

# INNOMOTICS



Catalog CR 81 | Edition 06/2025

## Innomotics Moves! Motors for Cranes

Innomotics DP – Crane Duty Motors

[innomotics.com/low-voltage-motors](https://innomotics.com/low-voltage-motors)

## Related catalogs

|        |                                                                                                                                                                                                      |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D 81.1 | <b>Innomotics GP, SD, XP, DP Low-Voltage Motors</b><br>Type series 1FP1, 1LE1, 1LE5, 1MB1, 1MB5, 1PC1<br>Frame sizes 63 to 450<br>Power range 0.09 to 1000 kW<br><br>PDF (E86060-K5581-A111-B3-7600) |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# Innomotics Motors for Cranes

## Catalog CR 81 | June 2025

Supersedes:  
Catalog CR 81 · 04/2024  
Catalog CR 1 · 2015, chapter 7

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This catalog covers the INNOMOTICS DP motor range especially designed for use in cranes applications.

For proper selection and configuration, in addition to the specifications within this document, also refer to:  
– Chapter 1 of Catalog D 81.1 for  
INNOMOTICS DP cranes motors

Potential deviations/contradictions between this Catalog and Catalogs D 81.1 may be specific to the cranes motors. In this case, observe the specifications mentioned in this document, or contact your INNOMOTICS Partner to avoid any errors in selection and configuration.

Refer to the Industry Mall for current updates of this catalog  
[innomotics.com](http://innomotics.com)

Please contact your Innomotics branch

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# Introduction

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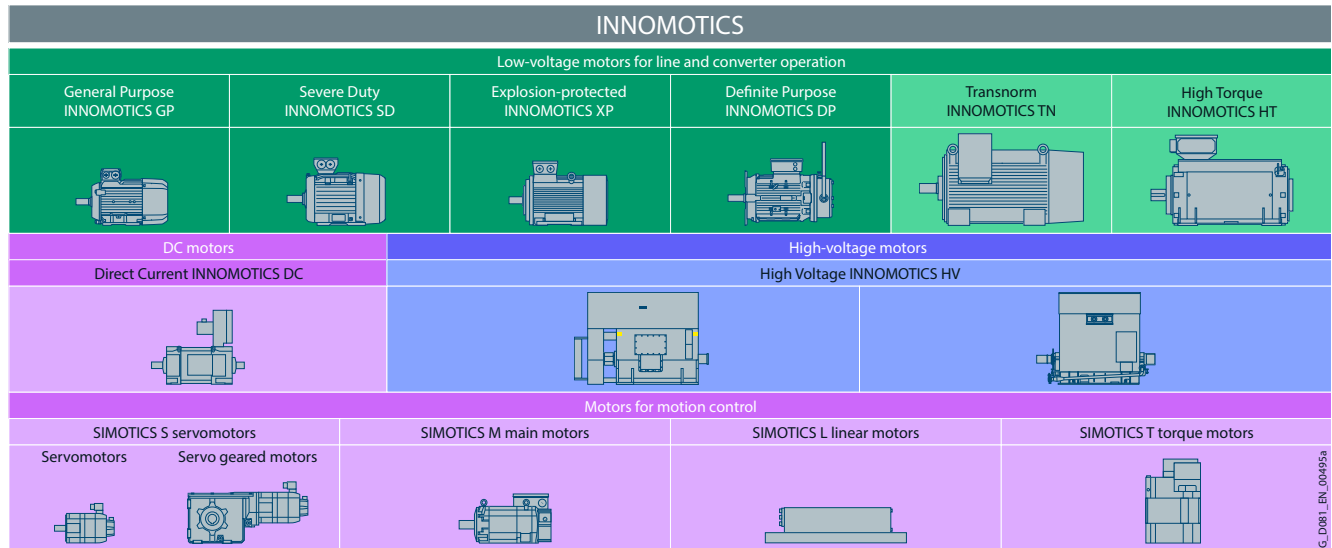
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# Introduction

Innovative drive technology for all industries, applications and power classes

## Overview



### Innomotics motors

Innomotics has the most comprehensive portfolio of electric motors worldwide. From energy-efficient, low-voltage motors through servomotors with high dynamic performance up to well-proven DC motors and powerful high-voltage motors. Innovative drive technology for all industries, applications and power classes.

Outstanding performance, quality, efficiency, and compactness.

The Innomotics motor portfolio:

- \_ Innomotics Low-Voltage Motors for line and converter operation:  
For standard applications with low to high motor power ratings
- \_ Innomotics Motion Control motors:  
For highly dynamic and extremely precise applications in mechanical engineering
- \_ Innomotics DC motors:  
For DC applications
- \_ Innomotics High-Voltage Motors:  
For line and converter operation in standard applications with high to very high motor power ratings.

### Innomotics Low-Voltage Motors for line and converter operation

Innomotics Low-Voltage Motors are the right choice for solving drive tasks efficiently and reliably. In contrast to Motion Control motors, which are additionally characterized by very high dynamic response and precision, the more favorably priced low-voltage motors are predestined for continuous or periodic, as well as powerful motions with fixed or variable speed, such as in pumps, fans, compressors, conveyor belts, lifts, hoisting and traversing gear, winders, mixers, kneaders and centrifuges.

Innomotics Low-Voltage Motors are characterized by very high reliability, ruggedness, and efficiency in operation.

They are available in diverse series and versions, which means that the appropriate motor can always be found for any application in an industrial or commercial environment, as well as in building management systems, shipbuilding and infrastructure.

Innomotics Low-Voltage Motors comply with the most important relevant standards and guidelines and are available in IEC, NEMA, and APAC versions. They can be used all over the world, and have a global, long-term spare parts service. For these reasons, they provide a sustainable basis for export-oriented, globally operating companies to enable them to conduct their international business efficiently.

**Overview**

**Innomotics GP – General Purpose** motors are the most economical solution for use under standard environmental conditions. Typically, these motors have an aluminum housing and are characterized by their low weight. Innomotics GP motors are available in the power range from 0.09 to 45 kW.

Available motor variants:

- \_ Induction motors, optimized for line operation
  - \_ in efficiency classes IE4, IE3, IE2, IE1
  - \_ as a standards-compliant version or compact version with increased power (IE3, IE2, IE1)
  - \_ as a 2-, 4-, 6-, 8-pole version
  - \_ as pole-changing motors
  - \_ as an APAC version for use in the ASEAN Pacific region (IE3, IE2)
  - \_ as a NEMA version for use in the NAFTA area
    - electrically (mechanically acc. to IEC): Eagle Line
    - electrically and mechanically
  - \_ can optionally be run on a converter
- \_ Motors optimized for operation on frequency converters
  - \_ as a Innomotics GP – VSD10 line induction motor
  - \_ as a Innomotics GP – VSD4000 line synchronous reluctance motor for particularly efficient operation in conjunction with SINAMICS converters.
- \_ Different types of construction, voltage versions, and a wide variety of options/add-ons for precise adaptation of the motors to application and customer-specific requirements.

**Innomotics SD – Severe Duty** motors have a rugged cast-iron housing, which means that they are also suitable for use in harsh to very harsh environments. With a wide power range from 0.09 to 1000 kW, Innomotics SD motors are the basis for machine and plant builders and owners who require a universal motor for flexible requirements and conditions of use.

Available motor variants:

- \_ Induction motors, optimized for line operation
  - \_ in efficiency classes IE4, IE3, IE2, IE1
  - \_ standards-compliant version or compact version with increased power (IE3, IE2, IE1)
  - \_ as a 2-, 4-, 6-, 8-pole version
  - \_ as an APAC version for use in the ASEAN Pacific region (IE3, IE2)
  - \_ as a NEMA version for use in the NAFTA area
    - electrically (mechanically acc. to IEC): Eagle Line
    - electrically and mechanically
  - \_ can optionally be run on a converter
- \_ Motors optimized for operation on frequency converters
  - \_ as a Innomotics SD – VSD10 line induction motor
  - \_ as a Innomotics SD – VSD4000 line synchronous reluctance motor for particularly efficient operation in conjunction with SINAMICS converters.
- \_ Basic Line and particularly rugged Performance Line
- \_ Different types of construction, voltage versions, and a verywide variety of options/add-ons for precise adaptation of the motors to application and customer-specific requirements.

**Innomotics – next generation** is the next innovation step in low-voltage motors.

In particular, these motors offer the following advantages for customers:

- \_ More efficiency in the engineering process due to the Digital Twin Concept.
- \_ Further increase in availability due to the Smart Motor Concept.

**Innomotics XP – Explosion Proof** motors are designed for use in hazardous environments. For all conditions of use and hazard zones, e.g. in explosive gas atmospheres of the chemical/petrochemical sector or in explosive dust atmospheres in the mining or food and beverage sectors, there are suitable motor versions in aluminum and cast iron that ensure maximum safety and satisfy the relevant standards and regulations.

Innomotics XP motors are available in the power range from 0.09 to 460 kW.

Available motor variants:

- \_ Motors for use in Zones 1, 2, 21 and 22
- \_ Induction motors optimized for line operation
  - \_ in efficiency classes IE3, IE2, IE1
  - \_ as a 2-, 4-, 6-, 8-pole version
  - \_ as a NEMA version for use in the NAFTA area
- \_ For motors suitable for line and converter operation
- \_ Basic Line and particularly rugged Performance Line in a cast-iron housing
- \_ Different types of construction, voltage versions, and a wide variety of options/add-ons for precise adaptation of the motors to application and customer-specific requirements.

**Innomotics DP – Definite Purpose** motors are low-voltage motors for application-specific, customized and industry-specific use.

They have the required respective industry-specific properties and certificates.

Innomotics DP motors:

- \_ Marine motors for use on ships
- \_ Steel plant motors for use in the steel industry
- \_ Roller table motors for roller table applications in the steel industry

**Innomotics TN – Transnorm** motors are low-voltage motors for line and converter operation in a cast-iron housing with higher power ratings up to 5000 kW from shaft height 315. In non-standard (Transnorm) motors, the assignment of the power rating and shaft extensions to frame size is not standardized.

**Innomotics HT – High Torque** motors are permanent-magnet synchronous motors and are used in applications that require extremely powerful drives without gear units, even at low speeds.

## Introduction

Innovative drive technology for all industries, applications and power classes

### Overview

#### Innomotics low-voltage motors for cranes

Innomotics offers a series of low-voltage motors that are ideally suited to use in crane applications:

- \_ In industrial cranes and harbor cranes
- \_ In indoor and the outdoor areas

The motors are perfectly suited to use with a converter which enables the typical load profiles in crane applications to be implemented efficiently and reliably.

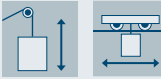
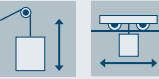
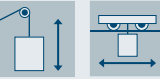
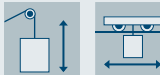
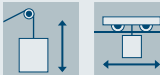
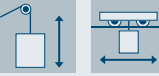
Different motor series can be selected depending on the environment of use and the application:

- \_ Innomotics SD cast-iron motors for use in industrial cranes in indoor areas
- \_ Innomotics DP cranes motors have been specially designed for use in harbor cranes and in outdoor areas.

This catalog contains the selection and ordering data of the Innomotics DP – Crane duty motors (Chapter 2).

The selection and ordering data of the Innomotics SD cast-iron motors which are often used for applications other than crane applications can be found in Catalog D 81.1.

### Overview of motors in crane application

|                                                                                                                                       | Motor type             | Industry                                                                                                                                                                   | Indoor – heavy                                                                                                                                                                                                                           | Outdoor                                                                              | Harbor<br>Machine house                                                                                                                                                        | Outdoor                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Innomotics DP –<br/>Definite Purpose</b><br><br> | 1PC1341                | –                                                                                                                                                                          | –                                                                                                                                                                                                                                        |    | <br>    |    |
|                                                                                                                                       | 1PC1361                | –                                                                                                                                                                          | –                                                                                                                                                                                                                                        |  |                                                                                           |  |
| <b>Innomotics SD –<br/>Severe Duty</b><br><br>     | 1LE15<br>1LE16<br>1LE5 | <br> | <br><br>With order codes<br>for elevated tem-<br>perature and dust | –                                                                                    |                                                                                           | –                                                                                     |
|                                                                                                                                       | 1PH8                   | <br> | <br>                                                               | –                                                                                    | <br> | –                                                                                     |
| <b>Innomotics M –<br/>Main motors</b><br><br>      |                        |                                                                                                                                                                            |                                                                                                                                                                                                                                          |                                                                                      |                                                                                                                                                                                |                                                                                       |

\_ Not preferred version

**Overview**

|                                                                                                                                      | Motor type             | IP class      | Type of cooling | Frame size    | Power range<br>kW | Torque range<br>Nm | No. of poles | Nom. speed range | Application                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|-----------------|---------------|-------------------|--------------------|--------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Innomotics DP –<br/>Definite Purpose</b><br><br> | 1PC1341                | IP55          | self            | 132S ... 280M | 5.5 ... 132       | 50 ... 1066        | 4            | 1500             |                                                                                            |
|                                                                                                                                      |                        | IP55          | self            | 132S ... 280M | 9 ... 90          | 41 ... 1089        | 6            | 1000             |                                                                                                                                                                               |
|                                                                                                                                      |                        | IP55          | forced          | 315L          | 117 ... 214       | 1425 ... 2605      | 6            | 1000             |                                                                                                                                                                               |
|                                                                                                                                      | 1PC1361                | IP55          | forced          | 315L          | 101 ... 179       | 1657 ... 2923      | 8            | 750              |                                                                                            |
|                                                                                                                                      |                        | IP55          | non             | 132S ... 280M | 2 ... 47          | 28 ... 675         | 4            | 1500             |                                                                                                                                                                               |
| <b>Innomotics SD –<br/>Severe Duty</b><br><br>      | 1LE15<br>1LE16<br>1LE5 | IP55          | self            | 100 ... 450   | 1.75 ... 1000     | 15 ... 8100        | 4, 6, 8      | 750 ... 1800     | <br>    |
|                                                                                                                                      |                        |               |                 |               |                   |                    |              |                  |                                                                                                                                                                               |
|                                                                                                                                      |                        |               |                 |               |                   |                    |              |                  |                                                                                                                                                                               |
| <b>Innomotics M –<br/>Main motors</b><br><br>      | 1PH8                   | IP23,<br>IP55 | forced          | 355           | 230 ... 1340      | 3661 ... 12415     | 6            | 600 ... 1350     | <br> |
|                                                                                                                                      |                        |               |                 |               |                   |                    |              |                  |                                                                                                                                                                               |

| Symbol                                                                              | Explanation    | Symbol                                                                              | Explanation                      |
|-------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------------|----------------------------------|
|  | <b>Hoist</b>   |                                                                                     |                                  |
|  | <b>Trolley</b> |  | <b>Boom</b>                      |
|  | <b>Gantry</b>  |  | <b>Hoisting gear and trolley</b> |

<sup>1)</sup> Referring to a duty cycle of S3-25 % or S2-60 min.

## Introduction

### Overview

Innomotics is since many years the leading manufacturer of crane motors. This overview covers the current range of three-phase motors specifically for use in cranes (for Innomotics SD see catalog D 81.1).

The range of crane motors is aimed at crane manufacturers, system integrators, and crane operators. To make it easier to select motors, they are listed by speed and output (continuous and intermittent duty). The tables indicate the rated motor torques and the maximum permissible torques.

The asynchronous motors with the DURIGNIT 2000 winding insulation are suitable for use on the SINAMICS S120 drive system.

The requirements of the motors vary depending on the application conditions:

- \_ Industry cranes which are used in production halls are usually not directly exposed to climatic influences. The motors do not necessarily need high degrees of protection or special paint.
- \_ Cranes located in seaports are often exposed to harsh environment like saltwater, dust, high humidity and rain, which means that special measures must be taken to protect the motors against corrosion as well as the ingress of dust and water.
- \_ Cranes in steel works are often subject to very high ambient temperatures. The electrical and mechanical design must take this into account. Please contact your local sales partner.

### Application

Innomotics crane motors are particularly suitable for crane operations under difficult conditions. These robust motors

- \_ offer a high degree of protection and are particularly suitable for harsh operating conditions
- \_ offer torque reserves that can handle high peak loads
- \_ are specially optimized for high-inertia drives with high torque

The compact Innomotics DP asynchronous cranes motors with cast-iron housing are particularly rugged and are, therefore, the first choice in crane applications.

### Configuration

#### Motor dimensioning

When motors are dimensioned for crane drives (high-inertia drives), two criteria must be taken into account:

- \_ The required maximum torque (starting torque)
- \_ The rated output (thermal motor capacity)

Since the hoist motors in particular operate in a large field weakening range during converter operation, you must check – alongside the usual design criteria such as thermal load (rms torque) and maximum acceleration torque – whether the motor can still generate the required maximum torque in the field weakening range. A torque-speed diagram can be created to check this.

When checking the torque, check whether the motor can generate the required maximum torque (e.g. for acceleration). The maximum permissible torque is higher than the rated torque and is often specified as a multiple of the rated torque. An adequate safety margin from the stalling torque must be maintained.

When the output is dimensioned, the rated motor output is adjusted in accordance with the effective power requirements of the motion. The rated motor output depends on the motor temperature which, in turn, is influenced by the operating mode and the thermal behavior of the motor. The rating data of a motor differs for the various operating modes in accordance with EN 60034-1. The data is usually specified for one or more of the following operating modes:

- \_ S9-non-periodic variation in load and speed
- \_ Short-time duty S2
- \_ Intermittent duty S3

Intermittent duties S4 and S5 vary to such an extent that accurate data can only be provided when certain additional conditions have been clearly defined.

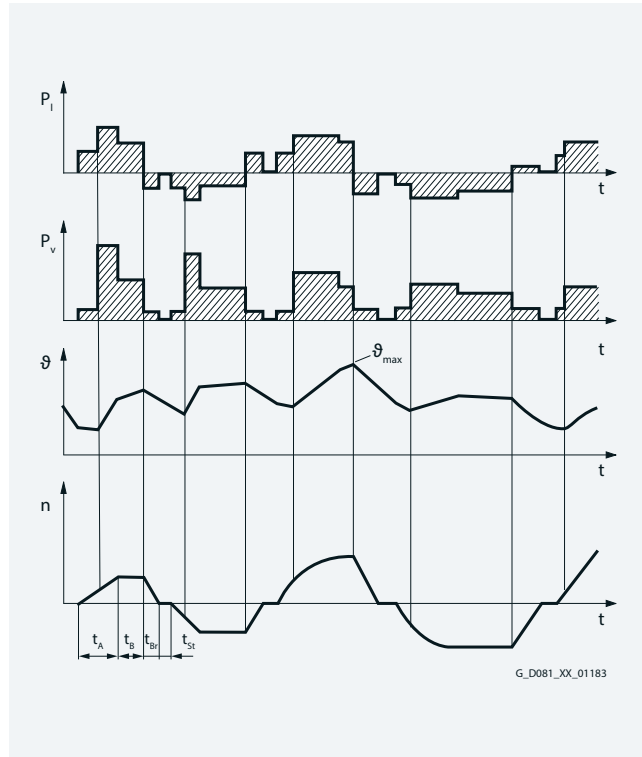
The operating modes are defined in accordance with EN 60034-1.

Symbols used in formulae:

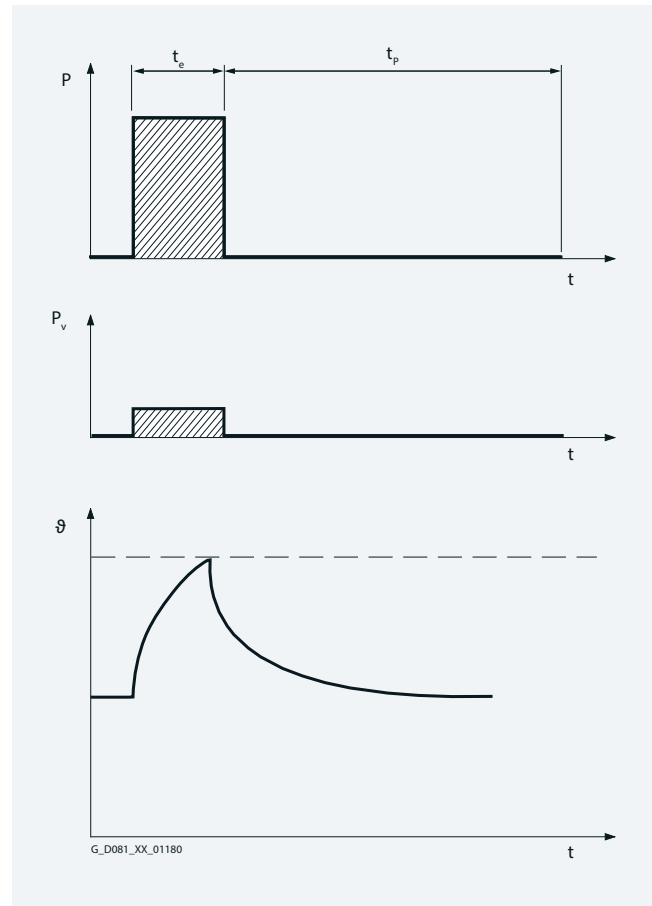
|                           |                                                       |
|---------------------------|-------------------------------------------------------|
| $P$                       | Load/specified motor output                           |
| $P_V$                     | Power loss of the motor                               |
| $\vartheta_e$             | Final temperature, steady-state temperature           |
| $\vartheta_{\max}$        | Max. winding temperature in respective operating mode |
| $\vartheta_{\text{mean}}$ | Mean winding temperature                              |
| $t_e$                     | Operating time                                        |
| $t_p$                     | Idle time                                             |
| $t_s$                     | Duty cycle duration                                   |
| $T_L$                     | Thermal time constant of the motor (running)          |
| $T_{\text{St}}$           | Thermal time constant of the motor (stationary)       |

**Configuration (continued)****S9: Duty with non-periodic variation in load and speed**Definition

Operation with a constant load state, the duration of which is sufficient to attain thermal equilibrium.

**Short-time duty (S2)**Definition

Operation with a constant load state that, however, does not last long enough to attain thermal equilibrium, followed by idle time that lasts until the machine temperature differs from the coolant temperature by no more than 2 K.



## Introduction

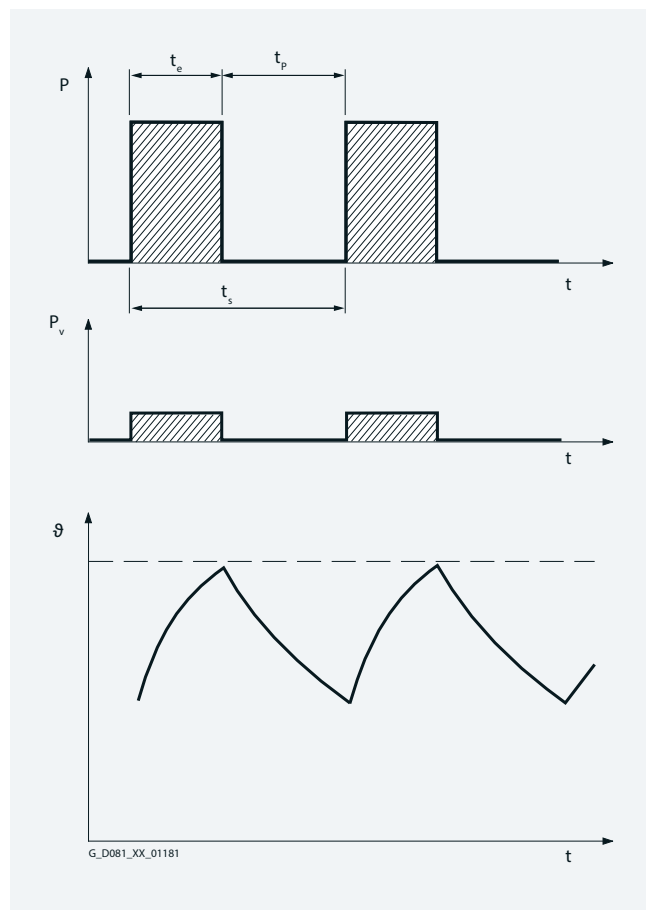
### Configuration (continued)

#### Intermittent duty without the effect of the start-up process (S3)

##### Definition

Operation that involves a sequence of similar duty cycles, each with a constant-load period and idle time, whereby the starting current does not have a noticeable effect on the temperature rise (the duty cycle duration is generally short enough to ensure that thermal equilibrium is not attained).

1



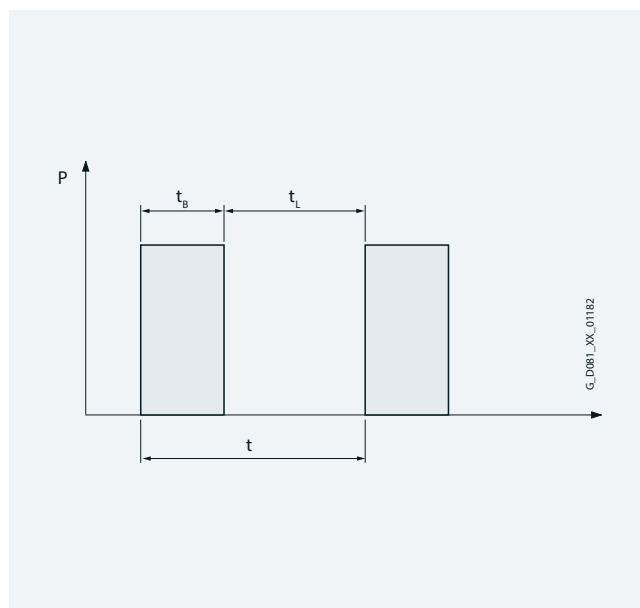
#### Continuous duty with intermittent load (S6)

##### Definition

This is a mode of operation that comprises a sequence of similar duty cycles, each of which consists of a constant load time followed by a no-load time.

There are no periods where the motor is not running - i.e. there are no off periods.

When specifying the increased power on the rating plate, duty type S3 and S6 must be supplemented by the on time and/or the cycle duration. If the duty cycle is not specified, then according to VDE 10 min. apply. Operation with alternating load times of 5 minutes and no-current off periods of 10 minutes that consecutively follow one another is e.g. designated as duty type S3: 5 min/15 min. However, this data can also be replaced by the relative on time and the cycle duration: Duty type S3: 33 %, 15 min. Recommended values of the relative on time are 15, 25, 40 and 60 %.



**Configuration****Calculating the rms value, ON duration**

Actual duty can also be converted to a thermally equivalent S3 mode by means of "rms value calculation", which means that the S3 motor tables can be used again.

Please be aware, that the values for S3-duty are based on a cycle time of 10 min. Details for calculation see EN 13135.

A torque diagram (duty cycle diagram) must be available when the calculation is performed (see diagrams below).

The value (assumed to be constant throughout the operating time) that would generate the same temperature rise as the actual torque is defined as the rms torque. The ON duration is the sum of operating times with respect to the total duty cycle duration.

The torque that occurs must not exceed any reduced limits imposed by the drive technology of the stalling torque. If the required highest torque differs from the lowest torque by more than a factor of 2 (not considering the no-load condition), the mean current must be used for calculating, please inquire

If the individual traveling duty cycles are not the same (e.g. due to different loads or distances), all the different traveling cycles must be included in the rms value and ON duration calculation until they repeat themselves.

Differences in thermal behavior when the motor is running and when it is at a standstill are already taken into account with respect to the ON durations in the S3 tables. For this reason,  $M_{rms}$  must be calculated with respect to the operating time  $t_e$  and not to the duty cycle duration  $t_s$ .

To ensure that the rms value can be defined with sufficient accuracy, however, the operating phases during which the motor is not cooled as efficiently must be taken into account (e.g. during correction runs at low speeds and with naturally cooled motors).

Effects such as these can only be taken into account by the motor manufacturer.

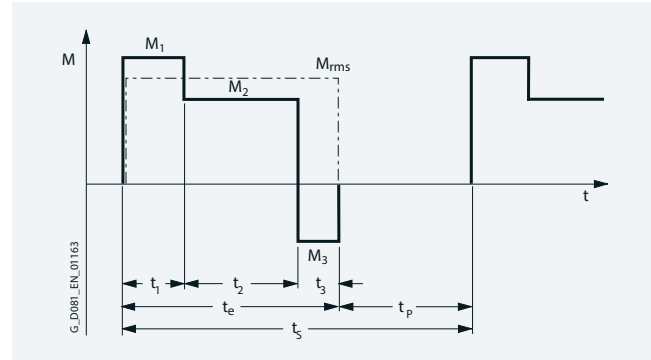
The operating conditions for hoist and traversing gears also vary enormously:

- The external moment of inertia with respect to the motor moment of inertia is usually greater in traversing gears than in hoist gears; in other words, the acceleration and braking work are more relevant for traversing gears than for hoists even when the number of duty cycles performed and the ON duration are the same.
- The steady-state torque (load torque) with respect to the rated motor torque is usually greater in hoists than in traversing gears (traveling resistance).
- The torque diagram for traversing gears does not take the direction of travel into account (without wind forces). The effect of the payload is minimal with high traversing gear weights; i.e. with handling cranes, it is repeated after each travel movement (after the second travel movement at the latest).
- The torque diagram for hoists is largely dependent on the load. The motor torques when the same load is hoisted and lowered are different (efficiency) and, in the case of handling cranes, a traveling duty cycle with a load is usually followed by a traveling duty cycle with empty load tackle (collective loading; see also FEM, Section I, Calculation Principles for Cranes); i.e. the cycle required for calculating the rms value is repeated after the fourth travel movement at the earliest.

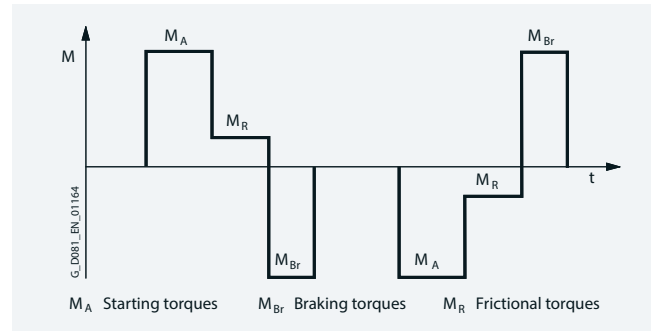
$$M_{rms} = \sqrt{\frac{\sum M^2 \times t}{t_e}}$$

$$ED = \frac{t_e \times 100}{t_s} \%$$

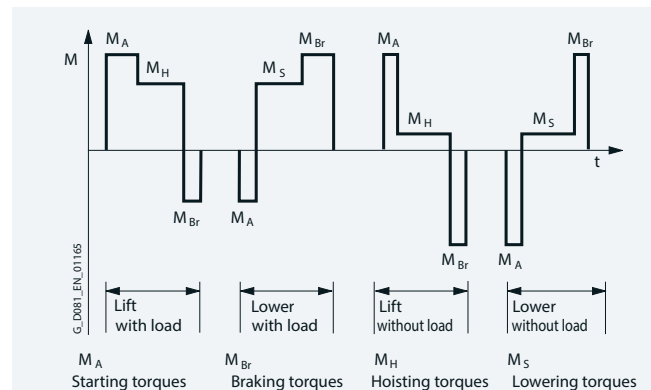
|                 |                                             |
|-----------------|---------------------------------------------|
| ED              | ON time                                     |
| $M_{rms}$       | rms torque                                  |
| $M_1, M_2, M_3$ | Torques in travel diagram                   |
| $t_1, t_2, t_3$ | Operating times of torques $M_1, M_2, M_3$  |
| $t_p$           | Idle time                                   |
| $t_e$           | Operating time of motor = $t_1 + t_2 + t_3$ |
| $t_s$           | Duty cycle duration = $t_e + t_p$           |



Torque diagram



Typical torque diagram for a gantry across one conveying cycle



Typical torque diagram for hoist across one conveying cycle

## Introduction

### Technical specifications

#### Standards and specifications

The motors comply with the appropriate standards and regulations, especially those listed in the table below.

| Title                                                                                  | IEC                                   | DIN/EN      |
|----------------------------------------------------------------------------------------|---------------------------------------|-------------|
| General specifications<br>for rotating electrical machines                             | IEC 60034-1<br>IEC 60085              | EN 60034-1  |
| General-purpose three-phase induction motors having<br>standard dimensions and outputs | IEC 60072<br>mounting dimensions only | EN 50347    |
| Terminal designations and direction of rotation<br>for rotating electrical machines    | IEC 60034-8                           | EN 60034-8  |
| Designation for types of construction,<br>installation and terminal box position       | IEC 60034-7                           | EN 60034-7  |
| Entry to terminal box                                                                  | –                                     | DIN 42925   |
| Built-in thermal protection                                                            | IEC 60034-11                          | EN 60034-11 |
| Noise limit values for<br>rotating electrical machines                                 | IEC 60034-9                           | EN 60034-9  |
| IEC standard voltages                                                                  | IEC 60038                             | IEC 60038   |
| Cooling methods<br>for rotating electrical machines                                    | IEC 60034-6                           | EN 60034-6  |
| Mechanical vibrations for<br>rotating electrical machines                              | IEC 60034-14                          | EN 60034-14 |
| Vibration limits                                                                       | –                                     | ISO 10816   |
| Degrees of protection<br>of rotating electrical machines                               | IEC 60034-5                           | EN 60034-5  |

#### Testing, quality assurance, acceptance inspection

In series production, each motor is subjected to a routine test.

As part of quality assurance measures, the motors are subjected to in-process inspections.

Type test or routine test certificates can be issued optionally, see chapter 2 and 3, options tables.

**Technical specifications** (continued)**Types of construction according to EN 60034-7/IEC 60034-7**

Hoisting gear motors are primarily used in types of construction IM B3, IM B5, IM V1, and IM B35, although they can be supplied in other types of construction (please inquire).

The individual sections provide information about the listed available types of construction of the various motor series.

|                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
|-------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                               |  |  |  |  |  |  |  |  |  |  |
| <b>EN 60034-7<br/>Code I</b>  | IM B3                                                                             | IM B35                                                                            | IM B5                                                                             | IM V1                                                                             | IM V5                                                                             | IM V6                                                                             | IM B6                                                                              | IM B7                                                                               | IM B8                                                                               | IM V3                                                                               |
| <b>EN 60034-7<br/>Code II</b> | IM 1001                                                                           | IM 2001                                                                           | IM 3001                                                                           | IM 3011                                                                           | IM 1011                                                                           | IM 1031                                                                           | IM 1051                                                                            | IM 1061                                                                             | IM 1071                                                                             | IM 3031                                                                             |

**Insulation**

The insulation system protects the winding against aggressive gases, vapors, dust, oil and increased air humidity. It can withstand the vibration stresses and ambient conditions that normally occur in hoisting operations.

Temperature classes

In EN 60034-1, the winding insulation (incl. impregnating material) is classified into temperature classes which are assigned specific overtemperatures.

The motor output specifications are uniformly based on a coolant temperature of 40 °C at an installation altitude of 1000 m above sea level for all insulation classes. The various sections provide information about the permissible outputs under other ambient conditions.

Temperature limit in K according to temperature class

| Temperature class | B    | F     | H     |
|-------------------|------|-------|-------|
| Temperature limit | 80 K | 105 K | 125 K |

**Mechanical balance quality**Dynamic balancing

All rotors in hoisting gear motors are dynamically balanced with an inserted half featherkey. This corresponds to vibration severity grade A (normal). EN 60034-14 specifies the factory acceptance vibration test procedures and vibration limits for electrical machines. "Half-key balancing" (half featherkey = code H) is specified here based on ISO 8821.

Full-key balanced machines can also be shipped as special versions (please inquire).

Note for 1PC1341/1PC1361 three-phase squirrel-cage motors:

Low-vibration version B can be supplied to fulfill stricter requirements on smooth running. For converter-fed operation with frequencies greater than 60 Hz, special balancing is required for compliance with the specified limit values (plain text: maximum supply frequency/speed).

Vibration severity

The vibration severity is the r.m.s. value of the vibration velocity (frequency range from 10 Hz to 1000 Hz).

A motor balanced in accordance with the relevant standard, however, may vibrate more strongly at the operating site.

This can be caused by the following factors:

- \_ Unsuitable foundation
- \_ Interference from the driven machine
- \_ Components with a natural frequency that is almost identical to the frequency of the residual unbalance of the motor.

In cases such as these, each element in the system – not just the motor itself – needs to be checked.

## Introduction

### Technical specifications

The table below shows the limit values of electrical machines in accordance with EN 60034-14 Nov. 2004.

| Limits (rms values) of max. vibration variables of vibration displacement $s$ , vibration velocity $v$ and acceleration $a$ for the shaft height $H$ |                      | Shaft height $H$ in mm |                   |                                |                  |                   |                                |                  |                   |                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------|-------------------|--------------------------------|------------------|-------------------|--------------------------------|------------------|-------------------|--------------------------------|
| Vibration severity grade                                                                                                                             | Machine installation | 56 < $H$ ≤ 132         |                   |                                | 132 < $H$ ≤ 280  |                   |                                | $H$ > 280        |                   |                                |
|                                                                                                                                                      |                      | $s_{rms}$<br>μmm       | $v_{rms}$<br>mm/s | $a_{rms}$<br>mm/s <sup>2</sup> | $s_{rms}$<br>μmm | $v_{rms}$<br>mm/s | $a_{rms}$<br>mm/s <sup>2</sup> | $s_{rms}$<br>μmm | $v_{rms}$<br>mm/s | $a_{rms}$<br>mm/s <sup>2</sup> |
| A                                                                                                                                                    | Free suspension      | 25                     | 1.6               | 2.5                            | 35               | 2.2               | 3.5                            | 45               | 2.8               | 4.4                            |
|                                                                                                                                                      | Rigid clamping       | 21                     | 1.3               | 2.0                            | 29               | 1.8               | 2.8                            | 37               | 2.3               | 3.6                            |
| B                                                                                                                                                    | Free suspension      | 11                     | 0.7               | 1.1                            | 18               | 1.1               | 1.7                            | 29               | 1.8               | 2.8                            |
|                                                                                                                                                      | Rigid clamping       | –                      | –                 | –                              | 14               | 0.9               | 1.4                            | 24               | 1.5               | 2.4                            |

The balancing type is stamped on the face of the DE <sup>1)</sup> shaft extension:

- \_ F = Balancing with full featherkey
- \_ H = Balancing with half featherkey
- \_ N = Balancing without featherkey

#### Bearings

All motors are equipped with rolling-contact bearings.

Motors equipped with cylindrical roller bearings are shipped with a rotor shipping brace to prevent brinelling in the DE <sup>1)</sup> bearings during transportation and storage.

#### Shaft extensions

The motors have cylindrical shaft extensions and are always supplied with a featherkey inserted in the shaft. Dimensions according IEC 60072.

#### Coupling

The standard versions of hoisting gear motors are designed for coupling output. Pinion, chain, and belt outputs generate greater cantilever forces and bearing loads, which must be taken into account.

#### Motor protection

Hoisting gear motors are operated with a higher load factor in intermittent duty. If there is excessive power consumption, an undervoltage in the supply, an excessive ON duration, or excessive coolant temperatures or if the heat is not being dissipated adequately (speed of naturally cooled machines is too low), this can cause the temperature in the windings to rise and the motors to overheat. Direct and indirect measures can be taken to protect the motors from overheating. An adequate monitoring concept should take into account all the relevant factors and must be properly implemented.

The resistance of the PTC thermistor detectors integrated in the windings increases significantly if the response temperature is exceeded. A tripping unit (Catalog LV1) detects this increase and uses a contact to intervene in the open-loop control. An additional detector loop for emitting a warning signal just below the shutdown temperature can also be used in process-critical cranes applications to allow working cycles that have already been started to be brought to an end.

It is recommended that Pt 1000 temperature sensors be installed in converter-fed drives. This sensor is embedded in the winding head of the motor in the same manner as a PTC thermistor. The data is evaluated directly in the converter. Warning and shutdown response limits can be set. Since only one sensor can be evaluated in the converter, this motor protection method is only suitable in single-motor drives; PTC thermistors are recommended for drives with more than one motor (e.g. gantry and trolley motor gears).

<sup>1)</sup> DE is the motor's drive end with shaft. NDE is the motor's non-drive end.



# **Innomotics DP – Crane duty motors**

2



## 2

## Innomotics DP – Crane duty motors

|             |                                                                           |
|-------------|---------------------------------------------------------------------------|
| <b>2/2</b>  | <b>1PC1361, 1PC1341</b>                                                   |
| <b>2/11</b> | <b>Innomotics DP – 1PC1341:<br/>Self-/Forced-ventilated (IC411/IC416)</b> |
| <b>2/21</b> | <b>Innomotics DP – 1PC1341:<br/>Forced-ventilated (IC416)</b>             |
| <b>2/25</b> | <b>Innomotics DP – 1PC1361:<br/>Non-ventilated</b>                        |
| <b>2/36</b> | <b>Supplements to article numbers and<br/>special versions</b>            |
|             | <u>Cast-iron series 1PC1341 and 1PC1361</u>                               |
| 2/36        | Voltages                                                                  |
| 2/37        | Types of construction                                                     |
| 2/38        | Motor protection                                                          |
| 2/39        | Terminal box position                                                     |
| 2/40        | Options                                                                   |
| <b>2/45</b> | <b>Dimensional drawings</b>                                               |

1

2

3

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1PC1361, 1PC1341

## Innomotics DP – Crane duty motors

### Overview



Three-phase asynchronous motor 1PC1361 with fitted seawater protected electromagnetic brake

Innomotics DP crane duty motors with seawater protected brakes provide a compact solution for crane travelling applications. The DC-operated brake is designed as a holding brake, but is also capable of emergency shutdown braking operations at maximum motor speed. In the case of power failure, the brake is applied automatically by its spring force and brings the drive to a standstill.

### Product range

The product range includes shaft heights 132 S to 315 L in rating 8.3 kW to 191 kW power range for 4-pole motors, in the 4.1 to 310 kW power range for 6-pole motors, or in the 146 to 259 kW power range for 8-pole motors for duty type S3 – 25 % in each case.

As the table below shows, more than one type of brake can be fitted to a motor; this flexibility allows the user to tailor the drive unit – comprising the motor and brake – to the exact requirements of the crane.

The motors can also be ordered without a brake. The same article numbers apply, but the article number supplements for the brake are excluded.

| Motor shaft height | Brake type       |                  |                  |                  |                  |                  |                    |                    |
|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------------------|--------------------|
|                    | KFB 10<br>100 Nm | KFB 16<br>160 Nm | KFB 25<br>250 Nm | KFB 30<br>300 Nm | KFB 40<br>400 Nm | KFB 63<br>630 Nm | KFB 100<br>1000 Nm | KFB 160<br>1600 Nm |
| 132                | ✓                | –                | –                | –                | –                | –                | –                  | –                  |
| 160                | ✓                | ✓                | –                | –                | –                | –                | –                  | –                  |
| 180                | ✓                | ✓                | ✓                | ✓                | ✓                | –                | –                  | –                  |
| 200                | –                | ✓                | ✓                | ✓                | ✓                | –                | –                  | –                  |
| 225                | –                | –                | ✓                | ✓                | ✓                | ✓                | –                  | –                  |
| 250                | –                | –                | ✓                | ✓                | ✓                | ✓                | ✓                  | ✓ <sup>1)</sup>    |
| 280                | –                | –                | –                | –                | ✓                | ✓                | ✓                  | ✓                  |

<sup>1)</sup> Only for motor 1PC1361.



Innomotics GmbH,

DE-90441 Nürnberg

Made in Czech Rep.

3~MOT 1CV2222B 1PC13412BB290AA4-Z UC 2412/2345678 001

001

IEC/EN 60034225M IMB3 IP55

Brake:

350kg Th.CL 155(F) -20°C <= TAMB <= 40°C

BFK458-25E

Bearing

230V AC 50/60Hz 0.55A

DE 6213-ZC3

TH.CL 155(F) 400Nm

NE 6213-ZC3

CONVERTER DUTY ONLY VPWMSINAMICS S120Nmax 4500 1/min

| V     | Hz | A   | kW | cosφ | 1/min | NOM.EFF | IE-CL  |  |
|-------|----|-----|----|------|-------|---------|--------|--|
| 400 Δ | 50 | 87  | 49 | 0.88 | 1470  |         | S3 60% |  |
| 400 Δ | 50 | 100 | 56 | 0.88 | 1465  |         | S3 40% |  |
| 400 Δ | 50 | 116 | 65 | 0.89 | 1460  |         | S3 25% |  |

Space Heater 230V

Example of rating plate

## Innomotics DP – Crane duty motors

### Technical specifications

#### Electrical design

##### Operating voltage

The crane motors are available for the following rated voltages:

- \_ 400 V 3 AC, 50 Hz
- \_ 500 V 3 AC, 50 Hz
- \_ 690 V 3 AC, 50 Hz

Other main voltage version, like 460 V 60 Hz are available by option.

##### Connected in delta for dispatch – Order code **M02**

The terminal board of the motor is connected in delta for dispatch.

The catalog data apply for operation with Siemens SINAMICS S converters. The catalog data apply approximately for the following general conditions:

- \_ The converter can provide the rated voltage as listed in the catalog
- \_ Permissible voltage peaks for reinforced insulation system (Advanced):  
 $\hat{U}_{LL} = 1600 \text{ V}$ ,  $\hat{U}_{LE} = 1400 \text{ V}$ ,  $t_s > 0.1 \mu\text{s}$
- \_ Permissible voltage peaks for special insulation system (Premium):  
 $\hat{U}_{LL} = 2200 \text{ V}$ ,  $\hat{U}_{LE} = 1500 \text{ V}$ ,  $t_s > 0.1 \mu\text{s}$

Operation with third party converters require an insulation coordination. Please refer to IEC 60034-18-41.

Further information is available in SPC  
[configurator.innomotics.com](http://configurator.innomotics.com).

##### Motor protection

The following protective equipment can be installed (see "Article number supplements and special versions"):

- \_ 3 PTC thermistors for tripping
- \_ 3 PTC thermistors for tripping and 3 PTC thermistors for alarm
- \_ 1 KTY 84-130/PT1000 temperature sensor for evaluation in the converter

##### Standstill heating

The motors can be fitted with a standstill heater with nominal supply voltage of 230 V AC (Option **Q02**) or 115 V AC (**Q03**).

The heat outputs are as follows:

| Motor shaft height | Heat output<br>W |
|--------------------|------------------|
| <b>132 ... 160</b> | 50               |
| <b>180 ... 200</b> | 55               |
| <b>225 ... 250</b> | 92               |
| <b>280 ... 315</b> | 109              |

##### Noises

The noises of the motors are in accordance with the noise limit values for rotating electrical machines specified in IEC 60034-9.

##### Insulation

The motors can be operated with line voltages up to 690 V 3 AC with SINAMICS S converters, (uncontrolled and controlled infeed) when maintaining the permissible peak voltages specified above. Depending on the selected motor connection voltage, a suitable insulation system is used for converter operation.

- \_ 400 V up to 460 V motor voltage "Advanced" insulation system is used
- \_ Motor supply voltages above, a "Premium" insulation system is used.

For converter operation on SINAMICS S120 with the power ratings specified in the catalog, the motors can be utilized corresponding to thermal class 155 (F) (service factor 1.0).

In the case of a fault when connected to an IT supply system (ground fault), the insulation is excessively stressed. In this case, the process should be terminated as quickly as possible ( $t < 2 \text{ h}$ ), and the fault resolved. Innomotics does not recommend operation on TN supply systems with transition-point grounding, for systems with a rated voltage below 500 V and strictly recommends IT supply for systems with a rated voltage above 500 V. Application notes are available through your local sales contact.

##### Mechanical design

Motors 1PC1361 and 1PC1341 are made of cast iron. The brake itself does not have a separate terminal box; all the brake connections, whether coil, microswitch or heater, are taken to the motor terminal box. The DE flange (**L18**) and the bolt-on feet (**L17**, only for SH 180 – 315) can be supplied in spheroidal graphite cast iron by option.

##### Types of construction

The motors are available in types of construction IM B3, IM B35, IM V5, IM B5 and IM V1. Other types of construction are available on request.

The position of the condensate drain holes is determined by the type of construction and (for flange mounted motors) by the position of the terminal box. To assure that the condensate drain hole is always on the lowest point of the motor, a proper clarification of the mounting in the application has to be done. If motors are mounted deviating from vertical or horizontal position (slope more than 15° against horizontal or vertical line) Innomotics recommends to send a request.

##### Degree of protection

The degree of protection of the standard motor models is IP55. IP56 is also available as an option **H22**.

## Innomotics DP – Crane duty motors

### Technical specifications

#### Mounted equipment

Sensing equipment such as the POG 10 incremental encoder (made by Baumer Hübner) can be mounted on the motors. The brakes themselves can be supplied with an emergency manual release mechanism.

Additional following encoders can be mounted (only for 1PC1341):

- \_ HOG 10 D
- \_ HOG 10 D with centrifugal switch FSL (on request)

Based on the Innomotics SD 1LE15 series, following options are already included in the standard design of crane duty motors:

- \_ Special finish system "sea air resistant" C4 (**S03**)
- \_ Internal finish; Machined laminated rotor core, shaft, inner diameter of cast-iron housing primed with rust inhibitor
- \_ Non-rusting screws externally (**H07**)
- \_ T-drain plugs (**H03**)
- \_ Silicone seal for terminal box cover
- \_ Cast resin inside flange enshield for 1PC13[4,6]1-.....-[G,H,L,M].. (mounting IM V\*)
- \_ Rating plate, stainless steel (**M11**)
- \_ External fan for SH 315 (**F79**)
- \_ Insulated bearing NDE side in SH 280/315

#### Bearing system

A measuring nipple for SPM shock pulse measurement can be mounted to check bearing vibration. The motors have an M8 tapped hole for each bearing plate and a measuring nipple with a protective cap. If a second tapped hole is provided, it is fitted with a sealing plug.

Order code **Q01**

#### Terminal box and feet and flange

Standard position of the terminal box on DE-side.

Following variations are possible:

- \_ Terminal box on top can be ordered with the digit "4" on position 16 of the article number code.
- \_ Terminal box on right-hand side (viewed from DE) can be selected with the digit "5" on position 16 of the article number code.
- \_ Terminal box on left-hand side (viewed from DE) can be selected with the digit "6" on position 16 of the article number code
- \_ Feet made of spheroidal graphite iron (GGG) material instead of laminar graphite iron (GG) can be ordered with options **L17 + H01**.

For foot-mounted motors, and motors with feet and flange, cast feet are standard. Material: GG-20 valid for frame sizes 132 - 315.

Screwed-on feet can be ordered with option **H01**. Feet in GGG can be ordered with option codes **H01 + L17**.

The position of the condensate drain holes will always on the lowest point, depending on the ordered mounting code and terminal box position.

Terminals for motor-integrated sensors and actors like space heater, temperature sensors and brakes will be connected to terminals in the terminal box.

If the motor is ordered with option **R01**, the position of terminal box is fixed and it cannot be rotated afterwards.

Some flanges made of spheroidal graphite iron (GGG) material instead of GG-20 can be ordered with option **L18**.

Resin sealing between motor and terminal box is optionally available (**R01**).

Rotation terminal box with option **R01** is not possible. Resin sealing for motors according UL not available.

| Terminal box 1PC13. Cranes – standard |                   |                                 |                     |                                                            |                        |                    |
|---------------------------------------|-------------------|---------------------------------|---------------------|------------------------------------------------------------|------------------------|--------------------|
| Frame size                            | Terminal box type | Maximum dimensions W × H × L mm | Size of thread bolt | Supply conductor cross-section (one phase) mm <sup>2</sup> | Cable entry – standard | Cable entry – max. |
| 132                                   | TB1J01            | 165 × 119 × 190                 | M4                  | 6                                                          | 2 × M32 × 1.5          | M50 × 1.5          |
| 160                                   | TB1J01            | 165 × 119 × 190                 | M5                  | 16                                                         | 2 × M40 × 1.5          | M50 × 1.5          |
| 180                                   | TB1K01            | 197 × 123 × 266                 | M6                  | 25                                                         | 2 × M50 × 1.5          | M63 × 1.5          |
| 200                                   | TB1L01            | 197 × 123 × 266                 | M8                  | 35                                                         | 2 × M50 × 1.5          | M63 × 1.5          |
| 225                                   | TB1L01            | 197 × 123 × 266                 | M8                  | 35                                                         | 2 × M50 × 1.5          | M63 × 1.5          |
| 250                                   | TB1N01            | 233 × 167 × 319                 | M10                 | 120                                                        | 2 × M63 × 1.5          | M75 × 1.5          |
| 280                                   |                   |                                 |                     |                                                            |                        |                    |
| 315                                   | TB1Q01            | 299 × 214 × 374                 | M12                 | 185                                                        | 2 × M63 × 1.5          | M75 × 1.5          |

| Terminal box 1PC13. Cranes – Option <b>R50</b> (larger terminal box) |                   |                                 |                     |                                                            |                        |                    |
|----------------------------------------------------------------------|-------------------|---------------------------------|---------------------|------------------------------------------------------------|------------------------|--------------------|
| Frame size                                                           | Terminal box type | Maximum dimensions W × H × L mm | Size of thread bolt | Supply conductor cross-section (one phase) mm <sup>2</sup> | Cable entry – standard | Cable entry – max. |
| 132                                                                  | TB1K01            | 197 × 123 × 266                 | M5                  | 16                                                         | 2 × M32 × 1.5          | M63 × 1.5          |
| 160                                                                  | TB1K01            | 197 × 123 × 266                 | M5                  | 16                                                         | 2 × M40 × 1.5          | M63 × 1.5          |
| 180                                                                  | TB1K01            | 197 × 123 × 266                 | M8                  | 35                                                         | 2 × M50 × 1.5          | M63 × 1.5          |
| 200                                                                  | TB1N01            | 233 × 167 × 319                 | M10                 | 120                                                        | 2 × M63 × 1.5          | M63 × 1.5          |
| 225                                                                  | TB1N01            | 233 × 167 × 319                 | M10                 | 120                                                        | 2 × M63 × 1.5          | M63 × 1.5          |
| 250                                                                  | TB1Q01            | 299 × 214 × 374                 | M12                 | 185                                                        | 2 × M63 × 1.5          | M75 × 1.5          |
| 280                                                                  |                   |                                 |                     |                                                            |                        |                    |
| 315                                                                  | TB1R01            | 330 × 278 × 470                 | M16                 | 240                                                        | 2 × M63 × 1.5          | M90 × 1.5          |

## Innomotics DP – Crane duty motors

### Technical specifications

#### Auxiliary terminal designation

| Temperature sensor                   | Terminal designation |
|--------------------------------------|----------------------|
| 3 PTC thermistors for alarm          | 1TP1-1TP2            |
| 3 PTC thermistors for tripping       | 2TP1-2TP2            |
| Bimetallic (NC contact) for tripping | 2TB1-2TB2            |
| Standstill heater (motor)            | 1HE1-1HE2            |
| Brake coil DC                        | BD1-BD2              |
| Brake coil AC                        | BA1-BA2              |
| Standstill heater (brake)            | HE1-HE2              |
| Microswitch brake opened             | S11-S13              |
| Microswitch brake air gap monitoring | S21-S23              |

#### Bearing

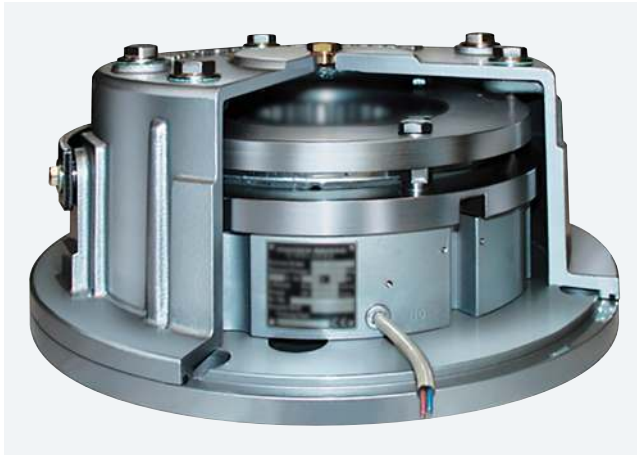
| Motor shaft height | DE bearing | NDE bearing |
|--------------------|------------|-------------|
| <b>132</b>         | 6208 2ZC3  | 6208 2ZC3   |
| <b>160</b>         | 6209 2ZC3  | 6209 2ZC3   |
| <b>180</b>         | 6210 C3    | 6210 C3     |
| <b>200</b>         | 6212 C3    | 6212 C3     |
| <b>225</b>         | 6213 ZC3   | 6213 ZC3    |
| <b>250</b>         | 6215 ZC3   | 6215 ZC3    |
| <b>280</b>         | 6317 C3    | 6317 C3     |
| <b>315</b>         | 6319 C3    | 6319 C3     |

#### Shaft extension

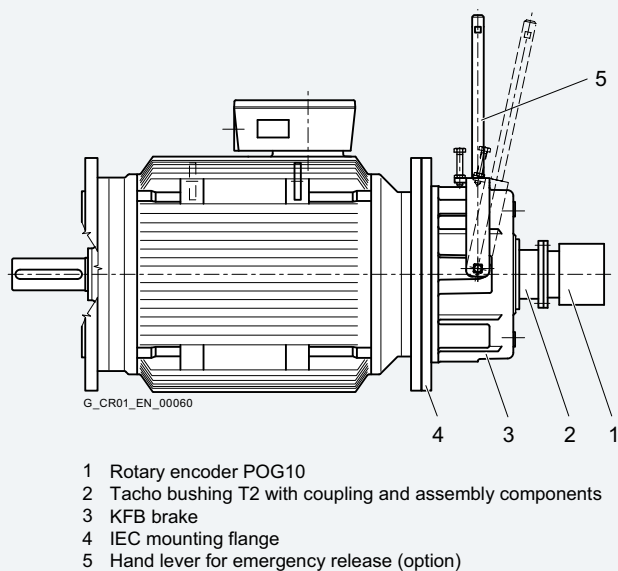
Standard brake motors are designed with a cylindrical shaft extension.

## Innomotics DP – Crane duty motors

### Design

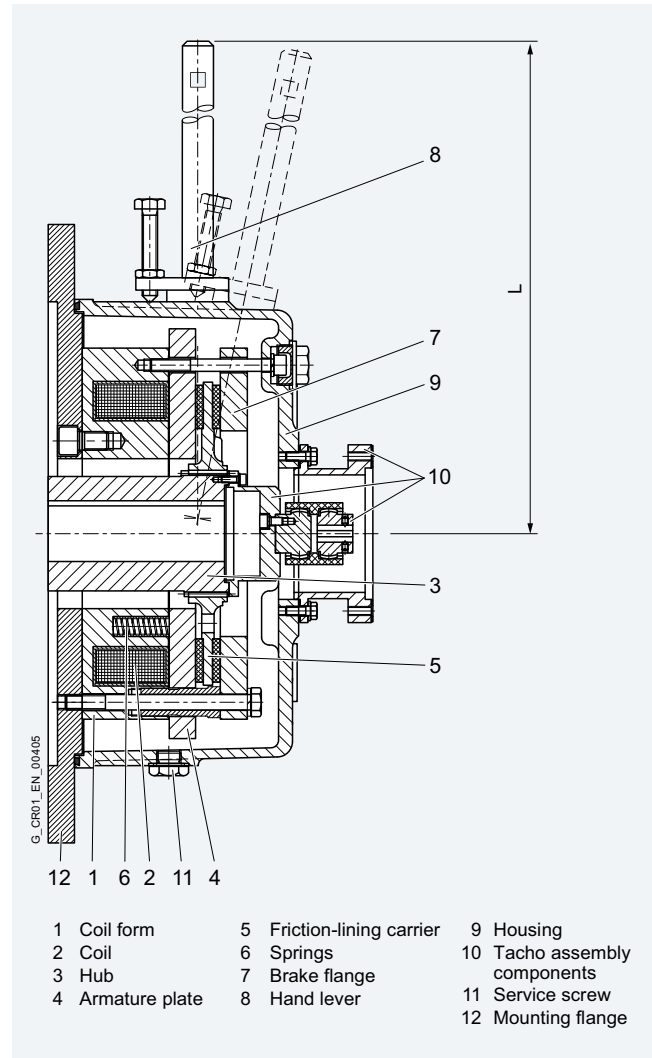


2



The electromagnetic double-disc spring-set brake KFB, see picture "KFB spring-set brake with manual lever", is intended to operate solely as a holding brake for this application. With the exception of emergency braking, it may only be operated as a dynamically loaded operational brake if it is appropriately dimensioned or after consultation with Innomotics.

To ensure an optimized design regarding water- and dustprotection, combination with hollow shaft encoders or motors in IC411 should be avoided. Preferred solution for brake motors are motors in IC410, if encoders needed, flange encoders like POG10 should be used.



KFB spring-set brake with manual lever

## Design

### Protective element

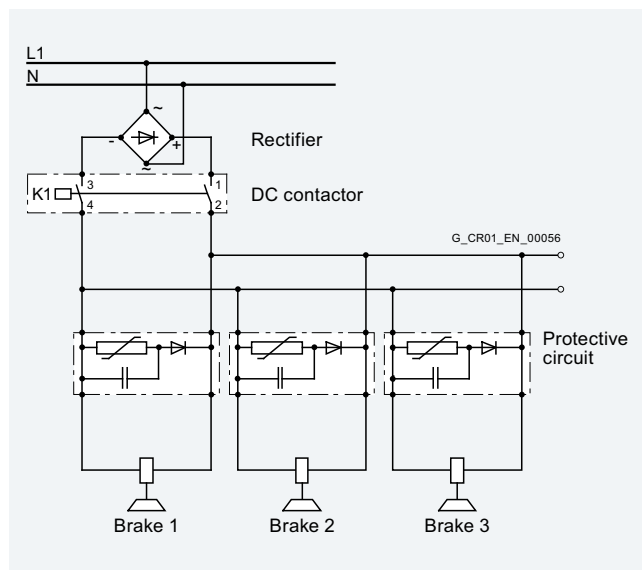
The brakes should be switched on DC side i.e. between the rectifier and coil (see circuit diagram below). This ensures a significantly shorter closing time than switching on AC end. A protective element (varistor + spark quenching) must be fitted in parallel to each brake coil. This protects the brake coil against excessively high de-energization voltages on the one hand, and the contactor contacts on the other.

These protective elements must be installed close to the brake coils where possible, e.g. in the motor terminal box or in a distribution board on the subframes in the case of traversing gear. Protective elements PE-400/150/5 are directly available from the manufacturer under Article No. 008099300249.

For an easy installable system providing a supervision of the brake for wearing of the lining, brake function, including brake voltage control, we recommend to use a Pintsch Bubenzer brake control unit BCU2001 (single brakes) or BCMS-4 (up to 4 brakes controlled with one unit).

### Technical specifications

|                                                       |                             |
|-------------------------------------------------------|-----------------------------|
| Protective element                                    |                             |
| Connection voltage, max. (coil voltage)               | 400 V DC                    |
| Max. coil current                                     | 5 A                         |
| Max. energy absorption of one trip                    | 150 J                       |
| Max. continuous output (average) of energy absorption | 5 W                         |
| Trip peak at max. coil current                        | < 450 V                     |
| Ambient temperature                                   | -40 ... +50 °C              |
| Permissible cross section of connecting lead          | 0.2 ... 2.5 mm <sup>2</sup> |
| Weight, approx.                                       | 0.2 kg                      |
| Degree of protection                                  | IP20                        |



### Special versions

#### Emergency release with hand lever, option **F50**

In addition to brake release at zero current via 2 emergency release screws, it is also possible to release the brake by means of a hand lever permanently mounted on the brake housing. The lever is lockable.

#### Microswitch for "brake released" monitoring, option **F26**

The brake can be fitted with a microswitch for monitoring the "brake released" state. The contact is rated for:

- \_ < 30 V DC, 5.0 A
- \_ < 125 V DC, 0.5 A
- \_ < 250 V AC, 5.0 A

#### Microswitch for air gap monitoring/wear, option **F51**

A second microswitch can be fitted to monitor the "maximum air gap" function. Tripping of this contact indicates that full braking power is no longer available and the air gap must be adjusted immediately. The contact load rating is identical to that of the "brake released" microswitch.

#### Standstill heater, option **F27**

The installation of a heater can prevent the formation of condensate, e.g. caused by fluctuations in temperature and air humidity, inside the brake. This heater must not be switched on when the motor is operating. The heater is designed for a supply voltage of 230 V AC and a heat output of 40 W.

#### Encoder mounting, option **F28/F29**

An encoder POG 10 DN 1024 I mounted on the brake must be order with combination of options **F28+G07** (or that **G10** = POG 10 DN 1024 I + FSL).

If an encoder (POG) is to be fitted later by customer, the brake must be prepared for encoder mounting. This is possible with option **F29**. Mounting components are included. Brake is totally enclosed by stainless steel plate.

It is also possible to retrofit an encoder by replacing the brake housing (the parts required, such as new housing, coupling, etc., can be ordered directly from the manufacturer) using the brake serial number as a reference).

#### Brake control unit BCU

A brake control unit (BCU) can also be used to supply and monitor the brake on single drives. For technical specifications, price, etc., please contact the manufacturer directly.

#### Brake supply

The nominal voltage of brake is 207 V DC and has to be ordered by option **F16**.

Additional following brake supply is optional available:

- \_ 230 V AC 50/60 Hz with bridge rectifier in terminal box (**F11**)
- \_ 400 V AC 50/60 Hz with half-wave rectifier in terminal box (**F12**)

#### Note:

It must, however, be noted that the closing time for the brake can be a factor of 10 longer than the values specified in the tables (see section "Technical specifications") if it is switched on AC-side only.

## Innomotics DP – Crane duty motors

### Configuration

The following dimensioning parameters must be taken into account when a brake is selected:

#### Braking torque

The brake torque must comply with the requirements of the application. Calculation of required torque has to be performed as per actual standards, e.g. EN13135. Relevant deratings caused e.g. due to high motor speeds have to be considered.

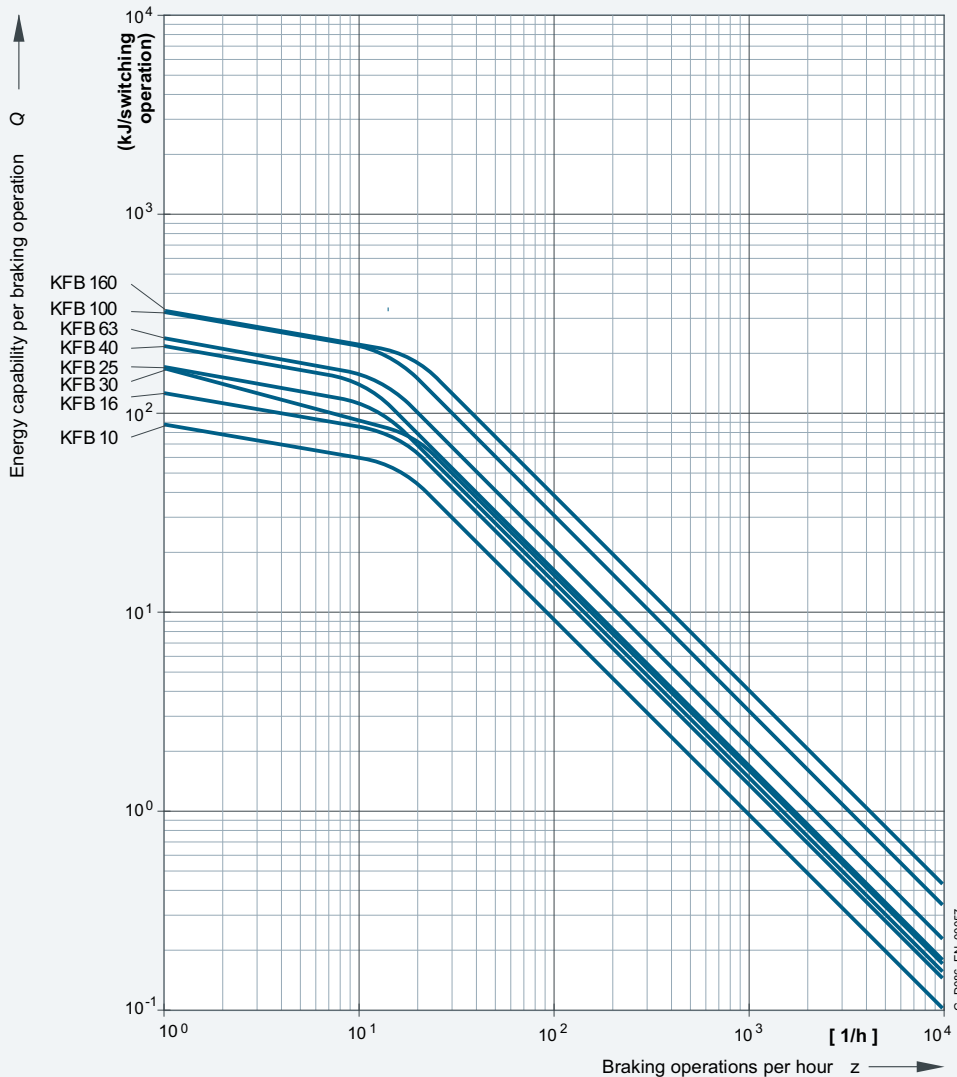
#### Braking energy on emergency trip

The energetic capacity of the brake must comply with the requirements of the application. Calculation of required energy capacity has to be performed as per actual standards, e.g. EN13135. Relevant deratings e.g. due to high ambient temperature have to be considered.

**Configuration****Configuration Braking energy and energy capability**

The brake must be capable of absorbing the heat produced by the occasional emergency braking operation. The maximum permissible energy capability  $Q$  is shown in the diagram below as a function of the number of switching operations.

The permissible energy capability  $Q$  for a single emergency trip can be found in the table in section "Technical specifications".



When the switching energy per braking operation and number of braking operations per hour are known, the brake size can be calculated.

Example:

$Q = 35$  kJ/switching operations and  
 $z = 100$  braking operations/hour  
 = brake KFB 160

Energy capability  $Q$ , braking speed  $n = 1500$  rpm

## Innomotics DP – Crane duty motors

### Technical specifications

|                                       |                  | KFB spring-set brakes |        |        |        |        |        |         |         |
|---------------------------------------|------------------|-----------------------|--------|--------|--------|--------|--------|---------|---------|
|                                       |                  | Type                  |        |        |        |        |        |         |         |
|                                       |                  | KFB 10                | KFB 16 | KFB 25 | KFB 30 | KFB 40 | KFB 63 | KFB 100 | KFB 160 |
| Rated brake torque acc. to VDE 0580   | Nm               | 100                   | 160    | 250    | 300    | 400    | 630    | 1000    | 1600    |
| Permissible speed $n$                 | rpm              | 6000                  | 6000   | 6000   | 6000   | 5500   | 4700   | 4000    | 3600    |
| Rated voltage $U_{\text{rated}}^{1)}$ | V DC             | 207                   | 207    | 207    | 207    | 207    | 207    | 207     | 207     |
| Rated output $P_{\text{rated}}$       | W                | 100                   | 118    | 160    | 154    | 188    | 206    | 316     | 340     |
| Rated current $I_{\text{rated}}$      | A                | 0.48                  | 0.57   | 0.77   | 0.74   | 0.91   | 1      | 1.53    | 1.64    |
| Moment of inertia $J$                 | kgm <sup>2</sup> | 0.0017                | 0.0037 | 0.0048 | 0.0055 | 0.0068 | 0.017  | 0.036   | 0.05    |
| Weight, approx.                       | kg               | 19                    | 28     | 42     | 50     | 55     | 74     | 106     | 168     |
| Energy capability $Q$                 |                  |                       |        |        |        |        |        |         |         |
| _ at $n = 1500 \text{ rpm}/z = 1$     | kJ               | 88                    | 126    | 169    | 167    | 216    | 235    | 321     | 331     |
| _ at $n = 1500 \text{ rpm}/z = 100$   | kJ               | 8                     | 11.7   | 12.6   | 13.8   | 14.5   | 18.4   | 27.1    | 34.8    |
| Closing time $t_1^{2)}$               | ms               | 55                    | 75     | 80     | 85     | 90     | 120    | 135     | 195     |
| Release time $t_2^{2)}$               | ms               | 128                   | 173    | 239    | 245    | 251    | 342    | 375     | 498     |

- $Q$  Energy capability per braking operation  
[kJ per switching operation]
- $n$  Speed [rpm]
- $z$  Braking operations per hour [1/h]
- $t_1$  Closing time: Time from power OFF until 90 %  
of rated braking torque is reached
- $t_2$  Release time: Time from power ON until 10 %  
of rated braking torque is reached
- $t$  Measured at 20 °C

The normal version of the brake is supplied for a coil voltage of 207 V DC. Voltages of 110 V DC and 180 V DC are also available at no extra cost (please state in plain text in the order). Other coil voltages on request.

<sup>1)</sup> Rated voltage according to DIN IEC 38 with tolerances of +6 % and -10 % according to DIN VDE 0580.

<sup>2)</sup> Switching time terms defined according to DIN VDE 0580,  
Closing time  $t_2$  = Connection time  $t_1$ , Release time  $t_2$  = Disconnection time  $t_2$

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake)     |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|----------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                        |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm²              | Article No.                                              | kg                                     |
| 4-pole, 1500 rpm                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| Intermittent duty S3 – 15 %                                                                |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| 132 S                                                                                      | 1438        | 8.6          | 57           | 17.6                 | 14.1                 | 10.2                 | 0.85           | 101               | 0.022             | 1PC1341-1CB09-0                                          | 61                                     |
| 132 M                                                                                      | 1428        | 12.5         | 84           | 25                   | 20                   | 14.5                 | 0.87           | 147               | 0.028             | 1PC1341-1CB29-0                                          | 75                                     |
| 160 M                                                                                      | 1445        | 18.3         | 121          | 36                   | 29                   | 21                   | 0.86           | 213               | 0.055             | 1PC1341-1DB29-0                                          | 96                                     |
| 160 L                                                                                      | 1450        | 25.8         | 170          | 49.5                 | 39.5                 | 28.5                 | 0.85           | 301               | 0.071             | 1PC1341-1DB49-0                                          | 104                                    |
| 180 M                                                                                      | 1430        | 32.6         | 218          | 60                   | 48                   | 35                   | 0.88           | 411               | 0.12              | 1PC1341-1EB29-0                                          | 160                                    |
| 180 L                                                                                      | 1432        | 38.8         | 259          | 72                   | 58                   | 41.5                 | 0.87           | 501               | 0.13              | 1PC1341-1EB49-0                                          | 170                                    |
| 180 L                                                                                      | 1428        | 52.9         | 354          | 100                  | 80                   | 58                   | 0.85           | 647               | 0.16              | 1PC1341-1EB69-0                                          | 185                                    |
| 200 L                                                                                      | 1442        | 51.6         | 342          | 96                   | 77                   | 56                   | 0.88           | 605               | 0.2               | 1PC1341-2AB59-0                                          | 230                                    |
| 200 L                                                                                      | 1442        | 61.6         | 408          | 113                  | 90                   | 66                   | 0.87           | 720               | 0.25              | 1PC1341-2AB69-0                                          | 240                                    |
| 200 L                                                                                      | 1448        | 81.3         | 290          | 151                  | 121                  | 88                   | 0.84           | 1044              | 0.28              | 1PC1341-2AB79-0                                          | 260                                    |
| 225 S                                                                                      | 1445        | 66           | 436          | 122                  | 97                   | 71                   | 0.89           | 690               | 0.42              | 1PC1341-2BB09-0                                          | 280                                    |
| 225 M                                                                                      | 1445        | 81           | 535          | 148                  | 118                  | 86                   | 0.89           | 900               | 0.46              | 1PC1341-2BB29-0                                          | 305                                    |
| 225 M                                                                                      | 1450        | 99           | 652          | 190                  | 152                  | 110                  | 0.84           | 960               | 0.47              | 1PC1341-2BB69-0                                          | 320                                    |
| 250 M                                                                                      | 1460        | 99           | 648          | 187                  | 149                  | 108                  | 0.85           | 1060              | 0.75              | 1PC1341-2CB29-0                                          | 385                                    |
| 250 M                                                                                      | 1460        | 135          | 883          | 250                  | 200                  | 146                  | 0.85           | 1350              | 0.85              | 1PC1341-2CB69-0                                          | 440                                    |
| 250 M                                                                                      | 1470        | 162          | 1052         | 300                  | 240                  | 174                  | 0.85           | 1960              | 1.2               | 1PC1341-2CB79-0                                          | 480                                    |
| 280 S                                                                                      | 1470        | 135          | 877          | 240                  | 193                  | 140                  | 0.88           | 1440              | 1.3               | 1PC1341-2DB09-0                                          | 550                                    |
| 280 M                                                                                      | 1470        | 162          | 1052         | 290                  | 230                  | 167                  | 0.88           | 1790              | 1.4               | 1PC1341-2DB29-0                                          | 570                                    |
| 280 M                                                                                      | 1470        | 198          | 1286         | 350                  | 280                  | 205                  | 0.88           | 2120              | 1.7               | 1PC1341-2DB69-0                                          | 680                                    |
| 280 M                                                                                      | 1465        | 237          | 1545         | 425                  | 340                  | 245                  | 0.88           | 2380              | 1.8               | 1PC1341-2DB79-0                                          | 750                                    |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>F<br>G                            |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L   |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 4<br>5<br>6                            |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | Order code<br>M4B<br>M4C<br>M4D<br>M4F |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                        |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

Innomotics DP – 1PC1341: Self-/Forced-ventilated (IC411/IC416)

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake)   |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|--------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                      |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                   |
| 4-pole, 1500 rpm                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Intermittent duty S3 – 25 %                                                                |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 132 S                                                                                      | 1440        | 8.3          | 55           | 17                   | 13.6                 | 9.9                  | 0.85           | 101               | 0.022             | 1PC1341-1CB09-0                                          | 61                                   |
| 132 M                                                                                      | 1435        | 11.3         | 75           | 22.5                 | 18                   | 13                   | 0.86           | 147               | 0.028             | 1PC1341-1CB29-0                                          | 75                                   |
| 160 M                                                                                      | 1450        | 16           | 105          | 31.5                 | 25                   | 18.2                 | 0.85           | 213               | 0.055             | 1PC1341-1DB29-0                                          | 96                                   |
| 160 L                                                                                      | 1460        | 21.8         | 143          | 42                   | 33.6                 | 24.5                 | 0.84           | 301               | 0.071             | 1PC1341-1DB49-0                                          | 104                                  |
| 180 M                                                                                      | 1440        | 26.9         | 178          | 50                   | 40                   | 29                   | 0.87           | 411               | 0.12              | 1PC1341-1EB29-0                                          | 160                                  |
| 180 L                                                                                      | 1445        | 32           | 211          | 60                   | 48                   | 35                   | 0.86           | 501               | 0.13              | 1PC1341-1EB49-0                                          | 170                                  |
| 180 L                                                                                      | 1440        | 43.6         | 289          | 83                   | 66                   | 48                   | 0.84           | 647               | 0.16              | 1PC1341-1EB69-0                                          | 185                                  |
| 200 L                                                                                      | 1450        | 44.5         | 293          | 82                   | 66                   | 47.5                 | 0.87           | 605               | 0.2               | 1PC1341-2AB59-0                                          | 230                                  |
| 200 L                                                                                      | 1450        | 54.8         | 361          | 101                  | 81                   | 59                   | 0.86           | 720               | 0.25              | 1PC1341-2AB69-0                                          | 240                                  |
| 200 L                                                                                      | 1458        | 66.7         | 290          | 126                  | 101                  | 73                   | 0.83           | 1044              | 0.28              | 1PC1341-2AB79-0                                          | 260                                  |
| 225 S                                                                                      | 1455        | 53           | 348          | 95                   | 76                   | 55                   | 0.89           | 690               | 0.42              | 1PC1341-2BB09-0                                          | 280                                  |
| 225 M                                                                                      | 1460        | 65           | 425          | 116                  | 93                   | 67                   | 0.89           | 900               | 0.46              | 1PC1341-2BB29-0                                          | 305                                  |
| 225 M                                                                                      | 1465        | 79           | 515          | 146                  | 117                  | 85                   | 0.85           | 960               | 0.47              | 1PC1341-2BB69-0                                          | 320                                  |
| 250 M                                                                                      | 1470        | 79           | 513          | 146                  | 117                  | 85                   | 0.85           | 1060              | 0.75              | 1PC1341-2CB29-0                                          | 385                                  |
| 250 M                                                                                      | 1470        | 108          | 702          | 196                  | 157                  | 114                  | 0.86           | 1350              | 0.85              | 1PC1341-2CB69-0                                          | 440                                  |
| 250 M                                                                                      | 1475        | 130          | 842          | 235                  | 189                  | 137                  | 0.85           | 1960              | 1.2               | 1PC1341-2CB79-0                                          | 480                                  |
| 280 S                                                                                      | 1475        | 108          | 699          | 190                  | 152                  | 110                  | 0.88           | 1440              | 1.3               | 1PC1341-2DB09-0                                          | 550                                  |
| 280 M                                                                                      | 1478        | 130          | 840          | 230                  | 183                  | 132                  | 0.88           | 1790              | 1.4               | 1PC1341-2DB29-0                                          | 570                                  |
| 280 M                                                                                      | 1478        | 159          | 1027         | 280                  | 225                  | 162                  | 0.88           | 2120              | 1.7               | 1PC1341-2DB69-0                                          | 680                                  |
| 280 M                                                                                      | 1475        | 191          | 1237         | 335                  | 265                  | 193                  | 0.89           | 2380              | 1.8               | 1PC1341-2DB79-0                                          | 750                                  |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>F<br>G                          |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 4<br>5<br>6                          |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | Order code                           |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4F                                  |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                         | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx. (without brake) |
|------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|--------------|-------------------|-------------------|----------------------------------------------------------|---------------------------------|
| FS                                 | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | cos φ        |                   | $J$               |                                                          |                                 |
|                                    | rpm         | kW           | Nm           | A                    | A                    | A                    |              | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                              |
| <b>4-pole, 1500 rpm</b>            |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| <b>Intermittent duty S3 – 40 %</b> |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| <b>132 S</b>                       | 1445        | 7.5          | 50           | 15.5                 | 12.4                 | 9                    | 0.84         | 101               | 0.022             | <b>1PC1341-1CB09-0</b> ■ ■ ■                             | 61                              |
| <b>132 M</b>                       | 1440        | 10           | 66           | 19.9                 | 15.9                 | 11.5                 | 0.85         | 147               | 0.028             | <b>1PC1341-1CB29-0</b> ■ ■ ■                             | 75                              |
| <b>160 M</b>                       | 1460        | 13.7         | 90           | 27                   | 21.5                 | 15.6                 | 0.84         | 213               | 0.055             | <b>1PC1341-1DB29-0</b> ■ ■ ■                             | 96                              |
| <b>160 L</b>                       | 1465        | 18.7         | 122          | 36                   | 29                   | 21                   | 0.83         | 301               | 0.071             | <b>1PC1341-1DB49-0</b> ■ ■ ■                             | 104                             |
| <b>180 M</b>                       | 1450        | 23.1         | 152          | 43.5                 | 35                   | 25                   | 0.86         | 411               | 0.12              | <b>1PC1341-1EB29-0</b> ■ ■ ■                             | 160                             |
| <b>180 L</b>                       | 1455        | 27.5         | 180          | 52                   | 41.5                 | 30                   | 0.85         | 501               | 0.13              | <b>1PC1341-1EB49-0</b> ■ ■ ■                             | 170                             |
| <b>180 L</b>                       | 1450        | 37.4         | 246          | 72                   | 58                   | 41.5                 | 0.83         | 647               | 0.16              | <b>1PC1341-1EB69-0</b> ■ ■ ■                             | 185                             |
| <b>200 L</b>                       | 1460        | 37.9         | 248          | 71                   | 57                   | 41                   | 0.85         | 605               | 0.2               | <b>1PC1341-2AB59-0</b> ■ ■ ■                             | 230                             |
| <b>200 L</b>                       | 1458        | 46.8         | 307          | 87                   | 70                   | 50                   | 0.85         | 720               | 0.25              | <b>1PC1341-2AB69-0</b> ■ ■ ■                             | 240                             |
| <b>200 L</b>                       | 1465        | 56.9         | 290          | 109                  | 87                   | 63                   | 0.81         | 1044              | 0.28              | <b>1PC1341-2AB79-0</b> ■ ■ ■                             | 260                             |
| <b>225 S</b>                       | 1465        | 46           | 300          | 82                   | 65                   | 47.5                 | 0.89         | 690               | 0.42              | <b>1PC1341-2BB09-0</b> ■ ■ ■                             | 280                             |
| <b>225 M</b>                       | 1465        | 56           | 365          | 100                  | 80                   | 58                   | 0.88         | 900               | 0.46              | <b>1PC1341-2BB29-0</b> ■ ■ ■                             | 305                             |
| <b>225 M</b>                       | 1470        | 68           | 442          | 125                  | 100                  | 72                   | 0.85         | 960               | 0.47              | <b>1PC1341-2BB69-0</b> ■ ■ ■                             | 320                             |
| <b>250 M</b>                       | 1475        | 68           | 440          | 125                  | 100                  | 72                   | 0.85         | 1060              | 0.75              | <b>1PC1341-2CB29-0</b> ■ ■ ■                             | 385                             |
| <b>250 M</b>                       | 1475        | 93           | 602          | 167                  | 134                  | 97                   | 0.86         | 1350              | 0.85              | <b>1PC1341-2CB69-0</b> ■ ■ ■                             | 440                             |
| <b>250 M</b>                       | 1478        | 112          | 724          | 205                  | 164                  | 119                  | 0.84         | 1960              | 1.2               | <b>1PC1341-2CB79-0</b> ■ ■ ■                             | 480                             |
| <b>280 S</b>                       | 1480        | 93           | 600          | 163                  | 130                  | 94                   | 0.88         | 1440              | 1.3               | <b>1PC1341-2DB09-0</b> ■ ■ ■                             | 550                             |
| <b>280 M</b>                       | 1480        | 112          | 723          | 198                  | 158                  | 115                  | 0.87         | 1790              | 1.4               | <b>1PC1341-2DB29-0</b> ■ ■ ■                             | 570                             |
| <b>280 M</b>                       | 1480        | 137          | 884          | 240                  | 191                  | 138                  | 0.88         | 2120              | 1.7               | <b>1PC1341-2DB69-0</b> ■ ■ ■                             | 680                             |
| <b>280 M</b>                       | 1478        | 165          | 1066         | 285                  | 230                  | 166                  | 0.89         | 2380              | 1.8               | <b>1PC1341-2DB79-0</b> ■ ■ ■                             | 750                             |

## Type of construction

IMB3, IM1001 horizontal foot mounted

IMB5, IM3001 horizontal flange mounted

IMV1, IM3011 vertical flange mounted

Further types of construction, code numbers, order codes and descriptions, see page 2/37.

## Motor protection

Without winding protection

3 x PTC for tripping, 2 terminals

6 x PTC for tripping and warning, 4 terminals

1 x KTY84, 2 terminals

2 x KTY84, 4 terminals

3 x Pt100, 6 terminals

1 x Pt1000, 2 terminals

2 x Pt1000, 4 terminals

Further motor protection, code numbers, order codes and descriptions, see page 2/38.

## Terminal box position

Terminal box at top

Terminal box at right side

Terminal box at top left side

Further terminal box positions, code numbers, order codes and descriptions, see page 2/39.

## Winding

400 VΔ, 50 Hz

460 VΔ, 50 Hz

500 VΔ, 50 Hz

690 VΔ, 50 Hz

Further voltages, code numbers, order codes and descriptions, see page 2/36.

A  
F  
GA  
B  
C  
F  
G  
H  
K  
L4  
5  
6

## Order code

M4B

M4C

M4D

M4F

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

Innomotics DP – 1PC1341: Self-/Forced-ventilated (IC411/IC416)

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                         | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx. (without brake) |
|------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|---------------------------------|
| FS                                 | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                 |
|                                    | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                              |
| <b>4-pole, 1500 rpm</b>            |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| <b>Intermittent duty S3 – 60 %</b> |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| <b>132 S</b>                       | 1455        | 6.5          | 43           | 13.5                 | 10.8                 | 7.8                  | 0.83           | 101               | 0.022             | <b>1PC1341-1CB09-0</b>                                   | 61                              |
| <b>132 M</b>                       | 1450        | 8.8          | 58           | 17.5                 | 14                   | 10.1                 | 0.84           | 147               | 0.028             | <b>1PC1341-1CB29-0</b>                                   | 75                              |
| <b>160 M</b>                       | 1465        | 12.3         | 80           | 24.5                 | 19.6                 | 14.1                 | 0.83           | 213               | 0.055             | <b>1PC1341-1DB29-0</b>                                   | 96                              |
| <b>160 L</b>                       | 1470        | 16.8         | 109          | 32.5                 | 26                   | 18.8                 | 0.82           | 301               | 0.071             | <b>1PC1341-1DB49-0</b>                                   | 104                             |
| <b>180 M</b>                       | 1458        | 20.6         | 135          | 38.5                 | 31                   | 22.5                 | 0.85           | 411               | 0.12              | <b>1PC1341-1EB29-0</b>                                   | 160                             |
| <b>180 L</b>                       | 1460        | 24.6         | 161          | 46.5                 | 37                   | 27                   | 0.85           | 501               | 0.13              | <b>1PC1341-1EB49-0</b>                                   | 170                             |
| <b>180 L</b>                       | 1455        | 33.5         | 220          | 64                   | 51                   | 37                   | 0.82           | 647               | 0.16              | <b>1PC1341-1EB69-0</b>                                   | 185                             |
| <b>200 L</b>                       | 1465        | 33.7         | 220          | 63                   | 50                   | 36.5                 | 0.84           | 605               | 0.2               | <b>1PC1341-2AB59-0</b>                                   | 230                             |
| <b>200 L</b>                       | 1462        | 41.6         | 272          | 77                   | 62                   | 44.5                 | 0.85           | 720               | 0.25              | <b>1PC1341-2AB69-0</b>                                   | 240                             |
| <b>200 L</b>                       | 1470        | 50.6         | 290          | 98                   | 78                   | 57                   | 0.79           | 1044              | 0.28              | <b>1PC1341-2AB79-0</b>                                   | 260                             |
| <b>225 S</b>                       | 1470        | 40           | 260          | 71                   | 57                   | 41.5                 | 0.88           | 690               | 0.42              | <b>1PC1341-2BB09-0</b>                                   | 280                             |
| <b>225 M</b>                       | 1470        | 49           | 318          | 87                   | 70                   | 50                   | 0.88           | 900               | 0.46              | <b>1PC1341-2BB29-0</b>                                   | 305                             |
| <b>225 M</b>                       | 1475        | 60           | 388          | 111                  | 89                   | 64                   | 0.84           | 960               | 0.47              | <b>1PC1341-2BB69-0</b>                                   | 320                             |
| <b>250 M</b>                       | 1478        | 60           | 388          | 109                  | 88                   | 63                   | 0.85           | 1060              | 0.75              | <b>1PC1341-2CB29-0</b>                                   | 385                             |
| <b>250 M</b>                       | 1478        | 82           | 530          | 147                  | 118                  | 85                   | 0.86           | 1350              | 0.85              | <b>1PC1341-2CB69-0</b>                                   | 440                             |
| <b>250 M</b>                       | 1482        | 99           | 638          | 181                  | 144                  | 105                  | 0.84           | 1960              | 1.2               | <b>1PC1341-2CB79-0</b>                                   | 480                             |
| <b>280 S</b>                       | 1482        | 82           | 528          | 143                  | 114                  | 83                   | 0.88           | 1440              | 1.3               | <b>1PC1341-2DB09-0</b>                                   | 550                             |
| <b>280 M</b>                       | 1482        | 99           | 638          | 176                  | 141                  | 102                  | 0.86           | 1790              | 1.4               | <b>1PC1341-2DB29-0</b>                                   | 570                             |
| <b>280 M</b>                       | 1482        | 121          | 780          | 210                  | 170                  | 123                  | 0.87           | 2120              | 1.7               | <b>1PC1341-2DB69-0</b>                                   | 680                             |
| <b>280 M</b>                       | 1480        | 145          | 936          | 250                  | 200                  | 146                  | 0.88           | 2380              | 1.8               | <b>1PC1341-2DB79-0</b>                                   | 750                             |

## Type of construction

IMB3, IM1001 horizontal foot mounted

IMB5, IM3001 horizontal flange mounted

IMV1, IM3011 vertical flange mounted

Further types of construction, code numbers, order codes and descriptions, see page 2/37.

## Motor protection

Without winding protection

3 x PTC for tripping, 2 terminals

6 x PTC for tripping and warning, 4 terminals

1 x KTY84, 2 terminals

2 x KTY84, 4 terminals

3 x Pt100, 6 terminals

1 x Pt1000, 2 terminals

2 x Pt1000, 4 terminals

Further motor protection, code numbers, order codes and descriptions, see page 2/38.

## Terminal box position

Terminal box at top

Terminal box at right side

Terminal box at top left side

Further terminal box positions, code numbers, order codes and descriptions, see page 2/39.

## Winding

400 VΔ, 50 Hz

460 VΔ, 50 Hz

500 VΔ, 50 Hz

690 VΔ, 50 Hz

Further voltages, code numbers, order codes and descriptions, see page 2/36.

A  
F  
GA  
B  
C  
F  
G  
H  
K  
L4  
5  
6

## Order code

M4B

M4C

M4D

M4F

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Efficiency | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake)   |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|------------|-------------------|-------------------|----------------------------------------------------------|--------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ | $\eta$     |                   | $J$               |                                                          |                                      |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | %          | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                   |
| 4-pole, 1500 rpm                                                                           |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Intermittent duty S9: Duty with non-periodic variation in load and speed                   |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 132 S                                                                                      | 1465        | 5.5          | 36           | 11.3                 | 9.1                  | 6.6                  | 0.80           | 87.7       | 101               | 0.022             | 1PC1341-1CB09-0                                          | 61                                   |
| 132 M                                                                                      | 1460        | 7.5          | 49           | 14.9                 | 11.9                 | 8.6                  | 0.82           | 88.7       | 147               | 0.028             | 1PC1341-1CB29-0                                          | 75                                   |
| 160 M                                                                                      | 1470        | 11.0         | 71           | 21.5                 | 17.2                 | 12.5                 | 0.82           | 89.8       | 213               | 0.055             | 1PC1341-1DB29-0                                          | 96                                   |
| 160 L                                                                                      | 1475        | 15.0         | 97           | 29.5                 | 23.5                 | 17.1                 | 0.81           | 90.6       | 301               | 0.071             | 1PC1341-1DB49-0                                          | 104                                  |
| 180 M                                                                                      | 1465        | 18.5         | 121          | 35.0                 | 28.0                 | 20.0                 | 0.84           | 91.2       | 411               | 0.12              | 1PC1341-1EB29-0                                          | 160                                  |
| 180 L                                                                                      | 1465        | 22.0         | 143          | 41.5                 | 33.0                 | 24.0                 | 0.84           | 91.6       | 501               | 0.13              | 1PC1341-1EB49-0                                          | 170                                  |
| 180 L                                                                                      | 1465        | 30.0         | 196          | 58.0                 | 46.5                 | 33.5                 | 0.81           | 92.3       | 647               | 0.16              | 1PC1341-1EB69-0                                          | 185                                  |
| 200 L                                                                                      | 1470        | 30.0         | 195          | 56.0                 | 44.5                 | 32.5                 | 0.84           | 92.3       | 605               | 0.2               | 1PC1341-2AB59-0                                          | 230                                  |
| 200 L                                                                                      | 1470        | 37.0         | 240          | 69.0                 | 55.0                 | 40.0                 | 0.84           | 92.7       | 720               | 0.25              | 1PC1341-2AB69-0                                          | 240                                  |
| 200 L                                                                                      | 1472        | 45.0         | 290          | 89.0                 | 72.0                 | 52.0                 | 0.78           | 93.1       | 1044              | 0.28              | 1PC1341-2AB79-0                                          | 260                                  |
| 225 S                                                                                      | 1470        | 37.0         | 240          | 65.0                 | 52.0                 | 38.0                 | 0.88           | 92.7       | 690               | 0.42              | 1PC1341-2BB09-0                                          | 280                                  |
| 225 M                                                                                      | 1475        | 45.0         | 291          | 80.0                 | 64.0                 | 46.5                 | 0.87           | 93.1       | 900               | 0.46              | 1PC1341-2BB29-0                                          | 305                                  |
| 225 M                                                                                      | 1475        | 55.0         | 356          | 101.0                | 81.0                 | 59.0                 | 0.84           | 93.5       | 960               | 0.47              | 1PC1341-2BB69-0                                          | 320                                  |
| 250 M                                                                                      | 1480        | 55.0         | 355          | 100.0                | 80.0                 | 58.0                 | 0.85           | 93.5       | 1060              | 0.75              | 1PC1341-2CB29-0                                          | 385                                  |
| 250 M                                                                                      | 1480        | 75.0         | 484          | 134.0                | 107.0                | 78.0                 | 0.86           | 94.0       | 1350              | 0.85              | 1PC1341-2CB69-0                                          | 440                                  |
| 250 M                                                                                      | 1485        | 90.0         | 579          | 166.0                | 133.0                | 96.0                 | 0.83           | 94.2       | 1960              | 1.2               | 1PC1341-2CB79-0                                          | 480                                  |
| 280 S                                                                                      | 1485        | 75.0         | 482          | 132.0                | 106.0                | 77.0                 | 0.87           | 94.0       | 1440              | 1.3               | 1PC1341-2DB09-0                                          | 550                                  |
| 280 M                                                                                      | 1486        | 90.0         | 578          | 159.0                | 127.0                | 92.0                 | 0.87           | 94.2       | 1790              | 1.4               | 1PC1341-2DB29-0                                          | 570                                  |
| 280 M                                                                                      | 1485        | 110.0        | 707          | 193.0                | 154.0                | 112.0                | 0.87           | 94.5       | 2120              | 1.7               | 1PC1341-2DB69-0                                          | 680                                  |
| 280 M                                                                                      | 1482        | 132.0        | 851          | 230.0                | 183.0                | 133.0                | 0.88           | 94.7       | 2380              | 1.8               | 1PC1341-2DB79-0                                          | 750                                  |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | A<br>F<br>G                          |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | 4<br>5<br>6                          |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | Order code                           |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | M4B                                  |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | M4C                                  |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | M4D                                  |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | M4F                                  |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

Innomotics DP – 1PC1341: Self-/Forced-ventilated (IC411/IC416)

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake) |            |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|--------------|-------------------|-------------------|----------------------------------------------------------|------------------------------------|------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | cos φ        |                   | J                 |                                                          |                                    |            |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |              | Nm                | kgm²              | Article No.                                              | kg                                 |            |
| 6-pole, 1000 rpm                                                                           |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    |            |
| Intermittent duty S3 – 15 %                                                                |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    |            |
| 132 S                                                                                      | 955         | 4.1          | 29.5         | 9.4                  | 7.5                  | 5.4                  | 0.75         | 74                | 0.024             | 1PC1341-1CC09-0                                          | 56                                 |            |
| 132 M                                                                                      | 958         | 5.1          | 39.5         | 11.5                 | 9.2                  | 6.7                  | 0.78         | 91                | 0.029             | 1PC1341-1CC29-0                                          | 61                                 |            |
| 132 M                                                                                      | 955         | 7.9          | 79           | 17.9                 | 14.3                 | 10.5                 | 0.78         | 140               | 0.037             | 1PC1341-1CC39-0                                          | 70                                 |            |
| 160 M                                                                                      | 970         | 9.1          | 90           | 20.5                 | 16.4                 | 11.9                 | 0.75         | 161               | 0.075             | 1PC1341-1DC29-0                                          | 106                                |            |
| 160 L                                                                                      | 962         | 13.4         | 133          | 28                   | 22.5                 | 16.2                 | 0.77         | 237               | 0.098             | 1PC1341-1DC49-0                                          | 122                                |            |
| 180 L                                                                                      | 950         | 25.8         | 259          | 51                   | 41                   | 29.5                 | 0.82         | 455               | 0.17              | 1PC1341-1EC49-0                                          | 155                                |            |
| 180 L                                                                                      | 950         | 29.8         | 300          | 60                   | 48                   | 35                   | 0.82         | 525               | 0.19              | 1PC1341-1EC69-0                                          | 165                                |            |
| 180 L                                                                                      | 948         | 39.7         | 400          | 82                   | 66                   | 47.5                 | 0.8          | 710               | 0.25              | 1PC1341-1EC79-0                                          | 185                                |            |
| 200 L                                                                                      | 962         | 26.7         | 265          | 52                   | 41.5                 | 30                   | 0.83         | 470               | 0.25              | 1PC1341-2AC49-0                                          | 200                                |            |
| 200 L                                                                                      | 965         | 31.7         | 314          | 61                   | 49                   | 35.5                 | 0.84         | 559               | 0.3               | 1PC1341-2AC59-0                                          | 220                                |            |
| 200 L                                                                                      | 960         | 45           | 295          | 91                   | 73                   | 53                   | 0.8          | 797               | 0.38              | 1PC1341-2AC69-0                                          | 240                                |            |
| 200 L                                                                                      | 958         | 55.3         | 360          | 107                  | 87                   | 62                   | 0.8          | 972               | 0.43              | 1PC1341-2AC79-0                                          | 264                                |            |
| 225 M                                                                                      | 955         | 54           | 540          | 107                  | 85                   | 62                   | 0.84         | 780               | 0.58              | 1PC1341-2BC29-0                                          | 300                                |            |
| 225 M                                                                                      | 960         | 66           | 657          | 127                  | 101                  | 73                   | 0.85         | 1040              | 0.67              | 1PC1341-2BC69-0                                          | 325                                |            |
| 225 M                                                                                      | 965         | 81           | 802          | 155                  | 124                  | 90                   | 0.85         | 1310              | 0.79              | 1PC1341-2BC79-0                                          | 395                                |            |
| 250 M                                                                                      | 965         | 66           | 653          | 131                  | 105                  | 76                   | 0.83         | 900               | 0.86              | 1PC1341-2CC29-0                                          | 370                                |            |
| 250 M                                                                                      | 965         | 81           | 802          | 153                  | 123                  | 89                   | 0.86         | 1170              | 1.0               | 1PC1341-2CC69-0                                          | 410                                |            |
| 250 M                                                                                      | 970         | 99           | 975          | 187                  | 149                  | 108                  | 0.86         | 1590              | 1.2               | 1PC1341-2CC79-0                                          | 480                                |            |
| 280 S                                                                                      | 970         | 81           | 797          | 158                  | 126                  | 91                   | 0.84         | 1130              | 1.1               | 1PC1341-2DC09-0                                          | 460                                |            |
| 280 M                                                                                      | 970         | 99           | 975          | 190                  | 152                  | 110                  | 0.85         | 1380              | 1.4               | 1PC1341-2DC29-0                                          | 510                                |            |
| 280 M                                                                                      | 970         | 135          | 1329         | 250                  | 200                  | 145                  | 0.86         | 2100              | 1.8               | 1PC1341-2DC69-0                                          | 570                                |            |
| 280 M                                                                                      | 975         | 162          | 1587         | 315                  | 250                  | 181                  | 0.84         | 2870              | 1.9               | 1PC1341-2DC79-0                                          | 630                                |            |
| Type of construction                                                                       |             |              |              |                      |                      |                      |              |                   |                   |                                                          | A                                  |            |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |              |                   |                   |                                                          | F                                  |            |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          | G                                  |            |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    |            |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    |            |
| Motor protection                                                                           |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    |            |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    |            |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | A          |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | B          |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | C          |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | F          |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | G          |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | H          |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | K          |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | L          |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    |            |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | 4          |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | 5          |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | 6          |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    |            |
| Winding                                                                                    |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | Order code |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | M4B        |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | M4C        |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | M4D        |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    | M4F        |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                    |            |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake) |            |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|------------------------------------|------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                    |            |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                 |            |
| 6-pole, 1000 rpm                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |            |
| Intermittent duty S3 – 25 %                                                                |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |            |
| 132 S                                                                                      | 955         | 4.1          | 29.5         | 9.4                  | 7.5                  | 5.4                  | 0.75           | 74                | 0.024             | 1PC1341-1CC09-0                                          | 56                                 |            |
| 132 M                                                                                      | 958         | 5.1          | 39.5         | 11.5                 | 9.2                  | 6.7                  | 0.78           | 91                | 0.029             | 1PC1341-1CC29-0                                          | 61                                 |            |
| 132 M                                                                                      | 955         | 7.9          | 79           | 17.9                 | 14.3                 | 10.5                 | 0.78           | 140               | 0.037             | 1PC1341-1CC39-0                                          | 70                                 |            |
| 160 M                                                                                      | 970         | 9.1          | 90           | 20.5                 | 16.4                 | 11.9                 | 0.75           | 161               | 0.075             | 1PC1341-1DC29-0                                          | 106                                |            |
| 160 L                                                                                      | 962         | 13.4         | 133          | 28                   | 22.5                 | 16.2                 | 0.77           | 237               | 0.098             | 1PC1341-1DC49-0                                          | 122                                |            |
| 180 L                                                                                      | 955         | 22.2         | 220          | 45                   | 36                   | 26                   | 0.81           | 455               | 0.17              | 1PC1341-1EC49-0                                          | 155                                |            |
| 180 L                                                                                      | 955         | 27.4         | 274          | 56                   | 45                   | 32.5                 | 0.81           | 525               | 0.19              | 1PC1341-1EC69-0                                          | 165                                |            |
| 180 L                                                                                      | 958         | 32.6         | 325          | 67                   | 54                   | 38.5                 | 0.79           | 710               | 0.225             | 1PC1341-1EC79-0                                          | 185                                |            |
| 200 L                                                                                      | 962         | 26.7         | 265          | 52                   | 41.5                 | 30                   | 0.83           | 470               | 0.25              | 1PC1341-2AC49-0                                          | 200                                |            |
| 200 L                                                                                      | 965         | 31.7         | 314          | 61                   | 49                   | 35.5                 | 0.84           | 559               | 0.3               | 1PC1341-2AC59-0                                          | 220                                |            |
| 200 L                                                                                      | 960         | 44.5         | 295          | 90                   | 72                   | 52                   | 0.8            | 797               | 0.38              | 1PC1341-2AC69-0                                          | 240                                |            |
| 200 L                                                                                      | 958         | 52.6         | 360          | 106                  | 85                   | 61                   | 0.80           | 972               | 0.43              | 1PC1341-2AC79-0                                          | 264                                |            |
| 225 M                                                                                      | 970         | 43           | 423          | 82                   | 66                   | 48                   | 0.84           | 780               | 0.58              | 1PC1341-2BC29-0                                          | 300                                |            |
| 225 M                                                                                      | 970         | 53           | 522          | 99                   | 80                   | 58                   | 0.85           | 1040              | 0.67              | 1PC1341-2BC69-0                                          | 325                                |            |
| 225 M                                                                                      | 970         | 65           | 640          | 122                  | 97                   | 71                   | 0.85           | 1310              | 0.79              | 1PC1341-2BC79-0                                          | 395                                |            |
| 250 M                                                                                      | 975         | 53           | 519          | 101                  | 81                   | 59                   | 0.84           | 900               | 0.86              | 1PC1341-2CC29-0                                          | 370                                |            |
| 250 M                                                                                      | 975         | 65           | 637          | 120                  | 96                   | 70                   | 0.86           | 1170              | 1.0               | 1PC1341-2CC69-0                                          | 410                                |            |
| 250 M                                                                                      | 975         | 79           | 774          | 147                  | 118                  | 85                   | 0.85           | 1590              | 1.2               | 1PC1341-2CC79-0                                          | 480                                |            |
| 280 S                                                                                      | 978         | 65           | 635          | 122                  | 98                   | 71                   | 0.85           | 1130              | 1.1               | 1PC1341-2DC09-0                                          | 460                                |            |
| 280 M                                                                                      | 978         | 79           | 771          | 146                  | 117                  | 84                   | 0.86           | 1380              | 1.4               | 1PC1341-2DC29-0                                          | 510                                |            |
| 280 M                                                                                      | 978         | 108          | 1055         | 197                  | 158                  | 114                  | 0.86           | 2100              | 1.8               | 1PC1341-2DC69-0                                          | 570                                |            |
| 280 M                                                                                      | 980         | 130          | 1267         | 250                  | 200                  | 145                  | 0.82           | 2870              | 1.9               | 1PC1341-2DC79-0                                          | 630                                |            |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>F<br>G                        |            |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |            |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |            |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |            |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |            |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |            |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |            |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A                                  |            |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | B                                  |            |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          | C                                  |            |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          | F                                  |            |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          | G                                  |            |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | H                                  |            |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | K                                  |            |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | L                                  |            |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |            |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 4                                  |            |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 5                                  |            |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 6                                  |            |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |            |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    | Order code |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4B                                |            |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4C                                |            |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4D                                |            |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4F                                |            |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

Innomotics DP – 1PC1341: Self-/Forced-ventilated (IC411/IC416)

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx. (without brake) |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|---------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                 |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                              |
| <b>6-pole, 1000 rpm</b>                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| <b>Intermittent duty S3 – 40 %</b>                                                         |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| <b>132 S</b>                                                                               | 955         | 4.1          | 29.5         | 9.4                  | 7.5                  | 5.4                  | 0.75           | 74                | 0.024             | <b>1PC1341-1CC09-0</b> ■ ■ ■                             | 56                              |
| <b>132 M</b>                                                                               | 958         | 5.1          | 39.5         | 11.5                 | 9.2                  | 6.7                  | 0.78           | 91                | 0.029             | <b>1PC1341-1CC29-0</b> ■ ■ ■                             | 61                              |
| <b>132 M</b>                                                                               | 960         | 7            | 70           | 15.7                 | 12.6                 | 9.1                  | 0.77           | 140               | 0.037             | <b>1PC1341-1CC39-0</b> ■ ■ ■                             | 70                              |
| <b>160 M</b>                                                                               | 970         | 9.1          | 90           | 20.5                 | 16.4                 | 11.9                 | 0.75           | 161               | 0.075             | <b>1PC1341-1DC29-0</b> ■ ■ ■                             | 106                             |
| <b>160 L</b>                                                                               | 962         | 13.4         | 133          | 28                   | 22.5                 | 16.2                 | 0.77           | 237               | 0.098             | <b>1PC1341-1DC49-0</b> ■ ■ ■                             | 122                             |
| <b>180 L</b>                                                                               | 965         | 19           | 188          | 38.5                 | 31                   | 22                   | 0.8            | 455               | 0.17              | <b>1PC1341-1EC49-0</b> ■ ■ ■                             | 155                             |
| <b>180 L</b>                                                                               | 965         | 23.4         | 232          | 47.5                 | 38                   | 27.5                 | 0.8            | 525               | 0.19              | <b>1PC1341-1EC69-0</b> ■ ■ ■                             | 165                             |
| <b>180 L</b>                                                                               | 965         | 27.8         | 275          | 57                   | 45.5                 | 33                   | 0.78           | 710               | 0.25              | <b>1PC1341-1EC79-0</b> ■ ■ ■                             | 185                             |
| <b>200 L</b>                                                                               | 968         | 23.4         | 231          | 45.5                 | 36.5                 | 26.5                 | 0.82           | 470               | 0.25              | <b>1PC1341-2AC49-0</b> ■ ■ ■                             | 200                             |
| <b>200 L</b>                                                                               | 970         | 27.8         | 274          | 54                   | 43                   | 31.5                 | 0.83           | 559               | 0.3               | <b>1PC1341-2AC59-0</b> ■ ■ ■                             | 220                             |
| <b>200 L</b>                                                                               | 965         | 37.9         | 295          | 76                   | 61                   | 44                   | 0.79           | 797               | 0.38              | <b>1PC1341-2AC69-0</b> ■ ■ ■                             | 240                             |
| <b>200 L</b>                                                                               | 965         | 44.9         | 360          | 90                   | 72                   | 52                   | 0.79           | 972               | 0.43              | <b>1PC1341-2AC79-0</b> ■ ■ ■                             | 264                             |
| <b>225 M</b>                                                                               | 975         | 37           | 362          | 70                   | 56                   | 40.5                 | 0.84           | 780               | 0.58              | <b>1PC1341-2BC29-0</b> ■ ■ ■                             | 300                             |
| <b>225 M</b>                                                                               | 975         | 46           | 451          | 87                   | 69                   | 50                   | 0.84           | 1040              | 0.67              | <b>1PC1341-2BC69-0</b> ■ ■ ■                             | 325                             |
| <b>225 M</b>                                                                               | 975         | 56           | 548          | 106                  | 85                   | 62                   | 0.83           | 1310              | 0.79              | <b>1PC1341-2BC79-0</b> ■ ■ ■                             | 395                             |
| <b>250 M</b>                                                                               | 978         | 46           | 449          | 88                   | 70                   | 51                   | 0.83           | 900               | 0.86              | <b>1PC1341-2CC29-0</b> ■ ■ ■                             | 370                             |
| <b>250 M</b>                                                                               | 978         | 56           | 547          | 104                  | 83                   | 60                   | 0.85           | 1170              | 1.0               | <b>1PC1341-2CC69-0</b> ■ ■ ■                             | 410                             |
| <b>250 M</b>                                                                               | 980         | 68           | 663          | 126                  | 100                  | 73                   | 0.85           | 1590              | 1.2               | <b>1PC1341-2CC79-0</b> ■ ■ ■                             | 480                             |
| <b>280 S</b>                                                                               | 980         | 56           | 546          | 104                  | 83                   | 60                   | 0.85           | 1130              | 1.1               | <b>1PC1341-2DC09-0</b> ■ ■ ■                             | 460                             |
| <b>280 M</b>                                                                               | 980         | 68           | 663          | 124                  | 99                   | 72                   | 0.86           | 1380              | 1.4               | <b>1PC1341-2DC29-0</b> ■ ■ ■                             | 510                             |
| <b>280 M</b>                                                                               | 982         | 93           | 904          | 168                  | 134                  | 97                   | 0.86           | 2100              | 1.8               | <b>1PC1341-2DC69-0</b> ■ ■ ■                             | 570                             |
| <b>280 M</b>                                                                               | 982         | 112          | 1089         | 215                  | 170                  | 123                  | 0.82           | 2870              | 1.9               | <b>1PC1341-2DC79-0</b> ■ ■ ■                             | 630                             |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A                               |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          | F                               |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | G                               |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A                               |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          | B                               |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | C                               |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          | F                               |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          | G                               |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          | H                               |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | K                               |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | L                               |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 4                               |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 5                               |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 6                               |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4B                             |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4C                             |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4D                             |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4F                             |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake)   |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|--------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                      |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm²              | Article No.                                              | kg                                   |
| 6-pole, 1000 rpm                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Intermittent duty S3 – 60 %                                                                |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 132 S                                                                                      | 958         | 3.9          | 29.5         | 8.9                  | 7.1                  | 5.2                  | 0.74           | 74                | 0.024             | 1PC1341-1CC09-0                                          | 56                                   |
| 132 M                                                                                      | 962         | 4.7          | 39.5         | 10.7                 | 8.6                  | 6.2                  | 0.77           | 91                | 0.029             | 1PC1341-1CC29-0                                          | 61                                   |
| 132 M                                                                                      | 965         | 6.2          | 61           | 14                   | 11.2                 | 8.1                  | 0.75           | 140               | 0.037             | 1PC1341-1CC39-0                                          | 70                                   |
| 160 M                                                                                      | 972         | 8.4          | 83           | 18.7                 | 15                   | 10.8                 | 0.75           | 161               | 0.075             | 1PC1341-1DC29-0                                          | 106                                  |
| 160 L                                                                                      | 968         | 12.3         | 121          | 26.5                 | 21                   | 15.3                 | 0.76           | 237               | 0.098             | 1PC1341-1DC49-0                                          | 122                                  |
| 180 L                                                                                      | 970         | 16.9         | 166          | 34.5                 | 27.5                 | 19.9                 | 0.79           | 455               | 0.17              | 1PC1341-1EC49-0                                          | 155                                  |
| 180 L                                                                                      | 970         | 20.8         | 205          | 42.5                 | 34                   | 24.5                 | 0.78           | 525               | 0.19              | 1PC1341-1EC69-0                                          | 165                                  |
| 180 L                                                                                      | 970         | 24.7         | 243          | 52                   | 41.5                 | 30                   | 0.75           | 710               | 0.25              | 1PC1341-1EC79-0                                          | 185                                  |
| 200 L                                                                                      | 972         | 20.8         | 204          | 40.5                 | 32.5                 | 23                   | 0.82           | 470               | 0.25              | 1PC1341-2AC49-0                                          | 200                                  |
| 200 L                                                                                      | 972         | 24.7         | 243          | 48                   | 38.5                 | 28                   | 0.83           | 559               | 0.3               | 1PC1341-2AC59-0                                          | 220                                  |
| 200 L                                                                                      | 970         | 33.7         | 295          | 68                   | 54                   | 39.5                 | 0.78           | 797               | 0.38              | 1PC1341-2AC69-0                                          | 240                                  |
| 200 L                                                                                      | 970         | 39.9         | 360          | 81                   | 65                   | 47                   | 0.78           | 972               | 0.43              | 1PC1341-2AC79-0                                          | 264                                  |
| 225 M                                                                                      | 975         | 33           | 323          | 63                   | 50                   | 36.5                 | 0.83           | 780               | 0.58              | 1PC1341-2BC29-0                                          | 300                                  |
| 225 M                                                                                      | 975         | 40           | 392          | 77                   | 61                   | 44.5                 | 0.82           | 1040              | 0.67              | 1PC1341-2BC69-0                                          | 325                                  |
| 225 M                                                                                      | 978         | 49           | 478          | 94                   | 75                   | 54                   | 0.82           | 1310              | 0.79              | 1PC1341-2BC79-0                                          | 395                                  |
| 250 M                                                                                      | 980         | 40           | 390          | 76                   | 61                   | 44                   | 0.83           | 900               | 0.86              | 1PC1341-2CC29-0                                          | 370                                  |
| 250 M                                                                                      | 980         | 49           | 477          | 91                   | 73                   | 53                   | 0.84           | 1170              | 1.0               | 1PC1341-2CC69-0                                          | 410                                  |
| 250 M                                                                                      | 982         | 60           | 583          | 111                  | 89                   | 65                   | 0.84           | 1590              | 1.2               | 1PC1341-2CC79-0                                          | 480                                  |
| 280 S                                                                                      | 982         | 49           | 476          | 90                   | 72                   | 52                   | 0.85           | 1130              | 1.1               | 1PC1341-2DC09-0                                          | 460                                  |
| 280 M                                                                                      | 982         | 60           | 583          | 110                  | 88                   | 64                   | 0.85           | 1380              | 1.4               | 1PC1341-2DC29-0                                          | 510                                  |
| 280 M                                                                                      | 985         | 82           | 795          | 149                  | 119                  | 86                   | 0.85           | 2100              | 1.8               | 1PC1341-2DC69-0                                          | 570                                  |
| 280 M                                                                                      | 985         | 99           | 960          | 188                  | 150                  | 109                  | 0.81           | 2870              | 1.9               | 1PC1341-2DC79-0                                          | 630                                  |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>F<br>G                          |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 4<br>5<br>6                          |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | Order code                           |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

Innomotics DP – 1PC1341: Self-/Forced-ventilated (IC411/IC416)

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Efficiency | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx. (without brake)      |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|------------|-------------------|-------------------|----------------------------------------------------------|--------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ | $\eta$     |                   | $J$               |                                                          |                                      |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | %          | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                   |
| 6-pole, 1000 rpm                                                                           |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Intermittent duty S9: Duty with non-periodic variation in load and speed                   |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 132 S                                                                                      | 970         | 3.0          | 29.5         | 7.2                  | 5.8                  | 4.2                  | 0.72           | 83.3       | 74                | 0.024             | 1PC1341-1CC09-0                                          | 56                                   |
| 132 M                                                                                      | 970         | 4.0          | 39.5         | 9.1                  | 7.3                  | 5.3                  | 0.75           | 84.6       | 91                | 0.029             | 1PC1341-1CC29-0                                          | 61                                   |
| 132 M                                                                                      | 972         | 5.5          | 54           | 12.5                 | 10.0                 | 7.2                  | 0.74           | 86.0       | 140               | 0.037             | 1PC1341-1CC39-0                                          | 70                                   |
| 160 M                                                                                      | 975         | 7.5          | 73           | 16.8                 | 13.4                 | 9.7                  | 0.74           | 87.2       | 161               | 0.075             | 1PC1341-1DC29-0                                          | 106                                  |
| 160 L                                                                                      | 975         | 11.0         | 108          | 23.5                 | 18.8                 | 13.6                 | 0.76           | 88.7       | 237               | 0.098             | 1PC1341-1DC49-0                                          | 122                                  |
| 180 L                                                                                      | 975         | 15.0         | 147          | 31.0                 | 25.0                 | 17.9                 | 0.78           | 89.7       | 455               | 0.17              | 1PC1341-1EC49-0                                          | 155                                  |
| 180 L                                                                                      | 975         | 18.5         | 181          | 38.5                 | 30.5                 | 22.0                 | 0.77           | 90.4       | 525               | 0.19              | 1PC1341-1EC69-0                                          | 165                                  |
| 180 L                                                                                      | 975         | 22.0         | 215          | 47.0                 | 38.0                 | 27.5                 | 0.74           | 90.9       | 710               | 0.25              | 1PC1341-1EC79-0                                          | 185                                  |
| 200 L                                                                                      | 978         | 18.5         | 181          | 36.0                 | 29.0                 | 21.0                 | 0.82           | 90.4       | 470               | 0.25              | 1PC1341-2AC49-0                                          | 200                                  |
| 200 L                                                                                      | 978         | 22.0         | 215          | 42.5                 | 34.0                 | 24.5                 | 0.82           | 90.9       | 559               | 0.3               | 1PC1341-2AC59-0                                          | 220                                  |
| 200 L                                                                                      | 975         | 30.0         | 295          | 61.0                 | 49.0                 | 35.5                 | 0.77           | 91.7       | 797               | 0.38              | 1PC1341-2AC69-0                                          | 240                                  |
| 200 L                                                                                      | 975         | 37.0         | 360          | 75.0                 | 60.0                 | 43.5                 | 0.77           | 92.2       | 972               | 0.43              | 1PC1341-2AC79-0                                          | 264                                  |
| 225 M                                                                                      | 980         | 30.0         | 292          | 57.0                 | 45.5                 | 33.0                 | 0.83           | 91.7       | 780               | 0.58              | 1PC1341-2BC29-0                                          | 300                                  |
| 225 M                                                                                      | 978         | 37.0         | 361          | 70.0                 | 56.0                 | 40.5                 | 0.83           | 92.2       | 1040              | 0.67              | 1PC1341-2BC69-0                                          | 325                                  |
| 225 M                                                                                      | 978         | 45.0         | 439          | 87.0                 | 69.0                 | 50.0                 | 0.81           | 92.7       | 1310              | 0.79              | 1PC1341-2BC79-0                                          | 395                                  |
| 250 M                                                                                      | 982         | 37.0         | 360          | 70.0                 | 56.0                 | 40.5                 | 0.83           | 92.2       | 900               | 0.86              | 1PC1341-2CC29-0                                          | 370                                  |
| 250 M                                                                                      | 985         | 45.0         | 436          | 83.0                 | 67.0                 | 48.5                 | 0.84           | 92.7       | 1170              | 1.0               | 1PC1341-2CC69-0                                          | 410                                  |
| 250 M                                                                                      | 985         | 55.0         | 533          | 102.0                | 81.0                 | 59.0                 | 0.84           | 93.1       | 1590              | 1.2               | 1PC1341-2CC79-0                                          | 480                                  |
| 280 S                                                                                      | 985         | 45.0         | 436          | 83.0                 | 67.0                 | 48.5                 | 0.84           | 92.7       | 1130              | 1.1               | 1PC1341-2DC09-0                                          | 460                                  |
| 280 M                                                                                      | 985         | 55.0         | 533          | 99.0                 | 79.0                 | 57.0                 | 0.86           | 93.1       | 1380              | 1.4               | 1PC1341-2DC29-0                                          | 510                                  |
| 280 M                                                                                      | 986         | 75.0         | 726          | 136.0                | 109.0                | 79.0                 | 0.85           | 93.7       | 2100              | 1.8               | 1PC1341-2DC69-0                                          | 570                                  |
| 280 M                                                                                      | 988         | 90.0         | 870          | 171.0                | 136.0                | 99.0                 | 0.81           | 94.0       | 2870              | 1.9               | 1PC1341-2DC79-0                                          | 630                                  |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | A<br>F<br>G                          |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | 4<br>5<br>6                          |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | Order<br>code                        |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Efficiency | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake) |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|------------|-------------------|-------------------|----------------------------------------------------------|------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ | $\eta$     |                   | $J$               |                                                          |                                    |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | %          | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                 |
| 6-pole, 1000 rpm                                                                           |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Intermittent duty S3 – 15 %                                                                |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 315 L                                                                                      | 978         | 198          | 1933         | 355                  | 285                  | 355                  | 0.87           | –          | 3160              | 3.6               | 1PC1341-3AC49-0 ■■■                                      | 985                                |
| 315 L                                                                                      | 978         | 239          | 2334         | 430                  | 345                  | 430                  | 0.87           | –          | 4220              | 4.0               | 1PC1341-3AC59-0 ■■■                                      | 1035                               |
| 315 L                                                                                      | 978         | 209          | 2041         | 375                  | 300                  | 375                  | 0.87           | –          | 5450              | 4.6               | 1PC1341-3AC69-0 ■■■                                      | 1205                               |
| 315 L                                                                                      | 980         | 363          | 3537         | 650                  | 520                  | 650                  | 0.87           | –          | 6190              | 5.6               | 1PC1341-3AC79-0 ■■■                                      | 1460                               |
| Intermittent duty S3 – 25 %                                                                |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 315 L                                                                                      | 982         | 169          | 1643         | 300                  | 240                  | 175                  | 0.87           | –          | 3160              | 3.6               | 1PC1341-3AC49-0 ■■■                                      | 985                                |
| 315 L                                                                                      | 982         | 204          | 1984         | 365                  | 290                  | 210                  | 0.87           | –          | 4220              | 4.0               | 1PC1341-3AC59-0 ■■■                                      | 1035                               |
| 315 L                                                                                      | 982         | 248          | 2412         | 440                  | 350                  | 255                  | 0.87           | –          | 5450              | 4.6               | 1PC1341-3AC69-0 ■■■                                      | 1205                               |
| 315 L                                                                                      | 985         | 310          | 3005         | 550                  | 440                  | 320                  | 0.87           | –          | 6190              | 5.6               | 1PC1341-3AC79-0 ■■■                                      | 1460                               |
| Intermittent duty S3 – 40 %                                                                |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 315 L                                                                                      | 985         | 147          | 1425         | 265                  | 210                  | 153                  | 0.86           | –          | 3160              | 3.6               | 1PC1341-3AC49-0 ■■■                                      | 985                                |
| 315 L                                                                                      | 985         | 177          | 1716         | 315                  | 255                  | 183                  | 0.86           | –          | 4220              | 4.0               | 1PC1341-3AC59-0 ■■■                                      | 1035                               |
| 315 L                                                                                      | 985         | 215          | 2084         | 385                  | 305                  | 220                  | 0.86           | –          | 5450              | 4.6               | 1PC1341-3AC69-0 ■■■                                      | 1205                               |
| 315 L                                                                                      | 986         | 269          | 2605         | 480                  | 385                  | 280                  | 0.86           | –          | 6190              | 5.6               | 1PC1341-3AC79-0 ■■■                                      | 1460                               |
| Intermittent duty S3 – 60 %                                                                |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 315 L                                                                                      | 986         | 131          | 1269         | 235                  | 187                  | 136                  | 0.86           | –          | 3160              | 3.6               | 1PC1341-3AC49-0 ■■■                                      | 985                                |
| 315 L                                                                                      | 986         | 158          | 1530         | 280                  | 225                  | 163                  | 0.86           | –          | 4220              | 4.0               | 1PC1341-3AC59-0 ■■■                                      | 1035                               |
| 315 L                                                                                      | 986         | 191          | 1850         | 340                  | 270                  | 197                  | 0.86           | –          | 5450              | 4.6               | 1PC1341-3AC69-0 ■■■                                      | 1205                               |
| 315 L                                                                                      | 988         | 239          | 2310         | 425                  | 340                  | 245                  | 0.86           | –          | 6190              | 5.6               | 1PC1341-3AC79-0 ■■■                                      | 1460                               |
| Intermittent duty S9: Duty with non-periodic variation in load and speed                   |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 315 L                                                                                      | 988         | 117.0        | 1131         | 210.0                | –                    | –                    | 0.86           | 94.4       | 3160              | 3.6               | 1PC1341-3AC49-0 ■■■                                      | 985                                |
| 315 L                                                                                      | 988         | 141.0        | 1363         | 255.0                | –                    | –                    | 0.85           | 94.7       | 4220              | 4.0               | 1PC1341-3AC59-0 ■■■                                      | 1035                               |
| 315 L                                                                                      | 988         | 171.0        | 1653         | 300.0                | –                    | –                    | 0.86           | 95.0       | 5450              | 4.6               | 1PC1341-3AC69-0 ■■■                                      | 1205                               |
| 315 L                                                                                      | 990         | 214.0        | 2064         | 390.0                | –                    | –                    | 0.83           | 95.0       | 6190              | 5.6               | 1PC1341-3AC79-0 ■■■                                      | 1460                               |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |            |                   |                   | A<br>F<br>G                                              |                                    |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |            |                   |                   | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L                     |                                    |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |            |                   |                   | 4<br>5<br>6                                              |                                    |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   | Order<br>code<br>M4B<br>M4C<br>M4D<br>M4F                |                                    |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

## Innomotics DP – Crane duty motors

## Selection and ordering data

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Efficiency | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx. (without brake)      |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|------------|-------------------|-------------------|----------------------------------------------------------|--------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ | $\eta$     |                   | $J$               |                                                          |                                      |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | %          | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                   |
| 8-pole, 750 rpm                                                                            |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Intermittent duty S3 – 15 %                                                                |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 315 L                                                                                      | 728         | 171          | 2243         | 325                  | 260                  | 189                  | 0.84           | –          | 3400              | 3.1               | 1PC1341-3AD49-0 ■ ■ ■                                    | 905                                  |
| 315 L                                                                                      | 725         | 209          | 2753         | 395                  | 315                  | 230                  | 0.84           | –          | 4610              | 3.9               | 1PC1341-3AD59-0 ■ ■ ■                                    | 1025                                 |
| 315 L                                                                                      | 728         | 251          | 3292         | 490                  | 395                  | 285                  | 0.81           | –          | 5360              | 4.5               | 1PC1341-3AD69-0 ■ ■ ■                                    | 1115                                 |
| 315 L                                                                                      | 728         | 304          | 3988         | 570                  | 455                  | 330                  | 0.84           | –          | 5790              | 5.6               | 1PC1341-3AD79-0 ■ ■ ■                                    | 1460                                 |
| Intermittent duty S3 – 25 %                                                                |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 315 L                                                                                      | 730         | 146          | 1910         | 280                  | 225                  | 162                  | 0.82           | –          | 3400              | 3.1               | 1PC1341-3AD49-0 ■ ■ ■                                    | 905                                  |
| 315 L                                                                                      | 728         | 178          | 2335         | 340                  | 270                  | 196                  | 0.83           | –          | 4610              | 3.9               | 1PC1341-3AD59-0 ■ ■ ■                                    | 1025                                 |
| 315 L                                                                                      | 732         | 215          | 2805         | 415                  | 335                  | 240                  | 0.81           | –          | 5360              | 4.5               | 1PC1341-3AD69-0 ■ ■ ■                                    | 1115                                 |
| 315 L                                                                                      | 732         | 259          | 3379         | 480                  | 385                  | 280                  | 0.84           | –          | 5790              | 5.6               | 1PC1341-3AD79-0 ■ ■ ■                                    | 1460                                 |
| Intermittent duty S3 – 40 %                                                                |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 315 L                                                                                      | 732         | 127          | 1657         | 240                  | 193                  | 140                  | 0.82           | –          | 3400              | 3.1               | 1PC1341-3AD49-0 ■ ■ ■                                    | 905                                  |
| 315 L                                                                                      | 732         | 155          | 2022         | 295                  | 235                  | 171                  | 0.82           | –          | 4610              | 3.9               | 1PC1341-3AD59-0 ■ ■ ■                                    | 1025                                 |
| 315 L                                                                                      | 735         | 186          | 2417         | 360                  | 290                  | 210                  | 0.8            | –          | 5360              | 4.5               | 1PC1341-3AD69-0 ■ ■ ■                                    | 1115                                 |
| 315 L                                                                                      | 735         | 225          | 2923         | 420                  | 335                  | 245                  | 0.83           | –          | 5790              | 5.6               | 1PC1341-3AD79-0 ■ ■ ■                                    | 1460                                 |
| Intermittent duty S3 – 60 %                                                                |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 315 L                                                                                      | 736         | 113          | 1466         | 215                  | 172                  | 125                  | 0.81           | –          | 3400              | 3.1               | 1PC1341-3AD49-0 ■ ■ ■                                    | 905                                  |
| 315 L                                                                                      | 735         | 139          | 1806         | 265                  | 215                  | 154                  | 0.81           | –          | 4610              | 3.9               | 1PC1341-3AD59-0 ■ ■ ■                                    | 1025                                 |
| 315 L                                                                                      | 736         | 166          | 2154         | 325                  | 260                  | 188                  | 0.79           | –          | 5360              | 4.5               | 1PC1341-3AD69-0 ■ ■ ■                                    | 1115                                 |
| 315 L                                                                                      | 740         | 202          | 2607         | 385                  | 305                  | 220                  | 0.81           | –          | 5790              | 5.6               | 1PC1341-3AD79-0 ■ ■ ■                                    | 1460                                 |
| Intermittent duty S9: Duty with non-periodic variation in load and speed                   |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 315 L                                                                                      | 736         | 101.0        | 1310         | 189.0                | –                    | –                    | 0.86           | 92.1       | 3400              | 3.1               | 1PC1341-3AD49-0 ■ ■ ■                                    | 905                                  |
| 315 L                                                                                      | 738         | 123.0        | 1592         | 230.0                | –                    | –                    | 0.85           | 92.5       | 4610              | 3.9               | 1PC1341-3AD59-0 ■ ■ ■                                    | 1025                                 |
| 315 L                                                                                      | 738         | 148.0        | 1915         | 280.0                | –                    | –                    | 0.86           | 92.8       | 5360              | 4.5               | 1PC1341-3AD69-0 ■ ■ ■                                    | 1115                                 |
| 315 L                                                                                      | 738         | 179.0        | 2316         | 335.0                | –                    | –                    | 0.83           | 93.0       | 5790              | 5.6               | 1PC1341-3AD79-0 ■ ■ ■                                    | 1460                                 |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | A<br>F<br>G                          |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | 4<br>5<br>6                          |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | Order code                           |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | M4B                                  |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | M4C                                  |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | M4D                                  |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | M4F                                  |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/24.

**Innomotics DP – Crane duty motors****Selection and ordering data****Product range shaft height 315, 69 Hz and 87 Hz**

|                                                 |                    |                | Intermittent duty<br>S9: Duty with non-<br>periodic variation<br>in load and speed |                                                        | Intermittent duty<br>S3 – 60 |                                                        | Intermittent duty<br>S3 – 40 |                                                        | Intermittent duty<br>S3 – 25 |                                                        |                       |
|-------------------------------------------------|--------------------|----------------|------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------|--------------------------------------------------------|------------------------------|--------------------------------------------------------|------------------------------|--------------------------------------------------------|-----------------------|
| Frame<br>size<br>FS                             | Number<br>of poles | Fre-<br>quency | Rated<br>output                                                                    | Rated<br>current<br><i>I</i> <sub>rated</sub><br>400 V | Rated<br>output              | Rated<br>current<br><i>I</i> <sub>rated</sub><br>400 V | Rated<br>output              | Rated<br>current<br><i>I</i> <sub>rated</sub><br>400 V | Rated<br>output              | Rated<br>current<br><i>I</i> <sub>rated</sub><br>400 V |                       |
|                                                 | –                  | Hz             | kW                                                                                 | A                                                      | kW                           | A                                                      | kW                           | A                                                      | kW                           | A                                                      | Article No.           |
| Product range shaft height 315, 69 Hz and 87 Hz |                    |                |                                                                                    |                                                        |                              |                                                        |                              |                                                        |                              |                                                        |                       |
| 315L                                            | 6                  | 69             | 150                                                                                | 268                                                    | 168                          | 298                                                    | 189                          | 335                                                    | 218                          | 388                                                    | 1PC1341-3AC49-0 + M3L |
| 315L                                            | 6                  | 69             | 180                                                                                | 316                                                    | 202                          | 353                                                    | 227                          | 396                                                    | 261                          | 455                                                    | 1PC1341-3AC59-0 + M3L |
| 315L                                            | 6                  | 69             | 219                                                                                | 388                                                    | 245                          | 424                                                    | 276                          | 477                                                    | 318                          | 554                                                    | 1PC1341-3AC69-0 + M3L |
| 315L                                            | 6                  | 69             | 274                                                                                | 476                                                    | 307                          | 535                                                    | 345                          | 598                                                    | 397                          | 695                                                    | 1PC1341-3AC79-0 + M3L |
| 315L                                            | 8                  | 69             | 129                                                                                | 239                                                    | 144                          | 266                                                    | 162                          | 300                                                    | 187                          | 351                                                    | 1PC1341-3AD49-0 + M3L |
| 315L                                            | 8                  | 69             | 157                                                                                | 280                                                    | 176                          | 315                                                    | 198                          | 357                                                    | 228                          | 418                                                    | 1PC1341-3AD59-0 + M3L |
| 315L                                            | 8                  | 69             | 189                                                                                | 336                                                    | 212                          | 378                                                    | 238                          | 427                                                    | 274                          | 502                                                    | 1PC1341-3AD69-0 + M3L |
| 315L                                            | 8                  | 69             | 229                                                                                | 408                                                    | 256                          | 455                                                    | 288                          | 512                                                    | 332                          | 600                                                    | 1PC1341-3AD79-0 + M3L |
| 315L                                            | 6                  | 87             | 181                                                                                | 318                                                    | 203                          | 355                                                    | 228                          | 397                                                    | 262                          | 461                                                    | 1PC1341-3AC49-0 + M3A |
| 315L                                            | 6                  | 87             | 219                                                                                | 380                                                    | 245                          | 420                                                    | 276                          | 469                                                    | 318                          | 548                                                    | 1PC1341-3AC59-0 + M3A |
| 315L                                            | 6                  | 87             | 265                                                                                | 454                                                    | 297                          | 509                                                    | 334                          | 572                                                    | 384                          | 665                                                    | 1PC1341-3AC69-0 + M3A |
| 315L                                            | 6                  | 87             | 332                                                                                | 580                                                    | 372                          | 648                                                    | 418                          | 728                                                    | 481                          | 848                                                    | 1PC1341-3AC79-0 + M3A |
| 315L                                            | 8                  | 87             | 156                                                                                | 280                                                    | 175                          | 315                                                    | 196                          | 351                                                    | 226                          | 412                                                    | 1PC1341-3AD49-0 + M3A |
| 315L                                            | 8                  | 87             | 191                                                                                | 340                                                    | 214                          | 383                                                    | 241                          | 434                                                    | 277                          | 508                                                    | 1PC1341-3AD59-0 + M3A |
| 315L                                            | 8                  | 87             | 229                                                                                | 410                                                    | 256                          | 460                                                    | 288                          | 522                                                    | 332                          | 609                                                    | 1PC1341-3AD69-0 + M3A |
| 315L                                            | 8                  | 87             | 277                                                                                | 478                                                    | 310                          | 538                                                    | 349                          | 610                                                    | 402                          | 712                                                    | 1PC1341-3AD79-0 + M3A |

## Innomotics DP – Crane duty motors

### Options

#### Ordering example 1

Force-ventilated trolley motor with brake and encoder in IM B5

1PC1341-2AC69-0FL5-Z M4D+F28+F33+G07+F70+L18+Q02

| Selection criteria                  | Requirement                                                                          | Structure of the Article No.                     |
|-------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------|
| Motor type                          | Crane duty motor with fan (IC411/IC416), degree of protection IP55, cast iron design | 1PC1341-■■■■■-■■■■■                              |
| Motor frame size/No. of poles/Speed | Motor in framesize 200, 6-pole version, 30 kW S9 (50 Hz-rating)                      | 1PC1341-2AC6■-■■■■■                              |
| Voltage and frequency               | Voltage: 500 V, 50 Hz                                                                | 1PC1341-2AC69-0■■■■■ M4D                         |
| Motor protection                    | IM B5 with flange FF350 (A400)                                                       | 1PC1341-2AC69-0F■■■■■ M4D                        |
| Type of construction                | 2 × Pt1000 resistance thermometers (4 terminals)                                     | 1PC1341-2AC69-0FL■■■■■ M4D                       |
| Terminal box position               | Terminal box on right hand side                                                      | 1PC1341-2AC69-0FL5 M4D                           |
| Options                             | Mounting of the brake KFB 30, 300 Nm                                                 | 1PC1341-2AC69-0FL5-Z M4D+F33                     |
| Options                             | Mounting of POG 10 DN 1024 I rotary pulse encoder                                    | 1PC1341-2AC69-0FL5-Z M4D+F33+G07                 |
| Options                             | Mounting of rotary pulse encoder POG 10 on the brake                                 | 1PC1341-2AC69-0FL5-Z M4D+F28+F33+G07             |
| Options                             | Mounting of external fan (IC416)                                                     | 1PC1341-2AC69-0FL5-Z M4D+F28+F33+G07+F70         |
| Options                             | End shield DE made of GGG40 for mounting in IM B5                                    | 1PC1341-2AC69-0FL5-Z M4D+F28+F33+G07+F70+L18     |
| Options                             | Anti-condensation heating for 230 V AC (2 terminals)                                 | 1PC1341-2AC69-0FL5-Z M4D+F28+F33+G07+F70+L18+Q02 |

#### Ordering example 2

Forced ventilated hoist motor in IM B3

1PC1341-3AC59-0AL5-Z M3N+G10+L06+Q02

| Selection criteria                  | Requirement                                                                                                | Structure of the Article No.         |
|-------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Motor type                          | Crane duty motor with fan (IC411/IC416), degree of protection IP55, cast iron design                       | 1PC1341-■■■■■-■■■■■                  |
| Motor frame size/No. of poles/Speed | Motor in framesize 315, 6-pole version, 141 kW, S9-non-periodic variation in load and speed (69 Hz-rating) | 1PC1341-3AC59-■■■■■                  |
| Voltage and frequency               | Voltage: 500 VΔ, 69 Hz                                                                                     | 1PC1341-3AC59-0■■■■■ M3N             |
| Motor protection                    | IM B3                                                                                                      | 1PC1341-3AC59-0A■■■■■ M3N            |
| Type of construction                | 2 Pt1000 resistance thermometers (4 terminals)                                                             | 1PC1341-3AC59-0AL■■■■■ M3N           |
| Terminal box position               | Terminal box on right hand side                                                                            | 1PC1341-3AC59-0AL5 M3N               |
| Options                             | Mounting of rotary pulse encoder POG10DN1024I + FSL                                                        | 1PC1341-3AC59-0AL5-Z M3N+G10         |
| Options                             | Standard shaft made of stainless steel                                                                     | 1PC1341-3AC59-0AL5-Z M3N+G10+L06     |
| Options                             | Anti-condensation heating for 230 V AC (2 terminals)                                                       | 1PC1341-3AC59-0AL5-Z M3N+G10+L06+Q02 |

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx. (without brake) |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|--------------|-------------------|-------------------|----------------------------------------------------------|---------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | cos φ        |                   | $J$               |                                                          |                                 |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |              | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                              |
| <b>4-pole, 1500 rpm</b>                                                                    |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| <b>Intermittent duty S3 – 15 % or S2 – 30 min.</b>                                         |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| <b>132S</b>                                                                                | 1460        | 6.6          | 43           | 13.5                 | 10.8                 | 7.8                  | 0.82         | 100               | 0.027             | <b>1PC1361-1CB09-0</b>                                   | 61                              |
| <b>132M</b>                                                                                | 1450        | 9            | 59           | 17.9                 | 14.3                 | 10.4                 | 0.83         | 147               | 0.034             | <b>1PC1361-1CB29-0</b>                                   | 75                              |
| <b>160M</b>                                                                                | 1460        | 13.2         | 86           | 26                   | 21                   | 15                   | 0.83         | 213               | 0.065             | <b>1PC1361-1DB29-0</b>                                   | 96                              |
| <b>160L</b>                                                                                | 1470        | 18           | 117          | 35                   | 28                   | 20.5                 | 0.83         | 300               | 0.083             | <b>1PC1361-1DB49-0</b>                                   | 104                             |
| <b>180M</b>                                                                                | 1455        | 22.2         | 146          | 42                   | 33.5                 | 24.5                 | 0.85         | 411               | 0.120             | <b>1PC1361-1EB29-0</b>                                   | 160                             |
| <b>180L</b>                                                                                | 1455        | 26.4         | 173          | 49.5                 | 39.5                 | 28.5                 | 0.85         | 500               | 0.130             | <b>1PC1361-1EB49-0</b>                                   | 170                             |
| <b>180L</b>                                                                                | 1450        | 36           | 237          | 69                   | 55                   | 40                   | 0.83         | 646               | 0.159             | <b>1PC1361-1EB69-0</b>                                   | 185                             |
| <b>200L</b>                                                                                | 1460        | 36           | 235          | 67                   | 54                   | 38.5                 | 0.85         | 605               | 0.200             | <b>1PC1361-2AB59-0</b>                                   | 230                             |
| <b>200L</b>                                                                                | 1460        | 44           | 288          | 81                   | 65                   | 47.0                 | 0.85         | 720               | 0.246             | <b>1PC1361-2AB69-0</b>                                   | 240                             |
| <b>200L</b>                                                                                | 1475        | 54           | 350          | 104                  | 83                   | 60                   | 0.8          | 1051              | 0.275             | <b>1PC1361-2AB79-0</b>                                   | 260                             |
| <b>225S</b>                                                                                | 1465        | 44           | 287          | 79                   | 63                   | 45.5                 | 0.88         | 680               | 0.420             | <b>1PC1361-2BB09-0</b>                                   | 280                             |
| <b>225M</b>                                                                                | 1465        | 54           | 352          | 96                   | 77                   | 56                   | 0.88         | 890               | 0.460             | <b>1PC1361-2BB29-0</b>                                   | 305                             |
| <b>225M</b>                                                                                | 1470        | 66           | 429          | 122                  | 98                   | 71                   | 0.84         | 940               | 0.470             | <b>1PC1361-2BB69-0</b>                                   | 320                             |
| <b>250M</b>                                                                                | 1475        | 66           | 427          | 121                  | 96                   | 70                   | 0.85         | 1060              | 0.750             | <b>1PC1361-2CB29-0</b>                                   | 385                             |
| <b>250M</b>                                                                                | 1478        | 90           | 581          | 162                  | 129                  | 94                   | 0.86         | 1340              | 0.850             | <b>1PC1361-2CB69-0</b>                                   | 440                             |
| <b>250M</b>                                                                                | 1480        | 108          | 697          | 196                  | 157                  | 113                  | 0.85         | 1950              | 1.200             | <b>1PC1361-2CB79-0</b>                                   | 480                             |
| <b>280S</b>                                                                                | 1480        | 90           | 581          | 157                  | 126                  | 91                   | 0.88         | 1430              | 1.300             | <b>1PC1361-2DB09-0</b>                                   | 550                             |
| <b>280M</b>                                                                                | 1482        | 108          | 696          | 192                  | 154                  | 111                  | 0.86         | 1770              | 1.400             | <b>1PC1361-2DB29-0</b>                                   | 570                             |
| <b>280M</b>                                                                                | 1482        | 132          | 851          | 230                  | 185                  | 134                  | 0.87         | 2090              | 1.700             | <b>1PC1361-2DB69-0</b>                                   | 680                             |
| <b>280M</b>                                                                                | 1478        | 158          | 1021         | 275                  | 220                  | 160                  | 0.88         | 2250              | 1.800             | <b>1PC1361-2DB79-0</b>                                   | 750                             |
| <b>4-pole, 1500 rpm Data for cooling with wind ~ 10 m/s IC418</b>                          |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| <b>Intermittent duty S3 – 15 %</b>                                                         |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| <b>160 M</b>                                                                               | 1445        | 18.3         | 121          | 36                   | 29                   | 21                   | 0.86         | 213               | 0.055             | <b>1PC1361-1DB29-0</b>                                   | 96                              |
| <b>160 L</b>                                                                               | 1450        | 25.8         | 170          | 49.5                 | 39.5                 | 28.5                 | 0.85         | 301               | 0.071             | <b>1PC1361-1DB49-0</b>                                   | 104                             |
| <b>180 M</b>                                                                               | 1430        | 32.6         | 218          | 60                   | 48                   | 35                   | 0.88         | 411               | 0.120             | <b>1PC1361-1EB29-0</b>                                   | 160                             |
| <b>180 L</b>                                                                               | 1432        | 38.8         | 259          | 72                   | 58                   | 41.5                 | 0.87         | 501               | 0.130             | <b>1PC1361-1EB49-0</b>                                   | 170                             |
| <b>180 L</b>                                                                               | 1428        | 52.9         | 354          | 100                  | 80                   | 58                   | 0.85         | 647               | 0.160             | <b>1PC1361-1EB69-0</b>                                   | 185                             |
| <b>200 L</b>                                                                               | 1442        | 51.6         | 342          | 96                   | 77                   | 56                   | 0.88         | 605               | 0.200             | <b>1PC1361-2AB59-0</b>                                   | 230                             |
| <b>200 L</b>                                                                               | 1442        | 61.6         | 408          | 113                  | 90                   | 66                   | 0.87         | 720               | 0.250             | <b>1PC1361-2AB69-0</b>                                   | 240                             |
| <b>200 L</b>                                                                               | 1448        | 81.3         | 536          | 151                  | 121                  | 88                   | 0.84         | 1044              | 0.280             | <b>1PC1361-2AB79-0</b>                                   | 260                             |
| Type of construction                                                                       |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |              |                   |                   |                                                          | A                               |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          | F                               |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |              |                   |                   |                                                          | G                               |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| Motor protection                                                                           |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |              |                   |                   |                                                          | A                               |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |              |                   |                   |                                                          | B                               |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | C                               |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          | F                               |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          | G                               |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          | H                               |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |              |                   |                   |                                                          | K                               |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |              |                   |                   |                                                          | L                               |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |              |                   |                   |                                                          | 4                               |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |              |                   |                   |                                                          | 5                               |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | 6                               |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| Winding                                                                                    |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | M4B                             |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | M4C                             |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | M4D                             |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | M4F                             |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/35.

## Innomotics DP – Crane duty motors

## Selection and ordering data

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx. (without brake) |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|---------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                 |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                              |
| <b>4-pole, 1500 rpm</b>                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| <b>Intermittent duty S3 – 25 % or S2 – 60 min.</b>                                         |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| <b>132S</b>                                                                                | 1465        | 5.5          | 36           | 11.3                 | 9                    | 6.6                  | 0.8            | 100               | 0.027             | <b>1PC1361-1CB09-0</b>                                   | 61                              |
| <b>132M</b>                                                                                | 1460        | 7.5          | 49           | 14.9                 | 11.9                 | 8.6                  | 0.82           | 147               | 0.034             | <b>1PC1361-1CB29-0</b>                                   | 75                              |
| <b>160M</b>                                                                                | 1470        | 11           | 71           | 21.5                 | 17.2                 | 12.5                 | 0.82           | 213               | 0.065             | <b>1PC1361-1DB29-0</b>                                   | 96                              |
| <b>160L</b>                                                                                | 1475        | 15           | 97           | 29.5                 | 23.5                 | 17.1                 | 0.81           | 300               | 0.083             | <b>1PC1361-1DB49-0</b>                                   | 104                             |
| <b>180M</b>                                                                                | 1465        | 18.5         | 121          | 35                   | 28                   | 20                   | 0.84           | 411               | 0.120             | <b>1PC1361-1EB29-0</b>                                   | 160                             |
| <b>180L</b>                                                                                | 1465        | 22           | 143          | 41.5                 | 33                   | 24                   | 0.84           | 500               | 0.130             | <b>1PC1361-1EB49-0</b>                                   | 170                             |
| <b>180L</b>                                                                                | 1465        | 30           | 196          | 58                   | 46.5                 | 33.5                 | 0.81           | 646               | 0.159             | <b>1PC1361-1EB69-0</b>                                   | 185                             |
| <b>200L</b>                                                                                | 1470        | 30           | 195          | 56                   | 49                   | 32.5                 | 0.84           | 605               | 0.200             | <b>1PC1361-2AB59-0</b>                                   | 230                             |
| <b>200L</b>                                                                                | 1470        | 37           | 240          | 69                   | 55                   | 40                   | 0.84           | 720               | 0.246             | <b>1PC1361-2AB69-0</b>                                   | 240                             |
| <b>200L</b>                                                                                | 1472        | 45           | 292          | 89                   | 71                   | 52                   | 0.78           | 1051              | 0.275             | <b>1PC1361-2AB79-0</b>                                   | 260                             |
| <b>225S</b>                                                                                | 1470        | 37           | 240          | 66                   | 52                   | 38                   | 0.88           | 680               | 0.420             | <b>1PC1361-2BB09-0</b>                                   | 280                             |
| <b>225M</b>                                                                                | 1475        | 45           | 291          | 80                   | 64                   | 46.5                 | 0.87           | 890               | 0.460             | <b>1PC1361-2BB29-0</b>                                   | 305                             |
| <b>225M</b>                                                                                | 1475        | 55           | 356          | 101                  | 81                   | 59                   | 0.84           | 940               | 0.470             | <b>1PC1361-2BB69-0</b>                                   | 320                             |
| <b>250M</b>                                                                                | 1480        | 55           | 355          | 100                  | 80                   | 58                   | 0.85           | 1060              | 0.750             | <b>1PC1361-2CB29-0</b>                                   | 385                             |
| <b>250M</b>                                                                                | 1480        | 75           | 484          | 134                  | 107                  | 78                   | 0.86           | 1340              | 0.850             | <b>1PC1361-2CB69-0</b>                                   | 440                             |
| <b>250M</b>                                                                                | 1482        | 90           | 580          | 164                  | 131                  | 95                   | 0.84           | 1950              | 1.200             | <b>1PC1361-2CB79-0</b>                                   | 480                             |
| <b>280S</b>                                                                                | 1485        | 75           | 482          | 132                  | 105                  | 76                   | 0.87           | 1430              | 1.300             | <b>1PC1361-2DB09-0</b>                                   | 550                             |
| <b>280M</b>                                                                                | 1485        | 90           | 579          | 161                  | 129                  | 93                   | 0.85           | 1770              | 1.400             | <b>1PC1361-2DB29-0</b>                                   | 570                             |
| <b>280M</b>                                                                                | 1485        | 110          | 707          | 194                  | 155                  | 113                  | 0.86           | 2090              | 1.700             | <b>1PC1361-2DB69-0</b>                                   | 680                             |
| <b>280M</b>                                                                                | 1482        | 132          | 851          | 230                  | 185                  | 134                  | 0.87           | 2250              | 1.800             | <b>1PC1361-2DB79-0</b>                                   | 750                             |
| <b>4-pole, 1500 rpm Data for cooling with wind ~ 10 m/s IC418</b>                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| <b>Intermittent duty S3 – 25 %</b>                                                         |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| <b>160 M</b>                                                                               | 1450        | 16           | 105          | 31.5                 | 25                   | 18.2                 | 0.85           | 213               | 0.055             | <b>1PC1361-1DB29-0</b>                                   | 96                              |
| <b>160 L</b>                                                                               | 1460        | 21.8         | 143          | 42                   | 33.6                 | 24.5                 | 0.84           | 301               | 0.071             | <b>1PC1361-1DB49-0</b>                                   | 104                             |
| <b>180 M</b>                                                                               | 1440        | 26.9         | 178          | 50                   | 40                   | 29                   | 0.87           | 411               | 0.120             | <b>1PC1361-1EB29-0</b>                                   | 160                             |
| <b>180 L</b>                                                                               | 1445        | 32           | 211          | 60                   | 48                   | 35                   | 0.86           | 501               | 0.130             | <b>1PC1361-1EB49-0</b>                                   | 170                             |
| <b>180 L</b>                                                                               | 1440        | 43.6         | 289          | 83                   | 66                   | 48                   | 0.84           | 647               | 0.160             | <b>1PC1361-1EB69-0</b>                                   | 185                             |
| <b>200 L</b>                                                                               | 1450        | 44.5         | 293          | 82                   | 66                   | 47.5                 | 0.87           | 605               | 0.200             | <b>1PC1361-2AB59-0</b>                                   | 230                             |
| <b>200 L</b>                                                                               | 1450        | 54.8         | 361          | 101                  | 81                   | 59                   | 0.86           | 720               | 0.250             | <b>1PC1361-2AB69-0</b>                                   | 240                             |
| <b>200 L</b>                                                                               | 1458        | 66.7         | 437          | 126                  | 101                  | 73                   | 0.83           | 1044              | 0.280             | <b>1PC1361-2AB79-0</b>                                   | 260                             |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A                               |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          | F                               |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | G                               |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A                               |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          | B                               |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | C                               |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          | F                               |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          | G                               |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          | H                               |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | K                               |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | L                               |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 4                               |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 5                               |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 6                               |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4B                             |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4C                             |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4D                             |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4F                             |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                 |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/35.

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake)   |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|--------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                      |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                   |
| 4-pole, 1500 rpm                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Intermittent duty S3 – 40 %                                                                |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 132S                                                                                       | 1475        | 4.4          | 28           | 9.7                  | 7.8                  | 5.6                  | 0.75           | 100               | 0.027             | 1PC1361-1CB09-0                                          | 61                                   |
| 132M                                                                                       | 1470        | 6            | 39           | 12.4                 | 9.9                  | 7.2                  | 0.79           | 147               | 0.034             | 1PC1361-1CB29-0                                          | 75                                   |
| 160M                                                                                       | 1475        | 8.8          | 57           | 18.2                 | 14.6                 | 10.5                 | 0.79           | 213               | 0.065             | 1PC1361-1DB29-0                                          | 96                                   |
| 160L                                                                                       | 1480        | 12           | 77           | 25                   | 20                   | 14.5                 | 0.76           | 300               | 0.083             | 1PC1361-1DB49-0                                          | 104                                  |
| 180M                                                                                       | 1470        | 14.8         | 96           | 29                   | 23                   | 16.8                 | 0.81           | 411               | 0.120             | 1PC1361-1EB29-0                                          | 160                                  |
| 180L                                                                                       | 1475        | 17.6         | 114          | 34                   | 27                   | 19.7                 | 0.81           | 500               | 0.130             | 1PC1361-1EB49-0                                          | 170                                  |
| 180L                                                                                       | 1470        | 24           | 156          | 48                   | 38.5                 | 28                   | 0.78           | 646               | 0.159             | 1PC1361-1EB69-0                                          | 185                                  |
| 200L                                                                                       | 1475        | 24           | 155          | 46                   | 37                   | 26.5                 | 0.82           | 605               | 0.200             | 1PC1361-2AB59-0                                          | 230                                  |
| 200L                                                                                       | 1475        | 29           | 188          | 56                   | 45                   | 32.5                 | 0.8            | 720               | 0.246             | 1PC1361-2AB69-0                                          | 240                                  |
| 200L                                                                                       | 1480        | 36           | 232          | 77                   | 62                   | 44.5                 | 0.72           | 1051              | 0.275             | 1PC1361-2AB79-0                                          | 260                                  |
| 225S                                                                                       | 1478        | 29           | 187          | 52                   | 41.5                 | 30                   | 0.86           | 680               | 0.420             | 1PC1361-2BB09-0                                          | 280                                  |
| 225M                                                                                       | 1478        | 36           | 233          | 65                   | 52                   | 37.5                 | 0.86           | 890               | 0.460             | 1PC1361-2BB29-0                                          | 305                                  |
| 225M                                                                                       | 1482        | 44           | 284          | 82                   | 66                   | 47.5                 | 0.82           | 940               | 0.470             | 1PC1361-2BB69-0                                          | 320                                  |
| 250M                                                                                       | 1485        | 44           | 283          | 81                   | 65                   | 47                   | 0.83           | 1060              | 0.750             | 1PC1361-2CB29-0                                          | 385                                  |
| 250M                                                                                       | 1485        | 60           | 386          | 108                  | 86                   | 63                   | 0.85           | 1340              | 0.850             | 1PC1361-2CB69-0                                          | 440                                  |
| 250M                                                                                       | 1488        | 72           | 462          | 134                  | 107                  | 78                   | 0.82           | 1950              | 1.200             | 1PC1361-2CB79-0                                          | 480                                  |
| 280S                                                                                       | 1488        | 60           | 385          | 107                  | 86                   | 62                   | 0.85           | 1430              | 1.300             | 1PC1361-2DB09-0                                          | 550                                  |
| 280M                                                                                       | 1488        | 72           | 462          | 133                  | 107                  | 77                   | 0.82           | 1770              | 1.400             | 1PC1361-2DB29-0                                          | 570                                  |
| 280M                                                                                       | 1488        | 88           | 565          | 161                  | 129                  | 93                   | 0.83           | 2090              | 1.700             | 1PC1361-2DB69-0                                          | 680                                  |
| 280M                                                                                       | 1485        | 105          | 675          | 190                  | 152                  | 110                  | 0.84           | 2250              | 1.800             | 1PC1361-2DB79-0                                          | 750                                  |
| 4-pole, 1500 rpm Data for cooling with wind ~ 10 m/s IC418                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Intermittent duty S3 – 40 %                                                                |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 160 M                                                                                      | 1460        | 13.7         | 90           | 27                   | 21.5                 | 15.6                 | 0.84           | 213               | 0.055             | 1PC1361-1DB29-0                                          | 96                                   |
| 160 L                                                                                      | 1465        | 18.7         | 122          | 36                   | 29                   | 21                   | 0.83           | 301               | 0.071             | 1PC1361-1DB49-0                                          | 104                                  |
| 180 M                                                                                      | 1450        | 23.1         | 152          | 43.5                 | 35                   | 25                   | 0.86           | 411               | 0.120             | 1PC1361-1EB29-0                                          | 160                                  |
| 180 L                                                                                      | 1455        | 27.5         | 180          | 52                   | 41.5                 | 30                   | 0.85           | 501               | 0.130             | 1PC1361-1EB49-0                                          | 170                                  |
| 180 L                                                                                      | 1450        | 37.4         | 246          | 72                   | 58                   | 41.5                 | 0.83           | 647               | 0.160             | 1PC1361-1EB69-0                                          | 185                                  |
| 200 L                                                                                      | 1460        | 37.9         | 248          | 71                   | 57                   | 41                   | 0.85           | 605               | 0.200             | 1PC1361-2AB59-0                                          | 230                                  |
| 200 L                                                                                      | 1458        | 46.8         | 307          | 87                   | 70                   | 50                   | 0.85           | 720               | 0.250             | 1PC1361-2AB69-0                                          | 240                                  |
| 200 L                                                                                      | 1465        | 56.9         | 371          | 109                  | 87                   | 63                   | 0.81           | 1044              | 0.280             | 1PC1361-2AB79-0                                          | 260                                  |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>F<br>G                          |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 4<br>5<br>6                          |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | Order code                           |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/35.

Innomotics DP – 1PC1361: Non-ventilated

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake) |     |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|------------------------------------|-----|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                    |     |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                 |     |
| 4-pole, 1500 rpm                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| Intermittent duty S3 – 60 %                                                                |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| 132S                                                                                       | 1480        | 3.3          | 21           | 8.2                  | 6.6                  | 4.8                  | 0.68           | 100               | 0.027             | 1PC1361-1CB09-0                                          | 61                                 |     |
| 132M                                                                                       | 1475        | 4.5          | 29           | 10.2                 | 8.2                  | 5.9                  | 0.72           | 147               | 0.034             | 1PC1361-1CB29-0                                          | 75                                 |     |
| 160M                                                                                       | 1482        | 6.6          | 43           | 14.7                 | 11.8                 | 8.5                  | 0.73           | 213               | 0.065             | 1PC1361-1DB29-0                                          | 96                                 |     |
| 160L                                                                                       | 1485        | 9            | 58           | 21.5                 | 17.2                 | 12.5                 | 0.68           | 300               | 0.083             | 1PC1361-1DB49-0                                          | 104                                |     |
| 180M                                                                                       | 1480        | 11.1         | 72           | 23.5                 | 18.8                 | 13.6                 | 0.74           | 411               | 0.120             | 1PC1361-1EB29-0                                          | 160                                |     |
| 180L                                                                                       | 1480        | 13.2         | 85           | 27.5                 | 22                   | 15.9                 | 0.75           | 500               | 0.130             | 1PC1361-1EB49-0                                          | 170                                |     |
| 180L                                                                                       | 1478        | 18           | 116          | 39.5                 | 31.5                 | 23                   | 0.71           | 646               | 0.159             | 1PC1361-1EB69-0                                          | 185                                |     |
| 200L                                                                                       | 1482        | 18           | 116          | 37                   | 29.5                 | 21.5                 | 0.76           | 605               | 0.200             | 1PC1361-2AB59-0                                          | 230                                |     |
| 200L                                                                                       | 1482        | 22           | 142          | 45.5                 | 36.5                 | 26.5                 | 0.75           | 720               | 0.246             | 1PC1361-2AB69-0                                          | 240                                |     |
| 200L                                                                                       | 1485        | 27           | 174          | 66                   | 41.5                 | 38                   | 0.64           | 1051              | 0.275             | 1PC1361-2AB79-0                                          | 260                                |     |
| 225S                                                                                       | 1485        | 22           | 141          | 41                   | 32.5                 | 23.5                 | 0.83           | 680               | 0.420             | 1PC1361-2BB09-0                                          | 280                                |     |
| 225M                                                                                       | 1485        | 27           | 174          | 51                   | 40.5                 | 29.5                 | 0.82           | 890               | 0.460             | 1PC1361-2BB29-0                                          | 305                                |     |
| 225M                                                                                       | 1486        | 33           | 212          | 65                   | 52                   | 37.5                 | 0.78           | 940               | 0.470             | 1PC1361-2BB69-0                                          | 320                                |     |
| 250M                                                                                       | 1490        | 33           | 211          | 64                   | 51                   | 37                   | 0.79           | 1060              | 0.750             | 1PC1361-2CB29-0                                          | 385                                |     |
| 250M                                                                                       | 1490        | 45           | 288          | 85                   | 68                   | 49                   | 0.81           | 1340              | 0.850             | 1PC1361-2CB69-0                                          | 440                                |     |
| 250M                                                                                       | 1491        | 54           | 346          | 106                  | 85                   | 61                   | 0.78           | 1950              | 1.200             | 1PC1361-2CB79-0                                          | 480                                |     |
| 280S                                                                                       | 1491        | 45           | 288          | 86                   | 69                   | 49.5                 | 0.8            | 1430              | 1.300             | 1PC1361-2DB09-0                                          | 550                                |     |
| 280M                                                                                       | 1491        | 54           | 346          | 109                  | 87                   | 63                   | 0.75           | 1770              | 1.400             | 1PC1361-2DB29-0                                          | 570                                |     |
| 280M                                                                                       | 1491        | 66           | 423          | 128                  | 103                  | 74                   | 0.78           | 2090              | 1.700             | 1PC1361-2DB69-0                                          | 680                                |     |
| 280M                                                                                       | 1490        | 79           | 506          | 153                  | 123                  | 89                   | 0.78           | 2250              | 1.800             | 1PC1361-2DB79-0                                          | 750                                |     |
| 4-pole, 1500 rpm Data for cooling with wind ~ 10 m/s IC418                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| Intermittent duty S3 – 60 %                                                                |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| 160 M                                                                                      | 1465        | 12.3         | 80           | 24.5                 | 19.6                 | 14.1                 | 0.83           | 213               | 0.055             | 1PC1361-1DB29-0                                          | 96                                 |     |
| 160 L                                                                                      | 1470        | 16.8         | 109          | 32.5                 | 26                   | 18.8                 | 0.82           | 301               | 0.071             | 1PC1361-1DB49-0                                          | 104                                |     |
| 180 M                                                                                      | 1458        | 20.6         | 135          | 38.5                 | 31                   | 22.5                 | 0.85           | 411               | 0.120             | 1PC1361-1EB29-0                                          | 160                                |     |
| 180 L                                                                                      | 1460        | 24.6         | 161          | 46.5                 | 37                   | 27                   | 0.85           | 501               | 0.130             | 1PC1361-1EB49-0                                          | 170                                |     |
| 180 L                                                                                      | 1455        | 33.5         | 220          | 64                   | 51                   | 37                   | 0.82           | 647               | 0.160             | 1PC1361-1EB69-0                                          | 185                                |     |
| 200 L                                                                                      | 1465        | 33.7         | 220          | 63                   | 50                   | 36.5                 | 0.84           | 605               | 0.200             | 1PC1361-2AB59-0                                          | 230                                |     |
| 200 L                                                                                      | 1462        | 41.6         | 272          | 77                   | 62                   | 44.5                 | 0.85           | 720               | 0.250             | 1PC1361-2AB69-0                                          | 240                                |     |
| 200 L                                                                                      | 1470        | 50.6         | 329          | 98                   | 78                   | 57                   | 0.79           | 1044              | 0.280             | 1PC1361-2AB79-0                                          | 260                                |     |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   | A<br>F<br>G                                              |                                    |     |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |                   |                   | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L                     |                                    |     |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |                   |                   | 4<br>5<br>6                                              |                                    |     |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    |     |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | Order code                         |     |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4B                                |     |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4C                                |     |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4D                                |     |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                    | M4F |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/35.

## Innomotics DP – Crane duty motors

## Selection and ordering data

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Efficiency | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake) |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|------------|-------------------|-------------------|----------------------------------------------------------|------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ | $\eta$     |                   | $J$               |                                                          |                                    |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | %          | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                 |
| <b>4-pole, 1500 rpm</b>                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| <b>Intermittent duty S9: Duty with non-periodic variation in load and speed</b>            |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 132S                                                                                       | 1488        | 2.0          | 13           | 6.7                  | 5.4                  | 3.9                  | 0.51           | 83.9       | 100               | 0.027             | 1PC1361-1CB09-0                                          | 61                                 |
| 132M                                                                                       | 1485        | 2.8          | 18           | 8.1                  | 6.6                  | 4.7                  | 0.57           | 85.3       | 147               | 0.034             | 1PC1361-1CB29-0                                          | 75                                 |
| 160M                                                                                       | 1490        | 4.1          | 26           | 11.7                 | 9.4                  | 6.8                  | 0.58           | 86.7       | 213               | 0.065             | 1PC1361-1DB29-0                                          | 96                                 |
| 160L                                                                                       | 1490        | 5.6          | 36           | 17.3                 | 13.9                 | 10.0                 | 0.53           | 87.7       | 300               | 0.083             | 1PC1361-1DB49-0                                          | 104                                |
| 180M                                                                                       | 1488        | 6.9          | 44           | 18.4                 | 15.0                 | 10.9                 | 0.60           | 88.4       | 411               | 0.120             | 1PC1361-1EB29-0                                          | 160                                |
| 180L                                                                                       | 1488        | 8.2          | 53           | 22.0                 | 17.4                 | 12.8                 | 0.61           | 88.9       | 500               | 0.130             | 1PC1361-1EB49-0                                          | 170                                |
| 180L                                                                                       | 1485        | 11.2         | 72           | 32.0                 | 25.5                 | 18.6                 | 0.56           | 89.8       | 646               | 0.159             | 1PC1361-1EB69-0                                          | 185                                |
| 200L                                                                                       | 1490        | 11.2         | 72           | 28.0                 | 23.0                 | 16.2                 | 0.63           | 89.8       | 605               | 0.200             | 1PC1361-2AB59-0                                          | 230                                |
| 200L                                                                                       | 1488        | 13.8         | 89           | 35.5                 | 29.0                 | 20.5                 | 0.61           | 90.4       | 720               | 0.246             | 1PC1361-2AB69-0                                          | 240                                |
| 200L                                                                                       | 1492        | 16.8         | 108          | 56.0                 | 40.0                 | 28.5                 | 0.48           | 90.9       | 1051              | 0.275             | 1PC1361-2AB79-0                                          | 260                                |
| 225S                                                                                       | 1490        | 13.8         | 88           | 30.0                 | 24.0                 | 17.3                 | 0.72           | 92.7       | 680               | 0.420             | 1PC1361-2BB09-0                                          | 280                                |
| 225M                                                                                       | 1491        | 16.8         | 108          | 37.0                 | 30.0                 | 21.5                 | 0.70           | 93.1       | 890               | 0.460             | 1PC1361-2BB59-0                                          | 305                                |
| 225M                                                                                       | 1492        | 20.0         | 128          | 47.5                 | 38.0                 | 27.5                 | 0.65           | 93.5       | 940               | 0.470             | 1PC1361-2BB69-0                                          | 320                                |
| 250M                                                                                       | 1494        | 20.0         | 128          | 46.0                 | 37.0                 | 26.5                 | 0.67           | 93.5       | 1060              | 0.750             | 1PC1361-2CB29-0                                          | 385                                |
| 250M                                                                                       | 1493        | 28.0         | 179          | 66.0                 | 53.0                 | 38.5                 | 0.65           | 94.0       | 1340              | 0.850             | 1PC1361-2CB69-0                                          | 440                                |
| 250M                                                                                       | 1494        | 34.0         | 217          | 84.0                 | 67.0                 | 48.5                 | 0.62           | 94.2       | 1950              | 1.200             | 1PC1361-2CB79-0                                          | 480                                |
| 280S                                                                                       | 1494        | 28.0         | 179          | 64.0                 | 51.0                 | 37.0                 | 0.67           | 94.0       | 1430              | 1.300             | 1PC1361-2DB09-0                                          | 550                                |
| 280M                                                                                       | 1495        | 34.0         | 217          | 80.0                 | 64.0                 | 46.5                 | 0.65           | 94.2       | 1770              | 1.400             | 1PC1361-2DB29-0                                          | 570                                |
| 280M                                                                                       | 1495        | 41.0         | 262          | 99.0                 | 80.0                 | 58.0                 | 0.63           | 94.5       | 2090              | 1.700             | 1PC1361-2DB69-0                                          | 680                                |
| 280M                                                                                       | 1494        | 47.0         | 300          | 112.0                | 90.0                 | 65.0                 | 0.64           | 94.7       | 2250              | 1.800             | 1PC1361-2DB79-0                                          | 750                                |
| <b>4-pole, 1500 rpm Data for cooling with wind ~ 10 m/s IC418</b>                          |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| <b>Intermittent duty S9: Duty with non-periodic variation in load and speed</b>            |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 160 M                                                                                      | 1470        | 11.0         | 71           | 21.5                 | 17.2                 | 12.5                 | 0.82           | 89.8       | 213               | 0.065             | 1PC1361-1DB29-0                                          | 96                                 |
| 160 L                                                                                      | 1475        | 15.0         | 97           | 29.5                 | 23.5                 | 17.1                 | 0.81           | 90.6       | 300               | 0.083             | 1PC1361-1DB49-0                                          | 104                                |
| 180 M                                                                                      | 1465        | 18.5         | 121          | 35.0                 | 28.0                 | 20.0                 | 0.84           | 91.2       | 411               | 0.12              | 1PC1361-1EB29-0                                          | 160                                |
| 180 L                                                                                      | 1465        | 22.0         | 143          | 41.5                 | 33.0                 | 24.0                 | 0.84           | 91.6       | 500               | 0.13              | 1PC1361-1EB49-0                                          | 170                                |
| 180 L                                                                                      | 1465        | 30.0         | 196          | 58.0                 | 46.5                 | 33.5                 | 0.81           | 92.3       | 646               | 0.159             | 1PC1361-1EB69-0                                          | 185                                |
| 200 L                                                                                      | 1470        | 30.0         | 195          | 56.0                 | 44.5                 | 32.5                 | 0.84           | 92.3       | 605               | 0.2               | 1PC1361-2AB59-0                                          | 230                                |
| 200 L                                                                                      | 1470        | 37.0         | 240          | 69.0                 | 55.0                 | 40.0                 | 0.84           | 92.7       | 720               | 0.246             | 1PC1361-2AB69-0                                          | 240                                |
| 200 L                                                                                      | 1472        | 45.0         | 292          | 89.0                 | 72.0                 | 52.0                 | 0.78           | 93.1       | 1051              | 0.275             | 1PC1361-2AB79-0                                          | 260                                |
| <b>Type of construction</b>                                                                |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   | A                                                        |                                    |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |            |                   |                   | F                                                        |                                    |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   | G                                                        |                                    |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| <b>Motor protection</b>                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   | A                                                        |                                    |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |            |                   |                   | B                                                        |                                    |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |            |                   |                   | C                                                        |                                    |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   | F                                                        |                                    |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   | G                                                        |                                    |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   | H                                                        |                                    |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   | K                                                        |                                    |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   | L                                                        |                                    |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| <b>Terminal box position</b>                                                               |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |            |                   |                   | 4                                                        |                                    |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   | 5                                                        |                                    |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |            |                   |                   | 6                                                        |                                    |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| <b>Winding</b>                                                                             |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   | M4B                                                      |                                    |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   | M4C                                                      |                                    |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   | M4D                                                      |                                    |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   | M4F                                                      |                                    |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                    |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/35.

Innomotics DP – 1PC1361: Non-ventilated

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake)   |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|--------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                      |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                   |
| 6-pole, 1000 rpm                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Intermittent duty S3 – 15 % or S2 – 30 min.                                                |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 132S                                                                                       | 960         | 3.6          | 36           | 8.3                  | 6.6                  | 4.8                  | 0.74           | 72                | 0.024             | 1PC1361-1CC09-0                                          | 56                                   |
| 132M                                                                                       | 965         | 4.8          | 48           | 10.9                 | 8.7                  | 6.3                  | 0.76           | 90                | 0.029             | 1PC1361-1CC29-0                                          | 61                                   |
| 132M                                                                                       | 965         | 6.6          | 65           | 14.9                 | 11.9                 | 8.6                  | 0.76           | 140               | 0.037             | 1PC1361-1CC39-0                                          | 70                                   |
| 160M                                                                                       | 972         | 9            | 88           | 20                   | 16                   | 11.6                 | 0.75           | 160               | 0.075             | 1PC1361-1DC29-0                                          | 106                                  |
| 160L                                                                                       | 965         | 13.2         | 131          | 28                   | 22.5                 | 16.2                 | 0.77           | 237               | 0.098             | 1PC1361-1DC49-0                                          | 122                                  |
| 180L                                                                                       | 968         | 18           | 178          | 36.5                 | 29                   | 21                   | 0.8            | 455               | 0.170             | 1PC1361-1EC49-0                                          | 155                                  |
| 180L                                                                                       | 968         | 22           | 217          | 45                   | 36                   | 26                   | 0.79           | 525               | 0.206             | 1PC1361-1EC69-0                                          | 165                                  |
| 180L                                                                                       | 968         | 26           | 256          | 54                   | 43                   | 31.5                 | 0.77           | 710               | 0.247             | 1PC1361-1EC79-0                                          | 185                                  |
| 200L                                                                                       | 970         | 22           | 217          | 43                   | 34.5                 | 25                   | 0.82           | 470               | 0.250             | 1PC1361-2AC49-0                                          | 200                                  |
| 200L                                                                                       | 970         | 26           | 256          | 51                   | 41                   | 29.5                 | 0.83           | 559               | 0.300             | 1PC1361-2AC59-0                                          | 220                                  |
| 200L                                                                                       | 970         | 36           | 354          | 72                   | 58                   | 41.5                 | 0.78           | 794               | 0.381             | 1PC1361-2AC69-0                                          | 240                                  |
| 200L                                                                                       | 968         | 44           | 434          | 88                   | 70                   | 51                   | 0.78           | 977               | 0.434             | 1PC1361-2AC79-0                                          | 264                                  |
| 225M                                                                                       | 975         | 36           | 353          | 68                   | 54                   | 39.5                 | 0.84           | 770               | 0.580             | 1PC1361-2BC29-0                                          | 300                                  |
| 225M                                                                                       | 975         | 44           | 431          | 84                   | 67                   | 48.5                 | 0.83           | 1030              | 0.670             | 1PC1361-2BC69-0                                          | 325                                  |
| 225M                                                                                       | 975         | 54           | 529          | 104                  | 84                   | 61                   | 0.82           | 1290              | 0.790             | 1PC1361-2BC79-0                                          | 395                                  |
| 250M                                                                                       | 978         | 44           | 430          | 83                   | 67                   | 48.5                 | 0.83           | 890               | 0.860             | 1PC1361-2CC29-0                                          | 370                                  |
| 250M                                                                                       | 978         | 54           | 527          | 100                  | 80                   | 58                   | 0.85           | 1150              | 1.000             | 1PC1361-2CC69-0                                          | 410                                  |
| 250M                                                                                       | 980         | 66           | 643          | 123                  | 98                   | 71                   | 0.84           | 1590              | 1.200             | 1PC1361-2CC79-0                                          | 480                                  |
| 280S                                                                                       | 982         | 54           | 525          | 101                  | 81                   | 58                   | 0.84           | 1120              | 1.100             | 1PC1361-2DC09-0                                          | 460                                  |
| 280M                                                                                       | 982         | 66           | 642          | 121                  | 97                   | 70                   | 0.85           | 1380              | 1.400             | 1PC1361-2DC29-0                                          | 510                                  |
| 280M                                                                                       | 982         | 90           | 875          | 164                  | 131                  | 95                   | 0.85           | 2090              | 1.800             | 1PC1361-2DC69-0                                          | 570                                  |
| 280M                                                                                       | 985         | 108          | 1047         | 205                  | 162                  | 118                  | 0.82           | 2670              | 1.900             | 1PC1361-2DC79-0                                          | 630                                  |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>F<br>G                          |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 4<br>5<br>6                          |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | Order code                           |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/35.

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake)   |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|--------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                      |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                   |
| 6-pole, 1000 rpm                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Intermittent duty S3 – 25 % or S2 – 60 min.                                                |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 132S                                                                                       | 970         | 3            | 29           | 7.2                  | 5.8                  | 4.2                  | 0.72           | 72                | 0.024             | 1PC1361-1CC09-0                                          | 56                                   |
| 132M                                                                                       | 970         | 4            | 39           | 9.1                  | 7.3                  | 5.3                  | 0.75           | 90                | 0.029             | 1PC1361-1CC29-0                                          | 61                                   |
| 132M                                                                                       | 972         | 5.5          | 54           | 12.5                 | 10                   | 7.2                  | 0.74           | 140               | 0.037             | 1PC1361-1CC39-0                                          | 70                                   |
| 160M                                                                                       | 975         | 7.5          | 73           | 16.8                 | 13.4                 | 9.7                  | 0.74           | 160               | 0.075             | 1PC1361-1DC29-0                                          | 106                                  |
| 160L                                                                                       | 975         | 11           | 108          | 23.5                 | 18.8                 | 13.6                 | 0.76           | 237               | 0.098             | 1PC1361-1DC49-0                                          | 122                                  |
| 180L                                                                                       | 975         | 15           | 147          | 31                   | 24.5                 | 17.9                 | 0.78           | 455               | 0.170             | 1PC1361-1EC49-0                                          | 155                                  |
| 180L                                                                                       | 975         | 18.5         | 181          | 38.5                 | 31                   | 22                   | 0.77           | 525               | 0.206             | 1PC1361-1EC69-0                                          | 165                                  |
| 180L                                                                                       | 975         | 22           | 215          | 47                   | 37.5                 | 27                   | 0.74           | 710               | 0.247             | 1PC1361-1EC79-0                                          | 185                                  |
| 200L                                                                                       | 978         | 18.5         | 181          | 36                   | 29                   | 21                   | 0.82           | 470               | 0.250             | 1PC1361-2AC49-0                                          | 200                                  |
| 200L                                                                                       | 978         | 22           | 215          | 42.5                 | 34                   | 24.5                 | 0.82           | 559               | 0.300             | 1PC1361-2AC59-0                                          | 220                                  |
| 200L                                                                                       | 975         | 30           | 294          | 61                   | 49                   | 35.5                 | 0.77           | 794               | 0.381             | 1PC1361-2AC69-0                                          | 240                                  |
| 200L                                                                                       | 975         | 37           | 362          | 75                   | 60                   | 43.5                 | 0.77           | 977               | 0.434             | 1PC1361-2AC79-0                                          | 264                                  |
| 225M                                                                                       | 978         | 30           | 293          | 58                   | 46                   | 33.5                 | 0.82           | 770               | 0.580             | 1PC1361-2BC29-0                                          | 300                                  |
| 225M                                                                                       | 978         | 37           | 361          | 71                   | 57                   | 41                   | 0.82           | 1030              | 0.670             | 1PC1361-2BC69-0                                          | 325                                  |
| 225M                                                                                       | 978         | 45           | 439          | 88                   | 71                   | 51                   | 0.8            | 1290              | 0.790             | 1PC1361-2BC79-0                                          | 395                                  |
| 250M                                                                                       | 982         | 37           | 360          | 70                   | 56                   | 40.5                 | 0.82           | 890               | 0.860             | 1PC1361-2CC29-0                                          | 370                                  |
| 250M                                                                                       | 982         | 45           | 438          | 83                   | 67                   | 48.5                 | 0.84           | 1150              | 1.000             | 1PC1361-2CC69-0                                          | 410                                  |
| 250M                                                                                       | 985         | 55           | 533          | 102                  | 81                   | 59                   | 0.84           | 1590              | 1.200             | 1PC1361-2CC79-0                                          | 480                                  |
| 280S                                                                                       | 985         | 45           | 436          | 83                   | 66                   | 48                   | 0.84           | 1120              | 1.100             | 1PC1361-2DC09-0                                          | 460                                  |
| 280M                                                                                       | 985         | 55           | 533          | 100                  | 80                   | 58                   | 0.85           | 1380              | 1.400             | 1PC1361-2DC29-0                                          | 510                                  |
| 280M                                                                                       | 986         | 75           | 726          | 136                  | 109                  | 79                   | 0.85           | 2090              | 1.800             | 1PC1361-2DC69-0                                          | 570                                  |
| 280M                                                                                       | 988         | 90           | 870          | 170                  | 136                  | 99                   | 0.81           | 2670              | 1.900             | 1PC1361-2DC79-0                                          | 630                                  |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>F<br>G                          |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 4<br>5<br>6                          |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |                   |                   |                                                          | Order code                           |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/35.

Innomotics DP – 1PC1361: Non-ventilated

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx.<br>(without brake)   |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|-------------------|-------------------|----------------------------------------------------------|--------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ |                   | $J$               |                                                          |                                      |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                   |
| 6-pole, 1000 rpm                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Intermittent duty S3 – 40 %                                                                |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 132S                                                                                       | 975         | 2.4          | 24           | 6.3                  | 5                    | 3.7                  | 0.63           | 72                | 0.024             | 1PC1361-1CC09-0                                          | 56                                   |
| 132M                                                                                       | 978         | 3.2          | 31           | 8.2                  | 6.6                  | 4.8                  | 0.67           | 90                | 0.029             | 1PC1361-1CC29-0                                          | 61                                   |
| 132M                                                                                       | 978         | 4.4          | 43           | 10.9                 | 8.7                  | 6.3                  | 0.67           | 140               | 0.037             | 1PC1361-1CC39-0                                          | 70                                   |
| 160M                                                                                       | 985         | 6            | 58           | 14                   | 11.2                 | 8.1                  | 0.7            | 160               | 0.075             | 1PC1361-1DC29-0                                          | 106                                  |
| 160L                                                                                       | 982         | 8.8          | 86           | 19.5                 | 15.6                 | 11.3                 | 0.72           | 237               | 0.098             | 1PC1361-1DC49-0                                          | 122                                  |
| 180L                                                                                       | 980         | 12           | 117          | 26                   | 21                   | 15                   | 0.73           | 455               | 0.170             | 1PC1361-1EC49-0                                          | 155                                  |
| 180L                                                                                       | 980         | 14.8         | 144          | 32.5                 | 26                   | 18.8                 | 0.72           | 525               | 0.206             | 1PC1361-1EC69-0                                          | 165                                  |
| 180L                                                                                       | 980         | 17.6         | 172          | 40.5                 | 32.5                 | 23.5                 | 0.69           | 710               | 0.247             | 1PC1361-1EC79-0                                          | 185                                  |
| 200L                                                                                       | 982         | 14.8         | 144          | 29.5                 | 23.5                 | 17.1                 | 0.78           | 470               | 0.250             | 1PC1361-2AC49-0                                          | 200                                  |
| 200L                                                                                       | 982         | 17.6         | 171          | 35                   | 28                   | 20.5                 | 0.79           | 559               | 0.300             | 1PC1361-2AC59-0                                          | 220                                  |
| 200L                                                                                       | 980         | 24           | 234          | 50                   | 40                   | 29                   | 0.74           | 794               | 0.381             | 1PC1361-2AC69-0                                          | 240                                  |
| 200L                                                                                       | 980         | 29           | 283          | 63                   | 50                   | 36.5                 | 0.72           | 977               | 0.434             | 1PC1361-2AC79-0                                          | 264                                  |
| 225M                                                                                       | 985         | 24           | 233          | 46                   | 37                   | 26.5                 | 0.81           | 770               | 0.580             | 1PC1361-2BC29-0                                          | 300                                  |
| 225M                                                                                       | 985         | 29           | 281          | 56                   | 45                   | 32.5                 | 0.8            | 1030              | 0.670             | 1PC1361-2BC69-0                                          | 325                                  |
| 225M                                                                                       | 982         | 36           | 350          | 72                   | 57                   | 41.5                 | 0.78           | 1290              | 0.790             | 1PC1361-2BC79-0                                          | 395                                  |
| 250M                                                                                       | 986         | 29           | 281          | 56                   | 44.5                 | 32.5                 | 0.8            | 890               | 0.860             | 1PC1361-2CC29-0                                          | 370                                  |
| 250M                                                                                       | 986         | 36           | 349          | 68                   | 54                   | 39.5                 | 0.82           | 1150              | 1.000             | 1PC1361-2CC69-0                                          | 410                                  |
| 250M                                                                                       | 988         | 44           | 425          | 84                   | 67                   | 48.5                 | 0.81           | 1590              | 1.200             | 1PC1361-2CC79-0                                          | 480                                  |
| 280S                                                                                       | 988         | 36           | 348          | 68                   | 55                   | 39.5                 | 0.81           | 1120              | 1.100             | 1PC1361-2DC09-0                                          | 460                                  |
| 280M                                                                                       | 988         | 44           | 425          | 81                   | 65                   | 47                   | 0.83           | 1380              | 1.400             | 1PC1361-2DC29-0                                          | 510                                  |
| 280M                                                                                       | 990         | 60           | 579          | 112                  | 89                   | 65                   | 0.82           | 2090              | 1.800             | 1PC1361-2DC69-0                                          | 570                                  |
| 280M                                                                                       | 990         | 72           | 694          | 142                  | 114                  | 83                   | 0.77           | 2670              | 1.900             | 1PC1361-2DC79-0                                          | 630                                  |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>F<br>G                          |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |                   |                   |                                                          | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |                   |                   |                                                          | 4<br>5<br>6                          |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |                   |                   |                                                          | Order code                           |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |                   |                   |                                                          |                                      |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4B                                  |
|                                                                                            |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4C                                  |
|                                                                                            |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4D                                  |
|                                                                                            |             |              |              |                      |                      |                      |                |                   |                   |                                                          | M4F                                  |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/35.

**Innomotics DP – Crane duty motors****Selection and ordering data**

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx. (without brake) |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|--------------|-------------------|-------------------|----------------------------------------------------------|---------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | cos φ        |                   | $J$               |                                                          |                                 |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |              | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                              |
| <b>6-pole, 1000 rpm</b>                                                                    |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| <b>Intermittent duty S3 – 60 %</b>                                                         |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| <b>132S</b>                                                                                | 982         | 1.8          | 18           | 5.6                  | 4.5                  | 3.2                  | 0.53         | 72                | 0.024             | <b>1PC1361-1CC09-0</b> ■ ■ ■                             | 56                              |
| <b>132M</b>                                                                                | 985         | 2.4          | 23           | 7.1                  | 5.7                  | 4.1                  | 0.58         | 90                | 0.029             | <b>1PC1361-1CC29-0</b> ■ ■ ■                             | 61                              |
| <b>132M</b>                                                                                | 985         | 3.3          | 32           | 9.4                  | 7.5                  | 5.4                  | 0.58         | 140               | 0.037             | <b>1PC1361-1CC39-0</b> ■ ■ ■                             | 70                              |
| <b>160M</b>                                                                                | 988         | 4.5          | 43           | 11.8                 | 9.4                  | 6.8                  | 0.64         | 160               | 0.075             | <b>1PC1361-1DC29-0</b> ■ ■ ■                             | 106                             |
| <b>160L</b>                                                                                | 990         | 6.6          | 64           | 16                   | 12.8                 | 9.2                  | 0.66         | 237               | 0.098             | <b>1PC1361-1DC49-0</b> ■ ■ ■                             | 122                             |
| <b>180L</b>                                                                                | 985         | 9            | 87           | 22                   | 17.6                 | 12.7                 | 0.65         | 455               | 0.170             | <b>1PC1361-1EC49-0</b> ■ ■ ■                             | 155                             |
| <b>180L</b>                                                                                | 985         | 11.1         | 108          | 27.5                 | 22                   | 15.9                 | 0.64         | 525               | 0.206             | <b>1PC1361-1EC69-0</b> ■ ■ ■                             | 165                             |
| <b>180L</b>                                                                                | 985         | 13.2         | 128          | 34.5                 | 27.5                 | 19.9                 | 0.6          | 710               | 0.247             | <b>1PC1361-1EC79-0</b> ■ ■ ■                             | 185                             |
| <b>200L</b>                                                                                | 988         | 11.1         | 107          | 24                   | 19.2                 | 13.9                 | 0.72         | 470               | 0.250             | <b>1PC1361-2AC49-0</b> ■ ■ ■                             | 200                             |
| <b>200L</b>                                                                                | 985         | 13.2         | 128          | 28.5                 | 23                   | 16.5                 | 0.74         | 559               | 0.300             | <b>1PC1361-2AC59-0</b> ■ ■ ■                             | 220                             |
| <b>200L</b>                                                                                | 985         | 18           | 175          | 40.5                 | 32.5                 | 23.5                 | 0.68         | 794               | 0.381             | <b>1PC1361-2AC69-0</b> ■ ■ ■                             | 240                             |
| <b>200L</b>                                                                                | 985         | 22           | 213          | 53                   | 42.5                 | 30.5                 | 0.64         | 977               | 0.434             | <b>1PC1361-2AC79-0</b> ■ ■ ■                             | 264                             |
| <b>225M</b>                                                                                | 988         | 18           | 174          | 36.5                 | 29.5                 | 21.5                 | 0.76         | 770               | 0.580             | <b>1PC1361-2BC29-0</b> ■ ■ ■                             | 300                             |
| <b>225M</b>                                                                                | 988         | 22           | 213          | 45.5                 | 36.5                 | 26.5                 | 0.75         | 1030              | 0.670             | <b>1PC1361-2BC69-0</b> ■ ■ ■                             | 325                             |
| <b>225M</b>                                                                                | 988         | 27           | 261          | 58                   | 46.5                 | 33.5                 | 0.72         | 1290              | 0.790             | <b>1PC1361-2BC79-0</b> ■ ■ ■                             | 395                             |
| <b>250M</b>                                                                                | 990         | 22           | 212          | 45                   | 36                   | 26                   | 0.75         | 890               | 0.860             | <b>1PC1361-2CC29-0</b> ■ ■ ■                             | 370                             |
| <b>250M</b>                                                                                | 990         | 27           | 260          | 53                   | 42.5                 | 31                   | 0.78         | 1150              | 1.000             | <b>1PC1361-2CC69-0</b> ■ ■ ■                             | 410                             |
| <b>250M</b>                                                                                | 991         | 33           | 318          | 67                   | 53                   | 38.5                 | 0.76         | 1590              | 1.200             | <b>1PC1361-2CC79-0</b> ■ ■ ■                             | 480                             |
| <b>280S</b>                                                                                | 992         | 27           | 260          | 54                   | 43.5                 | 31.5                 | 0.76         | 1120              | 1.100             | <b>1PC1361-2DC09-0</b> ■ ■ ■                             | 460                             |
| <b>280M</b>                                                                                | 992         | 33           | 318          | 64                   | 52                   | 37.5                 | 0.78         | 1380              | 1.400             | <b>1PC1361-2DC29-0</b> ■ ■ ■                             | 510                             |
| <b>280M</b>                                                                                | 992         | 45           | 433          | 90                   | 72                   | 52                   | 0.76         | 2090              | 1.800             | <b>1PC1361-2DC69-0</b> ■ ■ ■                             | 570                             |
| <b>280M</b>                                                                                | 993         | 54           | 519          | 117                  | 94                   | 68                   | 0.7          | 2670              | 1.900             | <b>1PC1361-2DC79-0</b> ■ ■ ■                             | 630                             |
| Type of construction                                                                       |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |              |                   |                   |                                                          | A                               |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          | F                               |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |              |                   |                   |                                                          | G                               |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| Motor protection                                                                           |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |              |                   |                   |                                                          | A                               |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |              |                   |                   |                                                          | B                               |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | C                               |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          | F                               |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          | G                               |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |              |                   |                   |                                                          | H                               |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |              |                   |                   |                                                          | K                               |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |              |                   |                   |                                                          | L                               |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |              |                   |                   |                                                          | 4                               |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |              |                   |                   |                                                          | 5                               |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | 6                               |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| Winding                                                                                    |             |              |              |                      |                      |                      |              |                   |                   |                                                          |                                 |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | Order code                      |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | M4B                             |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | M4C                             |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |              |                   |                   |                                                          | M4D                             |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |              |                   |                   |                                                          | M4F                             |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/35.

## Innomotics DP – Crane duty motors

## Selection and ordering data

| Frame size                                                                                 | Rated speed | Rated output | Rated torque | Rated current        |                      |                      | Power factor   | Efficiency | Break-down torque | Moment of inertia | 1PC13<br>400 VΔ, 50 Hz<br>500 VΔ, 50 Hz<br>690 VΔ, 50 Hz | Weight, approx. (without brake)      |
|--------------------------------------------------------------------------------------------|-------------|--------------|--------------|----------------------|----------------------|----------------------|----------------|------------|-------------------|-------------------|----------------------------------------------------------|--------------------------------------|
| FS                                                                                         | $n_{rated}$ | $P_{rated}$  | $M_{rated}$  | $I_{rated}$<br>400 V | $I_{rated}$<br>500 V | $I_{rated}$<br>690 V | $\cos \varphi$ | $\eta$     |                   | $J$               |                                                          |                                      |
|                                                                                            | rpm         | kW           | Nm           | A                    | A                    | A                    |                | %          | Nm                | kgm <sup>2</sup>  | Article No.                                              | kg                                   |
| 6-pole, 1000 rpm                                                                           |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Intermittent duty S9: Duty with non-periodic variation in load and speed                   |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 132S                                                                                       | 990         | 1.1          | 11           | 5.1                  | 4.2                  | 3.0                  | 0.39           | 78.1       | 72                | 0.024             | 1PC1361-1CC09-0                                          | 56                                   |
| 132M                                                                                       | 990         | 1.5          | 14           | 6.3                  | 5.0                  | 3.7                  | 0.43           | 79.8       | 90                | 0.029             | 1PC1361-1CC29-0                                          | 61                                   |
| 132M                                                                                       | 990         | 2.0          | 19           | 8.3                  | 6.6                  | 4.8                  | 0.43           | 81.3       | 140               | 0.037             | 1PC1361-1CC39-0                                          | 70                                   |
| 160M                                                                                       | 992         | 2.8          | 27           | 9.9                  | 7.9                  | 5.8                  | 0.49           | 83.0       | 160               | 0.075             | 1PC1361-1DC29-0                                          | 106                                  |
| 160L                                                                                       | 992         | 4.1          | 39           | 13.0                 | 11.0                 | 7.5                  | 0.51           | 84.7       | 237               | 0.098             | 1PC1361-1DC49-0                                          | 122                                  |
| 180L                                                                                       | 990         | 5.6          | 54           | 18.2                 | 15.0                 | 10.5                 | 0.50           | 86.1       | 455               | 0.170             | 1PC1361-1EC49-0                                          | 155                                  |
| 180L                                                                                       | 990         | 6.9          | 67           | 23.0                 | 18.7                 | 13.3                 | 0.49           | 86.9       | 525               | 0.206             | 1PC1361-1EC69-0                                          | 165                                  |
| 180L                                                                                       | 990         | 8.2          | 79           | 29.5                 | 24.5                 | 17.0                 | 0.44           | 87.6       | 710               | 0.247             | 1PC1361-1EC79-0                                          | 185                                  |
| 200L                                                                                       | 992         | 6.9          | 66           | 18.9                 | 15.8                 | 11.0                 | 0.58           | 86.9       | 470               | 0.250             | 1PC1361-2AC49-0                                          | 200                                  |
| 200L                                                                                       | 992         | 8.2          | 79           | 22.0                 | 18.0                 | 12.8                 | 0.60           | 87.6       | 559               | 0.300             | 1PC1361-2AC59-0                                          | 220                                  |
| 200L                                                                                       | 992         | 11.2         | 108          | 31.5                 | 27.0                 | 18.3                 | 0.54           | 88.7       | 794               | 0.381             | 1PC1361-2AC69-0                                          | 240                                  |
| 200L                                                                                       | 990         | 13.8         | 133          | 44.0                 | 35.0                 | 24.5                 | 0.49           | 89.4       | 977               | 0.434             | 1PC1361-2AC79-0                                          | 264                                  |
| 225M                                                                                       | 993         | 11.2         | 108          | 28.0                 | 22.5                 | 16.2                 | 0.63           | 91.7       | 770               | 0.580             | 1PC1361-2BC29-0                                          | 300                                  |
| 225M                                                                                       | 993         | 13.8         | 133          | 35.0                 | 28.0                 | 20.0                 | 0.62           | 92.2       | 1030              | 0.670             | 1PC1361-2BC69-0                                          | 325                                  |
| 225M                                                                                       | 993         | 16.8         | 162          | 46.0                 | 36.5                 | 26.5                 | 0.57           | 92.7       | 1290              | 0.790             | 1PC1361-2BC79-0                                          | 395                                  |
| 250M                                                                                       | 994         | 13.8         | 133          | 35.0                 | 28.0                 | 20.0                 | 0.62           | 92.2       | 890               | 0.860             | 1PC1361-2CC29-0                                          | 370                                  |
| 250M                                                                                       | 994         | 16.8         | 161          | 40.0                 | 32.0                 | 23.5                 | 0.65           | 92.7       | 1150              | 1.000             | 1PC1361-2CC69-0                                          | 410                                  |
| 250M                                                                                       | 995         | 20.0         | 192          | 50.0                 | 40.0                 | 29.0                 | 0.62           | 93.1       | 1590              | 1.200             | 1PC1361-2CC79-0                                          | 480                                  |
| 280S                                                                                       | 995         | 16.8         | 161          | 42.0                 | 34.0                 | 24.5                 | 0.62           | 92.7       | 1120              | 1.100             | 1PC1361-2DC09-0                                          | 460                                  |
| 280M                                                                                       | 995         | 20.0         | 192          | 49.0                 | 39.5                 | 28.5                 | 0.63           | 93.1       | 1380              | 1.400             | 1PC1361-2DC29-0                                          | 510                                  |
| 280M                                                                                       | 995         | 28.0         | 269          | 70.0                 | 56.0                 | 40.5                 | 0.62           | 93.7       | 2090              | 1.800             | 1PC1361-2DC69-0                                          | 570                                  |
| 280M                                                                                       | 995         | 32.0         | 307          | 89.0                 | 71.0                 | 52.0                 | 0.55           | 94.0       | 2670              | 1.900             | 1PC1361-2DC79-0                                          | 630                                  |
| Type of construction                                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | A<br>F<br>G                          |
| IMB3, IM1001 horizontal foot mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| IMB5, IM3001 horizontal flange mounted                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| IMV1, IM3011 vertical flange mounted                                                       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further types of construction, code numbers, order codes and descriptions, see page 2/37.  |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | A<br>B<br>C<br>F<br>G<br>H<br>K<br>L |
| Motor protection                                                                           |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Without winding protection                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 3 x PTC for tripping, 2 terminals                                                          |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 6 x PTC for tripping and warning, 4 terminals                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 1 x KTY84, 2 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 2 x KTY84, 4 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 3 x Pt100, 6 terminals                                                                     |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 1 x Pt1000, 2 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 2 x Pt1000, 4 terminals                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further motor protection, code numbers, order codes and descriptions, see page 2/38.       |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | 4<br>5<br>6                          |
| Terminal box position                                                                      |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box at top                                                                        |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box at right side                                                                 |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Terminal box at top left side                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further terminal box positions, code numbers, order codes and descriptions, see page 2/39. |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          | Order<br>code                        |
| Winding                                                                                    |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 400 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 460 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 500 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| 690 VΔ, 50 Hz                                                                              |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |
| Further voltages, code numbers, order codes and descriptions, see page 2/36.               |             |              |              |                      |                      |                      |                |            |                   |                   |                                                          |                                      |

For inertia mass and weight of brakes, see technical specifications for KFB spring-set brake for Innomotics DP 1PC134, 1PC136.

For ordering example, see page 2/35.

**Innomotics DP – Crane duty motors****Options****Ordering example**

Non-ventilated gantry motor with brake and encoder in IM V1

1PC1361-1EB29-0GB4-Z M4B+F28+G07+F31+H08+Q02+R10

| Selection criteria                  | Requirement                                                                       | Structure of the Article No.                     |
|-------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------|
| Motor type                          | Crane duty motor without fan (IC410), degree of protection IP55, cast iron design | 1PC1361-■■■■■-■■■■■                              |
| Motor frame size/No. of poles/Speed | Motor in framesize 180, 4-pole version, 18.5 kW, S3-25 % (50 Hz-rating)           | 1PC1361-1EB2■-■■■■■                              |
| Voltage and frequency               | Voltage: 400 VΔ, 50 Hz                                                            | 1PC1361-1EB29-0■■■■■ M4B                         |
| Motor protection                    | 3 PTC thermistors for disconnection (2 terminals)                                 | 1PC1361-1EB29-0G■■■ M4B                          |
| Type of construction                | IM V1 without canopy, flange: FF300 (A350)                                        | 1PC1361-1EB29-0GB■■ M4B                          |
| Terminal box position               | Terminal box at top                                                               | 1PC1361-1EB29-0GB4 M4B                           |
| Options                             | Mounting of the brake KFB 16, 160 Nm                                              | 1PC1361-1EB29-0GB4-Z M4B+F31                     |
| Options                             | Mounting of POG 10 DN 1024 I rotary pulse encoder                                 | 1PC1361-1EB29-0GB4-Z M4B+G07+F31                 |
| Options                             | Mounting of rotary pulse encoder POG 10 to the brake                              | 1PC1361-1EB29-0GB4-Z M4B+F28+G07+F31             |
| Options                             | Terminal box on NDE                                                               | 1PC1361-1EB29-0GB4-Z M4B+F28+G07+F31+H08         |
| Options                             | Terminal box rotated by 90°, entry from DE (drive end)                            | 1PC1361-1EB29-0GB4-Z M4B+F28+G07+F31+H08+R10     |
| Options                             | Anti-condensation heating for 230 V (2 terminals)                                 | 1PC1361-1EB29-0GB4-Z M4B+F28+G07+F31+H08+Q02+R10 |

**Innomotics DP – Crane duty motors**

Voltages · Cast-iron series 1PC1341 and 1PC1361

**Selection and ordering data**

| Voltages                                                                   | Article No. supplements                                |                                                                           | Frame size               |                          |                          |                          |                          |                          |                          |                          | Motor version |         |
|----------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------|---------|
|                                                                            | Voltage code 12th and 13th position of the Article No. | Additional identification code with order code and plain text if required | 132                      | 160                      | 180                      | 200                      | 225                      | 250                      | 280                      | 315                      |               |         |
|                                                                            |                                                        |                                                                           | 1PC1341                  |                          |                          |                          |                          |                          |                          |                          |               |         |
|                                                                            |                                                        |                                                                           | 1PC13 61                 |                          |                          |                          |                          |                          |                          |                          | TEFC (IC411)  | 1PC1341 |
|                                                                            |                                                        |                                                                           |                          |                          |                          |                          |                          |                          |                          |                          | TENV (IC410)  | 1PC1361 |
| 1PC13 .. - ....                                                            | ■ - ■ ...                                              | Order code                                                                |                          |                          |                          |                          |                          |                          |                          |                          |               |         |
| <b>Voltage at 50 Hz and 50 Hz power</b>                                    |                                                        |                                                                           |                          |                          |                          |                          |                          |                          |                          |                          |               |         |
| 400 VΔ                                                                     | 9 0                                                    | M4B                                                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |               |         |
| 460 VΔ                                                                     | 9 0                                                    | M4C                                                                       | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |         |
| 480 VΔ                                                                     | 9 0                                                    | M4L                                                                       | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |         |
| 500 VΔ                                                                     | 9 0                                                    | M4D                                                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        |               |         |
| 690 VΔ                                                                     | 9 0                                                    | M4F                                                                       | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |         |
| <b>Voltage at 60 Hz and 60 Hz power</b>                                    |                                                        |                                                                           |                          |                          |                          |                          |                          |                          |                          |                          |               |         |
| 400 VΔ                                                                     | 9 0                                                    | M1N                                                                       | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |         |
| 460 VΔ                                                                     | 9 0                                                    | M1F                                                                       | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |         |
| 480 VΔ                                                                     | 9 0                                                    | M1L                                                                       | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |         |
| 500 VΔ                                                                     | 9 0                                                    | M1P                                                                       | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |         |
| 690 VΔ                                                                     | 9 0                                                    | M1Q                                                                       | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |         |
| <b>Voltage at 69 Hz and 69 Hz power</b>                                    |                                                        |                                                                           |                          |                          |                          |                          |                          |                          |                          |                          |               |         |
| 400 VΔ                                                                     | 9 0                                                    | M3L                                                                       | -                        | -                        | -                        | -                        | -                        | -                        | -                        | ✓                        |               |         |
| 460 VΔ                                                                     | 9 0                                                    | M3M                                                                       | -                        | -                        | -                        | -                        | -                        | -                        | -                        | ✓                        |               |         |
| 500 VΔ                                                                     | 9 0                                                    | M3N                                                                       | -                        | -                        | -                        | -                        | -                        | -                        | -                        | ✓                        |               |         |
| 690 VΔ                                                                     | 9 0                                                    | M3P                                                                       | -                        | -                        | -                        | -                        | -                        | -                        | -                        | ✓                        |               |         |
| <b>Voltage at 87 Hz and 87 Hz power</b>                                    |                                                        |                                                                           |                          |                          |                          |                          |                          |                          |                          |                          |               |         |
| 400 VΔ                                                                     | 9 0                                                    | M3A                                                                       | -                        | -                        | -                        | -                        | -                        | -                        | -                        | ✓                        |               |         |
| 460 VΔ                                                                     | 9 0                                                    | M3H                                                                       | -                        | -                        | -                        | -                        | -                        | -                        | -                        | ✓                        |               |         |
| 500 VΔ                                                                     | 9 0                                                    | M3J                                                                       | -                        | -                        | -                        | -                        | -                        | -                        | -                        | ✓                        |               |         |
| 690 VΔ                                                                     | 9 0                                                    | M3K                                                                       | -                        | -                        | -                        | -                        | -                        | -                        | -                        | ✓                        |               |         |
| <b>Non-standard voltage and/or frequencies</b>                             |                                                        |                                                                           |                          |                          |                          |                          |                          |                          |                          |                          |               |         |
| Non-standard winding Reinforced insulation system (Advanced) <sup>1)</sup> | 9 0                                                    | M1Y • and customer specifications                                         | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |         |
| Non-standard winding Special insulation system (Premium) <sup>2)</sup>     | 9 0                                                    | M2Y • and customer specifications                                         | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |         |

- ☐ Standard version  
☒ With additional charge  
 - Not possible

<sup>1)</sup> Plain text must be specified in the order: Voltage between 200 V and 460 V, frequency, circuit, for 60 Hz additionally required rated power in kW.

<sup>2)</sup> Plain text must be specified in the order:  
Converter-proof for voltages with special insulation up to 690 V.

**Innomotics DP – Crane duty motors**

Types of construction · Cast-iron series 1PC1341 and 1PC1361

**Selection and ordering data**

| Types of construction          | Article No. supplements<br>Type of construction letter<br>14th position of the Article No. | For types of construction with order code(s)<br>Article No. With additional identification code -Z<br>Order code | Frame size     |       |       |       |       |       |       |       | Motor version |                    |
|--------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|---------------|--------------------|
|                                |                                                                                            |                                                                                                                  | 132            | 160   | 180   | 200   | 225   | 250   | 280   | 315   |               |                    |
|                                |                                                                                            |                                                                                                                  | <b>1PC1341</b> |       |       |       |       |       |       |       | TEFC (IC411)  | 1PC1341            |
|                                |                                                                                            |                                                                                                                  | <b>1PC1361</b> |       |       |       |       |       |       |       | TENV (IC410)  | 1PC1361            |
| <b>1PC13...-.....-..</b>       |                                                                                            |                                                                                                                  |                |       |       |       |       |       |       |       |               |                    |
| <b>Without flange</b>          |                                                                                            |                                                                                                                  |                |       |       |       |       |       |       |       |               |                    |
| IM B3                          |           | <b>A</b>                                                                                                         | -              |       |       |       |       |       |       |       |               |                    |
| IM B6                          |           | <b>T</b>                                                                                                         | -              |       |       |       |       |       |       |       |               |                    |
| IM B7                          |           | <b>U</b>                                                                                                         | -              |       |       |       |       |       |       |       |               |                    |
| IM B8                          |           | <b>V</b>                                                                                                         | -              |       |       |       |       |       |       |       |               |                    |
| IM V6                          |          | <b>D</b>                                                                                                         | -              |       |       |       |       |       |       |       |               |                    |
| IM V5 without protective cover |         | <b>C</b>                                                                                                         | -              |       |       |       |       |       |       |       |               |                    |
| IM V5 with protective cover    |         | <b>C</b>                                                                                                         | <b>H00</b>     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | TEFC (IC411)  | All except 1PC1361 |
| <b>With flange</b>             |                                                                                            |                                                                                                                  |                |       |       |       |       |       |       |       |               |                    |
|                                |                                                                                            | acc. to EN 50347                                                                                                 | FF265          | FF300 | FF300 | FF350 | FF400 | FF500 | FF500 | FF600 |               |                    |
|                                |                                                                                            | acc. to DIN 42948                                                                                                | A 300          | A 350 | A 350 | A 400 | A 450 | A 550 | A 550 | A 660 |               |                    |
| IM B5                          |         | <b>F</b>                                                                                                         | -              | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |                    |
| IM V1 without protective cover |         | <b>G</b>                                                                                                         | -              | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |                    |
| IM V1 with protective cover    |         | <b>G</b>                                                                                                         | <b>H00</b>     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | TEFC (IC411)  | All except 1PC1361 |
| IM V3                          |         | <b>H</b>                                                                                                         | -              | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |                    |
| IM B35                         |         | <b>J</b>                                                                                                         | -              | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |                    |

- ☐ Standard version  
☒ With additional charge  
☐ Not possible

## Innomotics DP – Crane duty motors

## Motor protection · Cast-iron series 1PC1341 and 1PC1361

## Selection and ordering data

| Motor protection   | Article No. supplements                                   |                                                                           | Frame size |     |     |     |     |     |     |     | Motor version |         |
|--------------------|-----------------------------------------------------------|---------------------------------------------------------------------------|------------|-----|-----|-----|-----|-----|-----|-----|---------------|---------|
|                    | Motor protection code<br>15th position of the Article No. | Additional identification code with order code and plain text if required | 132        | 160 | 180 | 200 | 225 | 250 | 280 | 315 |               |         |
|                    |                                                           |                                                                           | 1PC1341    |     |     |     |     |     |     |     | TEFC (IC411)  | 1PC1341 |
|                    |                                                           |                                                                           | 1PC1361    |     |     |     |     |     |     |     | TENV (IC410)  | 1PC1361 |
|                    |                                                           |                                                                           |            |     |     |     |     |     |     |     |               |         |
|                    |                                                           |                                                                           |            |     |     |     |     |     |     |     |               |         |
|                    |                                                           |                                                                           |            |     |     |     |     |     |     |     |               |         |
| 1PC13 ..-..... ■ . |                                                           | Order code                                                                |            |     |     |     |     |     |     |     |               |         |

### Motor protection (winding protection)

[illegible]

- ☐ Standard version  
☒ With additional charge  
☐ Not possible

Note:

Options are available specifically for bearing protection –  
For order codes and descriptions, see from page 2/40.

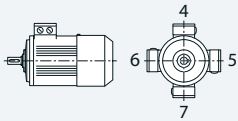
<sup>1)</sup> Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended.

2) Not available for option code **D31/D40**.

**Innomotics DP – Crane duty motors**

Terminal box position · Cast-iron series 1PC1341 and 1PC1361

**Selection and ordering data**

| Terminal box position                                                             | Article No. supplements                                     |                                                                           | Frame size                          |                                     |                                     |                                     |                                     |                                     |                                     |                                     | Motor version                       |         |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------|
|                                                                                   | Terminal box position code 16th position of the Article No. | Additional identification code with order code and plain text if required | 132                                 | 160                                 | 180                                 | 200                                 | 225                                 | 250                                 | 280                                 | 315                                 |                                     |         |
|  |                                                             |                                                                           | 1PC1341                             |                                     |                                     |                                     |                                     |                                     |                                     |                                     | TEFC (IC411)                        | 1PC1341 |
|                                                                                   |                                                             |                                                                           | 1PC1361                             |                                     |                                     |                                     |                                     |                                     |                                     |                                     | TENV (IC410)                        | 1PC1361 |
|                                                                                   | 1PC13...-.....-...                                          | Order code                                                                |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |         |
| Terminal box position                                                             |                                                             |                                                                           |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |         |
| Terminal box top <sup>1)</sup>                                                    | 4                                                           | -                                                                         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |         |
| Terminal box on RHS <sup>1)</sup>                                                 | 5                                                           | -                                                                         | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |         |
| Terminal box on LHS <sup>1)</sup>                                                 | 6                                                           | -                                                                         | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |         |

- ☐ Standard version  
☒ With additional charge

<sup>1)</sup> For types of construction with feet and flange-mounted with feet, cast feet are standard. Screwed-on feet are available with order code **H01**.

## Innomotics DP – Crane duty motors

Options · Cast-iron series 1PC1341 and 1PC1361

### Selection and ordering data

| Special versions                                                                                                    | Additional identification code -Z with order code and plain text if required | Frame size |       |       |       |       |       |       |       | Motor version |         |
|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------|-------|-------|-------|-------|-------|-------|-------|---------------|---------|
|                                                                                                                     |                                                                              | 132        | 160   | 180   | 200   | 225   | 250   | 280   | 315   |               |         |
|                                                                                                                     |                                                                              | 1PC1341    |       |       |       |       |       |       |       | TEFV (IC411)  | 1PC1341 |
|                                                                                                                     |                                                                              | 1PC1361    |       |       |       |       |       |       |       | TENV (IC410)  | 1PC1361 |
| 1PC1341- ..... -Z                                                                                                   |                                                                              |            |       |       |       |       |       |       |       |               |         |
| 1PC1361- ..... -Z                                                                                                   | Order code                                                                   |            |       |       |       |       |       |       |       |               |         |
| <b>Motor protection</b>                                                                                             |                                                                              |            |       |       |       |       |       |       |       |               |         |
| 1 temperature sensor KTY84-130 (2 terminals)                                                                        | Q23                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| 1 Pt1000 (2 terminals)                                                                                              | Q35                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| 2 Pt1000 resistance thermometers (4 terminals)                                                                      | Q36                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| <b>Motor connection and terminal box</b>                                                                            |                                                                              |            |       |       |       |       |       |       |       |               |         |
| Terminal box on NDE <sup>8)</sup>                                                                                   | H08                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Ground of cable bushing (inside terminal box) sealed with resin <sup>2)</sup>                                       | R01                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Rotation of the terminal box through 90°, entry from DE                                                             | R10                                                                          | O          | O     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Rotation of the connection box through 90°, entry from NDE                                                          | R11                                                                          | O          | O     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Rotation of the terminal box through 180°                                                                           | R12                                                                          | O          | O     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Larger terminal box                                                                                                 | R50                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Terminal box without cable entry holes                                                                              | R51                                                                          | -          | -     | O     | O     | O     | O     | O     | O     |               |         |
| Cast-iron auxiliary terminal box (small) <sup>11)</sup>                                                             | R62                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Non-standard cable entry hole thread (NPT or G thread)                                                              | Y61 • and customer specifications                                            | -          | -     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Special cable entry plate                                                                                           | Y73 • and customer specifications                                            | O. R.      | O. R. | O. R. | O. R. | O. R. | O. R. | O. R. | O. R. |               |         |
| <b>Windings and insulation</b>                                                                                      |                                                                              |            |       |       |       |       |       |       |       |               |         |
| Temperature class 155 (F), utilized acc. to 155 (F), coolant temperature 45 °C, derating approx. 4 %                | N05                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Temperature class 155 (F), utilized acc. to 155 (F), coolant temperature 50 °C, derating approx. 8 %                | N06                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Temperature class 155 (F), utilized acc. to 155 (F), coolant temperature 55 °C, derating approx. 13 %               | N07                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Temperature class 155 (F), utilized acc. to 155 (F), coolant temperature 60 °C, derating approx. 18 % <sup>2)</sup> | N08                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Temperature class 180 (H) at rated power and max. CT 60 °C <sup>12)</sup>                                           | N11                                                                          | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |
| Temperature class 180 (H)                                                                                           | Y75 • spec. power, CT ... °C or IA ... m above sea level                     | ✓          | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     |               |         |

For legends and footnotes, see page 2/43.

**Innomotics DP – Crane duty motors**

Options · Cast-iron series 1PC1341 and 1PC1361

| Special versions                                                                                                                                                                                                                                                                      | Additional identification code -Z with order code and plain text if required | Frame size               |                          |                          |                          |                          |                          |                          |                          | Motor version |                                               |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------|-----------------------------------------------|--|
|                                                                                                                                                                                                                                                                                       |                                                                              | 132                      | 160                      | 180                      | 200                      | 225                      | 250                      | 280                      | 315                      |               |                                               |  |
|                                                                                                                                                                                                                                                                                       |                                                                              | 1PC1341                  |                          |                          |                          |                          |                          |                          |                          | TEFV (IC411)  | 1PC1341                                       |  |
|                                                                                                                                                                                                                                                                                       |                                                                              | 1PC1361                  |                          |                          |                          |                          |                          |                          |                          | TENV (IC410)  | 1PC1361                                       |  |
| 1PC1341- ..... -Z<br>1PC1361- ..... -Z                                                                                                                                                                                                                                                |                                                                              |                          |                          |                          |                          |                          |                          |                          |                          |               |                                               |  |
| Order code                                                                                                                                                                                                                                                                            |                                                                              |                          |                          |                          |                          |                          |                          |                          |                          |               |                                               |  |
| Colors and paint finish                                                                                                                                                                                                                                                               |                                                                              |                          |                          |                          |                          |                          |                          |                          |                          |               |                                               |  |
| Special finish sea air resistant                                                                                                                                                                                                                                                      |                                                                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |               |                                               |  |
| Special paint for use offshore                                                                                                                                                                                                                                                        | S04                                                                          | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |                                               |  |
| Finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005 (see Catalog D 81.1 Section 1 "Introduction") | Y53 • and standard paint finish RAL ...                                      | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |                                               |  |
| Finish in special RAL colors: For RAL colors, see "Special finish in special RAL colors" (see Catalog D 81.1 Section 1 "Introduction")                                                                                                                                                | Y56 • and special paint finish RAL ...                                       | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        |               |                                               |  |
| Modular technology – Basic versions <sup>6)</sup>                                                                                                                                                                                                                                     |                                                                              |                          |                          |                          |                          |                          |                          |                          |                          |               |                                               |  |
| Brake prepared for mounting of encoder POG (POG encoder must be ordered)                                                                                                                                                                                                              | F28                                                                          | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        |               |                                               |  |
| Brake prepared for mounting of encoder POG - all mounting components are part of supply (POG encoder is not part of supply)                                                                                                                                                           | F29                                                                          | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        |               |                                               |  |
| Mounting of holding brake KFB 10 100 Nm <sup>3)</sup>                                                                                                                                                                                                                                 | F30                                                                          | ✓                        | ✓                        | ✓                        | -                        | -                        | -                        | -                        | -                        |               |                                               |  |
| Mounting of holding brake KFB 16 160 Nm <sup>3)</sup>                                                                                                                                                                                                                                 | F31                                                                          | -                        | ✓                        | ✓                        | ✓                        | -                        | -                        | -                        | -                        |               |                                               |  |
| Mounting of holding brake KFB 25 250 Nm <sup>3)</sup>                                                                                                                                                                                                                                 | F32                                                                          | -                        | -                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        | -                        |               |                                               |  |
| Mounting of holding brake KFB 30 300 Nm <sup>3)</sup>                                                                                                                                                                                                                                 | F33                                                                          | -                        | -                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        | -                        |               |                                               |  |
| Mounting of holding brake KFB 40 400 Nm <sup>3)</sup>                                                                                                                                                                                                                                 | F34                                                                          | -                        | -                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        | Not for       | combination with order code F50 1PC1341 FS250 |  |
| Mounting of holding brake KFB 63 630 Nm <sup>3)</sup>                                                                                                                                                                                                                                 | F35                                                                          | -                        | -                        | -                        | -                        | ✓                        | ✓                        | ✓                        | -                        |               |                                               |  |
| Mounting of holding brake KFB 100 1000 Nm <sup>3)</sup>                                                                                                                                                                                                                               | F36                                                                          | -                        | -                        | -                        | -                        | -                        | ✓                        | ✓                        | -                        |               |                                               |  |
| Mounting of holding brake KFB 160 1600 Nm <sup>3)</sup>                                                                                                                                                                                                                               | F37                                                                          | -                        | -                        | -                        | -                        | -                        | ✓                        | ✓                        | -                        | Not for       | 1PC1341 FS250                                 |  |
| Mounting of separately driven fan                                                                                                                                                                                                                                                     | F70                                                                          | ✓                        | ✓                        | ✓                        | ✓                        | -                        | -                        | -                        | -                        | Only for:     | 1PC1341                                       |  |
| Mounting of separately driven fan acc. IEC 60721-3-3 class 3K9/3K10                                                                                                                                                                                                                   | F79                                                                          | -                        | -                        | -                        | -                        | ✓                        | ✓                        | ✓                        | <input type="checkbox"/> | Only for:     | 1PC1341                                       |  |
| Modular technology – Additional versions                                                                                                                                                                                                                                              |                                                                              |                          |                          |                          |                          |                          |                          |                          |                          |               |                                               |  |
| Brake supply voltage 230 V AC, 50/60 Hz                                                                                                                                                                                                                                               | F11                                                                          | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        |               |                                               |  |
| Brake supply voltage 400 V AC, 50/60 Hz                                                                                                                                                                                                                                               | F12                                                                          | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        |               |                                               |  |
| Brake supply voltage 207 V DC                                                                                                                                                                                                                                                         | F16                                                                          | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        |               |                                               |  |
| Brake Microswitch on/off (Brake ventilated)                                                                                                                                                                                                                                           | F26                                                                          | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        |               |                                               |  |
| Anti-condensation heating for Brake 230 V AC                                                                                                                                                                                                                                          | F27                                                                          | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        |               |                                               |  |
| Mechanical manual brake release with lever                                                                                                                                                                                                                                            | F50                                                                          | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        | Not for       | combination with order code F34 1PC1341 FS250 |  |
| Brake Microswitch for air gap supervision                                                                                                                                                                                                                                             | F51                                                                          | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | ✓                        | -                        |               |                                               |  |

## Innomotics DP – Crane duty motors

### Options · Cast-iron series 1PC1341 and 1PC1361

| Special versions                                                                                                                         | Additional identification code -Z with order code and plain text if required | Frame size |     |     |     |     |     |     |     | Motor version |                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------|-----|-----|-----|-----|-----|-----|-----|---------------|-------------------------------------------------------------|
|                                                                                                                                          |                                                                              | 132        | 160 | 180 | 200 | 225 | 250 | 280 | 315 | TEFV (IC411)  | 1PC1341                                                     |
|                                                                                                                                          |                                                                              | 1PC1341    |     |     |     |     |     |     |     |               |                                                             |
|                                                                                                                                          |                                                                              | 1PC1361    |     |     |     |     |     |     |     | TENV (IC410)  | 1PC1361                                                     |
| 1PC1341- ..... -Z                                                                                                                        |                                                                              |            |     |     |     |     |     |     |     |               |                                                             |
| 1PC1361- ..... -Z                                                                                                                        | Order code                                                                   |            |     |     |     |     |     |     |     |               |                                                             |
| <b>Special technology</b>                                                                                                                |                                                                              |            |     |     |     |     |     |     |     |               |                                                             |
| Mounting of POG 10 DN 1024 I + FSL rotary pulse encoder (only in combination with separately driven fan or brake)                        | G10                                                                          | –          | –   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | Only for      | 1PC1361 or 1PC1341 in combination with external fan (IC416) |
| Mounting of POG 10 DN 1024 I rotary pulse encoder                                                                                        | G07                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | Only for      | 1PC1361 or 1PC1341 in combination with external fan (IC416) |
| Mounting of HOG 10 DN 1024 I rotary pulse encoder, terminal box moisture protection                                                      | G15                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | Only for      | 1PC1341 except IC416 versions                               |
| Mounting of HOG 10 DN 1024 I rotary pulse encoder, terminal box dust protection                                                          | G16                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | Only for      | 1PC1341 except IC416 versions                               |
| Mounting of rotary pulse encoder HOG 10 DN 1024 I + FSL (integrated centrifugal switch, speed ... rpm), terminal box moisture protection | Y74 • and spec. speed ... rpm                                                | –          | –   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | Only for      | 1PC1341 except IC416 versions                               |
| Mounting of rotary pulse encoder HOG 10 DN 1024 I + FSL (integrated centrifugal switch, speed ... rpm), terminal box dust protection     | Y76 • and spec. speed ... rpm                                                | –          | –   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | Only for      | 1PC1341 except IC416 versions                               |
| <b>Mechanical design and degrees of protection</b>                                                                                       |                                                                              |            |     |     |     |     |     |     |     |               |                                                             |
| Protective cover                                                                                                                         | H00                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |                                                             |
| Screwed-on (instead of cast) feet                                                                                                        | H01                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |                                                             |
| Condensation drainage holes                                                                                                              |                                                                              | □          | □   | □   | □   | □   | □   | □   | □   |               |                                                             |
| Condensation drainage sealing plug                                                                                                       |                                                                              | □          | □   | □   | □   | □   | □   | □   | □   |               |                                                             |
| Rust-resistant screws (externally)                                                                                                       |                                                                              | □          | □   | □   | □   | □   | □   | □   | □   |               |                                                             |
| IP56 degree of protection                                                                                                                | H22                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |                                                             |
| Drive-end seal for flange-mounting motors, oil-tight to 0,1 bar <sup>4) 10)</sup>                                                        | H23                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |                                                             |
| <b>Coolant temperature and installation altitude</b>                                                                                     |                                                                              |            |     |     |     |     |     |     |     |               |                                                             |
| Coolant temperature –40 to +40 °C <sup>5)</sup>                                                                                          | D03                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |                                                             |
| Coolant temperature –30 to +40 °C <sup>5)</sup>                                                                                          | D04                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |                                                             |
| <b>Bearings and lubrication</b>                                                                                                          |                                                                              |            |     |     |     |     |     |     |     |               |                                                             |
| Bolt-on feet material spheroidal graphite iron, only possible in combination with H01                                                    | L17                                                                          | –          | –   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |                                                             |
| End shield material IMB5 on DE in spheroidal graphite iron <sup>6)</sup>                                                                 | L18                                                                          | –          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |                                                             |
| Regreasing device with M10 × 1 grease nipple according to DIN 71412-A                                                                    | L19                                                                          | –          | –   | ✓   | ✓   | ✓   | ✓   | ○   | ○   |               |                                                             |
| Regreasing device <sup>1)</sup>                                                                                                          | L23                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | □   | □   |               |                                                             |

**Innomotics DP – Crane duty motors**

Options · Cast-iron series 1PC1341 and 1PC1361

| Special versions                                                           | Additional identification code -Z with order code and plain text if required | Frame size |     |     |     |     |     |     |     | Motor version |         |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------|------------|-----|-----|-----|-----|-----|-----|-----|---------------|---------|
|                                                                            |                                                                              | 132        | 160 | 180 | 200 | 225 | 250 | 280 | 315 |               |         |
|                                                                            |                                                                              | 1PC1341    |     |     |     |     |     |     |     | TEFV (IC411)  | 1PC1341 |
|                                                                            |                                                                              | 1PC1361    |     |     |     |     |     |     |     | TENV (IC410)  | 1PC1361 |
| 1PC1341- ..... -Z                                                          |                                                                              |            |     |     |     |     |     |     |     |               |         |
| 1PC1361- ..... -Z                                                          | Order code                                                                   |            |     |     |     |     |     |     |     |               |         |
| <b>Bearings and lubrication (continued)</b>                                |                                                                              |            |     |     |     |     |     |     |     |               |         |
| Special bearing for DE and NDE, bearing size 63                            | L25                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |
| Bearing insulation DE                                                      | L50                                                                          | -          | -   | -   | -   | ✓   | ✓   | ✓   | ✓   |               |         |
| Bearing insulation NDE                                                     | L51                                                                          | -          | -   | -   | -   | ✓   | ✓   | ✓   | ✓   |               |         |
| Measuring nipple for SPM shock pulse-measurement for bearing inspection    | Q01                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |
| <b>Shaft and rotor</b>                                                     |                                                                              |            |     |     |     |     |     |     |     |               |         |
| Standard shaft made of stainless steel                                     | L06                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |
| <b>Heating and ventilation</b>                                             |                                                                              |            |     |     |     |     |     |     |     |               |         |
| Sheet metal fan cover                                                      | F74                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | Only for:     | 1PC1341 |
| Metal external fan <sup>9)</sup>                                           | F76                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | Only for:     | 1PC1341 |
| Anti-condensation heating for 230 V (2 terminals)                          | Q02                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |
| Anti-condensation heating for 115 V (2 terminals)                          | Q03                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |
| <b>Rating plate and extra rating plates</b>                                |                                                                              |            |     |     |     |     |     |     |     |               |         |
| Rating plate, stainless steel                                              |                                                                              | □          | □   | □   | □   | □   | □   | □   | □   |               |         |
| Extra rating plate with identification codes                               | Y82 • and customer specifications                                            | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |
| <b>Packaging, safety notes, documentation and test certificates</b>        |                                                                              |            |     |     |     |     |     |     |     |               |         |
| Acceptance test certificate 3.1 in accordance with EN 102044 <sup>7)</sup> | B02                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |
| Document – Order dimensional drawing                                       | B61                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |
| Design according to UL with "Recognition Mark" <sup>13)</sup>              | D31                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |
| Canadian regulations (CSA) <sup>13)</sup>                                  | D40                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |
| TR CU product safety certificate EAC for the Eurasian customs union        | D47                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |
| Connected in delta for dispatch                                            | M02                                                                          | ✓          | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |               |         |

☐ Standard version  
☐ Without additional charge  
☒ With additional charge  
☐ Not possible

2

<sup>1)</sup> Up to frame size 160 not possible when brake is mounted.  
<sup>2)</sup> Cannot be used for motors in UL version (order code D31).  
<sup>3)</sup> For order codes F11, F12 and F16, the brake supply voltage must be specified or ordered.  
<sup>4)</sup> Not possible for type of construction IM V3.  
<sup>5)</sup> In connection with mountings, the respective technical data must be observed, please inquire before ordering.  
<sup>6)</sup> Special bearing for DE required, bearing size 63  
<sup>7)</sup> The delivery time for the factory test certificate may differ from the delivery time for the motor.

<sup>8)</sup> With H08, feet dimensions C and CA differ from EN 50347! Further information is available in SPC configurator:innomotics.com.  
<sup>9)</sup> Not possible in combination with order codes F70 or F79.  
<sup>10)</sup> Not possible in combination with order codes Q72 and Q78.  
<sup>11)</sup> Order code R62 is only possible in combination with R50.  
<sup>12)</sup> Not possible for nominal voltage > 460V (Insul. sys. premium).  
<sup>13)</sup> Not available in combination with **R01**. Not available in combination with 1PC13(4; 6)1-...-(G; H; L; M).. (mounting IM V\*).

## Innomotics DP – Crane duty motors

### More information

#### Replacement motors and repair parts

- \_ Commitment to provide replacement motors and repair parts following delivery of the motor:
  - \_ For up to 3 years after delivery of the original motor, in the event of total motor failure, Innomotics will supply a comparable replacement motor with regard to the mounting dimensions and functions (the type series may vary).
  - \_ If a replacement motor is supplied within the 3-year period, this does not mean that the warranty restarts.
  - \_ Replacement motors delivered after the active production of the machine series are also identified as spare motors on the rating plate.
  - \_ Spare parts are offered only for these spare motors on request; repair and replacement are not possible.
  - \_ After a period of 3 years (after the delivery of the original motor), it is only possible to repair these motors (depending on the availability of the spare parts required).
  - \_ For up to 5 years after the delivery of the original motor, spare parts will be available and for a further 5 years, Innomotics will provide information about spare parts and will supply documents when required.
- \_ When repair parts are ordered, the following details must be provided:
  - \_ Designation and part number
  - \_ Article No. and factory number of the motor.

Example for ordering a fan cover 1LE1003,  
frame size 112 M, 4-pole:

**Fan cover No. 7.40,  
1LE1003-1BB23-4AA4-Z, part No. E1001/5236197\_01\_001**

- \_ For bearing types, see Catalog Section 1 "Introduction".
- \_ Repair parts for 1MJ6, 1MJ7, 1MJ8, 1MJ1, 1ME8, 1ML8 motors are available on request.
- \_ For standard components, a commitment to supply repaired parts does not apply.
- \_ Support hotline  
In Germany  
Phone +49 (180) 5050448

You will find telephone numbers for other countries on our Internet site:  
[innomotics.com/hub/en/customer-service](https://innomotics.com/hub/en/customer-service)

**Innomotics DP – Crane duty motors****Notes on the dimensions****Overview**

\_ Dimension designations according to EN 50347 and IEC 60072.

\_ Fits

The shaft extensions specified in the dimension tables (DIN 748) and centering spigot diameters (EN 50347) are machined with the following fits:

| Dimension designation | ISO fit DIN ISO 286-2             |                |
|-----------------------|-----------------------------------|----------------|
| D, DA                 | to 30<br>over 30 to 50<br>over 50 | j6<br>k6<br>m6 |
| N                     | to 250<br>over 250                | j6<br>h6       |
| F, FA                 |                                   | h9             |
| S                     | flange (FF)H17                    | H17            |

The drilled holes of couplings and belt pulleys should have an ISO fit of at least H7.

Dimension K: nominal dimension according IEC 60072-1, negative deviation of tolerance H17 possible

\_ Dimensional tolerances

For the following dimensions, the admissible deviations are given below:

| Dimension designation | Dimension          | Admissible deviation |
|-----------------------|--------------------|----------------------|
| H                     | to 250<br>over 250 | - 0.5<br>- 1.0       |
| E, EA                 |                    | - 0.5                |

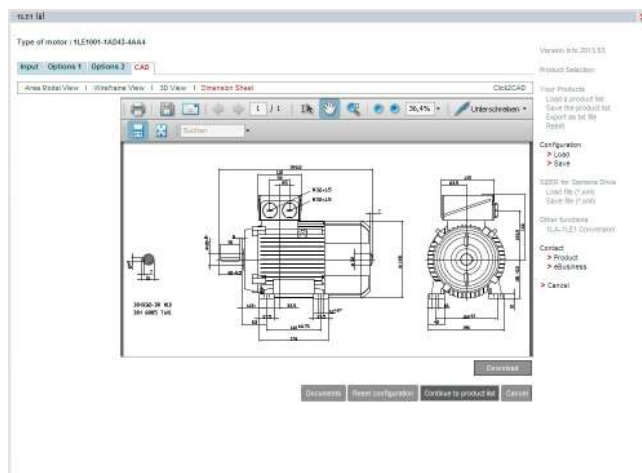
Keyways and feather keyways (dimensions GA, GC, F, and FA) are made in compliance with DIN 6885 Part 1.

\_ All dimensions are specified in mm.

**Dimension sheet generator (within the SPC)****Overview**

A dimensional drawing can be created in the "Drive Technology Configurator" (DT Configurator) for every configurable motor.

A dimensional drawing can be requested for every other motor.



When a complete Article No. is entered with or without order codes, a dimensional drawing can be called up under the "Documentation" tab.

These dimensional drawings can be presented in different views and sections and printed.

The corresponding dimension sheets can be exported, saved and processed further in DXF format (interchange/import format for CAD systems) or as bitmap graphics.

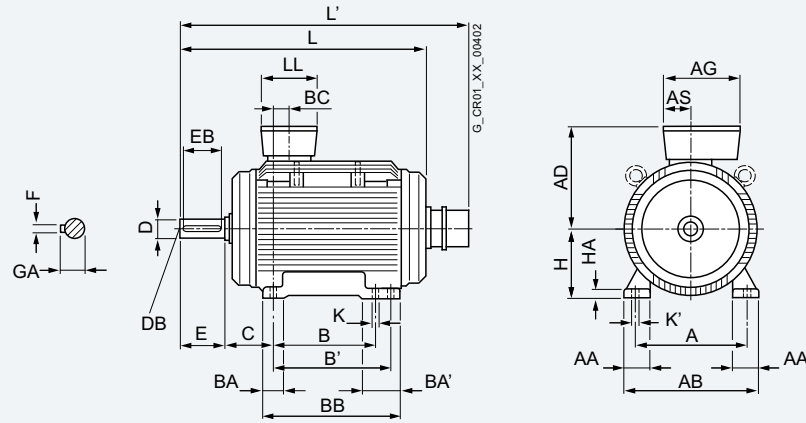
Online access in the Siemens Industry Mall

The SPC can be used on the Internet.  
[configurator.innomotics.com](http://configurator.innomotics.com)

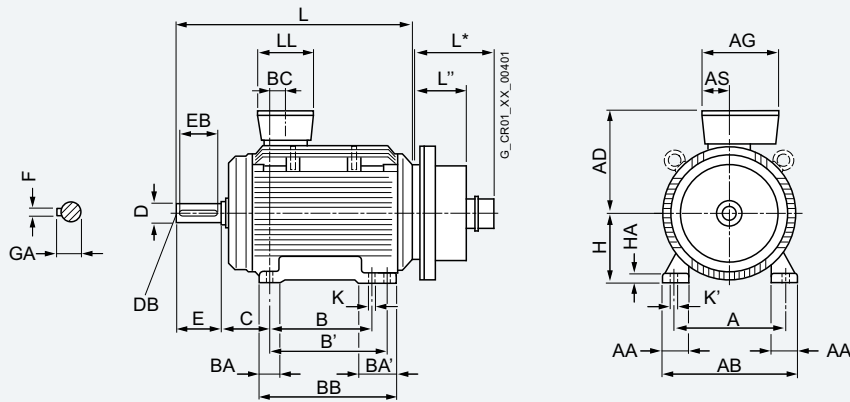
**Innomotics DP – Crane duty motors****Dimensional drawings****1PC1361, type of construction IM B3**

With POG10 pulse encoder

2



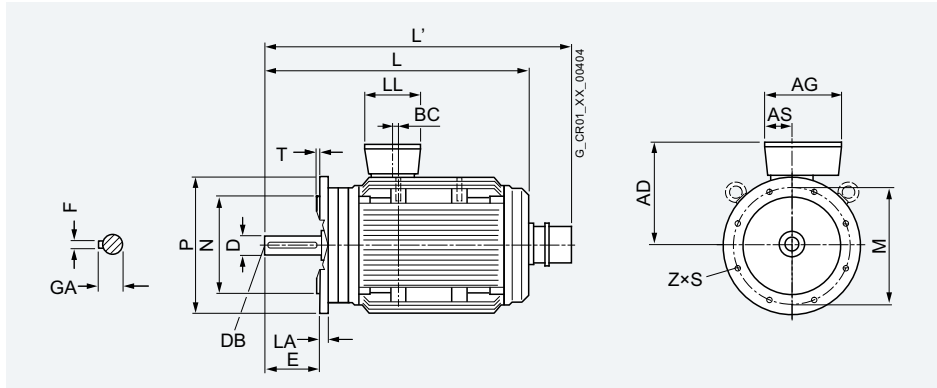
With brake and with POG10 pulse encoder



|            |                                                   | Dimensions in mm |    |     |     |     |     |     |     |     |     |     |      |     |     |    |     |     |    |    |     |
|------------|---------------------------------------------------|------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|----|-----|-----|----|----|-----|
| Frame size | Motor type                                        | A                | AA | AB  | AD  | AG  | AS  | B   | B'  | BA  | BA' | BB  | BC   | C   | H   | HA | L   | L'  | K  | K' | LL  |
| 132 S      | 1CB0, 1CC0                                        | 216              | 53 | 256 | 240 | 190 | 91  | 140 | ×   | 41  | 41  | 180 | 26.5 | 89  | 132 | 15 | 384 | 568 | 12 | 16 | 165 |
| 132 M      | 1CB2, 1CC2<br>1CC3                                |                  |    |     |     |     |     | 178 |     |     | 79  | 218 |      |     |     |    |     |     |    |    |     |
| 160 M      | 1DB2, 1DC2                                        | 254              | 60 | 300 | 265 | 190 | 91  | 210 | ×   | 49  | 49  | 256 | 47   | 108 | 160 | 18 | 512 | 707 | 15 | 19 | 165 |
| 160 L      | 1DB4, 1DC4                                        |                  |    |     |     |     |     | 254 |     |     | 93  | 300 |      |     |     |    |     |     |    |    |     |
| 180 M      | 1EB2                                              | 279              | 65 | 339 | 292 | 265 | 112 | 241 | 279 | 85  | 120 | 328 | 34   | 121 | 180 | 20 | 562 | 741 | 15 | 19 | 197 |
| 180 L      | 1EC4                                              |                  |    |     |     |     |     |     |     |     |     |     |      |     |     |    | 562 | 741 |    |    |     |
| 180 L      | 1EB4, 1EB6,<br>1EC6, 1EC7                         |                  |    |     |     |     |     |     |     |     |     |     |      |     |     |    | 592 | 771 |    |    |     |
| 200 L      | 2AB5, 2AC4,<br>2AC5,<br>2AB6, 2AC6,<br>2AB7, 2AC7 | 318              | 70 | 378 | 315 | 265 | 112 | 305 | ×   | 104 | 104 | 355 | 31   | 133 | 200 | 25 | 617 | 799 | 19 | 25 | 197 |
|            |                                                   |                  |    |     |     |     |     |     |     |     |     |     |      |     |     |    | 642 | 824 |    |    |     |

**Innomotics DP – Crane duty motors****Dimensional drawings****1PC1361, type of construction IM B5**

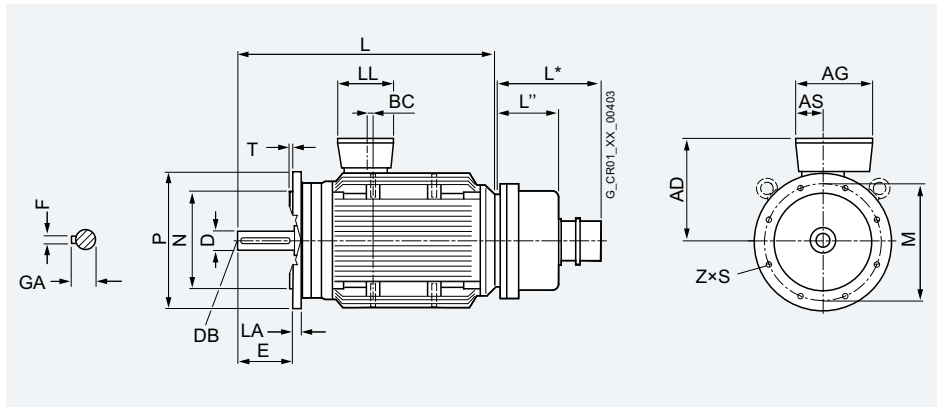
With POG10 pulse encoder

**Brake mounting - L" (mm)**

| <b>FS 132</b> |     | <b>FS 160</b> |     |
|---------------|-----|---------------|-----|
| KFB 10        | 156 | KFB 10        | 162 |
|               |     | KFB 16        | 149 |
| <b>FS 180</b> |     | <b>FS 200</b> |     |
| KFB10         | 178 | KFB16         | 173 |
| KFB16         | 165 | KFB25         | 197 |
| KFB25         | 189 | KFB30         | 207 |
| KFB30         | 199 | KFB40         | 207 |
| KFB40         | 199 |               |     |

**2**

With brake and with POG10 pulse encoder

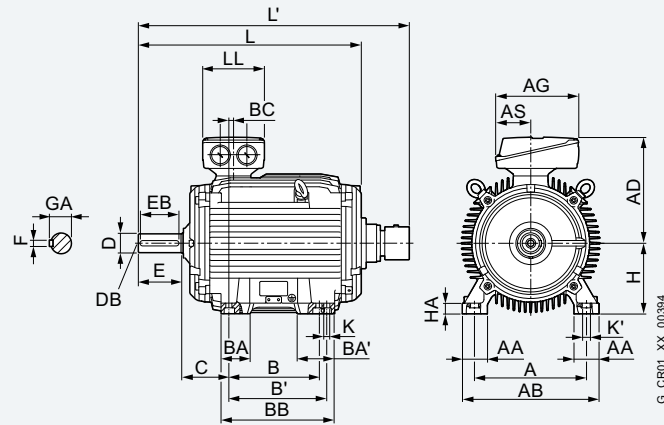
**Brake mounting + POG10 - L\* (mm)**

| <b>FS 132</b> |     | <b>FS 160</b> |     |
|---------------|-----|---------------|-----|
| KFB10+ POG10  | 307 | KFB10+ POG10  | 329 |
|               |     | KFB16+ POG10  | 315 |
| <b>FS 180</b> |     | <b>FS 200</b> |     |
| KFB10+ POG10  | 329 | KFB16+ POG10  | 323 |
| KFB16+ POG10  | 315 | KFB25+ POG10  | 348 |
| KFB25+ POG10  | 340 | KFB30+ POG10  | 367 |
| KFB30+ POG10  | 359 | KFB40+ POG10  | 348 |
| KFB40+ POG10  | 340 |               |     |

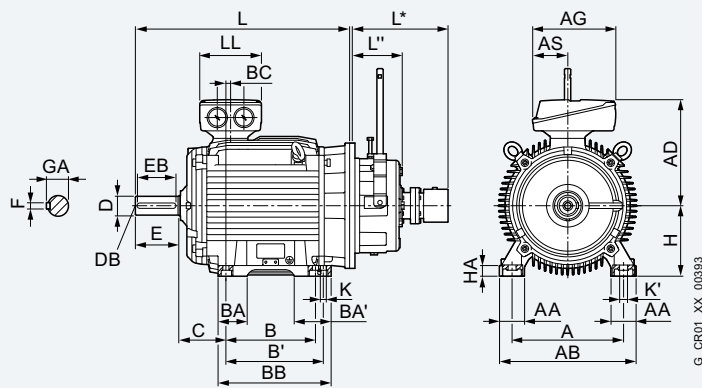
| Frame size | Motor type                               | Dimensions in mm |     |     |     |    |      |    |     |     |     |      |   |   |
|------------|------------------------------------------|------------------|-----|-----|-----|----|------|----|-----|-----|-----|------|---|---|
|            |                                          | D                | DB  | E   | EB  | F  | GA   | LA | M   | N   | P   | S    | T | Z |
| 132 S      | 1CB0, 1CC0                               | 38               | M12 | 80  | 70  | 10 | 41   | 12 | 265 | 230 | 300 | 14.5 | 4 | 4 |
| 132 M      | 1CB2, 1CC2, 1CC3                         |                  |     |     |     |    |      |    |     |     |     |      |   |   |
| 160 M      | 1DB2, 1DC2                               | 42               | M16 | 110 | 90  | 12 | 45   | 13 | 300 | 250 | 350 | 18.5 | 5 | 4 |
| 160 L      | 1DB4, 1DC4                               |                  |     |     |     |    |      |    |     |     |     |      |   |   |
| 180 M      | 1EB2                                     | 48               | M16 | 110 | 100 | 14 | 51.5 | 13 | 300 | 250 | 350 | 18.5 | 5 | 4 |
| 180 L      | 1EC4                                     |                  |     |     |     |    |      |    |     |     |     |      |   |   |
| 180 L      | 1EB4, 1EB6, 1EC6, 1EC7                   |                  |     |     |     |    |      |    |     |     |     |      |   |   |
| 200 L      | 2AB5, 2AC4, 2AC5, 2AB6, 2AC6, 2AB7, 2AC7 | 55               | M20 | 110 | 100 | 16 | 59   | 15 | 350 | 300 | 400 | 18.5 | 5 | 4 |

**Innomotics DP – Crane duty motors****Dimensional drawings****1PC1361, type of construction IM B3**

With POG10 pulse encoder



With brake and with POG10 pulse encoder



| Frame size | Motor type |      | Dimensions in mm |     |     |     |     |     |      |                   |     |     |     |    |     |     |    |     |      |    |    |     |
|------------|------------|------|------------------|-----|-----|-----|-----|-----|------|-------------------|-----|-----|-----|----|-----|-----|----|-----|------|----|----|-----|
|            |            |      | A                | AA  | AB  | AD  | AG  | AS  | B    | B'                | BA  | BA' | BB  | BC | C   | H   | HA | L   | L'   | K  | K' | LL  |
| 225 S      | 2BB0       | 4    | 356              | 80  | 436 | 338 | 266 | 112 | 286* | 311               | 92  | 117 | 361 | 15 | 149 | 225 | 34 | 650 | 802  | 19 | 25 | 197 |
| 225 M      | 2BB2, 2BC2 | 4, 6 | 356              | 80  | 436 | 338 | 266 | 112 | 286  | 311 <sup>1)</sup> | 92  | 117 | 361 | 15 | 149 | 225 | 34 | 710 | 862  | 19 | 25 | 197 |
|            | 2BB6, 2BC6 | 4, 6 | 356              | 80  | 436 | 338 | 266 | 112 | 286  | 311 <sup>1)</sup> | 92  | 117 | 361 | 15 | 149 | 225 | 34 | 710 | 862  | 19 | 25 | 197 |
|            | 2BC7       | 6    | 356              | 80  | 436 | 338 | 266 | 112 | 286  | 311 <sup>1)</sup> | 92  | 117 | 361 | 15 | 149 | 225 | 34 | 790 | 942  | 19 | 25 | 197 |
| 250 M      | 2CB2, 2CC2 | 4, 6 | 406              | 100 | 490 | 410 | 319 | 140 | 349  | –                 | 102 | 102 | 409 | 24 | 168 | 250 | 40 | 743 | 896  | 24 | 30 | 233 |
|            | 2CB6       | 4    | 406              | 100 | 490 | 410 | 319 | 140 | 349  | –                 | 102 | 102 | 409 | 24 | 168 | 250 | 40 | 813 | 966  | 24 | 30 | 233 |
|            | 2CC6       | 6    | 406              | 100 | 490 | 410 | 319 | 140 | 349  | –                 | 102 | 102 | 409 | 24 | 168 | 250 | 40 | 743 | 896  | 24 | 30 | 233 |
|            | 2CB7, 2CC7 | 4    | 406              | 100 | 490 | 410 | 319 | 140 | 349  | –                 | 102 | 102 | 409 | 24 | 168 | 250 | 40 | 813 | 966  | 24 | 30 | 233 |
| 280 S      | 2DB0, 2DC0 | 4, 6 | 457              | 100 | 540 | 433 | 319 | 140 | 368* | 419               | 101 | 152 | 479 | 20 | 190 | 280 | 40 | 806 | 956  | 24 | 30 | 233 |
| 280 M      | 2DB2, 2DC2 | 4, 6 | 457              | 100 | 540 | 433 | 319 | 140 | 368  | 419 <sup>1)</sup> | 101 | 152 | 479 | 20 | 190 | 280 | 40 | 806 | 956  | 24 | 30 | 233 |
|            | 2DB6       | 4    | 457              | 100 | 540 | 433 | 319 | 140 | 368  | 419 <sup>1)</sup> | 101 | 152 | 479 | 20 | 190 | 280 | 40 | 916 | 1066 | 24 | 30 | 233 |
|            | 2DC6       | 6    | 457              | 100 | 540 | 433 | 319 | 140 | 368  | 419 <sup>1)</sup> | 101 | 152 | 479 | 20 | 190 | 280 | 40 | 806 | 956  | 24 | 30 | 233 |
|            | 2DB7, 2DC7 | 4, 6 | 457              | 100 | 540 | 433 | 319 | 140 | 368  | 419 <sup>1)</sup> | 101 | 152 | 479 | 20 | 190 | 280 | 40 | 916 | 1066 | 24 | 30 | 233 |
|            |            |      |                  |     |     |     |     |     |      |                   |     |     |     |    |     |     |    |     |      |    |    |     |

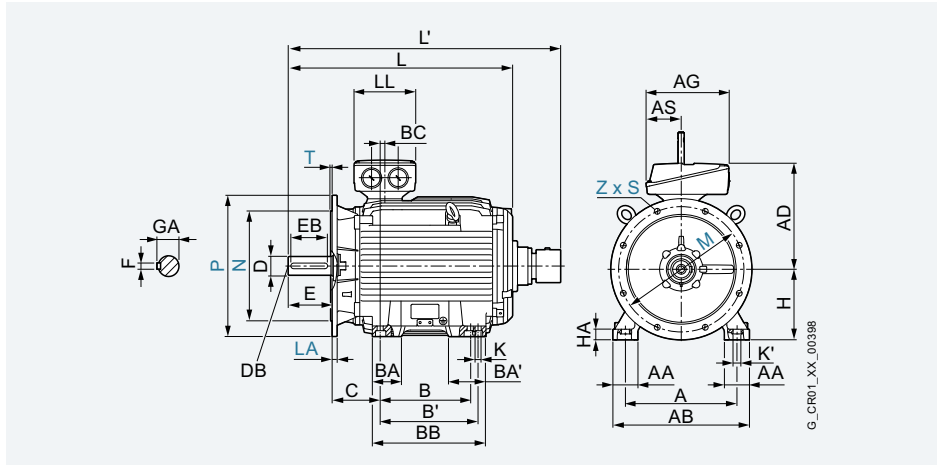
<sup>1)</sup> This dimension is assigned in DIN EN 50347 to the frame size listed.

## Innomotics DP – Crane duty motors

## Dimensional drawings

1PC1361, type of construction IM B5<sup>1)</sup>

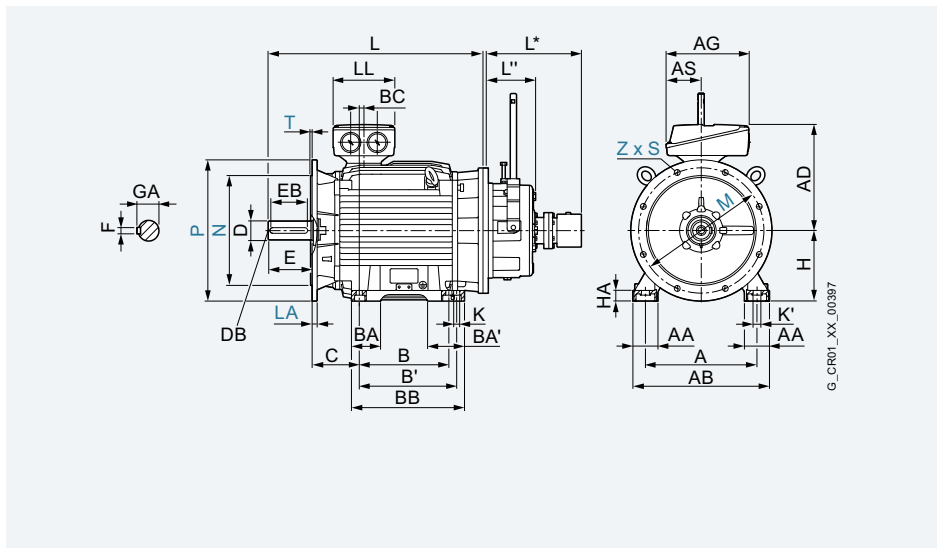
With POG10 pulse encoder



## Brake mounting - L" (mm)

| FS225        |       | FS250  |       |
|--------------|-------|--------|-------|
| KFB25        | 168.5 | KFB25  | 180.5 |
| KFB30        | 168.5 | KFB30  | 180.5 |
| KFB40        | 168.5 | KFB40  | 180.5 |
| KFB63        | 168.5 | KFB63  | 180.5 |
|              |       | KFB100 | 180.5 |
|              |       | KFB160 | 180.5 |
| <b>FS280</b> |       |        |       |
| KFB40        | 188.5 |        |       |
| KFB63        | 188.5 |        |       |
| KFB100       | 188.5 |        |       |
| KFB160       | 188.5 |        |       |

With brake and with POG10 pulse encoder

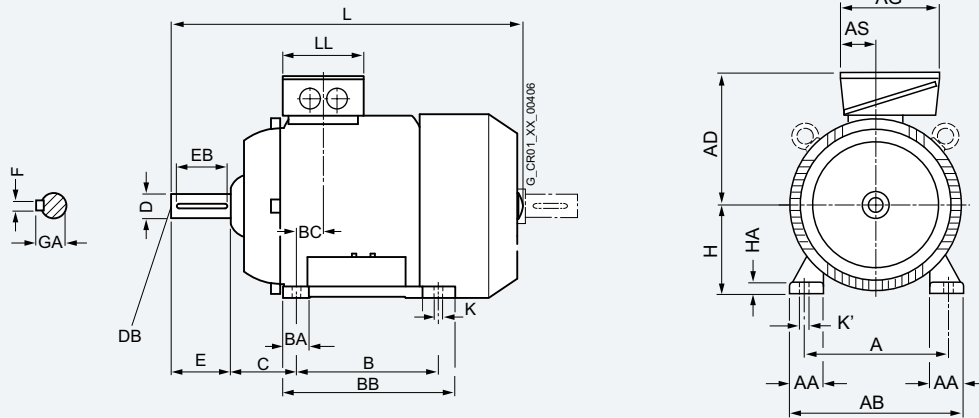
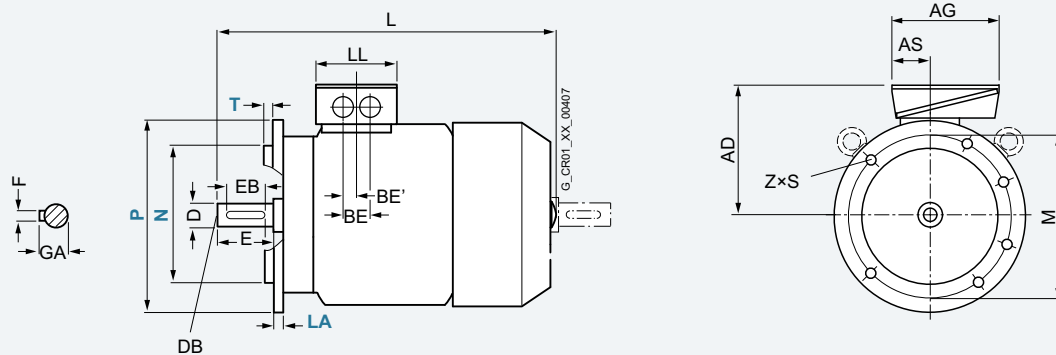


## Brake mounting + POG10 - L\* (mm)

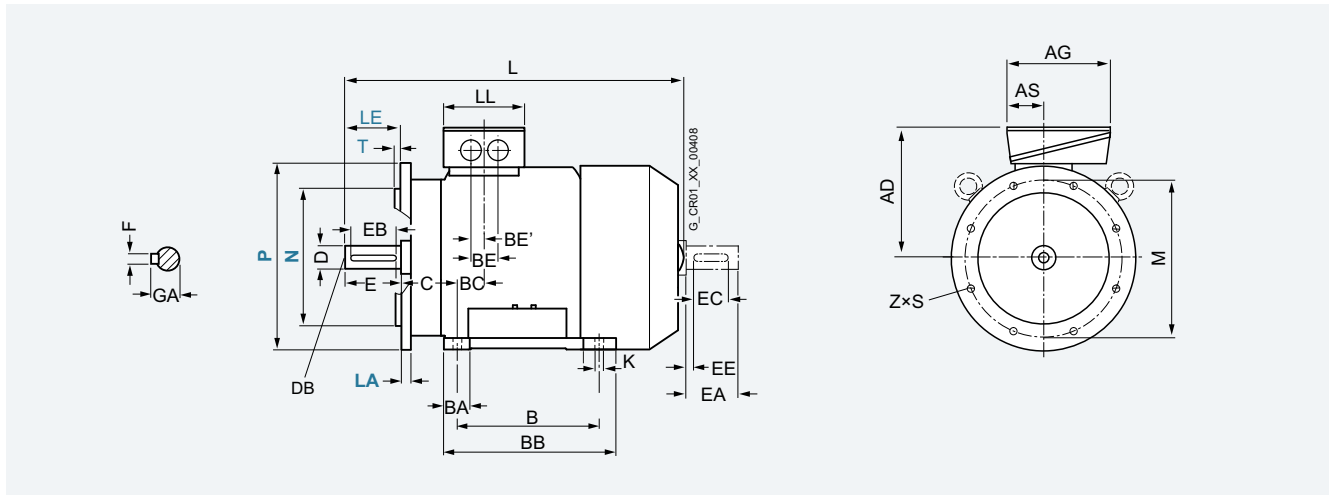
| FS225            |     | FS250            |     |
|------------------|-----|------------------|-----|
| KFB25+<br>POG10  | 314 | KFB25+<br>POG10  | 346 |
| KFB30+<br>POG10  | 314 | KFB30+<br>POG10  | 346 |
| KFB40+<br>POG10  | 314 | KFB40+<br>POG10  | 346 |
| KFB63+<br>POG10  | 314 | KFB63+<br>POG10  | 346 |
|                  |     | KFB100+<br>POG10 | 346 |
|                  |     | KFB160+<br>POG10 | 346 |
| <b>FS280</b>     |     |                  |     |
| KFB40+<br>POG10  | 350 |                  |     |
| KFB63+<br>POG10  | 350 |                  |     |
| KFB100+<br>POG10 | 350 |                  |     |
| KFB160+<br>POG10 | 350 |                  |     |

| Frame size | Motor type | Dimensions in mm |      |     |     |     |     |      |    |     |     |     |      |      |   |
|------------|------------|------------------|------|-----|-----|-----|-----|------|----|-----|-----|-----|------|------|---|
|            |            | D                | DB   | E   | EB  | F   | GA  | LA   | M  | N   | P   | S   | T    | Z    |   |
| 225 S      | 2BB0       | 4                | 60   | M20 | 140 | 125 | 18  | 64   | 16 | 400 | 350 | 450 | 18.5 | 5    | 8 |
| 225 M      | 2BB2, 2BC2 | 4, 6             | 60   | M20 | 140 | 125 | 18  | 64   | 16 | 400 | 350 | 450 | 18.5 | 5    | 8 |
|            | 2BB6, 2BC6 | 4, 6             | 60   | M20 | 140 | 125 | 18  | 64   | 16 | 400 | 350 | 450 | 18.5 | 5    | 8 |
|            | 2BC7       | 6                | 60   | M20 | 140 | 125 | 18  | 64   | 16 | 400 | 350 | 450 | 18.5 | 5    | 8 |
|            | 250 M      | 2CB2, 2CC2       | 4, 6 | 65  | M20 | 140 | 125 | 18   | 69 | 16  | 400 | 350 | 450  | 18.5 | 5 |
|            | 2CB6       | 4                | 65   | M20 | 140 | 125 | 18  | 69   | 16 | 400 | 350 | 450 | 18.5 | 5    | 8 |
|            | 2CC6       | 6                | 65   | M20 | 140 | 125 | 18  | 69   | 16 | 400 | 350 | 450 | 18.5 | 5    | 8 |
|            | 2CB7, 2CC7 | 4                | 65   | M20 | 140 | 125 | 18  | 69   | 16 | 400 | 350 | 450 | 18.5 | 5    | 8 |
| 280 S      | 2DB0, 2DC0 | 4, 6             | 75   | M20 | 140 | 125 | 20  | 79.5 | 18 | 500 | 450 | 550 | 22   | 6    | 8 |
| 280 M      | 2DB2, 2DC2 | 4, 6             | 75   | M20 | 140 | 125 | 20  | 79.5 | 18 | 500 | 450 | 550 | 22   | 6    | 8 |
|            | 2DB6       | 4                | 75   | M20 | 140 | 125 | 20  | 79.5 | 18 | 500 | 450 | 550 | 22   | 6    | 8 |
|            | 2DC6       | 6                | 75   | M20 | 140 | 125 | 20  | 79.5 | 18 | 500 | 450 | 550 | 22   | 6    | 8 |
|            | 2DB7, 2DC7 | 4, 6             | 75   | M20 | 140 | 125 | 20  | 79.5 | 18 | 500 | 450 | 550 | 22   | 6    | 8 |
|            |            |                  |      |     |     |     |     |      |    |     |     |     |      |      |   |

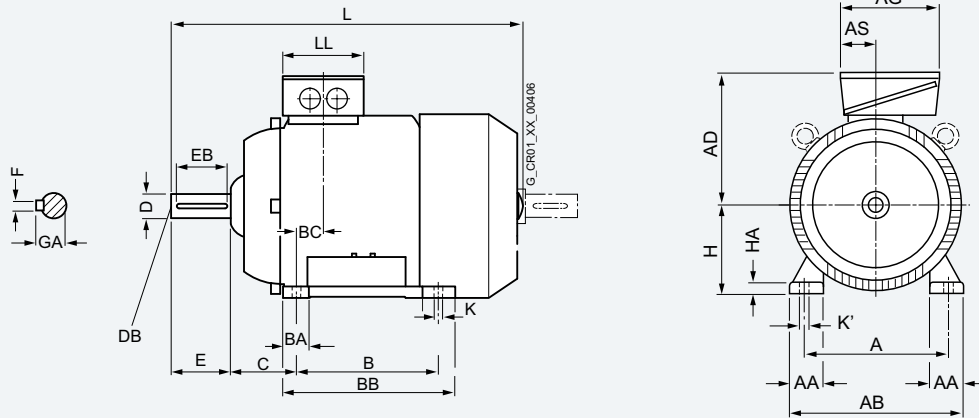
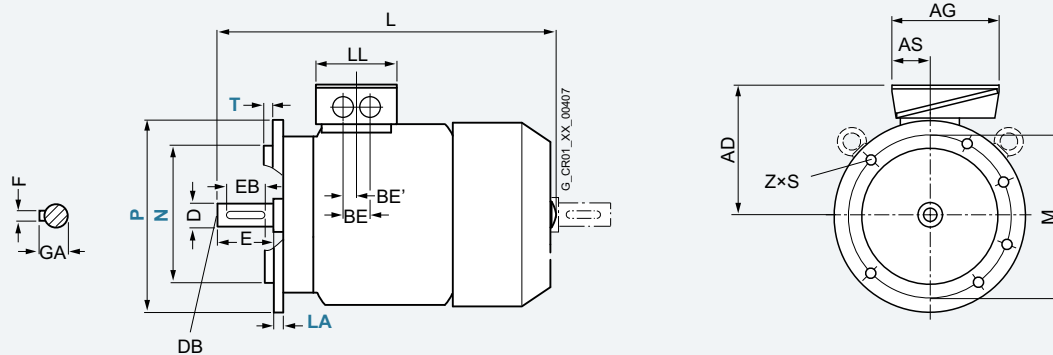
<sup>1)</sup> Motor drawing shows motor in IM B35. IM B5-motor comes without feet.

**Innomotics DP – Crane duty motors****Dimensional drawings****1PC1341, type of construction IM B3****1PC1341, type of construction IM B5**

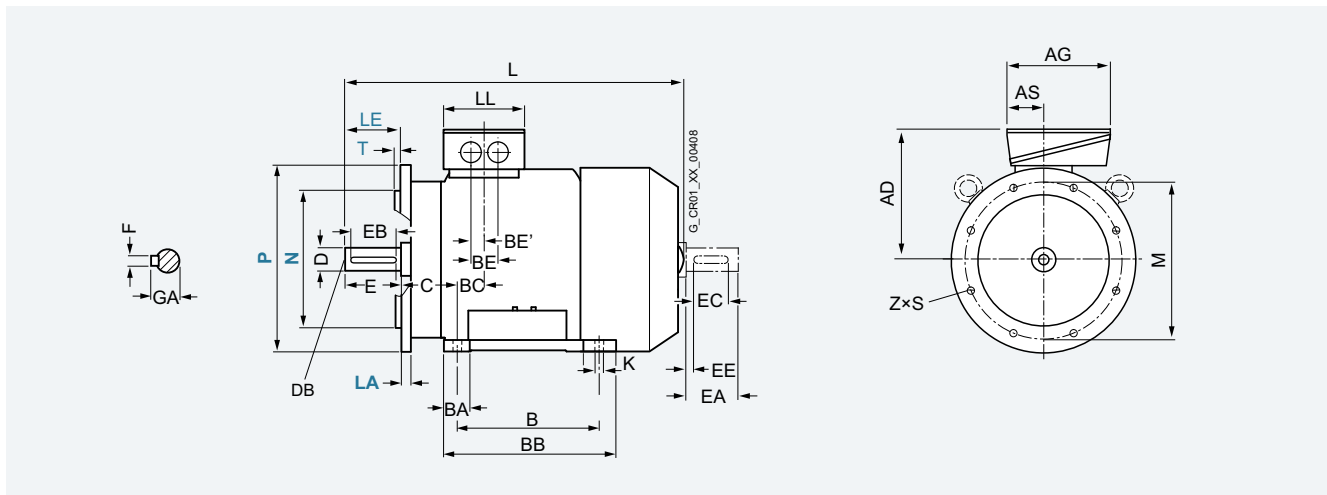
| Frame size | Motor type                                        | Dimensions in mm |    |     |     |     |     |     |     |     |      |     |     |    |       |    |    |     |
|------------|---------------------------------------------------|------------------|----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|----|-------|----|----|-----|
|            |                                                   | A                | AA | AB  | AD  | AG  | AS  | B   | BA  | BB  | BC   | C   | H   | HA | L     | K  | K' | LL  |
| 132 S      | 1CB0, 1CC0                                        | 216              | 53 | 256 | 240 | 190 | 91  | 140 | 41  | 180 | 26.5 | 89  | 132 | 15 | 466.5 | 12 | 16 | 165 |
| 132 M      | 1CB2, 1CC2<br>1CC3                                |                  |    |     |     |     |     | 178 |     | 218 |      |     |     |    |       |    |    |     |
| 160 M      | 1DB2, 1DC2                                        | 254              | 60 | 300 | 265 | 190 | 91  | 210 | 49  | 256 | 47   | 108 | 160 | 18 | 606.0 | 15 | 19 | 165 |
| 160 L      | 1DB4, 1DC4                                        |                  |    |     |     |     |     | 254 |     | 300 |      |     |     |    |       |    |    |     |
| 180 M      | 1EB2                                              | 279              | 65 | 339 | 292 | 265 | 112 | 241 | 85  | 328 | 34   | 121 | 180 | 20 | 668.0 | 15 | 19 | 197 |
| 180 L      | 1EC4                                              |                  |    |     |     |     |     |     |     |     |      |     |     |    | 668.0 |    |    |     |
| 180 L      | 1EB4, 1EB6,<br>1EC6, 1EC7                         |                  |    |     |     |     |     |     |     |     |      |     |     |    | 698.0 |    |    |     |
| 200 L      | 2AB5, 2AC4,<br>2AC5,<br>2AB6, 2AC6,<br>2AB7, 2AC7 | 318              | 70 | 378 | 315 | 265 | 112 | 305 | 104 | 355 | 31   | 133 | 200 | 25 | 721.0 | 19 | 25 | 197 |
|            |                                                   |                  |    |     |     |     |     |     |     |     |      |     |     |    | 746.0 |    |    |     |

**Innomotics DP – Crane duty motors****Dimensional drawings****1PC1341, type of construction IM B35****2**

| Frame size | Motor type                                        | Dimensions in mm |     |     |     |    |      |    |     |     |     |      |   |   |
|------------|---------------------------------------------------|------------------|-----|-----|-----|----|------|----|-----|-----|-----|------|---|---|
|            |                                                   | D                | DB  | E   | EB  | F  | GA   | LA | M   | N   | P   | S    | T | Z |
| 132 S      | 1CB0, 1CC0                                        | 38               | M12 | 80  | 70  | 10 | 41   | 12 | 265 | 230 | 300 | 14.5 | 4 | 4 |
| 132 M      | 1CB2, 1CC2<br>1CC3                                |                  |     |     |     |    |      |    |     |     |     |      |   |   |
| 160 M      | 1DB2, 1DC2                                        | 42               | M16 | 110 | 90  | 12 | 45   | 13 | 300 | 250 | 350 | 18.5 | 5 | 4 |
| 160 L      | 1DB4, 1DC4                                        |                  |     |     |     |    |      |    |     |     |     |      |   |   |
| 180 M      | 1EB2                                              | 48               | M16 | 110 | 100 | 14 | 51.5 | 13 | 300 | 250 | 350 | 18.5 | 5 | 4 |
| 180 L      | 1EC4                                              |                  |     |     |     |    |      |    |     |     |     |      |   |   |
| 180 L      | 1EB4, 1EB6,<br>1EC6, 1EC7                         |                  |     |     |     |    |      |    |     |     |     |      |   |   |
| 200 L      | 2AB5, 2AC4,<br>2AC5,<br>2AB6, 2AC6,<br>2AB7, 2AC7 | 55               | M20 | 110 | 100 | 16 | 59   | 15 | 350 | 300 | 400 | 18.5 | 5 | 4 |

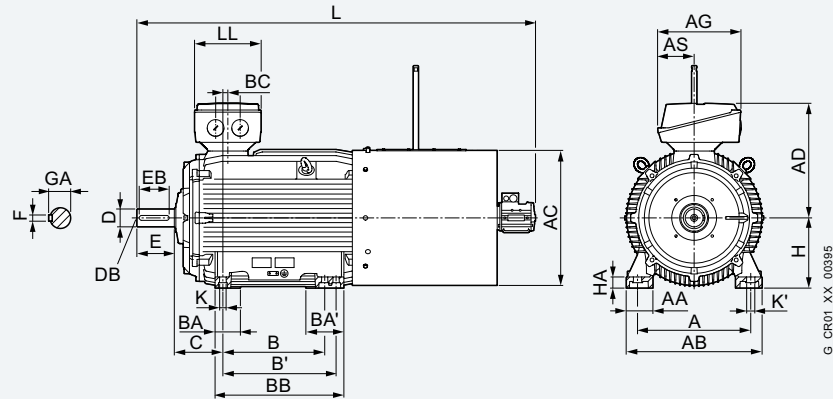
**Innomotics DP – Crane duty motors****Dimensional drawings****1PC1341, type of construction IM B3****1PC1341, type of construction IM B5**

| Frame size | Motor type |      | Dimensions in mm |     |     |     |     |     |      |     |     |    |     |     |    |        |    |    |     |
|------------|------------|------|------------------|-----|-----|-----|-----|-----|------|-----|-----|----|-----|-----|----|--------|----|----|-----|
|            |            |      | A                | AA  | AB  | AD  | AG  | AS  | B    | BA  | BB  | BC | C   | H   | HA | L      | K  | K' | LL  |
| 225 S      | 2BB0       | 4    | 356              | 80  | 436 | 338 | 266 | 112 | 286* | 92  | 361 | 15 | 149 | 225 | 34 | 788.0  | 19 | 25 | 197 |
| 225 M      | 2BB2, 2BC2 | 4, 6 | 356              | 80  | 436 | 338 | 266 | 112 | 286  | 92  | 361 | 15 | 149 | 225 | 34 | 848.0  | 19 | 25 | 197 |
|            | 2BB6, 2BC6 | 4, 6 | 356              | 80  | 436 | 338 | 266 | 112 | 286  | 92  | 361 | 15 | 149 | 225 | 34 | 848.0  | 19 | 25 | 197 |
|            | 2BC7       | 6    | 356              | 80  | 436 | 338 | 266 | 112 | 286  | 92  | 361 | 15 | 149 | 225 | 34 | 928.0  | 19 | 25 | 197 |
| 250 M      | 2CB2, 2CC2 | 4, 6 | 406              | 100 | 490 | 410 | 319 | 140 | 349  | 102 | 409 | 24 | 168 | 250 | 40 | 887.0  | 24 | 30 | 233 |
|            | 2CB6       | 4    | 406              | 100 | 490 | 410 | 319 | 140 | 349  | 102 | 409 | 24 | 168 | 250 | 40 | 957.0  | 24 | 30 | 233 |
|            | 2CC6       | 6    | 406              | 100 | 490 | 410 | 319 | 140 | 349  | 102 | 409 | 24 | 168 | 250 | 40 | 887.0  | 24 | 30 | 233 |
|            | 2CB7, 2CC7 | 4    | 406              | 100 | 490 | 410 | 319 | 140 | 349  | 102 | 409 | 24 | 168 | 250 | 40 | 957.0  | 24 | 30 | 233 |
| 280 S      | 2DB0, 2DC0 | 4, 6 | 457              | 100 | 540 | 433 | 319 | 140 | 368* | 101 | 479 | 20 | 190 | 280 | 40 | 960.0  | 24 | 30 | 233 |
| 280 M      | 2DB2, 2DC2 | 4, 6 | 457              | 100 | 540 | 433 | 319 | 140 | 368  | 101 | 479 | 20 | 190 | 280 | 40 | 960.0  | 24 | 30 | 233 |
|            | 2DB6       | 4    | 457              | 100 | 540 | 433 | 319 | 140 | 368  | 101 | 479 | 20 | 190 | 280 | 40 | 1070.0 | 24 | 30 | 233 |
|            | 2DC6       | 6    | 457              | 100 | 540 | 433 | 319 | 140 | 368  | 101 | 479 | 20 | 190 | 280 | 40 | 960.0  | 24 | 30 | 233 |
|            | 2DB7, 2DC7 | 4, 6 | 457              | 100 | 540 | 433 | 319 | 140 | 368  | 101 | 479 | 20 | 190 | 280 | 40 | 1070.0 | 24 | 30 | 233 |

**Innomotics DP – Crane duty motors****Dimensional drawings****1PC1341, type of construction IM B35**

2

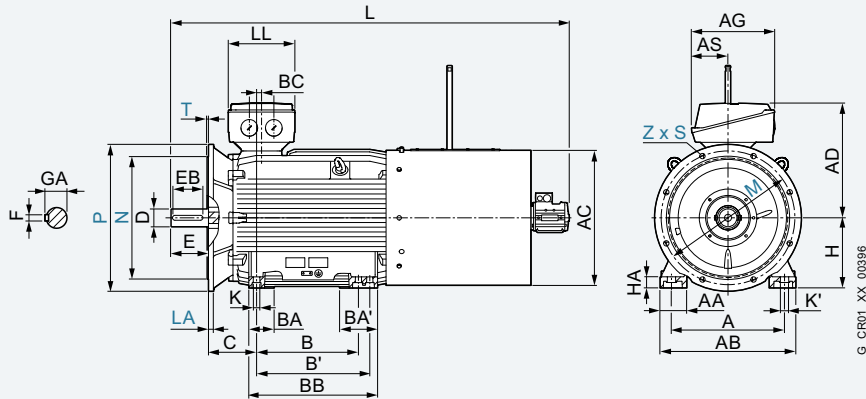
| Frame size | Motor type |      | Dimensions in mm |     |     |     |    |      |    |     |     |     |      |   |   |
|------------|------------|------|------------------|-----|-----|-----|----|------|----|-----|-----|-----|------|---|---|
|            |            |      | D                | DB  | E   | EB  | F  | GA   | LA | M   | N   | P   | S    | T | Z |
| 225 S      | 2BB0       | 4    | 60               | M20 | 140 | 125 | 18 | 64   | 16 | 400 | 350 | 450 | 18.5 | 5 | 8 |
| 225 M      | 2BB2, 2BC2 | 4, 6 | 60               | M20 | 140 | 125 | 18 | 64   | 16 | 400 | 350 | 450 | 18.5 | 5 | 8 |
|            | 2BB6, 2BC6 | 4, 6 | 60               | M20 | 140 | 125 | 18 | 64   | 16 | 400 | 350 | 450 | 18.5 | 5 | 8 |
|            | 2BC7       | 6    | 60               | M20 | 140 | 125 | 18 | 64   | 16 | 400 | 350 | 450 | 18.5 | 5 | 8 |
| 250 M      | 2CB2, 2CC2 | 4, 6 | 65               | M20 | 140 | 125 | 18 | 69   | 16 | 400 | 350 | 450 | 18.5 | 5 | 8 |
|            | 2CB6       | 4    | 65               | M20 | 140 | 125 | 18 | 69   | 16 | 400 | 350 | 450 | 18.5 | 5 | 8 |
|            | 2CC6       | 6    | 65               | M20 | 140 | 125 | 18 | 69   | 16 | 400 | 350 | 450 | 18.5 | 5 | 8 |
|            | 2CB7, 2CC7 | 4    | 65               | M20 | 140 | 125 | 18 | 69   | 16 | 400 | 350 | 450 | 18.5 | 5 | 8 |
| 280 S      | 2DB0, 2DC0 | 4, 6 | 75               | M20 | 140 | 125 | 20 | 79.5 | 18 | 500 | 450 | 550 | 22   | 6 | 8 |
| 280 M      | 2DB2, 2DC2 | 4, 6 | 75               | M20 | 140 | 125 | 20 | 79.5 | 18 | 500 | 450 | 550 | 22   | 6 | 8 |
|            | 2DB6       | 4    | 75               | M20 | 140 | 125 | 20 | 79.5 | 18 | 500 | 450 | 550 | 22   | 6 | 8 |
|            | 2DC6       | 6    | 75               | M20 | 140 | 125 | 20 | 79.5 | 18 | 500 | 450 | 550 | 22   | 6 | 8 |
|            | 2DB7, 2DC7 | 4, 6 | 75               | M20 | 140 | 125 | 20 | 79.5 | 18 | 500 | 450 | 550 | 22   | 6 | 8 |

**Innomotics DP – Crane duty motors****Dimensional drawings****1PC1341 shaft height 315, type of construction IM B3**

| Frame size | Motor type | Dimensions in mm |     |     |     |     |     |     |     |     |      |     |        |     |     |     |    |     |    |     |
|------------|------------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|--------|-----|-----|-----|----|-----|----|-----|
|            |            | A                | AA  | AB  | AC  | AD  | AD´ | AF  | AG  | AS  | B 1) | B´  | BA     | BA´ | BB  | BC  | BE | BE´ | C  |     |
| 315        | 3AC4, 3AD4 | 6, 8             | 508 | 120 | 610 | 623 | 515 | 515 | 404 | 374 | 164  | 457 | 508 1) | 113 | 170 | 578 | 22 | 110 | 55 | 216 |
|            | 3AC5, 3AD5 | 6, 8             | 508 | 120 | 610 | 623 | 515 | 515 | 404 | 374 | 164  | 457 | 508 1) | 176 | 227 | 578 | 22 | 110 | 55 | 216 |
|            | 3AC6       | 6                | 508 | 120 | 610 | 623 | 515 | 515 | 404 | 374 | 164  | 457 | 508 1) | 176 | 227 | 648 | 22 | 110 | 55 | 216 |
|            | 3AD6       | 8                | 508 | 120 | 610 | 623 | 515 | 515 | 404 | 374 | 164  | 457 | 508 1) | 176 | 227 | 578 | 22 | 110 | 55 | 216 |
|            | 3AC7, 3AD7 | 6, 8             | 508 | 120 | 610 | 623 | 515 | 515 | 404 | 374 | 164  | 457 | 508 1) | 176 | 227 | 648 | 22 | 110 | 55 | 216 |

<sup>1)</sup> This dimension is assigned in DIN EN 50347 to the frame size listed

<sup>2)</sup> Additional information: not a standard dimension acc. to DIN EN 50347

**Innomotics DP – Crane duty motors****Dimensional drawings****1PC1341 shaft height 315, type of construction IM B5****2**

| Frame size | Motor type | Dimensions in mm |     |                 |     |     |    |    |      |     |    |     |     |     |    |    |    |    |     |     |     |    |   |   |
|------------|------------|------------------|-----|-----------------|-----|-----|----|----|------|-----|----|-----|-----|-----|----|----|----|----|-----|-----|-----|----|---|---|
|            |            | H                | HA  | Y <sup>2)</sup> | HH  | K   | K' | L  | LL   | D   | DB | E   | EB  | ED  | F  | GA | LA | M  | N   | P   | S   | T  | Z |   |
| 315        | 3AC4, 3AD4 | 6, 8             | 315 | 50              | 181 | 238 | 28 | 35 | 1521 | 299 | 80 | M20 | 170 | 140 | 25 | 22 | 85 | 22 | 600 | 550 | 660 | 22 | 6 | 8 |
|            | 3AC5, 3AD5 | 6, 8             | 315 | 50              | 181 | 238 | 28 | 35 | 1521 | 299 | 80 | M20 | 170 | 140 | 25 | 22 | 85 | 22 | 600 | 550 | 660 | 22 | 6 | 8 |
|            | 3AC6       | 6                | 315 | 50              | 146 | 238 | 28 | 35 | 1676 | 299 | 80 | M20 | 170 | 140 | 25 | 22 | 85 | 22 | 600 | 550 | 660 | 22 | 6 | 8 |
|            | 3AD6       | 8                | 315 | 50              | 181 | 238 | 28 | 35 | 1521 | 299 | 80 | M20 | 170 | 140 | 25 | 22 | 85 | 22 | 600 | 550 | 660 | 22 | 6 | 8 |
|            | 3AC7, 3AD7 | 6, 8             | 315 | 50              | 146 | 238 | 28 | 35 | 1676 | 299 | 80 | M20 | 170 | 140 | 25 | 22 | 85 | 22 | 600 | 550 | 660 | 22 | 6 | 8 |

# **Innomotics M –**

# **Main motors**

3



# 3

## Innomotics M – Main motors

### 3/2 1PH8 for SINAMICS S120 for cranes

|      |                           |
|------|---------------------------|
| 3/4  | Degree of protection IP23 |
| 3/24 | Degree of protection IP55 |
| 3/28 | Article No. supplements   |
| 3/29 | Options                   |
| 3/31 | Dimensional drawings      |

1

2

3

4

## Innomotics M – Main motors

### Overview



1PH8 three-phase motor, shaft height 355

The innovations in the field of modern crane installations place higher and higher demands on compact asynchronous motors.

The compact asynchronous motor 1PH8 of shaft height 355 covers the increased performance requirements, e.g. for intermittent duty S3-40 % with up to 1.97 MW.

This motor serie is a converter solution which has been developed for use in conjunction with the SINAMICS S120 drive system. The 1PH8 asynchronous motors have the following features:

- \_ Forced ventilated asynchronous motors with squirrel-cage rotor with IP55 degree of protection. The motors are ventilated as standard by a radial, externally mounted fan unit. With the "enhanced corrosion protection" option, the motors can also be installed outdoors.
- \_ Forced ventilated asynchronous motors with squirrel-cage rotor with IP23 degree of protection. These motors are also ventilated as standard by a radial, externally mounted fan unit. These motors are particularly suitable for installation in power houses.

### Benefits

- \_ High power density with small motor dimensions
- \_ Wide speed control ranges
- \_ Speed down to zero without reducing the torque (constant torque characteristic)
- \_ High rotational accuracy, even at the lowest speeds
- \_ Fitted as standard with regreasing unit and insulated NDE bearing
- \_ Optimized for converter-fed operation on SINAMICS
- \_ Large selection of options

### Technical specifications

|                                                                                                                  |                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Insulation of the stator winding according to EN 60034-1 (IEC 60034-1)</b>                                    | Utilization to temperature class 155 (F) for a coolant temperature of up to 40 °C                                        |
| <b>Cooling in accordance with EN 60034-6 (IEC 60034-6)</b>                                                       | Radial fan NDE top mounted (intake from NDE)                                                                             |
| <b>Temperature monitoring</b>                                                                                    | Temperature sensor in the stator winding, additional as spare                                                            |
| <b>Motor supply voltage</b><br>(for technical specifications, see the ventilation data and sound pressure level) | 400 V 3 AC, 50/60 Hz<br>480 V 3 AC, 60 Hz                                                                                |
| <b>Type of construction according to EN 60034-7 (IEC 60034-7)</b>                                                | IM B3                                                                                                                    |
| <b>Degree of protection according to EN 60034-5 (IEC 60034-5)</b>                                                | IP23 or IP55                                                                                                             |
| <b>Shaft extension on the drive end according to DIN 748-3 (IEC 60072-1)</b>                                     | Feather key<br>full or half-key balancing                                                                                |
| <b>Shaft and flange accuracy according to (IEC 60072-1) <sup>1)</sup></b>                                        | Tolerance N (normal)<br>Tolerance R (reduced)                                                                            |
| <b>Vibration severity according to Innomotics/ EN 60034-14 (IEC 60034-14)</b>                                    | Level A (normal)<br>Level R/A (reduced)                                                                                  |
| <b>Sound pressure level according to DIN EN ISO 1680</b><br>Tolerance +3 dB                                      | Sound pressure level 85 dB(A)                                                                                            |
| <b>Maximum speeds</b>                                                                                            | 2800 rpm                                                                                                                 |
| <b>External encoder systems</b>                                                                                  | Incremental encoder HTL 1024 S/R<br>POG 10 (Baumer-Hübner)<br>Incremental encoder HTL 1024 S/R<br>HOG 28 (Baumer-Hübner) |
| <b>Connection</b>                                                                                                | Terminal box NDE right or DE top                                                                                         |
| <b>Paint finish</b>                                                                                              | Standard paint finish, anthracite, RAL 7016                                                                              |
| <b>Options</b>                                                                                                   | Refer to Options and Selection and ordering data                                                                         |

S/R = signals/revolution

#### Notes:

The rated motor data is specified in the selection and ordering data for a nominal pulse frequency of 2.5 kHz.

<sup>1)</sup> Rotational accuracy of shaft extension, concentricity of spigot and shaft and perpendicularity of mounting face of flange to shaft.

**Technical specifications****Ventilation data and sound pressure level**

| Motor version<br><b>Forced ventilation</b><br>(see 8th and 11th positions<br>in the Article No.)                          | Fan motor:<br>Current consumption at |                         |                         | Direction of<br>air-flow | Sound pressure level $L_{pA}$<br>(1 m)<br>Motor + external fan,<br>rated load,<br>tolerance +3 dB,<br>nominal pulse<br>frequency 2.5 kHz<br>dB | Volume of air<br>min.<br><br>m <sup>3</sup> /s |
|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------|-------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
|                                                                                                                           | 400 V/50 Hz<br>(± 10 %)              | 400 V/60 Hz<br>(± 10 %) | 460 V/60 Hz<br>(± 10 %) |                          |                                                                                                                                                |                                                |
|                                                                                                                           | A                                    | A                       | A                       |                          |                                                                                                                                                |                                                |
| <b>1PH8 motors, shaft height 355</b>                                                                                      |                                      |                         |                         |                          |                                                                                                                                                |                                                |
| <b>1PH835.-7..1</b><br>(asynchronous version,<br>external fan with noise level of 85 dB(A),<br>IP55 degree of protection) | 8.2                                  | 7.9                     | 7.9                     | NDE → DE<br>DE → NDE     | 85                                                                                                                                             | 1                                              |
| <b>1PH835.-7..4</b><br>(asynchronous version,<br>external fan with noise level of 85 dB(A),<br>IP23 degree of protection) | 8.2                                  | 13.2 <sup>1)</sup>      | 10.9 <sup>2)</sup>      | NDE → DE<br>DE → NDE     | 85                                                                                                                                             | 1.3                                            |

Important note:

For 1PH8/SH 355/IP23/85 dB(A) motors, a special fan motor must be ordered using option **R60/R61** for operating the external fan on a supply voltage of 60 Hz (see Selection and ordering data/Article No. supplements).

**Terminal box, max. connectable conductor cross sections**

| Terminal box type<br>(see selection and<br>ordering data for<br>details) | Cable entry<br>(power) | Cable entry<br>(external signals)                          | Outer cable<br>diameter, max. <sup>3)</sup> | Number of<br>main terminals                 | Cross section, max.<br>per terminal | Current, max.<br>per terminal <sup>4)</sup> |
|--------------------------------------------------------------------------|------------------------|------------------------------------------------------------|---------------------------------------------|---------------------------------------------|-------------------------------------|---------------------------------------------|
|                                                                          |                        |                                                            | mm                                          |                                             | mm <sup>2</sup>                     | A                                           |
| 1PH8 motors, shaft height 355                                            |                        |                                                            |                                             |                                             |                                     |                                             |
| 1XB7712-P01 <sup>5)</sup>                                                | 3 × M63 × 1.5          | 1 × M20 × 1.5 <sup>6)</sup><br>1 × M25 × 1.5 <sup>7)</sup> | 53                                          | Phases: 3 × 4 M16<br>Grounding: 4 × M16     | 3 × 95                              | 450                                         |
| 1XB7712-P03 <sup>5)</sup>                                                | 4 × M75 × 1.5          | 1 × M20 × 1.5 <sup>6)</sup><br>1 × M25 × 1.5 <sup>7)</sup> | 68                                          | Phases: 3 × 4 M16<br>Grounding: 4 × M16     | 4 × 185                             | 1150                                        |
| 1XB7820-P00                                                              | Not drilled            | 1 × M20 × 1.5 <sup>6)</sup><br>1 × M25 × 1.5 <sup>7)</sup> | –                                           | Phases: 2 × 3 × 4 M16<br>Grounding: 8 × M16 | 8 × 240                             | 2100                                        |

<sup>1)</sup> Special fan for operation at 460 V/60 Hz (± 10 %), option: **R60** (see Selection and ordering data/Article No. supplements).

<sup>2)</sup> Special fan for operation at 400 V/60 Hz (± 10 %), option: **R61** (see Selection and ordering data/Article No. supplements).

<sup>3)</sup> Dependent on the design of the metric cable gland.

<sup>4)</sup> Current carrying capacity based on IEC 60364-5-52, routing type C.

<sup>5)</sup> For terminal box type 1XB7712-P., depending on the standard, other cable entries (power) can be ordered using P options (see Selection and ordering data/Article No. supplements).

<sup>6)</sup> Mounted on left side of terminal box (viewed towards cable entries).

<sup>7)</sup> Mounted on right side of terminal box (viewed toward cable entries).

1PH8 for SINAMICS S120 for cranes

**Innomotics M – Main motors**

Degree of protection IP23

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                                                                                                                                   | Rated frequency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. current<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weakening) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |          |          |          | Mo-ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx. | Terminal box |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|--------------------------------|------------------------------------------------------------------------|-------------------------------------|----------|----------|----------|---------------------------|---------------------------------------------|-----------------|--------------|
| rpm                                                                                                                                                                                                          | Hz                             | kW                          | Nm                          | A                            | Nm                            | A                              | rpm                                                                    | 1000 rpm                            | 1500 rpm | 2000 rpm | 2500 rpm | kgm <sup>2</sup>          | Article No.                                 | kg              | Type         |
| <b>1PH8 35. asynchronous motors, IP23 degree of protection, noise level 85 dB(A), operating speed 600 rpm<br/>Supply voltage 480 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control</b> |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| <b>Intermittent duty S3 – 40 %</b>                                                                                                                                                                           |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 600                                                                                                                                                                                                          | 30,4                           | 545                         | 8675                        | 755 (at 500 V)               | 12640                         | 1310                           | 1100                                                                   | 4840                                | 2260     | 1320     | 870      | 14,74                     | 1PH8 350- 7 ■ B 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 610                         | 9709                        | 850 (at 500 V)               | 12500                         | 1280                           | 1100                                                                   | 4810                                | 2260     | 1320     | 870      | 14,74                     | 1PH8 351- 7 ■ B 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 735                         | 11699                       | 1010 (at 500 V)              | 15040                         | 1490                           | 1000                                                                   | 5770                                | 2700     | 1570     | 1040     | 17,40                     | 1PH8 352- 7 ■ B 4 0 - ■ ■ ■ 2               | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 865                         | 13768                       | 1175 (at 500 V)              | 17050                         | 1630                           | 1000                                                                   | 6550                                | 3070     | 1790     | 1180     | 20,66                     | 1PH8 354- 7 ■ B 4 0 - ■ ■ ■ 2               | 2889            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 1015                        | 16155                       | 1360 (at 500 V)              | 20690                         | 1950                           | 900                                                                    | 7930                                | 3710     | 2160     | 1420     | 24,22                     | 1PH8 356- 7 ■ B 4 0 - ■ ■ ■ 2               | 3256            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 1145                        | 18225                       | 1535 (at 500 V)              | 23650                         | 2200                           | 900                                                                    | 9070                                | 4240     | 2470     | 1630     | 27,79                     | 1PH8 358- 7 ■ B 4 0 - ■ ■ ■ 2               | 3629            | 1XB7712-P03  |
| <b>Intermittent duty S3 – 60 %</b>                                                                                                                                                                           |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 600                                                                                                                                                                                                          | 30,4                           | 455                         | 7242                        | 640 (at 500 V)               | 12640                         | 1310                           | 1100                                                                   | 4840                                | 2260     | 1320     | 870      | 14,74                     | 1PH8 350- 7 ■ B 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 510                         | 8118                        | 720 (at 500 V)               | 12500                         | 1280                           | 1100                                                                   | 4810                                | 2260     | 1320     | 870      | 14,74                     | 1PH8 351- 7 ■ B 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 615                         | 9789                        | 855 (at 500 V)               | 15040                         | 1490                           | 1000                                                                   | 5770                                | 2700     | 1570     | 1040     | 17,40                     | 1PH8 352- 7 ■ B 4 0 - ■ ■ ■ 2               | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 725                         | 11540                       | 990 (at 500 V)               | 17050                         | 1630                           | 1000                                                                   | 6550                                | 3070     | 1790     | 1180     | 20,66                     | 1PH8 354- 7 ■ B 4 0 - ■ ■ ■ 2               | 2889            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 850                         | 13529                       | 1145 (at 500 V)              | 20690                         | 1950                           | 900                                                                    | 7930                                | 3710     | 2160     | 1420     | 24,22                     | 1PH8 356- 7 ■ B 4 0 - ■ ■ ■ 2               | 3256            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 960                         | 15280                       | 1295 (at 500 V)              | 23650                         | 2200                           | 900                                                                    | 9070                                | 4240     | 2470     | 1630     | 27,79                     | 1PH8 358- 7 ■ B 4 0 - ■ ■ ■ 2               | 3629            | 1XB7712-P03  |
| <b>Intermittent duty S3 – 100 % (S1)</b>                                                                                                                                                                     |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 600                                                                                                                                                                                                          | 30,4                           | 370                         | 5889                        | 530 (at 500 V)               | 12640                         | 1310                           | 1100                                                                   | 4840                                | 2260     | 1320     | 870      | 14,74                     | 1PH8 350- 7 ■ B 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 415                         | 6605                        | 590 (at 500 V)               | 12500                         | 1280                           | 1100                                                                   | 4810                                | 2260     | 1320     | 870      | 14,74                     | 1PH8 351- 7 ■ B 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 500                         | 7958                        | 700 (at 500 V)               | 15040                         | 1490                           | 1000                                                                   | 5770                                | 2700     | 1570     | 1040     | 17,40                     | 1PH8 352- 7 ■ B 4 0 - ■ ■ ■ 2               | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 590                         | 9391                        | 810 (at 500 V)               | 17050                         | 1630                           | 1000                                                                   | 6550                                | 3070     | 1790     | 1180     | 20,66                     | 1PH8 354- 7 ■ B 4 0 - ■ ■ ■ 2               | 2889            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 690                         | 10983                       | 940 (at 500 V)               | 20690                         | 1950                           | 900                                                                    | 7930                                | 3710     | 2160     | 1420     | 24,22                     | 1PH8 356- 7 ■ B 4 0 - ■ ■ ■ 2               | 3256            | 1XB7712-P03  |
|                                                                                                                                                                                                              | 30,5                           | 780                         | 12415                       | 1060 (at 500 V)              | 23650                         | 2200                           | 900                                                                    | 9070                                | 4240     | 2470     | 1630     | 27,79                     | 1PH8 358- 7 ■ B 4 0 - ■ ■ ■ 2               | 3629            | 1XB7712-P03  |
| For versions, see Article No. supplements and options.                                                                                                                                                       |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                                    | Rated frequency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. current<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weakening) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |          |          |          | Mo-ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx. | Terminal box |
|---------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|--------------------------------|------------------------------------------------------------------------|-------------------------------------|----------|----------|----------|---------------------------|---------------------------------------------|-----------------|--------------|
| rpm                                                                                                           | Hz                             | kW                          | Nm                          | A                            | Nm                            | A                              | rpm                                                                    | 1000 rpm                            | 1500 rpm | 2000 rpm | 2500 rpm | kgm <sup>2</sup>          | Article No.                                 | kg              | Type         |
| <b>1PH8 35. asynchronous motors, IP23 degree of protection, noise level 85 dB(A), operating speed 600 rpm</b> |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| <b>Supply voltage 690 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control</b>             |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| <b>Intermittent duty S3 – 40 %</b>                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 600                                                                                                           | 30,5                           | 545                         | 8675                        | 545 (at 690 V)               | 12620                         | 950                            | 1100                                                                   | 4830                                | 2250     | 1310     | 860      | 14,74                     | 1PH8 350- 7 ■ H4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P01  |
|                                                                                                               | 30,5                           | 610                         | 9709                        | 620 (at 690 V)               | 12490                         | 930                            | 1100                                                                   | 4810                                | 2250     | 1310     | 870      | 14,74                     | 1PH8 351- 7 ■ H4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P01  |
|                                                                                                               | 30,5                           | 735                         | 11699                       | 740 (at 690 V)               | 14450                         | 1040                           | 1000                                                                   | 5570                                | 2610     | 1530     | 1010     | 17,40                     | 1PH8 352- 7 ■ H4 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                               | 30,5                           | 865                         | 13768                       | 855 (at 690 V)               | 17320                         | 1200                           | 1000                                                                   | 6650                                | 3110     | 1810     | 1190     | 20,66                     | 1PH8 354- 7 ■ H4 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                               | 30,5                           | 1015                        | 16155                       | 980 (at 690 V)               | 20800                         | 1420                           | 900                                                                    | 7980                                | 3730     | 2170     | 1430     | 24,22                     | 1PH8 356- 7 ■ H4 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                               | 30,4                           | 1145                        | 18225                       | 1110 (at 690 V)              | 24270                         | 1630                           | 900                                                                    | 9320                                | 4360     | 2540     | 1670     | 27,79                     | 1PH8 358- 7 ■ H4 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |
| <b>Intermittent duty S3 – 60 %</b>                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 600                                                                                                           | 30,5                           | 455                         | 7242                        | 460 (at 690 V)               | 12620                         | 950                            | 1100                                                                   | 4830                                | 2250     | 1310     | 860      | 14,74                     | 1PH8 350- 7 ■ H4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P01  |
|                                                                                                               | 30,5                           | 510                         | 8118                        | 525 (at 690 V)               | 12490                         | 930                            | 1100                                                                   | 4810                                | 2250     | 1310     | 870      | 14,74                     | 1PH8 351- 7 ■ H4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P01  |
|                                                                                                               | 30,5                           | 615                         | 9789                        | 625 (at 690 V)               | 14450                         | 1040                           | 1000                                                                   | 5570                                | 2610     | 1530     | 1010     | 17,40                     | 1PH8 352- 7 ■ H4 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                               | 30,5                           | 725                         | 11540                       | 720 (at 690 V)               | 17320                         | 1200                           | 1000                                                                   | 6650                                | 3110     | 1810     | 1190     | 20,66                     | 1PH8 354- 7 ■ H4 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                               | 30,5                           | 850                         | 13529                       | 830 (at 690 V)               | 20800                         | 1420                           | 900                                                                    | 7980                                | 3730     | 2170     | 1430     | 24,22                     | 1PH8 356- 7 ■ H4 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                               | 30,4                           | 960                         | 15280                       | 940 (at 690 V)               | 24270                         | 1630                           | 900                                                                    | 9320                                | 4360     | 2540     | 1670     | 27,79                     | 1PH8 358- 7 ■ H4 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |
| <b>Intermittent duty S3 – 100 % (S1)</b>                                                                      |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 600                                                                                                           | 30,5                           | 370                         | 5889                        | 380 (at 690 V)               | 12620                         | 950                            | 1100                                                                   | 4830                                | 2250     | 1310     | 860      | 14,74                     | 1PH8 350- 7 ■ H4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P01  |
|                                                                                                               | 30,5                           | 415                         | 6605                        | 430 (at 690 V)               | 12490                         | 930                            | 1100                                                                   | 4810                                | 2250     | 1310     | 870      | 14,74                     | 1PH8 351- 7 ■ H4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P01  |
|                                                                                                               | 30,5                           | 500                         | 7958                        | 510 (at 690 V)               | 14450                         | 1040                           | 1000                                                                   | 5570                                | 2610     | 1530     | 1010     | 17,40                     | 1PH8 352- 7 ■ H4 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                               | 30,5                           | 590                         | 9391                        | 590 (at 690 V)               | 17320                         | 1200                           | 1000                                                                   | 6650                                | 3110     | 1810     | 1190     | 20,66                     | 1PH8 354- 7 ■ H4 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                               | 30,5                           | 690                         | 10983                       | 680 (at 690 V)               | 20800                         | 1420                           | 900                                                                    | 7980                                | 3730     | 2170     | 1430     | 24,22                     | 1PH8 356- 7 ■ H4 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                               | 30,4                           | 780                         | 12415                       | 770 (at 690 V)               | 24270                         | 1630                           | 900                                                                    | 9320                                | 4360     | 2540     | 1670     | 27,79                     | 1PH8 358- 7 ■ H4 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |
| For versions, see Article No. supplements and options.                                                        |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

## Innomotics M – Main motors

Degree of protection IP23

### Selection and ordering data

#### Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3

| Rated speed<br>$n_{rated}$                                                                                    | Rated frequency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. current<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weakening) <sup>2)</sup> $n_2$ | Maximum torque $M_{max}^{1)}$ at |          |          |          | Mo-ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx. | Terminal box |
|---------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|--------------------------------|------------------------------------------------------------------------|----------------------------------|----------|----------|----------|---------------------------|---------------------------------------------|-----------------|--------------|
| rpm                                                                                                           | Hz                             | kW                          | Nm                          | A                            | Nm                            | A                              | rpm                                                                    | 1000 rpm                         | 1500 rpm | 2000 rpm | 2500 rpm | kgm <sup>2</sup>          | Article No.                                 | kg              | Type         |
| <b>1PH8 35. asynchronous motors, IP23 degree of protection, noise level 85 dB(A), operating speed 800 rpm</b> |                                |                             |                             |                              |                               |                                |                                                                        |                                  |          |          |          |                           |                                             |                 |              |
| <b>Supply voltage 480 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control</b>             |                                |                             |                             |                              |                               |                                |                                                                        |                                  |          |          |          |                           |                                             |                 |              |
| <b>Intermittent duty S3 – 40 %</b>                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                  |          |          |          |                           |                                             |                 |              |
| 800                                                                                                           | 40,4                           | 705                         | 8416                        | 975 (at 500 V)               | 12910                         | 1850                           | 1400                                                                   | 8430                             | 3890     | 2250     | 1470     | 14,74                     | 1PH8 350- 7 ■ Q4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                               | 40,5                           | 780                         | 9311                        | 1080 (at 500 V)              | 12830                         | 1810                           | 1400                                                                   | 8390                             | 3880     | 2250     | 1470     | 14,74                     | 1PH8 351- 7 ■ Q4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                               | 40,5                           | 925                         | 11042                       | 1255 (at 500 V)              | 15280                         | 2050                           | 1300                                                                   | 9990                             | 4610     | 2660     | 1740     | 17,40                     | 1PH8 352- 7 ■ Q4 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                               | 40,4                           | 1105                        | 13191                       | 1500 (at 500 V)              | 19170                         | 2480                           | 1300                                                                   | 12520                            | 5770     | 3330     | 2170     | 20,66                     | 1PH8 354- 7 ■ Q4 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                               | 40,4                           | 1265                        | 15101                       | 1700 (at 500 V)              | 22380                         | 2830                           | 1200                                                                   | 14610                            | 6730     | 3890     | 2540     | 24,22                     | 1PH8 356- 7 ■ Q4 0 - ■ ■ ■ 2                | 3256            | 1XB7820-P00  |
|                                                                                                               | 40,5                           | 1410                        | 16832                       | 1885 (at 500 V)              | 23090                         | 2860                           | 1200                                                                   | 15090                            | 6980     | 4030     | 2640     | 27,79                     | 1PH8 358- 7 ■ Q4 0 - ■ ■ ■ 2                | 3629            | 1XB7820-P00  |
| <b>Intermittent duty S3 – 60 %</b>                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                  |          |          |          |                           |                                             |                 |              |
| 800                                                                                                           | 40,4                           | 590                         | 7043                        | 825 (at 500 V)               | 12910                         | 1850                           | 1400                                                                   | 8430                             | 3890     | 2250     | 1470     | 14,74                     | 1PH8 350- 7 ■ Q4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                               | 40,5                           | 650                         | 7759                        | 915 (at 500 V)               | 12830                         | 1810                           | 1400                                                                   | 8390                             | 3880     | 2250     | 1470     | 14,74                     | 1PH8 351- 7 ■ Q4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                               | 40,5                           | 775                         | 9252                        | 1060 (at 500 V)              | 15280                         | 2050                           | 1300                                                                   | 9990                             | 4610     | 2660     | 1740     | 17,40                     | 1PH8 352- 7 ■ Q4 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                               | 40,4                           | 925                         | 11042                       | 1265 (at 500 V)              | 19170                         | 2480                           | 1300                                                                   | 12520                            | 5770     | 3330     | 2170     | 20,66                     | 1PH8 354- 7 ■ Q4 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                               | 40,4                           | 1060                        | 12654                       | 1435 (at 500 V)              | 22380                         | 2830                           | 1200                                                                   | 14610                            | 6730     | 3890     | 2540     | 24,22                     | 1PH8 356- 7 ■ Q4 0 - ■ ■ ■ 2                | 3256            | 1XB7820-P00  |
|                                                                                                               | 40,5                           | 1180                        | 14086                       | 1590 (at 500 V)              | 23090                         | 2860                           | 1200                                                                   | 15090                            | 6980     | 4030     | 2640     | 27,79                     | 1PH8 358- 7 ■ Q4 0 - ■ ■ ■ 2                | 3629            | 1XB7820-P00  |
| <b>Intermittent duty S3 – 100 % (S1)</b>                                                                      |                                |                             |                             |                              |                               |                                |                                                                        |                                  |          |          |          |                           |                                             |                 |              |
| 800                                                                                                           | 40,4                           | 480                         | 5730                        | 680 (at 500 V)               | 12910                         | 1850                           | 1400                                                                   | 8430                             | 3890     | 2250     | 1470     | 14,74                     | 1PH8 350- 7 ■ Q4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                               | 40,5                           | 530                         | 6327                        | 750 (at 500 V)               | 12830                         | 1810                           | 1400                                                                   | 8390                             | 3880     | 2250     | 1470     | 14,74                     | 1PH8 351- 7 ■ Q4 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                               | 40,5                           | 630                         | 7521                        | 870 (at 500 V)               | 15280                         | 2050                           | 1300                                                                   | 9990                             | 4610     | 2660     | 1740     | 17,40                     | 1PH8 352- 7 ■ Q4 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                               | 40,4                           | 750                         | 8953                        | 1040 (at 500 V)              | 19170                         | 2480                           | 1300                                                                   | 12520                            | 5770     | 3330     | 2170     | 20,66                     | 1PH8 354- 7 ■ Q4 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                               | 40,4                           | 860                         | 10266                       | 1180 (at 500 V)              | 22380                         | 2830                           | 1200                                                                   | 14610                            | 6730     | 3890     | 2540     | 24,22                     | 1PH8 356- 7 ■ Q4 0 - ■ ■ ■ 2                | 3256            | 1XB7820-P00  |
|                                                                                                               | 40,5                           | 960                         | 11460                       | 1300 (at 500 V)              | 23090                         | 2860                           | 1200                                                                   | 15090                            | 6980     | 4030     | 2640     | 27,79                     | 1PH8 358- 7 ■ Q4 0 - ■ ■ ■ 2                | 3629            | 1XB7820-P00  |
| For versions, see Article No. supplements and options.                                                        |                                |                             |                             |                              |                               |                                |                                                                        |                                  |          |          |          |                           |                                             |                 |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                             | Rated fre-<br>quency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. cur-<br>rent<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weaken-<br>ing) <sup>2)</sup> $n_2$ | Maximum torque $M_{max}^{1)}$ at |      |      |      | Mo-<br>ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355            | Weight, approx. | Terminal box |
|--------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|-------------------------------------|-----------------------------------------------------------------------------|----------------------------------|------|------|------|-------------------------------|--------------------------------------------------------|-----------------|--------------|
| rpm                                                                                                    | Hz                                  | kW                          | Nm                          | A                            | Nm                            | A                                   | rpm                                                                         | Nm                               | Nm   | Nm   | Nm   | kgm <sup>2</sup>              |                                                        | kg              | Type         |
| 1PH8 35. asynchronous motors, IP23 degree of protection, noise level 85 dB(A), operating speed 800 rpm |                                     |                             |                             |                              |                               |                                     |                                                                             |                                  |      |      |      |                               |                                                        |                 |              |
| Supply voltage 690 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control             |                                     |                             |                             |                              |                               |                                     |                                                                             |                                  |      |      |      |                               |                                                        |                 |              |
| Intermittent duty S3 – 40 %                                                                            |                                     |                             |                             |                              |                               |                                     |                                                                             |                                  |      |      |      |                               |                                                        |                 |              |
| 800                                                                                                    | 40,5                                | 705                         | 8416                        | 705 (at 690 V)               | 12600                         | 1330                                | 1400                                                                        | 8240                             | 3810 | 2200 | 1440 | 14,74                         | 1PH8 350- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2235            | 1XB7712-P03  |
|                                                                                                        | 40,5                                | 780                         | 9311                        | 780 (at 690 V)               | 12530                         | 1300                                | 1400                                                                        | 8200                             | 3800 | 2200 | 1440 | 14,74                         | 1PH8 351- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2235            | 1XB7712-P03  |
|                                                                                                        | 40,4                                | 925                         | 11042                       | 920 (at 690 V)               | 15760                         | 1520                                | 1300                                                                        | 10300                            | 4750 | 2740 | 1790 | 17,40                         | 1PH8 352- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2560            | 1XB7712-P03  |
|                                                                                                        | 40,5                                | 1105                        | 13191                       | 1070 (at 690 V)              | 18080                         | 1710                                | 1300                                                                        | 11820                            | 5460 | 3160 | 2060 | 20,66                         | 1PH8 354- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2889            | 1XB7712-P03  |
|                                                                                                        | 40,4                                | 1265                        | 15101                       | 1215 (at 690 V)              | 21500                         | 1990                                | 1200                                                                        | 14040                            | 6470 | 3730 | 2440 | 24,22                         | 1PH8 356- 7 ■ K 4 0 - ■ ■ ■ 2                          | 3256            | 1XB7712-P03  |
|                                                                                                        | 40,4                                | 1410                        | 16832                       | 1360 (at 690 V)              | 23550                         | 2110                                | 1200                                                                        | 15410                            | 7130 | 4120 | 2700 | 27,79                         | 1PH8 358- 7 ■ K 4 0 - ■ ■ ■ 2                          | 3629            | 1XB7712-P03  |
| Intermittent duty S3 – 60 %                                                                            |                                     |                             |                             |                              |                               |                                     |                                                                             |                                  |      |      |      |                               |                                                        |                 |              |
| 800                                                                                                    | 40,5                                | 590                         | 7043                        | 595 (at 690 V)               | 12600                         | 1330                                | 1400                                                                        | 8240                             | 3810 | 2200 | 1440 | 14,74                         | 1PH8 350- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2235            | 1XB7712-P03  |
|                                                                                                        | 40,5                                | 650                         | 7759                        | 660 (at 690 V)               | 12530                         | 1300                                | 1400                                                                        | 8200                             | 3800 | 2200 | 1440 | 14,74                         | 1PH8 351- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2235            | 1XB7712-P03  |
|                                                                                                        | 40,4                                | 775                         | 9252                        | 780 (at 690 V)               | 15760                         | 1520                                | 1300                                                                        | 10300                            | 4750 | 2740 | 1790 | 17,40                         | 1PH8 352- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2560            | 1XB7712-P03  |
|                                                                                                        | 40,5                                | 925                         | 11042                       | 905 (at 690 V)               | 18080                         | 1710                                | 1300                                                                        | 11820                            | 5460 | 3160 | 2060 | 20,66                         | 1PH8 354- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2889            | 1XB7712-P03  |
|                                                                                                        | 40,4                                | 1060                        | 12654                       | 1025 (at 690 V)              | 21500                         | 1990                                | 1200                                                                        | 14040                            | 6470 | 3730 | 2440 | 24,22                         | 1PH8 356- 7 ■ K 4 0 - ■ ■ ■ 2                          | 3256            | 1XB7712-P03  |
|                                                                                                        | 40,4                                | 1180                        | 14086                       | 1150 (at 690 V)              | 23550                         | 2110                                | 1200                                                                        | 15410                            | 7130 | 4120 | 2700 | 27,79                         | 1PH8 358- 7 ■ K 4 0 - ■ ■ ■ 2                          | 3629            | 1XB7712-P03  |
| Intermittent duty S3 - 100 % (S1)                                                                      |                                     |                             |                             |                              |                               |                                     |                                                                             |                                  |      |      |      |                               |                                                        |                 |              |
| 800                                                                                                    | 40,5                                | 480                         | 5730                        | 490 (at 690 V)               | 12600                         | 1330                                | 1400                                                                        | 8240                             | 3810 | 2200 | 1440 | 14,74                         | 1PH8 350- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2235            | 1XB7712-P03  |
|                                                                                                        | 40,5                                | 530                         | 6327                        | 540 (at 690 V)               | 12530                         | 1300                                | 1400                                                                        | 8200                             | 3800 | 2200 | 1440 | 14,74                         | 1PH8 351- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2235            | 1XB7712-P03  |
|                                                                                                        | 40,4                                | 630                         | 7521                        | 640 (at 690 V)               | 15760                         | 1520                                | 1300                                                                        | 10300                            | 4750 | 2740 | 1790 | 17,40                         | 1PH8 352- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2560            | 1XB7712-P03  |
|                                                                                                        | 40,5                                | 750                         | 8953                        | 740 (at 690 V)               | 18080                         | 1710                                | 1300                                                                        | 11820                            | 5460 | 3160 | 2060 | 20,66                         | 1PH8 354- 7 ■ K 4 0 - ■ ■ ■ 2                          | 2889            | 1XB7712-P03  |
|                                                                                                        | 40,4                                | 860                         | 10266                       | 840 (at 690 V)               | 21500                         | 1990                                | 1200                                                                        | 14040                            | 6470 | 3730 | 2440 | 24,22                         | 1PH8 356- 7 ■ K 4 0 - ■ ■ ■ 2                          | 3256            | 1XB7712-P03  |
|                                                                                                        | 40,4                                | 960                         | 11460                       | 940 (at 690 V)               | 23550                         | 2110                                | 1200                                                                        | 15410                            | 7130 | 4120 | 2700 | 27,79                         | 1PH8 358- 7 ■ K 4 0 - ■ ■ ■ 2                          | 3629            | 1XB7712-P03  |
|                                                                                                        |                                     |                             |                             |                              |                               |                                     |                                                                             |                                  |      |      |      |                               | For versions, see Article No. supplements and options. |                 |              |

For versions, see  
Article No. supplements and  
options.

For more operating characteristics and engineering data,  
please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential;  
the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

1PH8 for SINAMICS S120 for cranes

**Innomotics M – Main motors**

Degree of protection IP23

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                                                                                                                                    | Rated frequency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. current<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weakening) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |          |          |          | Mo-ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx. | Terminal box |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|--------------------------------|------------------------------------------------------------------------|-------------------------------------|----------|----------|----------|---------------------------|---------------------------------------------|-----------------|--------------|
| rpm                                                                                                                                                                                                           | Hz                             | kW                          | Nm                          | A                            | Nm                            | A                              | rpm                                                                    | 1500 rpm                            | 2000 rpm | 2500 rpm | 2800 rpm | kgm <sup>2</sup>          | Article No.                                 | kg              | Type         |
| <b>1PH8 35. asynchronous motors, IP23 degree of protection, noise level 85 dB(A), operating speed 1000 rpm<br/>Supply voltage 480 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control</b> |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| <b>Intermittent duty S3 – 40 %</b>                                                                                                                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1000                                                                                                                                                                                                          | 50,4                           | 880                         | 8404                        | 1205 (at 500 V)              | 13470                         | 2490                           | 1500                                                                   | 6160                                | 3540     | 2300     | 1850     | 14,74                     | 1PH8 350- 7 ■ C 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 50,5                           | 985                         | 9407                        | 1355 (at 500 V)              | 13380                         | 2470                           | 1500                                                                   | 6140                                | 3540     | 2300     | 1850     | 14,74                     | 1PH8 351- 7 ■ C 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 50,5                           | 1145                        | 10935                       | 1565 (at 500 V)              | 14980                         | 2540                           | 1400                                                                   | 6870                                | 3950     | 2570     | 2070     | 17,40                     | 1PH8 352- 7 ■ C 4 0 - ■ ■ ■ 2               | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 50,5                           | 1325                        | 12654                       | 1770 (at 500 V)              | 17230                         | 2790                           | 1300                                                                   | 7910                                | 4550     | 2970     | 2390     | 20,66                     | 1PH8 354- 7 ■ C 4 0 - ■ ■ ■ 2               | 2889            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 50,4                           | 1530                        | 14612                       | 2025 (at 500 V)              | 21370                         | 3380                           | 1200                                                                   | 9810                                | 5640     | 3670     | 2960     | 24,22                     | 1PH8 356- 7 ■ C 4 0 - ■ ■ ■ 2               | 3256            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 50,4                           | 1765                        | 16856                       | 2445 (at 480 V)              | 27150                         | 4400                           | 1200                                                                   | 12430                               | 7140     | 4650     | 3730     | 27,79                     | 1PH8 358- 7 ■ C 4 0 - ■ ■ ■ 2               | 3629            | 1XB7820-P00  |
| <b>Intermittent duty S3 – 60 %</b>                                                                                                                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1000                                                                                                                                                                                                          | 50,4                           | 740                         | 7067                        | 1020 (at 500 V)              | 13470                         | 2490                           | 1500                                                                   | 6160                                | 3540     | 2300     | 1850     | 14,74                     | 1PH8 350- 7 ■ C 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 50,5                           | 825                         | 7879                        | 1145 (at 500 V)              | 13380                         | 2470                           | 1500                                                                   | 6140                                | 3540     | 2300     | 1850     | 14,74                     | 1PH8 351- 7 ■ C 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 50,5                           | 960                         | 9168                        | 1320 (at 500 V)              | 14980                         | 2540                           | 1400                                                                   | 6870                                | 3950     | 2570     | 2070     | 17,40                     | 1PH8 352- 7 ■ C 4 0 - ■ ■ ■ 2               | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 50,5                           | 1105                        | 10553                       | 1495 (at 500 V)              | 17230                         | 2790                           | 1300                                                                   | 7910                                | 4550     | 2970     | 2390     | 20,66                     | 1PH8 354- 7 ■ C 4 0 - ■ ■ ■ 2               | 2889            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 50,4                           | 1280                        | 12224                       | 1710 (at 500 V)              | 21370                         | 3380                           | 1200                                                                   | 9810                                | 5640     | 3670     | 2960     | 24,22                     | 1PH8 356- 7 ■ C 4 0 - ■ ■ ■ 2               | 3256            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 50,4                           | 1475                        | 14086                       | 2070 (at 480 V)              | 27150                         | 4400                           | 1200                                                                   | 12430                               | 7140     | 4650     | 3730     | 27,79                     | 1PH8 358- 7 ■ C 4 0 - ■ ■ ■ 2               | 3629            | 1XB7820-P00  |
| <b>Intermittent duty S3 – 100 % (S1)</b>                                                                                                                                                                      |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1000                                                                                                                                                                                                          | 50,4                           | 600                         | 5730                        | 840 (at 500 V)               | 13470                         | 2490                           | 1500                                                                   | 6160                                | 3540     | 2300     | 1850     | 14,74                     | 1PH8 350- 7 ■ C 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 50,5                           | 670                         | 6399                        | 940 (at 500 V)               | 13380                         | 2470                           | 1500                                                                   | 6140                                | 3540     | 2300     | 1850     | 14,74                     | 1PH8 351- 7 ■ C 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 50,5                           | 780                         | 7449                        | 1080 (at 500 V)              | 14980                         | 2540                           | 1400                                                                   | 6870                                | 3950     | 2570     | 2070     | 17,40                     | 1PH8 352- 7 ■ C 4 0 - ■ ■ ■ 2               | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 50,5                           | 900                         | 8595                        | 1220 (at 500 V)              | 17230                         | 2790                           | 1300                                                                   | 7910                                | 4550     | 2970     | 2390     | 20,66                     | 1PH8 354- 7 ■ C 4 0 - ■ ■ ■ 2               | 2889            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 50,4                           | 1040                        | 9932                        | 1400 (at 500 V)              | 21370                         | 3380                           | 1200                                                                   | 9810                                | 5640     | 3670     | 2960     | 24,22                     | 1PH8 356- 7 ■ C 4 0 - ■ ■ ■ 2               | 3256            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 50,4                           | 1200                        | 11460                       | 1700 (at 480 V)              | 27150                         | 4400                           | 1200                                                                   | 12430                               | 7140     | 4650     | 3730     | 27,79                     | 1PH8 358- 7 ■ C 4 0 - ■ ■ ■ 2               | 3629            | 1XB7820-P00  |
| For versions, see Article No. supplements and options.                                                                                                                                                        |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                                                                                                                            | Rated fre-<br>quency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. cur-<br>rent<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weaken-<br>ing) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |      |      |      | Mo-<br>ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx. | Terminal box |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|-------------------------------------|-----------------------------------------------------------------------------|-------------------------------------|------|------|------|-------------------------------|---------------------------------------------|-----------------|--------------|
| rpm                                                                                                                                                                                                   | Hz                                  | kW                          | Nm                          | A                            | Nm                            | A                                   | rpm                                                                         | Nm                                  | Nm   | Nm   | Nm   | kgm <sup>2</sup>              |                                             | kg              | Type         |
| 1PH8 35. asynchronous motors, IP23 degree of protection, noise level 85 dB(A), operating speed 1000 rpm<br>Supply voltage 690 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                 |              |
| Intermittent duty S3 – 40 %                                                                                                                                                                           |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                 |              |
| 1000                                                                                                                                                                                                  | 50,5                                | 880                         | 8404                        | 875 (at 690 V)               | 13570                         | 1810                                | 1500                                                                        | 6200                                | 3550 | 2310 | 1850 | 14,74                         | 1PH8 350- 7 ■ U 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,5                                | 985                         | 9407                        | 980 (at 690 V)               | 13480                         | 1800                                | 1500                                                                        | 6180                                | 3550 | 2310 | 1860 | 14,74                         | 1PH8 351- 7 ■ U 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,5                                | 1145                        | 10935                       | 1130 (at 690 V)              | 15390                         | 1870                                | 1400                                                                        | 7050                                | 4050 | 2640 | 2120 | 17,40                         | 1PH8 352- 7 ■ U 4 0 - ■ ■ ■ 2               | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,4                                | 1325                        | 12654                       | 1285 (at 690 V)              | 18240                         | 2110                                | 1300                                                                        | 8360                                | 4810 | 3130 | 2520 | 20,66                         | 1PH8 354- 7 ■ U 4 0 - ■ ■ ■ 2               | 2889            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,5                                | 1530                        | 14612                       | 1480 (at 690 V)              | 20940                         | 2420                                | 1200                                                                        | 9590                                | 5510 | 3580 | 2880 | 24,22                         | 1PH8 356- 7 ■ U 4 0 - ■ ■ ■ 2               | 3256            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,4                                | 1765                        | 16856                       | 1680 (at 690 V)              | 24680                         | 2770                                | 1200                                                                        | 11330                               | 6530 | 4250 | 3420 | 27,79                         | 1PH8 358- 7 ■ U 4 0 - ■ ■ ■ 2               | 3629            | 1XB7820-P00  |
| Intermittent duty S3 – 60 %                                                                                                                                                                           |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                 |              |
| 1000                                                                                                                                                                                                  | 50,5                                | 740                         | 7067                        | 740 (at 690 V)               | 13570                         | 1810                                | 1500                                                                        | 6200                                | 3550 | 2310 | 1850 | 14,74                         | 1PH8 350- 7 ■ U 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,5                                | 825                         | 7879                        | 830 (at 690 V)               | 13480                         | 1800                                | 1500                                                                        | 6180                                | 3550 | 2310 | 1860 | 14,74                         | 1PH8 351- 7 ■ U 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,5                                | 960                         | 9168                        | 955 (at 690 V)               | 15390                         | 1870                                | 1400                                                                        | 7050                                | 4050 | 2640 | 2120 | 17,40                         | 1PH8 352- 7 ■ U 4 0 - ■ ■ ■ 2               | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,4                                | 1105                        | 10553                       | 1085 (at 690 V)              | 18240                         | 2110                                | 1300                                                                        | 8360                                | 4810 | 3130 | 2520 | 20,66                         | 1PH8 354- 7 ■ U 4 0 - ■ ■ ■ 2               | 2889            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,5                                | 1280                        | 12224                       | 1250 (at 690 V)              | 20940                         | 2420                                | 1200                                                                        | 9590                                | 5510 | 3580 | 2880 | 24,22                         | 1PH8 356- 7 ■ U 4 0 - ■ ■ ■ 2               | 3256            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,4                                | 1475                        | 14086                       | 1415 (at 690 V)              | 24680                         | 2770                                | 1200                                                                        | 11330                               | 6530 | 4250 | 3420 | 27,79                         | 1PH8 358- 7 ■ U 4 0 - ■ ■ ■ 2               | 3629            | 1XB7820-P00  |
| Intermittent duty S3 – 100 % (S1)                                                                                                                                                                     |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                 |              |
| 1000                                                                                                                                                                                                  | 50,5                                | 600                         | 5730                        | 610 (at 690 V)               | 13570                         | 1810                                | 1500                                                                        | 6200                                | 3550 | 2310 | 1850 | 14,74                         | 1PH8 350- 7 ■ U 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,5                                | 670                         | 6399                        | 680 (at 690 V)               | 13480                         | 1800                                | 1500                                                                        | 6180                                | 3550 | 2310 | 1860 | 14,74                         | 1PH8 351- 7 ■ U 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,5                                | 780                         | 7449                        | 780 (at 690 V)               | 15390                         | 1870                                | 1400                                                                        | 7050                                | 4050 | 2640 | 2120 | 17,40                         | 1PH8 352- 7 ■ U 4 0 - ■ ■ ■ 2               | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,4                                | 900                         | 8595                        | 890 (at 690 V)               | 18240                         | 2110                                | 1300                                                                        | 8360                                | 4810 | 3130 | 2520 | 20,66                         | 1PH8 354- 7 ■ U 4 0 - ■ ■ ■ 2               | 2889            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,5                                | 1040                        | 9932                        | 1020 (at 690 V)              | 20940                         | 2420                                | 1200                                                                        | 9590                                | 5510 | 3580 | 2880 | 24,22                         | 1PH8 356- 7 ■ U 4 0 - ■ ■ ■ 2               | 3256            | 1XB7712-P03  |
|                                                                                                                                                                                                       | 50,4                                | 1200                        | 11460                       | 1160 (at 690 V)              | 24680                         | 2770                                | 1200                                                                        | 11330                               | 6530 | 4250 | 3420 | 27,79                         | 1PH8 358- 7 ■ U 4 0 - ■ ■ ■ 2               | 3629            | 1XB7820-P00  |
| For versions, see<br>Article No. supplements and<br>options.                                                                                                                                          |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                 |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

1PH8 for SINAMICS S120 for cranes

**Innomotics M – Main motors**

Degree of protection IP23

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                                                                                                                                    | Rated frequency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. current<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weakening) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |          |          |          | Mo-ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx. | Terminal box |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|--------------------------------|------------------------------------------------------------------------|-------------------------------------|----------|----------|----------|---------------------------|---------------------------------------------|-----------------|--------------|
| rpm                                                                                                                                                                                                           | Hz                             | kW                          | Nm                          | A                            | Nm                            | A                              | rpm                                                                    | 1500 rpm                            | 2000 rpm | 2500 rpm | 2800 rpm | kgm <sup>2</sup>          | Article No.                                 | kg              | Type         |
| <b>1PH8 35. asynchronous motors, IP23 degree of protection, noise level 85 dB(A), operating speed 1350 rpm<br/>Supply voltage 480 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control</b> |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| <b>Intermittent duty S3 – 40 %</b>                                                                                                                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1350                                                                                                                                                                                                          | 68,0                           | 985                         | 6968                        | 1340 (at 500 V)              | 9990                          | 2450                           | 1700                                                                   | 8150                                | 4670     | 3030     | 2430     | 14,74                     | 1PH8 350- 7 ■ D 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 68,1                           | 1105                        | 7817                        | 1520 (at 500 V)              | 9950                          | 2400                           | 1700                                                                   | 8120                                | 4660     | 3030     | 2430     | 14,74                     | 1PH8 351- 7 ■ D 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 68,0                           | 1340                        | 9479                        | 1800 (at 500 V)              | 13910                         | 3310                           | 1700                                                                   | 11350                               | 6500     | 4220     | 3390     | 17,40                     | 1PH8 352- 7 ■ D 4 0 - ■ ■ ■ 2               | 2560            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 68,0                           | 1530                        | 10823                       | 2045 (at 500 V)              | 14180                         | 3160                           | 1400                                                                   | 11570                               | 6640     | 4320     | 3470     | 20,66                     | 1PH8 354- 7 ■ D 4 0 - ■ ■ ■ 2               | 2889            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 67,9                           | 1765                        | 12486                       | 2325 (at 500 V)              | 19150                         | 4130                           | 1400                                                                   | 15630                               | 8960     | 5820     | 4680     | 24,22                     | 1PH8 356- 7 ■ D 4 0 - ■ ■ ■ 2               | 3256            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 67,9                           | 1970                        | 13936                       | 2585 (at 500 V)              | 21870                         | 4620                           | 1400                                                                   | 17840                               | 10250    | 6660     | 5350     | 27,79                     | 1PH8 358- 7 ■ D 4 0 - ■ ■ ■ 2               | 3629            | 1XB7820-P00  |
| <b>Intermittent duty S3 – 60 %</b>                                                                                                                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1350                                                                                                                                                                                                          | 68,0                           | 825                         | 5836                        | 1130 (at 500 V)              | 9990                          | 2450                           | 1700                                                                   | 8150                                | 4670     | 3030     | 2430     | 14,74                     | 1PH8 350- 7 ■ D 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 68,1                           | 925                         | 6544                        | 1280 (at 500 V)              | 9950                          | 2400                           | 1700                                                                   | 8120                                | 4660     | 3030     | 2430     | 14,74                     | 1PH8 351- 7 ■ D 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 68,0                           | 1120                        | 7923                        | 1520 (at 500 V)              | 13910                         | 3310                           | 1700                                                                   | 11350                               | 6500     | 4220     | 3390     | 17,40                     | 1PH8 352- 7 ■ D 4 0 - ■ ■ ■ 2               | 2560            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 68,0                           | 1280                        | 9055                        | 1720 (at 500 V)              | 14180                         | 3160                           | 1400                                                                   | 11570                               | 6640     | 4320     | 3470     | 20,66                     | 1PH8 354- 7 ■ D 4 0 - ■ ■ ■ 2               | 2889            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 67,9                           | 1475                        | 10434                       | 1960 (at 500 V)              | 19150                         | 4130                           | 1400                                                                   | 15630                               | 8960     | 5820     | 4680     | 24,22                     | 1PH8 356- 7 ■ D 4 0 - ■ ■ ■ 2               | 3256            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 67,9                           | 1650                        | 11672                       | 2180 (at 500 V)              | 21870                         | 4620                           | 1400                                                                   | 17840                               | 10250    | 6660     | 5350     | 27,79                     | 1PH8 358- 7 ■ D 4 0 - ■ ■ ■ 2               | 3629            | 1XB7820-P00  |
| <b>Intermittent duty S3 – 100 % (S1)</b>                                                                                                                                                                      |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1350                                                                                                                                                                                                          | 68,0                           | 670                         | 4740                        | 920 (at 500 V)               | 9990                          | 2450                           | 1700                                                                   | 8150                                | 4670     | 3030     | 2430     | 14,74                     | 1PH8 350- 7 ■ D 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 68,1                           | 750                         | 5306                        | 1040 (at 500 V)              | 9950                          | 2400                           | 1700                                                                   | 8120                                | 4660     | 3030     | 2430     | 14,74                     | 1PH8 351- 7 ■ D 4 0 - ■ ■ ■ 2               | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 68,0                           | 910                         | 6437                        | 1240 (at 500 V)              | 13910                         | 3310                           | 1700                                                                   | 11350                               | 6500     | 4220     | 3390     | 17,40                     | 1PH8 352- 7 ■ D 4 0 - ■ ■ ■ 2               | 2560            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 68,0                           | 1040                        | 7357                        | 1400 (at 500 V)              | 14180                         | 3160                           | 1400                                                                   | 11570                               | 6640     | 4320     | 3470     | 20,66                     | 1PH8 354- 7 ■ D 4 0 - ■ ■ ■ 2               | 2889            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 67,9                           | 1200                        | 8489                        | 1600 (at 500 V)              | 19150                         | 4130                           | 1400                                                                   | 15630                               | 8960     | 5820     | 4680     | 24,22                     | 1PH8 356- 7 ■ D 4 0 - ■ ■ ■ 2               | 3256            | 1XB7820-P00  |
|                                                                                                                                                                                                               | 67,9                           | 1340                        | 9479                        | 1780 (at 500 V)              | 21870                         | 4620                           | 1400                                                                   | 17840                               | 10250    | 6660     | 5350     | 27,79                     | 1PH8 358- 7 ■ D 4 0 - ■ ■ ■ 2               | 3629            | 1XB7820-P00  |
| For versions, see Article No. supplements and options.                                                                                                                                                        |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                              | Rated fre-<br>quency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. cur-<br>rent<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weaken-<br>ing) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |      |      |      | Moment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx. | Terminal box |
|---------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|-------------------------------------|-----------------------------------------------------------------------------|-------------------------------------|------|------|------|--------------------------|---------------------------------------------|-----------------|--------------|
| rpm                                                                                                     | Hz                                  | kW                          | Nm                          | A                            | Nm                            | A                                   | rpm                                                                         | Nm                                  | Nm   | Nm   | Nm   | kgm <sup>2</sup>         |                                             | kg              | Type         |
| 1PH8 35. asynchronous motors, IP23 degree of protection, noise level 85 dB(A), operating speed 1350 rpm |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                          |                                             |                 |              |
| Supply voltage 690 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control              |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                          |                                             |                 |              |
| Intermittent duty S3 – 40 %                                                                             |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                          |                                             |                 |              |
| 1350                                                                                                    | 68,1                                | 985                         | 6968                        | 975 (at 690 V)               | 10260                         | 1810                                | 1700                                                                        | 8360                                | 4790 | 3100 | 2490 | 14,74                    | 1PH8 350- 7 ■ V 4 0 - ■ ■ ■ 0               | 2235            | 1XB7712-P03  |
|                                                                                                         | 68,1                                | 1105                        | 7817                        | 1095 (at 690 V)              | 10230                         | 1840                                | 1700                                                                        | 8340                                | 4780 | 3100 | 2490 | 14,74                    | 1PH8 351- 7 ■ V 4 0 - ■ ■ ■ 0               | 2235            | 1XB7712-P03  |
|                                                                                                         | 68,0                                | 1340                        | 9479                        | 1315 (at 690 V)              | 12720                         | 2310                                | 1700                                                                        | 10400                               | 6000 | 3920 | 3150 | 17,40                    | 1PH8 352- 7 ■ V 4 0 - ■ ■ ■ 0               | 2560            | 1XB7712-P03  |
|                                                                                                         | 68,1                                | 1530                        | 10823                       | 1495 (at 690 V)              | 13890                         | 2270                                | 1400                                                                        | 11330                               | 6490 | 4220 | 3390 | 20,66                    | 1PH8 354- 7 ■ V 4 0 - ■ ■ ■ 0               | 2889            | 1XB7712-P03  |
|                                                                                                         | 67,9                                | 1765                        | 12486                       | 1685 (at 690 V)              | 19270                         | 3010                                | 1400                                                                        | 15730                               | 9020 | 5870 | 4710 | 24,22                    | 1PH8 356- 7 ■ V 4 0 - ■ ■ ■ 0               | 3256            | 1XB7820-P00  |
|                                                                                                         | 68,0                                | 1970                        | 13936                       | 1865 (at 690 V)              | 20360                         | 3120                                | 1400                                                                        | 16620                               | 9540 | 6200 | 4990 | 27,79                    | 1PH8 358- 7 ■ V 4 0 - ■ ■ ■ 0               | 3629            | 1XB7820-P00  |
| Intermittent duty S3 – 60 %                                                                             |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                          |                                             |                 |              |
| 1350                                                                                                    | 68,1                                | 825                         | 5836                        | 820 (at 690 V)               | 10260                         | 1810                                | 1700                                                                        | 8360                                | 4790 | 3100 | 2490 | 14,74                    | 1PH8 350- 7 ■ V 4 0 - ■ ■ ■ 0               | 2235            | 1XB7712-P03  |
|                                                                                                         | 68,1                                | 925                         | 6544                        | 920 (at 690 V)               | 10230                         | 1840                                | 1700                                                                        | 8340                                | 4780 | 3100 | 2490 | 14,74                    | 1PH8 351- 7 ■ V 4 0 - ■ ■ ■ 0               | 2235            | 1XB7712-P03  |
|                                                                                                         | 68,0                                | 1120                        | 7923                        | 1105 (at 690 V)              | 12720                         | 2310                                | 1700                                                                        | 10400                               | 6000 | 3920 | 3150 | 17,40                    | 1PH8 352- 7 ■ V 4 0 - ■ ■ ■ 0               | 2560            | 1XB7712-P03  |
|                                                                                                         | 68,1                                | 1280                        | 9055                        | 1255 (at 690 V)              | 13890                         | 2270                                | 1400                                                                        | 11330                               | 6490 | 4220 | 3390 | 20,66                    | 1PH8 354- 7 ■ V 4 0 - ■ ■ ■ 0               | 2889            | 1XB7712-P03  |
|                                                                                                         | 67,9                                | 1475                        | 10434                       | 1420 (at 690 V)              | 19270                         | 3010                                | 1400                                                                        | 15730                               | 9020 | 5870 | 4710 | 24,22                    | 1PH8 356- 7 ■ V 4 0 - ■ ■ ■ 0               | 3256            | 1XB7820-P00  |
|                                                                                                         | 68,0                                | 1650                        | 11672                       | 1570 (at 690 V)              | 20360                         | 3120                                | 1400                                                                        | 16620                               | 9540 | 6200 | 4990 | 27,79                    | 1PH8 358- 7 ■ V 4 0 - ■ ■ ■ 0               | 3629            | 1XB7820-P00  |
| Intermittent duty S3 - 100 % (S1)                                                                       |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                          |                                             |                 |              |
| 1350                                                                                                    | 68,1                                | 670                         | 4740                        | 670 (at 690 V)               | 10260                         | 1810                                | 1700                                                                        | 8360                                | 4790 | 3100 | 2490 | 14,74                    | 1PH8 350- 7 ■ V 4 0 - ■ ■ ■ 0               | 2235            | 1XB7712-P03  |
|                                                                                                         | 68,1                                | 750                         | 5306                        | 750 (at 690 V)               | 10230                         | 1840                                | 1700                                                                        | 8340                                | 4780 | 3100 | 2490 | 14,74                    | 1PH8 351- 7 ■ V 4 0 - ■ ■ ■ 0               | 2235            | 1XB7712-P03  |
|                                                                                                         | 68,0                                | 910                         | 6437                        | 900 (at 690 V)               | 12720                         | 2310                                | 1700                                                                        | 10400                               | 6000 | 3920 | 3150 | 17,40                    | 1PH8 352- 7 ■ V 4 0 - ■ ■ ■ 0               | 2560            | 1XB7712-P03  |
|                                                                                                         | 68,1                                | 1040                        | 7357                        | 1020 (at 690 V)              | 13890                         | 2270                                | 1400                                                                        | 11330                               | 6490 | 4220 | 3390 | 20,66                    | 1PH8 354- 7 ■ V 4 0 - ■ ■ ■ 0               | 2889            | 1XB7712-P03  |
|                                                                                                         | 67,9                                | 1200                        | 8489                        | 1160 (at 690 V)              | 19270                         | 3010                                | 1400                                                                        | 15730                               | 9020 | 5870 | 4710 | 24,22                    | 1PH8 356- 7 ■ V 4 0 - ■ ■ ■ 0               | 3256            | 1XB7820-P00  |
|                                                                                                         | 68,0                                | 1340                        | 9479                        | 1280 (at 690 V)              | 20360                         | 3120                                | 1400                                                                        | 16620                               | 9540 | 6200 | 4990 | 27,79                    | 1PH8 358- 7 ■ V 4 0 - ■ ■ ■ 0               | 3629            | 1XB7820-P00  |
| For versions, see Article No. supplements and options.                                                  |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                          |                                             |                 |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

**Innomotics M – Main motors**

Degree of protection IP23

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                                    | Rated frequency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. current<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weakening) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |          |          |          | Mo-ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx.                                        | Terminal box |
|---------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|--------------------------------|------------------------------------------------------------------------|-------------------------------------|----------|----------|----------|---------------------------|---------------------------------------------|--------------------------------------------------------|--------------|
| rpm                                                                                                           | Hz                             | kW                          | Nm                          | A                            | Nm                            | A                              | rpm                                                                    | 1000 rpm                            | 1500 rpm | 2000 rpm | 2500 rpm | kgm <sup>2</sup>          | Article No.                                 | kg                                                     | Type         |
| <b>1PH8 35. asynchronous motors, IP55 degree of protection, noise level 85 dB(A), operating speed 600 rpm</b> |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                                                        |              |
| <b>Supply voltage 480 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control</b>             |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                                                        |              |
| <b>Intermittent duty S3 – 40 %</b>                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                                                        |              |
| 600                                                                                                           | 30,3                           | 340                         | 5412                        | 475 (at 500 V)               | 12120                         | 1260                           | 1400                                                                   | 4710                                | 2220     | 1310     | 860      | 14,74                     | 1PH8 350- 7 ■ B 1 0 - ■ ■ ■ 2               | 2235                                                   | 1XB7712-P01  |
|                                                                                                               | 30,3                           | 405                         | 6446                        | 555 (at 500 V)               | 14570                         | 1440                           | 1400                                                                   | 5640                                | 2660     | 1560     | 1030     | 17,40                     | 1PH8 352- 7 ■ B 1 0 - ■ ■ ■ 2               | 2560                                                   | 1XB7712-P01  |
|                                                                                                               | 30,3                           | 480                         | 7640                        | 655 (at 500 V)               | 16670                         | 1590                           | 1400                                                                   | 6450                                | 3030     | 1780     | 1170     | 20,66                     | 1PH8 354- 7 ■ B 1 0 - ■ ■ ■ 2               | 2889                                                   | 1XB7712-P03  |
|                                                                                                               | 30,3                           | 560                         | 8913                        | 755 (at 500 V)               | 20320                         | 1920                           | 1400                                                                   | 7840                                | 3680     | 2150     | 1420     | 24,22                     | 1PH8 356- 7 ■ B 1 0 - ■ ■ ■ 2               | 3256                                                   | 1XB7712-P03  |
|                                                                                                               | 30,2                           | 630                         | 10028                       | 850 (at 500 V)               | 23390                         | 2180                           | 1400                                                                   | 8990                                | 4210     | 2460     | 1620     | 27,79                     | 1PH8 358- 7 ■ B 1 0 - ■ ■ ■ 2               | 3629                                                   | 1XB7712-P03  |
| <b>Intermittent duty S3 – 60 %</b>                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                                                        |              |
| 600                                                                                                           | 30,3                           | 285                         | 4536                        | 410 (at 500 V)               | 12120                         | 1260                           | 1400                                                                   | 4710                                | 2220     | 1310     | 860      | 14,74                     | 1PH8 350- 7 ■ B 1 0 - ■ ■ ■ 2               | 2235                                                   | 1XB7712-P01  |
|                                                                                                               | 30,3                           | 340                         | 5412                        | 480 (at 500 V)               | 14570                         | 1440                           | 1400                                                                   | 5640                                | 2660     | 1560     | 1030     | 17,40                     | 1PH8 352- 7 ■ B 1 0 - ■ ■ ■ 2               | 2560                                                   | 1XB7712-P01  |
|                                                                                                               | 30,3                           | 400                         | 6367                        | 565 (at 500 V)               | 16670                         | 1590                           | 1400                                                                   | 6450                                | 3030     | 1780     | 1170     | 20,66                     | 1PH8 354- 7 ■ B 1 0 - ■ ■ ■ 2               | 2889                                                   | 1XB7712-P03  |
|                                                                                                               | 30,3                           | 465                         | 7401                        | 650 (at 500 V)               | 20320                         | 1920                           | 1400                                                                   | 7840                                | 3680     | 2150     | 1420     | 24,22                     | 1PH8 356- 7 ■ B 1 0 - ■ ■ ■ 2               | 3256                                                   | 1XB7712-P03  |
|                                                                                                               | 30,2                           | 530                         | 8436                        | 735 (at 500 V)               | 23390                         | 2180                           | 1400                                                                   | 8990                                | 4210     | 2460     | 1620     | 27,79                     | 1PH8 358- 7 ■ B 1 0 - ■ ■ ■ 2               | 3629                                                   | 1XB7712-P03  |
| <b>Intermittent duty S3 – 100 % (S1)</b>                                                                      |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                                                        |              |
| 600                                                                                                           | 30,3                           | 230                         | 3661                        | 350 (at 500 V)               | 12120                         | 1260                           | 1400                                                                   | 4710                                | 2220     | 1310     | 860      | 14,74                     | 1PH8 350- 7 ■ B 1 0 - ■ ■ ■ 2               | 2235                                                   | 1XB7712-P01  |
|                                                                                                               | 30,3                           | 275                         | 4377                        | 410 (at 500 V)               | 14570                         | 1440                           | 1400                                                                   | 5640                                | 2660     | 1560     | 1030     | 17,40                     | 1PH8 352- 7 ■ B 1 0 - ■ ■ ■ 2               | 2560                                                   | 1XB7712-P01  |
|                                                                                                               | 30,3                           | 325                         | 5173                        | 475 (at 500 V)               | 16670                         | 1590                           | 1400                                                                   | 6450                                | 3030     | 1780     | 1170     | 20,66                     | 1PH8 354- 7 ■ B 1 0 - ■ ■ ■ 2               | 2889                                                   | 1XB7712-P03  |
|                                                                                                               | 30,3                           | 380                         | 6048                        | 550 (at 500 V)               | 20320                         | 1920                           | 1400                                                                   | 7840                                | 3680     | 2150     | 1420     | 24,22                     | 1PH8 356- 7 ■ B 1 0 - ■ ■ ■ 2               | 3256                                                   | 1XB7712-P03  |
|                                                                                                               | 30,2                           | 430                         | 6844                        | 620 (at 500 V)               | 23390                         | 2180                           | 1400                                                                   | 8990                                | 4210     | 2460     | 1620     | 27,79                     | 1PH8 358- 7 ■ B 1 0 - ■ ■ ■ 2               | 3629                                                   | 1XB7712-P03  |
|                                                                                                               |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             | For versions, see Article No. supplements and options. |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                             | Rated frequency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. current<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weakening) <sup>2)</sup> $n_2$ | Maximum torque $M_{max}^{1)}$ at |      |      |      | Mo-ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx. | Terminal box |
|--------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|--------------------------------|------------------------------------------------------------------------|----------------------------------|------|------|------|---------------------------|---------------------------------------------|-----------------|--------------|
| rpm                                                                                                    | Hz                             | kW                          | Nm                          | A                            | Nm                            | A                              | rpm                                                                    | Nm                               | Nm   | Nm   | Nm   | kgm <sup>2</sup>          |                                             | kg              | Type         |
| 1PH8 35. asynchronous motors, IP55 degree of protection, noise level 85 dB(A), operating speed 600 rpm |                                |                             |                             |                              |                               |                                |                                                                        |                                  |      |      |      |                           |                                             |                 |              |
| Supply voltage 690 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control             |                                |                             |                             |                              |                               |                                |                                                                        |                                  |      |      |      |                           |                                             |                 |              |
| Intermittent duty S3 – 40 %                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                  |      |      |      |                           |                                             |                 |              |
| 600                                                                                                    | 30,3                           | 340                         | 5412                        | 345 (at 690 V)               | 12090                         | 910                            | 1400                                                                   | 4690                             | 2210 | 1300 | 860  | 14,74                     | 1PH8 350- 7  H1 0 -    2                    | 2235            | 1XB7712-P01  |
|                                                                                                        | 30,3                           | 405                         | 6446                        | 405 (at 690 V)               | 13880                         | 1000                           | 1400                                                                   | 5390                             | 2550 | 1500 | 990  | 17,40                     | 1PH8 352- 7  H1 0 -    2                    | 2560            | 1XB7712-P01  |
|                                                                                                        | 30,3                           | 480                         | 7640                        | 475 (at 690 V)               | 16940                         | 1170                           | 1400                                                                   | 6550                             | 3080 | 1810 | 1190 | 20,66                     | 1PH8 354- 7  H1 0 -    2                    | 2889            | 1XB7712-P01  |
|                                                                                                        | 30,3                           | 560                         | 8913                        | 550 (at 690 V)               | 20480                         | 1400                           | 1400                                                                   | 7890                             | 3700 | 2160 | 1430 | 24,22                     | 1PH8 356- 7  H1 0 -    2                    | 3256            | 1XB7712-P01  |
|                                                                                                        | 30,2                           | 630                         | 10028                       | 620 (at 690 V)               | 24230                         | 1630                           | 1400                                                                   | 9310                             | 4350 | 2540 | 1670 | 27,79                     | 1PH8 358- 7  H1 0 -    2                    | 3629            | 1XB7712-P03  |
| Intermittent duty S3 – 60 %                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                  |      |      |      |                           |                                             |                 |              |
| 600                                                                                                    | 30,3                           | 285                         | 4536                        | 300 (at 690 V)               | 12090                         | 910                            | 1400                                                                   | 4690                             | 2210 | 1300 | 860  | 14,74                     | 1PH8 350- 7  H1 0 -    2                    | 2235            | 1XB7712-P01  |
|                                                                                                        | 30,3                           | 340                         | 5412                        | 350 (at 690 V)               | 13880                         | 1000                           | 1400                                                                   | 5390                             | 2550 | 1500 | 990  | 17,40                     | 1PH8 352- 7  H1 0 -    2                    | 2560            | 1XB7712-P01  |
|                                                                                                        | 30,3                           | 400                         | 6367                        | 410 (at 690 V)               | 16940                         | 1170                           | 1400                                                                   | 6550                             | 3080 | 1810 | 1190 | 20,66                     | 1PH8 354- 7  H1 0 -    2                    | 2889            | 1XB7712-P01  |
|                                                                                                        | 30,3                           | 465                         | 7401                        | 470 (at 690 V)               | 20480                         | 1400                           | 1400                                                                   | 7890                             | 3700 | 2160 | 1430 | 24,22                     | 1PH8 356- 7  H1 0 -    2                    | 3256            | 1XB7712-P01  |
|                                                                                                        | 30,2                           | 530                         | 8436                        | 535 (at 690 V)               | 24230                         | 1630                           | 1400                                                                   | 9310                             | 4350 | 2540 | 1670 | 27,79                     | 1PH8 358- 7  H1 0 -    2                    | 3629            | 1XB7712-P03  |
| Intermittent duty S3 – 100 % (S1)                                                                      |                                |                             |                             |                              |                               |                                |                                                                        |                                  |      |      |      |                           |                                             |                 |              |
| 600                                                                                                    | 30,3                           | 230                         | 3661                        | 255 (at 690 V)               | 12090                         | 910                            | 1400                                                                   | 4690                             | 2210 | 1300 | 860  | 14,74                     | 1PH8 350- 7  H1 0 -    2                    | 2235            | 1XB7712-P01  |
|                                                                                                        | 30,3                           | 275                         | 4377                        | 295 (at 690 V)               | 13880                         | 1000                           | 1400                                                                   | 5390                             | 2550 | 1500 | 990  | 17,40                     | 1PH8 352- 7  H1 0 -    2                    | 2560            | 1XB7712-P01  |
|                                                                                                        | 30,3                           | 325                         | 5173                        | 345 (at 690 V)               | 16940                         | 1170                           | 1400                                                                   | 6550                             | 3080 | 1810 | 1190 | 20,66                     | 1PH8 354- 7  H1 0 -    2                    | 2889            | 1XB7712-P01  |
|                                                                                                        | 30,3                           | 380                         | 6048                        | 400 (at 690 V)               | 20480                         | 1400                           | 1400                                                                   | 7890                             | 3700 | 2160 | 1430 | 24,22                     | 1PH8 356- 7  H1 0 -    2                    | 3256            | 1XB7712-P01  |
|                                                                                                        | 30,2                           | 430                         | 6844                        | 455 (at 690 V)               | 24230                         | 1630                           | 1400                                                                   | 9310                             | 4350 | 2540 | 1670 | 27,79                     | 1PH8 358- 7  H1 0 -    2                    | 3629            | 1XB7712-P03  |
| For versions, see Article No. supplements and options.                                                 |                                |                             |                             |                              |                               |                                |                                                                        |                                  |      |      |      |                           |                                             |                 |              |

For versions, see  
Article No. supplements and  
options.

For more operating characteristics and engineering data,  
please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential;  
the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

1PH8 for SINAMICS S120 for cranes

**Innomotics M – Main motors**

Degree of protection IP23

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                                                                                                                           | Rated frequency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. current<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weakening) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |          |          |          | Mo-ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx.                                        | Terminal box |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|--------------------------------|------------------------------------------------------------------------|-------------------------------------|----------|----------|----------|---------------------------|---------------------------------------------|--------------------------------------------------------|--------------|
|                                                                                                                                                                                                      |                                |                             |                             |                              |                               |                                |                                                                        | 1000 rpm                            | 1500 rpm | 2000 rpm | 2500 rpm |                           |                                             |                                                        |              |
| rpm                                                                                                                                                                                                  | Hz                             | kW                          | Nm                          | A                            | Nm                            | A                              | rpm                                                                    | Nm                                  | Nm       | Nm       | Nm       | kgm <sup>2</sup>          |                                             | kg                                                     | Type         |
| 1PH8 35. asynchronous motors, IP55 degree of protection, noise level 85 dB(A), operating speed 800 rpm<br>Supply voltage 480 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                                                        |              |
| Intermittent duty S3 – 40 %                                                                                                                                                                          |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                                                        |              |
| 800                                                                                                                                                                                                  | 40,3                           | 440                         | 5253                        | 615 (at 500 V)               | 12500                         | 1790                           | 1400                                                                   | 8210                                | 3830     | 2230     | 1460     | 14,74                     | 1PH8 350- 7 ■ Q1 0 - ■ ■ ■ 2                | 2235                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,3                           | 530                         | 6327                        | 730 (at 500 V)               | 14870                         | 1990                           | 1400                                                                   | 9750                                | 4540     | 2640     | 1730     | 17,40                     | 1PH8 352- 7 ■ Q1 0 - ■ ■ ■ 2                | 2560                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,3                           | 615                         | 7342                        | 845 (at 500 V)               | 19960                         | 2580                           | 1400                                                                   | 12960                               | 5910     | 3390     | 2200     | 20,66                     | 1PH8 354- 7 ■ Q1 0 - ■ ■ ■ 2                | 2889                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,2                           | 720                         | 8595                        | 985 (at 500 V)               | 22050                         | 2790                           | 1400                                                                   | 14420                               | 6670     | 3860     | 2520     | 24,22                     | 1PH8 356- 7 ■ Q1 0 - ■ ■ ■ 2                | 3256                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,3                           | 830                         | 9908                        | 1105 (at 500 V)              | 22770                         | 2820                           | 1400                                                                   | 14930                               | 6930     | 4020     | 2640     | 27,79                     | 1PH8 358- 7 ■ Q1 0 - ■ ■ ■ 2                | 3629                                                   | 1XB7712-P03  |
| Intermittent duty S3 – 60 %                                                                                                                                                                          |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                                                        |              |
| 800                                                                                                                                                                                                  | 40,3                           | 370                         | 4417                        | 530 (at 500 V)               | 12500                         | 1790                           | 1400                                                                   | 8210                                | 3830     | 2230     | 1460     | 14,74                     | 1PH8 350- 7 ■ Q1 0 - ■ ■ ■ 2                | 2235                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,3                           | 445                         | 5312                        | 630 (at 500 V)               | 14870                         | 1990                           | 1400                                                                   | 9750                                | 4540     | 2640     | 1730     | 17,40                     | 1PH8 352- 7 ■ Q1 0 - ■ ■ ■ 2                | 2560                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,3                           | 515                         | 6148                        | 730 (at 500 V)               | 19960                         | 2580                           | 1400                                                                   | 12960                               | 5910     | 3390     | 2200     | 20,66                     | 1PH8 354- 7 ■ Q1 0 - ■ ■ ■ 2                | 2889                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,2                           | 605                         | 7222                        | 850 (at 500 V)               | 22050                         | 2790                           | 1400                                                                   | 14420                               | 6670     | 3860     | 2520     | 24,22                     | 1PH8 356- 7 ■ Q1 0 - ■ ■ ■ 2                | 3256                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,3                           | 695                         | 8297                        | 945 (at 500 V)               | 22770                         | 2820                           | 1400                                                                   | 14930                               | 6930     | 4020     | 2640     | 27,79                     | 1PH8 358- 7 ■ Q1 0 - ■ ■ ■ 2                | 3629                                                   | 1XB7712-P03  |
| Intermittent duty S3 – 100 % (S1)                                                                                                                                                                    |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                                                        |              |
| 800                                                                                                                                                                                                  | 40,3                           | 300                         | 3581                        | 450 (at 500 V)               | 12500                         | 1790                           | 1400                                                                   | 8210                                | 3830     | 2230     | 1460     | 14,74                     | 1PH8 350- 7 ■ Q1 0 - ■ ■ ■ 2                | 2235                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,3                           | 360                         | 4298                        | 530 (at 500 V)               | 14870                         | 1990                           | 1400                                                                   | 9750                                | 4540     | 2640     | 1730     | 17,40                     | 1PH8 352- 7 ■ Q1 0 - ■ ■ ■ 2                | 2560                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,3                           | 420                         | 5014                        | 620 (at 500 V)               | 19960                         | 2580                           | 1400                                                                   | 12960                               | 5910     | 3390     | 2200     | 20,66                     | 1PH8 354- 7 ■ Q1 0 - ■ ■ ■ 2                | 2889                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,2                           | 490                         | 5849                        | 720 (at 500 V)               | 22050                         | 2790                           | 1400                                                                   | 14420                               | 6670     | 3860     | 2520     | 24,22                     | 1PH8 356- 7 ■ Q1 0 - ■ ■ ■ 2                | 3256                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      | 40,3                           | 565                         | 6745                        | 790 (at 500 V)               | 22770                         | 2820                           | 1400                                                                   | 14930                               | 6930     | 4020     | 2640     | 27,79                     | 1PH8 358- 7 ■ Q1 0 - ■ ■ ■ 2                | 3629                                                   | 1XB7712-P03  |
|                                                                                                                                                                                                      |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             | For versions, see Article No. supplements and options. |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                             | Rated fre-<br>quency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. cur-<br>rent<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weaken-<br>ing) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |      |      |      | Mo-<br>ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx.                                        | Terminal box |
|--------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|-------------------------------------|-----------------------------------------------------------------------------|-------------------------------------|------|------|------|-------------------------------|---------------------------------------------|--------------------------------------------------------|--------------|
| rpm                                                                                                    | Hz                                  | kW                          | Nm                          | A                            | Nm                            | A                                   | rpm                                                                         | Nm                                  | Nm   | Nm   | Nm   | kgm <sup>2</sup>              |                                             | kg                                                     | Type         |
| 1PH8 35. asynchronous motors, IP55 degree of protection, noise level 85 dB(A), operating speed 800 rpm |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                                                        |              |
| Supply voltage 690 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control             |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                                                        |              |
| Intermittent duty S3 – 40 %                                                                            |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                                                        |              |
| 800                                                                                                    | 40,3                                | 440                         | 5253                        | 440 (at 690 V)               | 12180                         | 1290                                | 1400                                                                        | 8010                                | 3740 | 2180 | 1430 | 14,74                         | 1PH8 350- 7 ■ K1 0 - ■ ■ ■ 2                | 2235                                                   | 1XB7712-P01  |
|                                                                                                        | 40,3                                | 530                         | 6327                        | 530 (at 690 V)               | 15360                         | 1480                                | 1400                                                                        | 10070                               | 4670 | 2710 | 1780 | 17,40                         | 1PH8 352- 7 ■ K1 0 - ■ ■ ■ 2                | 2560                                                   | 1XB7712-P01  |
|                                                                                                        | 40,3                                | 615                         | 7342                        | 610 (at 690 V)               | 17590                         | 1660                                | 1400                                                                        | 11560                               | 5390 | 3140 | 2060 | 20,66                         | 1PH8 354- 7 ■ K1 0 - ■ ■ ■ 2                | 2889                                                   | 1XB7712-P03  |
|                                                                                                        | 40,3                                | 720                         | 8595                        | 705 (at 690 V)               | 20960                         | 1940                                | 1400                                                                        | 13760                               | 6400 | 3720 | 2440 | 24,22                         | 1PH8 356- 7 ■ K1 0 - ■ ■ ■ 2                | 3256                                                   | 1XB7712-P03  |
|                                                                                                        | 40,3                                | 830                         | 9908                        | 805 (at 690 V)               | 23360                         | 2090                                | 1400                                                                        | 15290                               | 7080 | 4100 | 2680 | 27,79                         | 1PH8 358- 7 ■ K1 0 - ■ ■ ■ 2                | 3629                                                   | 1XB7712-P03  |
| Intermittent duty S3 – 60 %                                                                            |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                                                        |              |
| 800                                                                                                    | 40,3                                | 370                         | 4417                        | 380 (at 690 V)               | 12180                         | 1290                                | 1400                                                                        | 8010                                | 3740 | 2180 | 1430 | 14,74                         | 1PH8 350- 7 ■ K1 0 - ■ ■ ■ 2                | 2235                                                   | 1XB7712-P01  |
|                                                                                                        | 40,3                                | 445                         | 5312                        | 460 (at 690 V)               | 15360                         | 1480                                | 1400                                                                        | 10070                               | 4670 | 2710 | 1780 | 17,40                         | 1PH8 352- 7 ■ K1 0 - ■ ■ ■ 2                | 2560                                                   | 1XB7712-P01  |
|                                                                                                        | 40,3                                | 515                         | 6148                        | 525 (at 690 V)               | 17590                         | 1660                                | 1400                                                                        | 11560                               | 5390 | 3140 | 2060 | 20,66                         | 1PH8 354- 7 ■ K1 0 - ■ ■ ■ 2                | 2889                                                   | 1XB7712-P03  |
|                                                                                                        | 40,3                                | 605                         | 7222                        | 605 (at 690 V)               | 20960                         | 1940                                | 1400                                                                        | 13760                               | 6400 | 3720 | 2440 | 24,22                         | 1PH8 356- 7 ■ K1 0 - ■ ■ ■ 2                | 3256                                                   | 1XB7712-P03  |
|                                                                                                        | 40,3                                | 695                         | 8297                        | 690 (at 690 V)               | 23360                         | 2090                                | 1400                                                                        | 15290                               | 7080 | 4100 | 2680 | 27,79                         | 1PH8 358- 7 ■ K1 0 - ■ ■ ■ 2                | 3629                                                   | 1XB7712-P03  |
| Intermittent duty S3 – 100 % (S1)                                                                      |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                                                        |              |
| 800                                                                                                    | 40,3                                | 300                         | 3581                        | 320 (at 690 V)               | 12180                         | 1290                                | 1400                                                                        | 8010                                | 3740 | 2180 | 1430 | 14,74                         | 1PH8 350- 7 ■ K1 0 - ■ ■ ■ 2                | 2235                                                   | 1XB7712-P01  |
|                                                                                                        | 40,3                                | 360                         | 4298                        | 390 (at 690 V)               | 15360                         | 1480                                | 1400                                                                        | 10070                               | 4670 | 2710 | 1780 | 17,40                         | 1PH8 352- 7 ■ K1 0 - ■ ■ ■ 2                | 2560                                                   | 1XB7712-P01  |
|                                                                                                        | 40,3                                | 420                         | 5014                        | 440 (at 690 V)               | 17590                         | 1660                                | 1400                                                                        | 11560                               | 5390 | 3140 | 2060 | 20,66                         | 1PH8 354- 7 ■ K1 0 - ■ ■ ■ 2                | 2889                                                   | 1XB7712-P03  |
|                                                                                                        | 40,3                                | 490                         | 5849                        | 510 (at 690 V)               | 20960                         | 1940                                | 1400                                                                        | 13760                               | 6400 | 3720 | 2440 | 24,22                         | 1PH8 356- 7 ■ K1 0 - ■ ■ ■ 2                | 3256                                                   | 1XB7712-P03  |
|                                                                                                        | 40,3                                | 565                         | 6745                        | 580 (at 690 V)               | 23360                         | 2090                                | 1400                                                                        | 15290                               | 7080 | 4100 | 2680 | 27,79                         | 1PH8 358- 7 ■ K1 0 - ■ ■ ■ 2                | 3629                                                   | 1XB7712-P03  |
|                                                                                                        |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             | For versions, see Article No. supplements and options. |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

## Innomotics M – Main motors

Degree of protection IP23

### Selection and ordering data

#### Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3

| Rated speed<br>$n_{rated}$                                                                                     | Rated frequency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. current<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weakening) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |          |          |          | Mo-ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx. | Terminal box |
|----------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|--------------------------------|------------------------------------------------------------------------|-------------------------------------|----------|----------|----------|---------------------------|---------------------------------------------|-----------------|--------------|
| rpm                                                                                                            | Hz                             | kW                          | Nm                          | A                            | Nm                            | A                              | rpm                                                                    | 1500 rpm                            | 2000 rpm | 2500 rpm | 2800 rpm | kgm <sup>2</sup>          | Article No.                                 | kg              | Type         |
| <b>1PH8 35. asynchronous motors, IP55 degree of protection, noise level 85 dB(A), operating speed 1000 rpm</b> |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| <b>Supply voltage 480 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control</b>              |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| <b>Intermittent duty S3 – 40 %</b>                                                                             |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1000                                                                                                           | 50,3                           | 530                         | 5062                        | 735 (at 500 V)               | 13150                         | 2430                           | 1500                                                                   | 6070                                | 3510     | 2290     | 1850     | 14,74                     | 1PH8 350- 7 ■ C1 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                                | 50,3                           | 630                         | 6017                        | 860 (at 500 V)               | 14700                         | 2490                           | 1500                                                                   | 6780                                | 3910     | 2550     | 2060     | 17,40                     | 1PH8 352- 7 ■ C1 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                                | 50,3                           | 740                         | 7067                        | 1005 (at 500 V)              | 16970                         | 2750                           | 1500                                                                   | 7830                                | 4530     | 2960     | 2380     | 20,66                     | 1PH8 354- 7 ■ C1 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                                | 50,3                           | 855                         | 8165                        | 1145 (at 500 V)              | 21120                         | 3340                           | 1600                                                                   | 9730                                | 5610     | 3660     | 2950     | 24,22                     | 1PH8 356- 7 ■ C1 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                                | 50,2                           | 985                         | 9407                        | 1415 (at 480 V)              | 26910                         | 4360                           | 1600                                                                   | 12360                               | 7120     | 4640     | 3730     | 27,79                     | 1PH8 358- 7 ■ C1 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |
| <b>Intermittent duty S3 – 60 %</b>                                                                             |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1000                                                                                                           | 50,3                           | 445                         | 4250                        | 635 (at 500 V)               | 13150                         | 2430                           | 1500                                                                   | 6070                                | 3510     | 2290     | 1850     | 14,74                     | 1PH8 350- 7 ■ C1 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                                | 50,3                           | 530                         | 5062                        | 735 (at 500 V)               | 14700                         | 2490                           | 1500                                                                   | 6780                                | 3910     | 2550     | 2060     | 17,40                     | 1PH8 352- 7 ■ C1 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                                | 50,3                           | 620                         | 5921                        | 860 (at 500 V)               | 16970                         | 2750                           | 1500                                                                   | 7830                                | 4530     | 2960     | 2380     | 20,66                     | 1PH8 354- 7 ■ C1 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                                | 50,3                           | 715                         | 6828                        | 985 (at 500 V)               | 21120                         | 3340                           | 1600                                                                   | 9730                                | 5610     | 3660     | 2950     | 24,22                     | 1PH8 356- 7 ■ C1 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                                | 50,2                           | 825                         | 7879                        | 1225 (at 480 V)              | 26910                         | 4360                           | 1600                                                                   | 12360                               | 7120     | 4640     | 3730     | 27,79                     | 1PH8 358- 7 ■ C1 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |
| <b>Intermittent duty S3 – 100 % (S1)</b>                                                                       |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1000                                                                                                           | 50,3                           | 360                         | 3438                        | 540 (at 500 V)               | 13150                         | 2430                           | 1500                                                                   | 6070                                | 3510     | 2290     | 1850     | 14,74                     | 1PH8 350- 7 ■ C1 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                                | 50,3                           | 430                         | 4107                        | 620 (at 500 V)               | 14700                         | 2490                           | 1500                                                                   | 6780                                | 3910     | 2550     | 2060     | 17,40                     | 1PH8 352- 7 ■ C1 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                                | 50,3                           | 505                         | 4823                        | 720 (at 500 V)               | 16970                         | 2750                           | 1500                                                                   | 7830                                | 4530     | 2960     | 2380     | 20,66                     | 1PH8 354- 7 ■ C1 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                                | 50,3                           | 580                         | 5539                        | 830 (at 500 V)               | 21120                         | 3340                           | 1600                                                                   | 9730                                | 5610     | 3660     | 2950     | 24,22                     | 1PH8 356- 7 ■ C1 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                                | 50,2                           | 670                         | 6399                        | 1040 (at 480 V)              | 26910                         | 4360                           | 1600                                                                   | 12360                               | 7120     | 4640     | 3730     | 27,79                     | 1PH8 358- 7 ■ C1 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |

For versions, see  
Article No. supplements and  
options.

For more operating characteristics and engineering data,  
please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential;  
the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                              | Rated fre-<br>quency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. cur-<br>rent<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weaken-<br>ing) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |      |      |      | Mo-<br>ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx. | Terminal box |
|---------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|-------------------------------------|-----------------------------------------------------------------------------|-------------------------------------|------|------|------|-------------------------------|---------------------------------------------|-----------------|--------------|
| rpm                                                                                                     | Hz                                  | kW                          | Nm                          | A                            | Nm                            | A                                   | rpm                                                                         | Nm                                  | Nm   | Nm   | Nm   | kgm <sup>2</sup>              |                                             | kg              | Type         |
| 1PH8 35. asynchronous motors, IP55 degree of protection, noise level 85 dB(A), operating speed 1000 rpm |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                 |              |
| Supply voltage 690 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control              |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                 |              |
| Intermittent duty S3 – 40 %                                                                             |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                 |              |
| 1000                                                                                                    | 50,3                                | 530                         | 5062                        | 535 (at 690 V)               | 13240                         | 1770                                | 1500                                                                        | 6110                                | 3530 | 2310 | 1860 | 14,74                         | 1PH8 350- 7 ■ U1 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P01  |
|                                                                                                         | 50,3                                | 630                         | 6017                        | 625 (at 690 V)               | 15110                         | 1840                                | 1500                                                                        | 6960                                | 4010 | 2620 | 2110 | 17,40                         | 1PH8 352- 7 ■ U1 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P01  |
|                                                                                                         | 50,3                                | 740                         | 7067                        | 730 (at 690 V)               | 18280                         | 2110                                | 1500                                                                        | 8430                                | 4860 | 3180 | 2560 | 20,66                         | 1PH8 354- 7 ■ U1 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                         | 50,3                                | 855                         | 8165                        | 835 (at 690 V)               | 20510                         | 2370                                | 1600                                                                        | 9450                                | 5450 | 3560 | 2860 | 24,22                         | 1PH8 356- 7 ■ U1 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                         | 50,2                                | 985                         | 9407                        | 955 (at 690 V)               | 24570                         | 2760                                | 1600                                                                        | 11310                               | 6520 | 4250 | 3420 | 27,79                         | 1PH8 358- 7 ■ U1 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |
| Intermittent duty S3 – 60 %                                                                             |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                 |              |
| 1000                                                                                                    | 50,3                                | 445                         | 4250                        | 465 (at 690 V)               | 13240                         | 1770                                | 1500                                                                        | 6110                                | 3530 | 2310 | 1860 | 14,74                         | 1PH8 350- 7 ■ U1 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P01  |
|                                                                                                         | 50,3                                | 530                         | 5062                        | 540 (at 690 V)               | 15110                         | 1840                                | 1500                                                                        | 6960                                | 4010 | 2620 | 2110 | 17,40                         | 1PH8 352- 7 ■ U1 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P01  |
|                                                                                                         | 50,3                                | 620                         | 5921                        | 630 (at 690 V)               | 18280                         | 2110                                | 1500                                                                        | 8430                                | 4860 | 3180 | 2560 | 20,66                         | 1PH8 354- 7 ■ U1 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                         | 50,3                                | 715                         | 6828                        | 715 (at 690 V)               | 20510                         | 2370                                | 1600                                                                        | 9450                                | 5450 | 3560 | 2860 | 24,22                         | 1PH8 356- 7 ■ U1 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                         | 50,2                                | 825                         | 7879                        | 820 (at 690 V)               | 24570                         | 2760                                | 1600                                                                        | 11310                               | 6520 | 4250 | 3420 | 27,79                         | 1PH8 358- 7 ■ U1 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |
| Intermittent duty S3 – 100 % (S1)                                                                       |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                 |              |
| 1000                                                                                                    | 50,3                                | 360                         | 3438                        | 395 (at 690 V)               | 13240                         | 1770                                | 1500                                                                        | 6110                                | 3530 | 2310 | 1860 | 14,74                         | 1PH8 350- 7 ■ U1 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P01  |
|                                                                                                         | 50,3                                | 430                         | 4107                        | 455 (at 690 V)               | 15110                         | 1840                                | 1500                                                                        | 6960                                | 4010 | 2620 | 2110 | 17,40                         | 1PH8 352- 7 ■ U1 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P01  |
|                                                                                                         | 50,3                                | 505                         | 4823                        | 530 (at 690 V)               | 18280                         | 2110                                | 1500                                                                        | 8430                                | 4860 | 3180 | 2560 | 20,66                         | 1PH8 354- 7 ■ U1 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                         | 50,3                                | 580                         | 5539                        | 600 (at 690 V)               | 20510                         | 2370                                | 1600                                                                        | 9450                                | 5450 | 3560 | 2860 | 24,22                         | 1PH8 356- 7 ■ U1 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                         | 50,2                                | 670                         | 6399                        | 690 (at 690 V)               | 24570                         | 2760                                | 1600                                                                        | 11310                               | 6520 | 4250 | 3420 | 27,79                         | 1PH8 358- 7 ■ U1 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |
| For versions, see Article No. supplements and options.                                                  |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                             |                 |              |

For versions, see  
Article No. supplements and  
options.

For more operating characteristics and engineering data,  
please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential;  
the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

## Innomotics M – Main motors

Degree of protection IP23

### Selection and ordering data

#### Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3

| Rated speed<br>$n_{rated}$                                                                                                                                                                                    | Rated frequency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. current<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weakening) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |          |          |          | Mo-ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355 | Weight, approx. | Terminal box |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|--------------------------------|------------------------------------------------------------------------|-------------------------------------|----------|----------|----------|---------------------------|---------------------------------------------|-----------------|--------------|
| rpm                                                                                                                                                                                                           | Hz                             | kW                          | Nm                          | A                            | Nm                            | A                              | rpm                                                                    | 1500 rpm                            | 2000 rpm | 2500 rpm | 2800 rpm | kgm <sup>2</sup>          | Article No.                                 | kg              | Type         |
| <b>1PH8 35. asynchronous motors, IP55 degree of protection, noise level 85 dB(A), operating speed 1350 rpm<br/>Supply voltage 480 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control</b> |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| <b>Intermittent duty S3 – 40 %</b>                                                                                                                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1350                                                                                                                                                                                                          | 67,8                           | 560                         | 3961                        | 760 (at 500 V)               | 9840                          | 2410                           | 1800                                                                   | 8040                                | 4620     | 3010     | 2420     | 14,74                     | 1PH8 350- 7 ■ D1 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,7                           | 675                         | 4775                        | 925 (at 500 V)               | 13690                         | 3260                           | 1800                                                                   | 11180                               | 6430     | 4190     | 3370     | 17,40                     | 1PH8 352- 7 ■ D1 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,8                           | 810                         | 5730                        | 1075 (at 500 V)              | 14050                         | 3130                           | 1700                                                                   | 11480                               | 6620     | 4310     | 3470     | 20,66                     | 1PH8 354- 7 ■ D1 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,7                           | 925                         | 6544                        | 1250 (at 500 V)              | 18980                         | 4090                           | 1700                                                                   | 15500                               | 8910     | 5800     | 4660     | 24,22                     | 1PH8 356- 7 ■ D1 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,7                           | 1075                        | 7605                        | 1445 (at 500 V)              | 21720                         | 4590                           | 1700                                                                   | 17740                               | 10220    | 6660     | 5360     | 27,79                     | 1PH8 358- 7 ■ D1 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |
| <b>Intermittent duty S3 – 60 %</b>                                                                                                                                                                            |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1350                                                                                                                                                                                                          | 67,8                           | 465                         | 3289                        | 650 (at 500 V)               | 9840                          | 2410                           | 1800                                                                   | 8040                                | 4620     | 3010     | 2420     | 14,74                     | 1PH8 350- 7 ■ D1 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,7                           | 565                         | 3997                        | 795 (at 500 V)               | 13690                         | 3260                           | 1800                                                                   | 11180                               | 6430     | 4190     | 3370     | 17,40                     | 1PH8 352- 7 ■ D1 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,8                           | 675                         | 4775                        | 915 (at 500 V)               | 14050                         | 3130                           | 1700                                                                   | 11480                               | 6620     | 4310     | 3470     | 20,66                     | 1PH8 354- 7 ■ D1 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,7                           | 775                         | 5482                        | 1070 (at 500 V)              | 18980                         | 4090                           | 1700                                                                   | 15500                               | 8910     | 5800     | 4660     | 24,22                     | 1PH8 356- 7 ■ D1 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,7                           | 900                         | 6367                        | 1240 (at 500 V)              | 21720                         | 4590                           | 1700                                                                   | 17740                               | 10220    | 6660     | 5360     | 27,79                     | 1PH8 358- 7 ■ D1 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |
| <b>Intermittent duty S3 – 100 % (S1)</b>                                                                                                                                                                      |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |
| 1350                                                                                                                                                                                                          | 67,8                           | 380                         | 2688                        | 540 (at 500 V)               | 9840                          | 2410                           | 1800                                                                   | 8040                                | 4620     | 3010     | 2420     | 14,74                     | 1PH8 350- 7 ■ D1 0 - ■ ■ ■ 2                | 2235            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,7                           | 460                         | 3254                        | 670 (at 500 V)               | 13690                         | 3260                           | 1800                                                                   | 11180                               | 6430     | 4190     | 3370     | 17,40                     | 1PH8 352- 7 ■ D1 0 - ■ ■ ■ 2                | 2560            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,8                           | 550                         | 3891                        | 760 (at 500 V)               | 14050                         | 3130                           | 1700                                                                   | 11480                               | 6620     | 4310     | 3470     | 20,66                     | 1PH8 354- 7 ■ D1 0 - ■ ■ ■ 2                | 2889            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,7                           | 630                         | 4457                        | 900 (at 500 V)               | 18980                         | 4090                           | 1700                                                                   | 15500                               | 8910     | 5800     | 4660     | 24,22                     | 1PH8 356- 7 ■ D1 0 - ■ ■ ■ 2                | 3256            | 1XB7712-P03  |
|                                                                                                                                                                                                               | 67,7                           | 730                         | 5164                        | 1040 (at 500 V)              | 21720                         | 4590                           | 1700                                                                   | 17740                               | 10220    | 6660     | 5360     | 27,79                     | 1PH8 358- 7 ■ D1 0 - ■ ■ ■ 2                | 3629            | 1XB7712-P03  |
| For versions, see Article No. supplements and options.                                                                                                                                                        |                                |                             |                             |                              |                               |                                |                                                                        |                                     |          |          |          |                           |                                             |                 |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed<br>$n_{rated}$                                                                              | Rated fre-<br>quency<br>$f_{rated}$ | Rated output<br>$P_{rated}$ | Rated torque<br>$M_{rated}$ | Rated current<br>$I_{rated}$ | Max. torque<br>$M_{max}^{1)}$ | Max. cur-<br>rent<br>$I_{max}^{1)}$ | Maximum speed at constant output (field weaken-<br>ing) <sup>2)</sup> $n_2$ | Maximum torque<br>$M_{max}^{1)}$ at |      |      |      | Mo-<br>ment of inertia<br>$J$ | 1PH8 asynchronous motor<br>Shaft height 355                                                                                                                                                                                                                                                                                                                                 | Weight, approx.                                        | Terminal box |
|---------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------------|-------------------------------------|-----------------------------------------------------------------------------|-------------------------------------|------|------|------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------|
| rpm                                                                                                     | Hz                                  | kW                          | Nm                          | A                            | Nm                            | A                                   | rpm                                                                         | Nm                                  | Nm   | Nm   | Nm   | kgm <sup>2</sup>              |                                                                                                                                                                                                                                                                                                                                                                             | kg                                                     | Type         |
| 1PH8 35. asynchronous motors, IP55 degree of protection, noise level 85 dB(A), operating speed 1350 rpm |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                                                                                                                                                                                                                                                                                                                                                             |                                                        |              |
| Supply voltage 690 V 3 AC for SINAMICS S120 converters, Active Line Module, Vector Control              |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                                                                                                                                                                                                                                                                                                                                                             |                                                        |              |
| Intermittent duty S3 – 40 %                                                                             |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                                                                                                                                                                                                                                                                                                                                                             |                                                        |              |
| 1350                                                                                                    | 67,8                                | 560                         | 3961                        | 550 (at 690 V)               | 10200                         | 1800                                | 1800                                                                        | 8320                                | 4780 | 3110 | 2500 | 14,74                         | 1PH8 350- 7  V1 0-    2         | 2235                                                   | 1XB7712-P01  |
|                                                                                                         | 67,8                                | 675                         | 4775                        | 660 (at 690 V)               | 12290                         | 2230                                | 1800                                                                        | 10040                               | 5780 | 3760 | 3030 | 17,40                         | 1PH8 352- 7  V1 0-    2         | 2560                                                   | 1XB7712-P03  |
|                                                                                                         | 67,8                                | 810                         | 5730                        | 780 (at 690 V)               | 13660                         | 2230                                | 1700                                                                        | 11160                               | 6420 | 4180 | 3360 | 20,66                         | 1PH8 354- 7  V1 0-    2         | 2889                                                   | 1XB7712-P03  |
|                                                                                                         | 67,7                                | 925                         | 6544                        | 900 (at 690 V)               | 19140                         | 2990                                | 1700                                                                        | 15630                               | 8980 | 5840 | 4700 | 24,22                         | 1PH8 356- 7  V1 0-    2         | 3256                                                   | 1XB7712-P03  |
|                                                                                                         | 67,7                                | 1075                        | 7605                        | 1040 (at 690 V)              | 20270                         | 3110                                | 1700                                                                        | 16550                               | 9510 | 6190 | 4970 | 27,79                         | 1PH8 358- 7  V1 0-    2         | 3629                                                   | 1XB7712-P03  |
| Intermittent duty S3 – 60 %                                                                             |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                                                                                                                                                                                                                                                                                                                                                             |                                                        |              |
| 1350                                                                                                    | 67,8                                | 465                         | 3289                        | 475 (at 690 V)               | 10200                         | 1800                                | 1800                                                                        | 8320                                | 4780 | 3110 | 2500 | 14,74                         | 1PH8 350- 7  V1 0-    2         | 2235                                                   | 1XB7712-P01  |
|                                                                                                         | 67,8                                | 565                         | 3997                        | 565 (at 690 V)               | 12290                         | 2230                                | 1800                                                                        | 10040                               | 5780 | 3760 | 3030 | 17,40                         | 1PH8 352- 7  V1 0-    2         | 2560                                                   | 1XB7712-P03  |
|                                                                                                         | 67,8                                | 675                         | 4775                        | 665 (at 690 V)               | 13660                         | 2230                                | 1700                                                                        | 11160                               | 6420 | 4180 | 3360 | 20,66                         | 1PH8 354- 7  V1 0-    2         | 2889                                                   | 1XB7712-P03  |
|                                                                                                         | 67,7                                | 775                         | 5482                        | 775 (at 690 V)               | 19140                         | 2990                                | 1700                                                                        | 15630                               | 8980 | 5840 | 4700 | 24,22                         | 1PH8 356- 7  V1 0-    2         | 3256                                                   | 1XB7712-P03  |
|                                                                                                         | 67,7                                | 900                         | 6367                        | 890 (at 690 V)               | 20270                         | 3110                                | 1700                                                                        | 16550                               | 9510 | 6190 | 4970 | 27,79                         | 1PH8 358- 7  V1 0-    2         | 3629                                                   | 1XB7712-P03  |
| Intermittent duty S3 – 100 % (S1)                                                                       |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                                                                                                                                                                                                                                                                                                                                                             |                                                        |              |
| 1350                                                                                                    | 67,8                                | 380                         | 2688                        | 395 (at 690 V)               | 10200                         | 1800                                | 1800                                                                        | 8320                                | 4780 | 3110 | 2500 | 14,74                         | 1PH8 350- 7  V1 0-    2         | 2235                                                   | 1XB7712-P01  |
|                                                                                                         | 67,8                                | 460                         | 3254                        | 470 (at 690 V)               | 12290                         | 2230                                | 1800                                                                        | 10040                               | 5780 | 3760 | 3030 | 17,40                         | 1PH8 352- 7  V1 0-    2 | 2560                                                   | 1XB7712-P03  |
|                                                                                                         | 67,8                                | 550                         | 3891                        | 550 (at 690 V)               | 13660                         | 2230                                | 1700                                                                        | 11160                               | 6420 | 4180 | 3360 | 20,66                         | 1PH8 354- 7  V1 0-    2 | 2889                                                   | 1XB7712-P03  |
|                                                                                                         | 67,7                                | 630                         | 4457                        | 650 (at 690 V)               | 19140                         | 2990                                | 1700                                                                        | 15630                               | 8980 | 5840 | 4700 | 24,22                         | 1PH8 356- 7  V1 0-    2 | 3256                                                   | 1XB7712-P03  |
|                                                                                                         | 67,7                                | 730                         | 5164                        | 740 (at 690 V)               | 20270                         | 3110                                | 1700                                                                        | 16550                               | 9510 | 6190 | 4970 | 27,79                         | 1PH8 358- 7  V1 0-    2 | 3629                                                   | 1XB7712-P03  |
|                                                                                                         |                                     |                             |                             |                              |                               |                                     |                                                                             |                                     |      |      |      |                               |                                                                                                                                                                                                                                                                                                                                                                             | For versions, see Article No. supplements and options. |              |

For more operating characteristics and engineering data, please contact your local Innomotics representative.  
Compliance with the rated pulse frequencies is essential; the rated motor data is valid for 2.5 kHz.

<sup>1)</sup> Maximum torque/current that is briefly available for dynamic operations (e.g. accelerating). Please refer to the planning documents for the values for thyristor or diode infeeds (e.g. Basic Line Module).

<sup>2)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

1PH8 for SINAMICS S120 for cranes

**Innomotics M – Main motors**

Degree of protection IP23

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed                                                   | Rated output | Rated torque | Rated current | Rated voltage | Rated frequency | Operating speed during field weakening.max. <sup>1)</sup> | Max. speed <sup>2)</sup> | Max. torque <sup>3)</sup>   | Max. current <sup>4)</sup> | 1PH8 asynchronous motor<br>Forced ventilation,<br>IP23 degree of protection |
|---------------------------------------------------------------|--------------|--------------|---------------|---------------|-----------------|-----------------------------------------------------------|--------------------------|-----------------------------|----------------------------|-----------------------------------------------------------------------------|
| $n_{rated}$                                                   | $P_{rated}$  | $M_{rated}$  | $I_{rated}$   | $U_{rated}$   | $f_{rated}$     | $n_2$                                                     | $n_{max}$                | $M_{max}$<br>at $n_{rated}$ | $I_{max}$                  |                                                                             |
| rpm                                                           | kW           | Nm           | A             | V             | Hz              | rpm                                                       | rpm                      | Nm                          | A                          |                                                                             |
| Supply voltage 480 V 3 AC, Active Line Module, Vector Control |              |              |               |               |                 |                                                           |                          |                             |                            |                                                                             |
| 600                                                           | 370          | 5889         | 530           | 500           | 30.4            | 1100                                                      | 2800                     | 12640                       | 1310                       | 1PH8350-7B40-■■■■■                                                          |
|                                                               | 415          | 6605         | 590           | 500           | 30.5            | 1100                                                      | 2800                     | 12500                       | 1280                       | 1PH8351-7B40-■■■■■                                                          |
|                                                               | 500          | 7958         | 700           | 500           | 30.5            | 1000                                                      | 2800                     | 15040                       | 1490                       | 1PH8352-7B40-■■■■■                                                          |
|                                                               | 590          | 9391         | 810           | 500           | 30.5            | 1000                                                      | 2800                     | 17050                       | 1630                       | 1PH8354-7B40-■■■■■                                                          |
|                                                               | 690          | 10983        | 940           | 500           | 30.5            | 900                                                       | 2800                     | 20690                       | 1950                       | 1PH8356-7B40-■■■■■                                                          |
|                                                               | 780          | 12415        | 1060          | 500           | 30.5            | 900                                                       | 2800                     | 23650                       | 2200                       | 1PH8358-7B40-■■■■■                                                          |
| 800                                                           | 480          | 5730         | 680           | 500           | 40.4            | 1400                                                      | 2800                     | 12910                       | 1850                       | 1PH8350-7Q40-■■■■■                                                          |
|                                                               | 530          | 6327         | 750           | 500           | 40.5            | 1400                                                      | 2800                     | 12830                       | 1810                       | 1PH8351-7Q40-■■■■■                                                          |
|                                                               | 630          | 7521         | 870           | 500           | 40.5            | 1300                                                      | 2800                     | 15280                       | 2050                       | 1PH8352-7Q40-■■■■■                                                          |
|                                                               | 750          | 8953         | 1040          | 500           | 40.4            | 1300                                                      | 2800                     | 19170                       | 2480                       | 1PH8354-7Q40-■■■■■                                                          |
|                                                               | 860          | 10266        | 1180          | 500           | 40.4            | 1200                                                      | 2800                     | 22380                       | 2830                       | 1PH8356-7Q40-■■■■■                                                          |
|                                                               | 960          | 11460        | 1300          | 500           | 40.5            | 1200                                                      | 2800                     | 23090                       | 2860                       | 1PH8358-7Q40-■■■■■                                                          |
| 1000                                                          | 600          | 5730         | 840           | 500           | 50.4            | 1500                                                      | 2800                     | 13470                       | 2490                       | 1PH8350-7C40-■■■■■                                                          |
|                                                               | 670          | 6399         | 940           | 500           | 50.5            | 1500                                                      | 2800                     | 13380                       | 2470                       | 1PH8351-7C40-■■■■■                                                          |
|                                                               | 780          | 7449         | 1080          | 500           | 50.5            | 1400                                                      | 2800                     | 14980                       | 2540                       | 1PH8352-7C40-■■■■■                                                          |
|                                                               | 900          | 8595         | 1220          | 500           | 50.5            | 1300                                                      | 2800                     | 17230                       | 2790                       | 1PH8354-7C40-■■■■■                                                          |
|                                                               | 1040         | 9932         | 1400          | 500           | 50.4            | 1200                                                      | 2800                     | 21370                       | 3380                       | 1PH8356-7C40-■■■■■                                                          |
|                                                               | 1200         | 11460        | 1700          | 480           | 50.4            | 1200                                                      | 2800                     | 27150                       | 4400                       | 1PH8358-7C40-■■■■■                                                          |
| 1350                                                          | 670          | 4740         | 920           | 500           | 68              | 1700                                                      | 2800                     | 9990                        | 2450                       | 1PH8350-7D40-■■■■■                                                          |
|                                                               | 750          | 5306         | 1040          | 500           | 68.1            | 1700                                                      | 2800                     | 9950                        | 2400                       | 1PH8351-7D40-■■■■■                                                          |
|                                                               | 910          | 6437         | 1240          | 500           | 68              | 1700                                                      | 2800                     | 13910                       | 3310                       | 1PH8352-7D40-■■■■■                                                          |
|                                                               | 1040         | 7357         | 1400          | 500           | 68              | 1400                                                      | 2800                     | 14180                       | 3160                       | 1PH8354-7D40-■■■■■                                                          |
|                                                               | 1200         | 8489         | 1600          | 500           | 67.9            | 1400                                                      | 2800                     | 19150                       | 4130                       | 1PH8356-7D40-■■■■■                                                          |
|                                                               | 1340         | 9479         | 1780          | 500           | 67.9            | 1400                                                      | 2800                     | 21870                       | 4620                       | 1PH8358-7D40-■■■■■                                                          |

For versions, see  
Article No. supplements and  
options.

Overload factors for intermittent duty (S3) for  
1PH835.-7..40-....

|                 |         |         |
|-----------------|---------|---------|
| Operating mode  | S3-40 % | S3-60 % |
| Overload factor | 1.47    | 1.23    |

**Selection and ordering data**

| Motor type<br>(repeated)                                             | Max. torque <sup>3)</sup> |          |          |          |          | Power<br>factor | Magnetizing<br>current | Efficiency | Moment<br>of inertia | Weight,<br>approx. | Terminal box |
|----------------------------------------------------------------------|---------------------------|----------|----------|----------|----------|-----------------|------------------------|------------|----------------------|--------------------|--------------|
|                                                                      | $M_{max}$<br>at           |          |          |          |          | $\cos \varphi$  | $I_{\mu}$              | $\eta$     | $J$                  |                    |              |
|                                                                      | 1000 rpm                  | 1500 rpm | 2000 rpm | 2500 rpm | 2800 rpm |                 |                        |            |                      |                    |              |
|                                                                      | Nm                        | Nm       | Nm       | Nm       | Nm       |                 | A                      |            | kgm <sup>2</sup>     | kg                 | Type         |
| <b>Supply voltage 480 V 3 AC, Active Line Module, Vector Control</b> |                           |          |          |          |          |                 |                        |            |                      |                    |              |
| 1PH8350-7.B4.-...                                                    | 4840                      | 2260     | 1320     | 870      | 580      | 0.85            | 194                    | 0.946      | 14.74                | 2235               | 1XB7712-P01  |
| 1PH8351-7.B4.-...                                                    | 4810                      | 2260     | 1320     | 870      | 580      | 0.85            | 194                    | 0.946      | 14.74                | 2235               | 1XB7712-P01  |
| 1PH8352-7.B4.-...                                                    | 5770                      | 2700     | 1570     | 1040     | 700      | 0.86            | 223                    | 0.949      | 17.4                 | 2560               | 1XB7712-P03  |
| 1PH8354-7.B4.-...                                                    | 6550                      | 3070     | 1790     | 1180     | 800      | 0.88            | 236                    | 0.949      | 20.66                | 2889               | 1XB7712-P03  |
| 1PH8356-7.B4.-...                                                    | 7930                      | 3710     | 2160     | 1420     | 1000     | 0.88            | 285                    | 0.952      | 24.22                | 3256               | 1XB7712-P03  |
| 1PH8358-7.B4.-...                                                    | 9070                      | 4240     | 2470     | 1630     | 1150     | 0.89            | 316                    | 0.954      | 27.79                | 3629               | 1XB7712-P03  |
| 1PH8350-7.Q4.-...                                                    | 8430                      | 3890     | 2250     | 1470     | 1100     | 0.85            | 235                    | 0.957      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8351-7.Q4.-...                                                    | 8390                      | 3880     | 2250     | 1470     | 1100     | 0.85            | 235                    | 0.957      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8352-7.Q4.-...                                                    | 9990                      | 4610     | 2660     | 1740     | 1300     | 0.86            | 267                    | 0.959      | 17.4                 | 2560               | 1XB7712-P03  |
| 1PH8354-7.Q4.-...                                                    | 12520                     | 5770     | 3330     | 2170     | 1600     | 0.87            | 334                    | 0.962      | 20.66                | 2889               | 1XB7712-P03  |
| 1PH8356-7.Q4.-...                                                    | 14610                     | 6730     | 3890     | 2540     | 1900     | 0.88            | 380                    | 0.963      | 24.22                | 3256               | 1XB7820-P00  |
| 1PH8358-7.Q4.-...                                                    | 15090                     | 6980     | 4030     | 2640     | 1950     | 0.89            | 359                    | 0.963      | 27.79                | 3629               | 1XB7820-P00  |
| 1PH8350-7.C4...                                                      | 13470                     | 6160     | 3540     | 2300     | 1850     | 0.85            | 294                    | 0.962      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8351-7.C4...                                                      | 13380                     | 6140     | 3540     | 2300     | 1850     | 0.85            | 294                    | 0.962      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8352-7.C4...                                                      | 14980                     | 6870     | 3950     | 2570     | 2070     | 0.87            | 302                    | 0.963      | 17.4                 | 2560               | 1XB7712-P03  |
| 1PH8354-7.C4...                                                      | 17230                     | 7910     | 4550     | 2970     | 2390     | 0.88            | 328                    | 0.965      | 20.66                | 2889               | 1XB7820-P00  |
| 1PH8356-7.C4...                                                      | 21370                     | 9810     | 5640     | 3670     | 2960     | 0.88            | 410                    | 0.967      | 24.22                | 3256               | 1XB7820-P00  |
| 1PH8358-7.C4...                                                      | 27150                     | 12430    | 7140     | 4650     | 3730     | 0.88            | 567                    | 0.969      | 27.79                | 3629               | 1XB7820-P00  |
| 1PH8350-7.D4...                                                      | 9990                      | 8150     | 4670     | 3030     | 2430     | 0.86            | 235                    | 0.965      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8351-7.D4...                                                      | 9950                      | 8120     | 4660     | 3030     | 2430     | 0.86            | 235                    | 0.965      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8352-7.D4...                                                      | 13910                     | 11350    | 6500     | 4220     | 3390     | 0.87            | 338                    | 0.969      | 17.4                 | 2560               | 1XB7820-P00  |
| 1PH8354-7.D4...                                                      | 14180                     | 11570    | 6640     | 4320     | 3470     | 0.88            | 314                    | 0.969      | 20.66                | 2889               | 1XB7820-P00  |
| 1PH8356-7.D4...                                                      | 19150                     | 15630    | 8960     | 5820     | 4680     | 0.88            | 433                    | 0.972      | 24.22                | 3256               | 1XB7820-P00  |
| 1PH8358-7.D4...                                                      | 21870                     | 17840    | 10250    | 6660     | 5350     | 0.89            | 489                    | 0.973      | 27.79                | 3629               | 1XB7820-P00  |

<sup>1)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

<sup>2)</sup>  $n_{max}$ : Maximum speed that must not be exceeded.

<sup>3)</sup> Maximum torque which is briefly available for dynamic operations (e.g. when accelerating).

<sup>4)</sup> Maximum current which is briefly available for dynamic operations (e.g. when accelerating).

1PH8 for SINAMICS S120 for cranes

**Innomotics M – Main motors**

Degree of protection IP23

**Selection and ordering data**

| Rated speed                                                   | Rated output | Rated torque | Rated current | Rated voltage | Rated frequency | Operating speed during field weakening, max. <sup>1)</sup> | Max. speed <sup>2)</sup> | Max. torque <sup>3)</sup> | Max. current <sup>4)</sup> | 1PH8 asynchronous motor<br>Forced ventilation, IP23 degree of protection<br><br>Article No. |
|---------------------------------------------------------------|--------------|--------------|---------------|---------------|-----------------|------------------------------------------------------------|--------------------------|---------------------------|----------------------------|---------------------------------------------------------------------------------------------|
| $n_{rated}$                                                   | $P_{rated}$  | $M_{rated}$  | $I_{rated}$   | $U_{rated}$   | $f_{rated}$     | $n_2$                                                      | $n_{max}$                | $M_{max}$ at $n_{rated}$  | $I_{max}$                  |                                                                                             |
| rpm                                                           | kW           | Nm           | A             | V             | Hz              | rpm                                                        | rpm                      | Nm                        | A                          |                                                                                             |
| Supply voltage 690 V 3 AC, Active Line Module, Vector Control |              |              |               |               |                 |                                                            |                          |                           |                            |                                                                                             |
| 600                                                           | 370          | 5889         | 380           | 690           | 30.5            | 1100                                                       | 2800                     | 12620                     | 950                        | 1PH8350-7 H40-■■■■                                                                          |
|                                                               | 415          | 6605         | 430           | 690           | 30.5            | 1100                                                       | 2800                     | 12490                     | 930                        | 1PH8351-7 H40-■■■■                                                                          |
|                                                               | 500          | 7958         | 510           | 690           | 30.5            | 1000                                                       | 2800                     | 14450                     | 1040                       | 1PH8352-7 H40-■■■■                                                                          |
|                                                               | 590          | 9391         | 590           | 690           | 30.5            | 1000                                                       | 2800                     | 17320                     | 1200                       | 1PH8354-7 H40-■■■■                                                                          |
|                                                               | 690          | 10983        | 680           | 690           | 30.5            | 900                                                        | 2800                     | 20800                     | 1420                       | 1PH8356-7 H40-■■■■                                                                          |
|                                                               | 780          | 12415        | 770           | 690           | 30.4            | 900                                                        | 2800                     | 24270                     | 1630                       | 1PH8358-7 H40-■■■■                                                                          |
| 800                                                           | 480          | 5730         | 490           | 690           | 40.5            | 1400                                                       | 2800                     | 12600                     | 1330                       | 1PH8350-7 K40-■■■■                                                                          |
|                                                               | 530          | 6327         | 540           | 690           | 40.5            | 1400                                                       | 2800                     | 12530                     | 1300                       | 1PH8351-7 K40-■■■■                                                                          |
|                                                               | 630          | 7521         | 640           | 690           | 40.4            | 1300                                                       | 2800                     | 15760                     | 1520                       | 1PH8352-7 K40-■■■■                                                                          |
|                                                               | 750          | 8953         | 740           | 690           | 40.5            | 1300                                                       | 2800                     | 18080                     | 1710                       | 1PH8354-7 K40-■■■■                                                                          |
|                                                               | 860          | 10266        | 840           | 690           | 40.4            | 1200                                                       | 2800                     | 21500                     | 1990                       | 1PH8356-7 K40-■■■■                                                                          |
|                                                               | 960          | 11460        | 940           | 690           | 40.4            | 1200                                                       | 2800                     | 23550                     | 2110                       | 1PH8358-7 K40-■■■■                                                                          |
| 1000                                                          | 600          | 5730         | 610           | 690           | 50.5            | 1500                                                       | 2800                     | 13570                     | 1810                       | 1PH8350-7 U40-■■■■                                                                          |
|                                                               | 670          | 6399         | 680           | 690           | 50.5            | 1500                                                       | 2800                     | 13480                     | 1800                       | 1PH8351-7 U40-■■■■                                                                          |
|                                                               | 780          | 7449         | 780           | 690           | 50.5            | 1400                                                       | 2800                     | 15390                     | 1870                       | 1PH8352-7 U40-■■■■                                                                          |
|                                                               | 900          | 8595         | 890           | 690           | 50.4            | 1300                                                       | 2800                     | 18240                     | 2110                       | 1PH8354-7 U40-■■■■                                                                          |
|                                                               | 1040         | 9932         | 1020          | 690           | 50.5            | 1200                                                       | 2800                     | 20940                     | 2420                       | 1PH8356-7 U40-■■■■                                                                          |
|                                                               | 1200         | 11460        | 1160          | 690           | 50.4            | 1200                                                       | 2800                     | 24680                     | 2770                       | 1PH8358-7 U40-■■■■                                                                          |
| 1350                                                          | 670          | 4740         | 670           | 690           | 68.1            | 1700                                                       | 2800                     | 10260                     | 1810                       | 1PH8350-7 V40-■■■■                                                                          |
|                                                               | 750          | 5306         | 750           | 690           | 68.1            | 1700                                                       | 2800                     | 10230                     | 1840                       | 1PH8351-7 V40-■■■■                                                                          |
|                                                               | 910          | 6437         | 910           | 690           | 68              | 1700                                                       | 2800                     | 12720                     | 2310                       | 1PH8352-7 V40-■■■■                                                                          |
|                                                               | 1040         | 7357         | 1040          | 690           | 68.1            | 1400                                                       | 2800                     | 13890                     | 2270                       | 1PH8354-7 V40-■■■■                                                                          |
|                                                               | 1200         | 8489         | 1200          | 690           | 67.9            | 1400                                                       | 2800                     | 19270                     | 3010                       | 1PH8356-7 V40-■■■■                                                                          |
|                                                               | 1340         | 9479         | 1340          | 690           | 68              | 1400                                                       | 2800                     | 20360                     | 3120                       | 1PH8358-7 V40-■■■■                                                                          |

For versions, see  
Article No. supplements and  
options.

Overload factors for intermittent duty (S3) for  
1PH835..-7..40-....

|                 |         |         |
|-----------------|---------|---------|
| Operating mode  | S3-40 % | S3-60 % |
| Overload factor | 1.47    | 1.23    |

**Selection and ordering data**

| Motor type<br>(repeated)                                      | Max. torque <sup>3)</sup>    |          |          |          |          | Power<br>factor | Magnetizing<br>current | Efficiency | Moment<br>of inertia | Weight,<br>approx. | Terminal box |
|---------------------------------------------------------------|------------------------------|----------|----------|----------|----------|-----------------|------------------------|------------|----------------------|--------------------|--------------|
|                                                               |                              |          |          |          |          |                 |                        |            |                      |                    |              |
|                                                               |                              |          |          |          |          |                 |                        |            |                      |                    |              |
|                                                               |                              |          |          |          |          |                 |                        |            |                      |                    |              |
|                                                               | $M_{\max}$<br>at<br>1000 rpm | 1500 rpm | 2000 rpm | 2500 rpm | 2800 rpm | $\cos \varphi$  | $I_{\mu}$              | $\eta$     | $J$                  |                    |              |
|                                                               | Nm                           | Nm       | Nm       | Nm       | Nm       |                 | A                      |            | kgm <sup>2</sup>     | kg                 | Type         |
| Supply voltage 690 V 3 AC, Active Line Module, Vector Control |                              |          |          |          |          |                 |                        |            |                      |                    |              |
| 1PH8350-7.H4...                                               | 4830                         | 2250     | 1310     | 860      | 580      | 0.85            | 139                    | 0.947      | 14.74                | 2235               | 1XB7712-P01  |
| 1PH8351-7.H4...                                               | 4810                         | 2250     | 1310     | 870      | 580      | 0.85            | 139                    | 0.947      | 14.74                | 2235               | 1XB7712-P01  |
| 1PH8352-7.H4...                                               | 5570                         | 2610     | 1530     | 1010     | 700      | 0.87            | 149                    | 0.946      | 17.4                 | 2560               | 1XB7712-P03  |
| 1PH8354-7.H4...                                               | 6650                         | 3110     | 1810     | 1190     | 800      | 0.88            | 176                    | 0.95       | 20.66                | 2889               | 1XB7712-P03  |
| 1PH8356-7.H4...                                               | 7980                         | 3730     | 2170     | 1430     | 1000     | 0.88            | 209                    | 0.953      | 24.22                | 3256               | 1XB7712-P03  |
| 1PH8358-7.H4...                                               | 9320                         | 4360     | 2540     | 1670     | 1160     | 0.88            | 245                    | 0.955      | 27.79                | 3629               | 1XB7712-P03  |
| 1PH8350-7.K4...                                               | 8240                         | 3810     | 2200     | 1440     | 1120     | 0.86            | 162                    | 0.956      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8351-7.K4...                                               | 8200                         | 3800     | 2200     | 1440     | 1120     | 0.86            | 162                    | 0.956      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8352-7.K4...                                               | 10300                        | 4750     | 2740     | 1790     | 1320     | 0.86            | 207                    | 0.959      | 17.4                 | 2560               | 1XB7712-P03  |
| 1PH8354-7.K4...                                               | 11820                        | 5460     | 3160     | 2060     | 1500     | 0.88            | 215                    | 0.96       | 20.66                | 2889               | 1XB7712-P03  |
| 1PH8356-7.K4...                                               | 14040                        | 6470     | 3730     | 2440     | 1850     | 0.88            | 249                    | 0.962      | 24.22                | 3256               | 1XB7820-P00  |
| 1PH8358-7.K4...                                               | 15410                        | 7130     | 4120     | 2700     | 2000     | 0.89            | 272                    | 0.964      | 27.79                | 3629               | 1XB7820-P00  |
| 1PH8350-7.U4...                                               | 13570                        | 6200     | 3550     | 2310     | 1850     | 0.85            | 216                    | 0.962      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8351-7.U4...                                               | 13480                        | 6180     | 3550     | 2310     | 1860     | 0.85            | 216                    | 0.962      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8352-7.U4...                                               | 15390                        | 7050     | 4050     | 2640     | 2120     | 0.86            | 232                    | 0.964      | 17.4                 | 2560               | 1XB7712-P03  |
| 1PH8354-7.U4...                                               | 18240                        | 8360     | 4810     | 3130     | 2520     | 0.87            | 269                    | 0.966      | 20.66                | 2889               | 1XB7712-P03  |
| 1PH8356-7.U4...                                               | 20940                        | 9590     | 5510     | 3580     | 2880     | 0.88            | 283                    | 0.967      | 24.22                | 3256               | 1XB7712-P03  |
| 1PH8358-7.U4...                                               | 24680                        | 11330    | 6530     | 4250     | 3420     | 0.88            | 339                    | 0.968      | 27.79                | 3629               | 1XB7820-P00  |
| 1PH8350-7.V4...                                               | 10260                        | 8360     | 4790     | 3100     | 2490     | 0.86            | 178                    | 0.966      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8351-7.V4...                                               | 10230                        | 8340     | 4780     | 3100     | 2490     | 0.86            | 178                    | 0.966      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8352-7.V4...                                               | 12720                        | 10400    | 6000     | 3920     | 3150     | 0.87            | 208                    | 0.967      | 17.4                 | 2560               | 1XB7712-P03  |
| 1PH8354-7.V4...                                               | 13890                        | 11330    | 6490     | 4220     | 3390     | 0.88            | 219                    | 0.968      | 20.66                | 2889               | 1XB7712-P03  |
| 1PH8356-7.V4...                                               | 19270                        | 15730    | 9020     | 5870     | 4710     | 0.88            | 317                    | 0.972      | 24.22                | 3256               | 1XB7820-P00  |
| 1PH8358-7.V4...                                               | 20360                        | 16620    | 9540     | 6200     | 4990     | 0.89            | 322                    | 0.972      | 27.79                | 3629               | 1XB7820-P00  |

<sup>1)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

<sup>2)</sup>  $n_{max}$ : Maximum speed that must not be exceeded.

<sup>3)</sup> Maximum torque which is briefly available for dynamic operations (e.g. when accelerating).

<sup>4)</sup> Maximum current which is briefly available for dynamic operations (e.g. when accelerating).

1PH8 for SINAMICS S120 for cranes

**Innomotics M – Main motors**

Degree of protection IP55

**Selection and ordering data****Innomotics M-1PH8 asynchronous motors, shaft height 355, type of construction IM B3**

| Rated speed                                                   | Rated output | Rated torque | Rated current | Rated voltage | Rated frequency | Operating speed during field weakening, max. <sup>1)</sup> | Max. speed <sup>2)</sup> | Max. torque <sup>3)</sup>   | Max. current <sup>4)</sup> | 1PH8 asynchronous motor<br>Forced ventilation,<br>IP55 degree of protection<br><br>Article No. |
|---------------------------------------------------------------|--------------|--------------|---------------|---------------|-----------------|------------------------------------------------------------|--------------------------|-----------------------------|----------------------------|------------------------------------------------------------------------------------------------|
| $n_{rated}$                                                   | $P_{rated}$  | $M_{rated}$  | $I_{rated}$   | $U_{rated}$   | $f_{rated}$     | $n_2$                                                      | $n_{max}$                | $M_{max}$<br>at $n_{rated}$ | $I_{max}$                  |                                                                                                |
| rpm                                                           | kW           | Nm           | A             | V             | Hz              | rpm                                                        | rpm                      | Nm                          | A                          |                                                                                                |
| Supply voltage 480 V 3 AC, Active Line Module, Vector Control |              |              |               |               |                 |                                                            |                          |                             |                            |                                                                                                |
| 600                                                           | 230          | 3661         | 350           | 500           | 30.3            | 1400                                                       | 2800                     | 12120                       | 1260                       | 1PH8350-7-B10-■■■■■                                                                            |
|                                                               | 275          | 4377         | 410           | 500           | 30.3            | 1400                                                       | 2800                     | 14570                       | 1440                       | 1PH8352-7-B10-■■■■■                                                                            |
|                                                               | 325          | 5173         | 475           | 500           | 30.3            | 1400                                                       | 2800                     | 16670                       | 1590                       | 1PH8354-7-B10-■■■■■                                                                            |
|                                                               | 380          | 6048         | 550           | 500           | 30.3            | 1400                                                       | 2800                     | 20320                       | 1920                       | 1PH8356-7-B10-■■■■■                                                                            |
|                                                               | 430          | 6844         | 620           | 500           | 30.2            | 1400                                                       | 2800                     | 23390                       | 2180                       | 1PH8358-7-B10-■■■■■                                                                            |
| 800                                                           | 300          | 3581         | 450           | 500           | 40.3            | 1400                                                       | 2800                     | 12500                       | 1790                       | 1PH8350-7-Q10-■■■■■                                                                            |
|                                                               | 360          | 4298         | 530           | 500           | 40.3            | 1400                                                       | 2800                     | 14870                       | 1990                       | 1PH8352-7-Q10-■■■■■                                                                            |
|                                                               | 420          | 5014         | 620           | 500           | 40.3            | 1400                                                       | 2800                     | 19960                       | 2580                       | 1PH8354-7-Q10-■■■■■                                                                            |
|                                                               | 490          | 5849         | 720           | 500           | 40.2            | 1400                                                       | 2800                     | 22050                       | 2790                       | 1PH8356-7-Q10-■■■■■                                                                            |
|                                                               | 565          | 6745         | 790           | 500           | 40.3            | 1400                                                       | 2800                     | 22770                       | 2820                       | 1PH8358-7-Q10-■■■■■                                                                            |
| 1000                                                          | 360          | 3438         | 540           | 500           | 50.3            | 1500                                                       | 2800                     | 13150                       | 2430                       | 1PH8350-7-C10-■■■■■                                                                            |
|                                                               | 430          | 4107         | 620           | 500           | 50.3            | 1500                                                       | 2800                     | 14700                       | 2490                       | 1PH8352-7-C10-■■■■■                                                                            |
|                                                               | 505          | 4823         | 720           | 500           | 50.3            | 1500                                                       | 2800                     | 16970                       | 2750                       | 1PH8354-7-C10-■■■■■                                                                            |
|                                                               | 580          | 5539         | 830           | 500           | 50.3            | 1600                                                       | 2800                     | 21120                       | 3340                       | 1PH8356-7-C10-■■■■■                                                                            |
|                                                               | 670          | 6399         | 1040          | 480           | 50.2            | 1600                                                       | 2800                     | 26910                       | 4360                       | 1PH8358-7-C10-■■■■■                                                                            |
| 1350                                                          | 380          | 2688         | 540           | 500           | 67.8            | 1800                                                       | 2800                     | 9840                        | 2410                       | 1PH8350-7-D10-■■■■■                                                                            |
|                                                               | 460          | 3254         | 670           | 500           | 67.7            | 1800                                                       | 2800                     | 13690                       | 3260                       | 1PH8352-7-D10-■■■■■                                                                            |
|                                                               | 550          | 3891         | 760           | 500           | 67.8            | 1700                                                       | 2800                     | 14050                       | 3130                       | 1PH8354-7-D10-■■■■■                                                                            |
|                                                               | 630          | 4457         | 900           | 500           | 67.7            | 1700                                                       | 2800                     | 18980                       | 4090                       | 1PH8356-7-D10-■■■■■                                                                            |
|                                                               | 730          | 5164         | 1040          | 500           | 67.7            | 1700                                                       | 2800                     | 21720                       | 4590                       | 1PH8358-7-D10-■■■■■                                                                            |

For versions, see  
Article No. supplements and  
options.

Overload factors for intermittent duty (S3) for  
1PH835..7..10-....

|                 |         |         |
|-----------------|---------|---------|
| Operating mode  | S3-40 % | S3-60 % |
| Overload factor | 1.47    | 1.23    |

**Selection and ordering data**

| Motor type<br>(repeated)                                             | Max. torque <sup>3)</sup> |          |          |          |          | Power<br>factor | Magnetizing<br>current | Efficiency | Moment<br>of inertia | Weight,<br>approx. | Terminal box |
|----------------------------------------------------------------------|---------------------------|----------|----------|----------|----------|-----------------|------------------------|------------|----------------------|--------------------|--------------|
|                                                                      | $M_{\max}$<br>at          |          |          |          |          | $\cos \varphi$  | $I_{\mu}$              | $\eta$     | $J$                  |                    |              |
|                                                                      | 1000 rpm                  | 1500 rpm | 2000 rpm | 2500 rpm | 2800 rpm |                 |                        |            |                      |                    |              |
|                                                                      | Nm                        | Nm       | Nm       | Nm       | Nm       |                 | A                      |            | kgm <sup>2</sup>     | kg                 | Type         |
| <b>Supply voltage 480 V 3 AC, Active Line Module, Vector Control</b> |                           |          |          |          |          |                 |                        |            |                      |                    |              |
| 1PH8350-7.B1...                                                      | 4710                      | 2220     | 1310     | 860      | 580      | 0.79            | 194                    | 0.959      | 14.74                | 2235               | 1XB7712-P01  |
| 1PH8352-7.B1...                                                      | 5640                      | 2660     | 1560     | 1030     | 700      | 0.8             | 223                    | 0.961      | 17.4                 | 2560               | 1XB7712-P01  |
| 1PH8354-7.B1...                                                      | 6450                      | 3030     | 1780     | 1170     | 800      | 0.82            | 236                    | 0.962      | 20.66                | 2889               | 1XB7712-P03  |
| 1PH8356-7.B1...                                                      | 7840                      | 3680     | 2150     | 1420     | 980      | 0.82            | 285                    | 0.964      | 24.22                | 3256               | 1XB7712-P03  |
| 1PH8358-7.B1...                                                      | 8990                      | 4210     | 2460     | 1620     | 1100     | 0.82            | 316                    | 0.965      | 27.79                | 3629               | 1XB7820-P00  |
| 1PH8350-7.Q1...                                                      | 8210                      | 3830     | 2230     | 1460     | 1050     | 0.8             | 235                    | 0.964      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8352-7.Q1...                                                      | 9750                      | 4540     | 2640     | 1730     | 1250     | 0.81            | 267                    | 0.966      | 17.40                | 2560               | 1XB7712-P03  |
| 1PH8354-7.Q1...                                                      | 12960                     | 5910     | 3390     | 2200     | 1690     | 0.8             | 334                    | 0.967      | 20.66                | 2889               | 1XB7820-P00  |
| 1PH8356-7.Q1...                                                      | 14420                     | 6670     | 3860     | 2520     | 1850     | 0.81            | 380                    | 0.968      | 24.22                | 3256               | 1XB7820-P00  |
| 1PH8358-7.Q1...                                                      | 14930                     | 6930     | 4020     | 2640     | 1890     | 0.84            | 359                    | 0.969      | 27.79                | 3629               | 1XB7820-P00  |
| 1PH8350-7.C1...                                                      | 13150                     | 6070     | 3510     | 2290     | 1850     | 0.79            | 294                    | 0.967      | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8352-7.C1...                                                      | 14700                     | 6780     | 3910     | 2550     | 2060     | 0.82            | 302                    | 0.969      | 17.40                | 2560               | 1XB7820-P00  |
| 1PH8354-7.C1...                                                      | 16970                     | 7830     | 4530     | 2960     | 2380     | 0.83            | 328                    | 0.97       | 20.66                | 2889               | 1XB7820-P00  |
| 1PH8356-7.C1...                                                      | 21120                     | 9730     | 5610     | 3660     | 2950     | 0.82            | 410                    | 0.971      | 24.22                | 3256               | 1XB7820-P00  |
| 1PH8358-7.C1...                                                      | 26910                     | 12360    | 7120     | 4640     | 3730     | 0.8             | 567                    | 0.971      | 27.79                | 3629               | 1XB7820-P00  |
| 1PH8350-7.D1...                                                      | 9840                      | 8040     | 4620     | 3010     | 2420     | 0.83            | 235                    | 0.97       | 14.74                | 2235               | 1XB7712-P03  |
| 1PH8352-7.D1...                                                      | 13690                     | 11180    | 6430     | 4190     | 3370     | 0.81            | 338                    | 0.97       | 17.4                 | 2560               | 1XB7820-P00  |
| 1PH8354-7.D1...                                                      | 14050                     | 11480    | 6620     | 4310     | 3470     | 0.85            | 314                    | 0.972      | 20.66                | 2889               | 1XB7820-P00  |
| 1PH8356-7.D1...                                                      | 18980                     | 15500    | 8910     | 5800     | 4660     | 0.83            | 433                    | 0.972      | 24.22                | 3256               | 1XB7820-P00  |
| 1PH8358-7.D1...                                                      | 21720                     | 17740    | 10220    | 6660     | 5360     | 0.83            | 489                    | 0.972      | 27.79                | 3629               | 1XB7820-P00  |

<sup>1)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{\text{rated}}$ .

<sup>2)</sup>  $n_{\max}$ : Maximum speed that must not be exceeded.

<sup>3)</sup> Maximum torque which is briefly available for dynamic operations (e.g. when accelerating).

<sup>4)</sup> Maximum current which is briefly available for dynamic operations (e.g. when accelerating).

1PH8 for SINAMICS S120 for cranes

**Innomotics M – Main motors**

Degree of protection IP55

**Selection and ordering data**

| Rated speed                                                   | Rated output | Rated torque | Rated current | Rated voltage | Rated frequency | Operating speed during field weakening, max. <sup>1)</sup> | Max. speed <sup>2)</sup> | Max. torque <sup>3)</sup>   | Max. current <sup>4)</sup> | 1PH8 asynchronous motor<br>Forced ventilation,<br>IP55 degree of protection |
|---------------------------------------------------------------|--------------|--------------|---------------|---------------|-----------------|------------------------------------------------------------|--------------------------|-----------------------------|----------------------------|-----------------------------------------------------------------------------|
| $n_{rated}$                                                   | $P_{rated}$  | $M_{rated}$  | $I_{rated}$   | $U_{rated}$   | $f_{rated}$     | $n_2$                                                      | $n_{max}$                | $M_{max}$<br>at $n_{rated}$ | $I_{max}$                  |                                                                             |
| rpm                                                           | kW           | Nm           | A             | V             | Hz              | rpm                                                        | rpm                      | Nm                          | A                          |                                                                             |
| Supply voltage 690 V 3 AC, Active Line Module, Vector Control |              |              |               |               |                 |                                                            |                          |                             |                            |                                                                             |
| 600                                                           | 230          | 3661         | 255           | 690           | 30.3            | 1400                                                       | 2800                     | 12090                       | 910                        | 1PH8350-7 H10-■■■■                                                          |
|                                                               | 275          | 4377         | 295           | 690           | 30.3            | 1400                                                       | 2800                     | 13880                       | 1000                       | 1PH8352-7 H10-■■■■                                                          |
|                                                               | 325          | 5173         | 345           | 690           | 30.3            | 1400                                                       | 2800                     | 16940                       | 1170                       | 1PH8354-7 H10-■■■■                                                          |
|                                                               | 380          | 6048         | 400           | 690           | 30.3            | 1400                                                       | 2800                     | 20480                       | 1400                       | 1PH8356-7 H10-■■■■                                                          |
|                                                               | 430          | 6844         | 455           | 690           | 30.2            | 1400                                                       | 2800                     | 24230                       | 1630                       | 1PH8358-7 H10-■■■■                                                          |
| 800                                                           | 300          | 3581         | 320           | 690           | 40.3            | 1400                                                       | 2800                     | 12180                       | 1290                       | 1PH8350-7 K10-■■■■                                                          |
|                                                               | 360          | 4298         | 390           | 690           | 40.3            | 1400                                                       | 2800                     | 15360                       | 1480                       | 1PH8352-7 K10-■■■■                                                          |
|                                                               | 420          | 5014         | 440           | 690           | 40.3            | 1400                                                       | 2800                     | 17590                       | 1660                       | 1PH8354-7 K10-■■■■                                                          |
|                                                               | 490          | 5849         | 510           | 690           | 40.3            | 1400                                                       | 2800                     | 20960                       | 1940                       | 1PH8356-7 K10-■■■■                                                          |
|                                                               | 565          | 6745         | 580           | 690           | 40.3            | 1400                                                       | 2800                     | 23360                       | 2090                       | 1PH8358-7 K10-■■■■                                                          |
| 1000                                                          | 360          | 3438         | 395           | 690           | 50.3            | 1500                                                       | 2800                     | 13240                       | 1770                       | 1PH8350-7 U10-■■■■                                                          |
|                                                               | 430          | 4107         | 455           | 690           | 50.3            | 1500                                                       | 2800                     | 15110                       | 1840                       | 1PH8352-7 U10-■■■■                                                          |
|                                                               | 505          | 4823         | 530           | 690           | 50.3            | 1500                                                       | 2800                     | 18280                       | 2110                       | 1PH8354-7 U10-■■■■                                                          |
|                                                               | 580          | 5539         | 600           | 690           | 50.3            | 1600                                                       | 2800                     | 20510                       | 2370                       | 1PH8356-7 U10-■■■■                                                          |
|                                                               | 670          | 6399         | 690           | 690           | 50.2            | 1600                                                       | 2800                     | 24570                       | 2760                       | 1PH8358-7 U10-■■■■                                                          |
| 1350                                                          | 380          | 2688         | 395           | 690           | 67.8            | 1800                                                       | 2800                     | 10200                       | 1800                       | 1PH8350-7 V10-■■■■                                                          |
|                                                               | 460          | 3254         | 470           | 690           | 67.8            | 1800                                                       | 2800                     | 12290                       | 2230                       | 1PH8352-7 V10-■■■■                                                          |
|                                                               | 550          | 3891         | 550           | 690           | 67.8            | 1700                                                       | 2800                     | 13660                       | 2230                       | 1PH8354-7 V10-■■■■                                                          |
|                                                               | 630          | 4457         | 650           | 690           | 67.7            | 1700                                                       | 2800                     | 19140                       | 2990                       | 1PH8356-7 V10-■■■■                                                          |
|                                                               | 730          | 5164         | 740           | 690           | 67.7            | 1700                                                       | 2800                     | 20270                       | 3110                       | 1PH8358-7 V10-■■■■                                                          |

For versions, see  
Article No. supplements and  
options.

Overload factors for intermittent duty (S3) for  
1PH835.-7..10-....

|                 |         |         |
|-----------------|---------|---------|
| Operating mode  | S3-40 % | S3-60 % |
| Overload factor | 1.47    | 1.23    |

**Selection and ordering data**

| Motor type<br>(repeated)                                      | Max. torque <sup>3)</sup>    |          |          |          |          | Power<br>factor | Magnetizing<br>current | Efficiency | Moment<br>of inertia | Weight,<br>approx. | Terminal box |
|---------------------------------------------------------------|------------------------------|----------|----------|----------|----------|-----------------|------------------------|------------|----------------------|--------------------|--------------|
|                                                               |                              |          |          |          |          |                 |                        |            |                      |                    |              |
|                                                               |                              |          |          |          |          |                 |                        |            |                      |                    |              |
|                                                               |                              |          |          |          |          |                 |                        |            |                      |                    |              |
|                                                               | $M_{\max}$<br>at<br>1000 rpm | 1500 rpm | 2000 rpm | 2500 rpm | 2800 rpm | $\cos \varphi$  | $I_{\mu}$              | $\eta$     | $J$                  |                    |              |
|                                                               | Nm                           | Nm       | Nm       | Nm       | Nm       |                 | A                      |            | kgm <sup>2</sup>     | kg                 | Type         |
| Supply voltage 690 V 3 AC, Active Line Module, Vector Control |                              |          |          |          |          |                 |                        |            |                      |                    |              |
| 1PH8350-7.H1...                                               | 4690                         | 2210     | 1300     | 860      | 580      | 0.79            | 139                    | 0.959      | 14.74                | 2235               | 1XB7712-P01  |
| 1PH8352-7.H1...                                               | 5390                         | 2550     | 1500     | 990      | 680      | 0.81            | 149                    | 0.96       | 17.4                 | 2560               | 1XB7712-P01  |
| 1PH8354-7.H1...                                               | 6550                         | 3080     | 1810     | 1190     | 820      | 0.82            | 176                    | 0.962      | 20.66                | 2889               | 1XB7712-P01  |
| 1PH8356-7.H1...                                               | 7890                         | 3700     | 2160     | 1430     | 1000     | 0.82            | 209                    | 0.964      | 24.22                | 3256               | 1XB7712-P01  |
| 1PH8358-7.H1...                                               | 9310                         | 4350     | 2540     | 1670     | 1160     | 0.81            | 242                    | 0.965      | 27.79                | 3629               | 1XB7712-P03  |
| 1PH8350-7.K1...                                               | 8010                         | 3740     | 2180     | 1430     | 1000     | 0.8             | 162                    | 0.965      | 14.74                | 2235               | 1XB7712-P01  |
| 1PH8352-7.K1...                                               | 10070                        | 4670     | 2710     | 1780     | 1290     | 0.8             | 207                    | 0.966      | 17.40                | 2560               | 1XB7712-P01  |
| 1PH8354-7.K1...                                               | 11560                        | 5390     | 3140     | 2060     | 1490     | 0.82            | 215                    | 0.969      | 20.66                | 2889               | 1XB7712-P03  |
| 1PH8356-7.K1...                                               | 13760                        | 6400     | 3720     | 2440     | 1800     | 0.83            | 249                    | 0.969      | 24.22                | 3256               | 1XB7712-P03  |
| 1PH8358-7.K1...                                               | 15290                        | 7080     | 4100     | 2680     | 2010     | 0.84            | 272                    | 0.969      | 27.79                | 3629               | 1XB7712-P03  |
| 1PH8350-7.U1...                                               | 13240                        | 6110     | 3530     | 2310     | 1860     | 0.78            | 216                    | 0.967      | 14.74                | 2235               | 1XB7712-P01  |
| 1PH8357-7.U1...                                               | 15110                        | 6960     | 4010     | 2620     | 2110     | 0.81            | 232                    | 0.968      | 17.40                | 2560               | 1XB7712-P01  |
| 1PH8354-7.U1...                                               | 18280                        | 8430     | 4860     | 3180     | 2560     | 0.82            | 269                    | 0.97       | 20.66                | 2889               | 1XB7712-P03  |
| 1PH8356-7.U1...                                               | 20510                        | 9450     | 5450     | 3560     | 2860     | 0.83            | 283                    | 0.971      | 24.22                | 3256               | 1XB7712-P03  |
| 1PH8358-7.U1...                                               | 24570                        | 11310    | 6520     | 4250     | 3420     | 0.83            | 339                    | 0.971      | 27.79                | 3629               | 1XB7820-P00  |
| 1PH8350-7.V1...                                               | 10200                        | 8320     | 4780     | 3110     | 2500     | 0.83            | 178                    | 0.97       | 14.74                | 2235               | 1XB7712-P01  |
| 1PH8352-7.V1...                                               | 12290                        | 10040    | 5780     | 3760     | 3030     | 0.84            | 208                    | 0.971      | 17.4                 | 2560               | 1XB7712-P03  |
| 1PH8354-7.V1...                                               | 13660                        | 11160    | 6420     | 4180     | 3360     | 0.86            | 219                    | 0.972      | 20.66                | 2889               | 1XB7712-P03  |
| 1PH8356-7.V1...                                               | 19140                        | 15630    | 8980     | 5840     | 4700     | 0.83            | 317                    | 0.972      | 24.22                | 3256               | 1XB7712-P03  |
| 1PH8358-7.V1...                                               | 20270                        | 16550    | 9510     | 6190     | 4970     | 0.85            | 322                    | 0.973      | 27.79                | 3629               | 1XB7712-P03  |

<sup>1)</sup>  $n_2$ : Max. permissible thermal speed at constant output or speed, which is at the voltage limit when  $P = P_{rated}$ .

<sup>2)</sup>  $n_{max}$ : Maximum speed that must not be exceeded.

<sup>3)</sup> Maximum torque which is briefly available for dynamic operations (e.g. when accelerating).

<sup>4)</sup> Maximum current which is briefly available for dynamic operations (e.g. when accelerating).

## Innomotics M – Main motors

Article No. supplements

## Selection and ordering data

| Position of the Article No.                                                                         |  |                                                                    | 1 | 2 | 3 | 4 | 5 | 6 | 7                        | 8 | 9                                        | 10 | 11 | 12 | 13 | 14 | 15 | 16 |   |   |   |
|-----------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------|---|---|---|---|---|---|--------------------------|---|------------------------------------------|----|----|----|----|----|----|----|---|---|---|
| Shaft height 355                                                                                    |  |                                                                    | 1 | P | H | 8 | 3 | 5 | .                        | - | 7                                        | ■  | .  | ■  | ■  | -  | ■  | ■  | ■ | - | Z |
| Overall length <sup>1)</sup>                                                                        |  |                                                                    |   |   |   |   |   |   | .                        |   |                                          |    |    |    |    |    |    |    |   |   |   |
| Asynchronous variant                                                                                |  |                                                                    |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    |   |   |   |
| Forced ventilation with noise value 85 dB                                                           |  |                                                                    |   |   |   |   |   |   |                          | 7 |                                          |    |    |    |    |    |    |    |   |   |   |
| Encoder systems for motors <u>without</u> DRIVE-CLiQ interface                                      |  |                                                                    |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    |   |   |   |
| Without encoder                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | A                                        |    |    |    |    |    |    |    |   |   |   |
| Prepared for encoder mounting systems <sup>2)</sup>                                                 |  |                                                                    |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    |   |   |   |
| Incremental encoder 22-bit with commutation position (encoder IC22DQ)                               |  |                                                                    |   |   |   |   |   |   |                          |   | D                                        |    |    |    |    |    |    |    |   |   |   |
| Absolute value encoder ENDAT 2048 S/R (encoder AM2048S/R)                                           |  |                                                                    |   |   |   |   |   |   |                          |   | E                                        |    |    |    |    |    |    |    |   |   |   |
| Absolute value encoder 22 BIT singleturn + 12 BIT multiturn (encoder AM22DQ)                        |  |                                                                    |   |   |   |   |   |   |                          |   | F                                        |    |    |    |    |    |    |    |   |   |   |
| Incremental encoder HTL 1024 S/R HOG 28 (Huebner) pre assembly (without encoder)                    |  |                                                                    |   |   |   |   |   |   | Order code required: H75 |   | G                                        |    |    |    |    |    |    |    |   |   |   |
| Incremental encoder HTL 1024 S/R (encoder IC1024 S/R)                                               |  |                                                                    |   |   |   |   |   |   |                          |   | H                                        |    |    |    |    |    |    |    |   |   |   |
| Incremental encoder HTL 2048 S/R                                                                    |  |                                                                    |   |   |   |   |   |   |                          |   | J                                        |    |    |    |    |    |    |    |   |   |   |
| Incremental encoder HTL 1024 S/R POG 10 (Huebner)                                                   |  |                                                                    |   |   |   |   |   |   | Order code required: H56 |   | K                                        |    |    |    |    |    |    |    |   |   |   |
| Incremental encoder HTL 1024 S/R with solid shaft                                                   |  |                                                                    |   |   |   |   |   |   | Order code required: G80 |   | K                                        |    |    |    |    |    |    |    |   |   |   |
| Incremental encoder POG 10 supplied by customer                                                     |  |                                                                    |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    |   |   |   |
| Incremental encoder sin/cos 1VPP with C and D truck (encoder IC2048 S/R)                            |  |                                                                    |   |   |   |   |   |   |                          |   | M                                        |    |    |    |    |    |    |    |   |   |   |
| Mounting prepared for MHGE 200                                                                      |  |                                                                    |   |   |   |   |   |   |                          |   | X                                        |    |    |    |    |    |    |    |   |   |   |
| Mounting prepared for MAGG 200                                                                      |  |                                                                    |   |   |   |   |   |   |                          |   | Y                                        |    |    |    |    |    |    |    |   |   |   |
| Rated speed (winding version)                                                                       |  |                                                                    |   |   |   |   |   |   |                          | . |                                          |    |    |    |    |    |    |    |   |   |   |
| Cooling                                                                                             |  | Degree of protection                                               |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    |   |   |   |
| Forced ventilation                                                                                  |  | IP55                                                               |   |   |   |   |   |   |                          |   | 1                                        |    |    |    |    |    |    |    |   |   |   |
| Forced ventilation                                                                                  |  | IP23 (open-circuit cooling)                                        |   |   |   |   |   |   |                          |   | 4                                        |    |    |    |    |    |    |    |   |   |   |
| Type                                                                                                |  |                                                                    |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    |   |   |   |
| IM B3                                                                                               |  |                                                                    |   |   |   |   |   |   |                          |   | 0                                        |    |    |    |    |    |    |    |   |   |   |
| Shaft extension (DE)                                                                                |  | Balancing                                                          |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    |   |   |   |
| Featherkey groove                                                                                   |  | Full-key                                                           |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    | 0  |   |   |   |
| Featherkey                                                                                          |  | Full-key                                                           |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    | 1  |   |   |   |
| Featherkey                                                                                          |  | Half-key                                                           |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    | 2  |   |   |   |
| Bearings                                                                                            |  | Vibration magnitude acc. to Innomotics / EN 60034-14 <sup>3)</sup> |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    |   |   |   |
| Standard                                                                                            |  | A                                                                  |   |   |   |   |   |   |                          |   | N                                        |    |    |    |    |    |    |    | A |   |   |
| Standard                                                                                            |  | R/A                                                                |   |   |   |   |   |   |                          |   | R                                        |    |    |    |    |    |    |    | B |   |   |
| increased cantilever forces                                                                         |  | A                                                                  |   |   |   |   |   |   |                          |   | N                                        |    |    |    |    |    |    |    | E |   |   |
| increased cantilever forces                                                                         |  | R/A                                                                |   |   |   |   |   |   |                          |   | R                                        |    |    |    |    |    |    |    | F |   |   |
| Cable connection                                                                                    |  | (view of DE)                                                       |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    |   |   |   |
| Terminal box                                                                                        |  | Cable infeed                                                       |   |   |   |   |   |   |                          |   | External fan NDE with air inlet from NDE |    |    |    |    |    |    |    |   |   |   |
|                                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | Air-flow direction NDE                   |    |    |    |    |    |    |    |   |   |   |
| NDE right                                                                                           |  | Bottom                                                             |   |   |   |   |   |   |                          |   | Top                                      |    |    |    |    |    |    |    | U |   |   |
|                                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | Left                                     |    |    |    |    |    |    |    | U | - | Z |
|                                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | Order code required: G00                 |    |    |    |    |    |    |    |   |   |   |
| NDE left                                                                                            |  | Bottom                                                             |   |   |   |   |   |   |                          |   | Top                                      |    |    |    |    |    |    |    | V |   |   |
|                                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | Right                                    |    |    |    |    |    |    |    | V | - | Z |
|                                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | Order code required: G02                 |    |    |    |    |    |    |    |   |   |   |
| NDE top                                                                                             |  | Right                                                              |   |   |   |   |   |   |                          |   | Left                                     |    |    |    |    |    |    |    | W | - | Z |
|                                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | Right                                    |    |    |    |    |    |    |    | W | - | Z |
|                                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | Order code required: G02                 |    |    |    |    |    |    |    |   |   |   |
| DE top <sup>4)</sup>                                                                                |  | Right                                                              |   |   |   |   |   |   |                          |   | Top <sup>5)</sup>                        |    |    |    |    |    |    |    | X |   |   |
|                                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | Left                                     |    |    |    |    |    |    |    | X | - | Z |
|                                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | Order code required: G00                 |    |    |    |    |    |    |    |   |   |   |
|                                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | Right                                    |    |    |    |    |    |    |    | X | - | Z |
|                                                                                                     |  |                                                                    |   |   |   |   |   |   |                          |   | Order code required: G02                 |    |    |    |    |    |    |    |   |   |   |
| Temperature monitoring                                                                              |  |                                                                    |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    |   |   |   |
| Temperature sensor PT1000 in the stator winding                                                     |  |                                                                    |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    | 2 |   |   |
| Special versions Order No. supplement "-Z" with order code and plain text if required, see options. |  |                                                                    |   |   |   |   |   |   |                          |   |                                          |    |    |    |    |    |    |    |   | - | Z |

<sup>1)</sup> Not selectable. Determined by the choice of rated power.<sup>2)</sup> For more information on incremental encoders, visit [www.baumerhuebner.com](http://www.baumerhuebner.com)<sup>3)</sup> For definition, see 1PH8 Configuration Manual.<sup>4)</sup> Signal connection for 1PH835 NDE at bearing shield.<sup>5)</sup> Only possible for assignments with terminal box 1XB7712-P.

**Options**

| Order code     | Description                                                                                                   |
|----------------|---------------------------------------------------------------------------------------------------------------|
| <b>A08</b>     | Air flow monitoring 24 V DC                                                                                   |
| <b>A12</b>     | Thermistors for alarm                                                                                         |
| <b>A31</b>     | Motor temperature monitoring through switch                                                                   |
| <b>A60</b>     | Motor protection through 3 × Pt100                                                                            |
| <b>A72</b>     | Bearing temperature monitoring with Pt100                                                                     |
| <b>G00</b>     | External fan NDE left (possible if 15th position of Article No. is U, W or X)                                 |
| <b>G02</b>     | External fan NDE right (possible if 15th position of Article No. is V, W or X)                                |
| <b>G14</b>     | With air filter                                                                                               |
| <b>G80</b>     | Mounting of a supplied POG 10 incremental encoder (possible if 9th position of Article No. is K)              |
| <b>H56</b>     | Mounting of a POG 10 DN 1024 incremental encoder (HTL 1024 S/R; possible if 9th position of Article No. is K) |
| <b>H75</b>     | Mounting of a supplied HOG 28 incremental encoder (possible if 9th position of Article No. is G)              |
| <b>K12</b>     | Additional PTC thermistor chain for alarm and tripping                                                        |
| <b>K16</b>     | Second shaft extension 120 mm × 210 mm (d × l; possible if 9th position of Article No. = "A" or "G")          |
| <b>K45</b>     | 230 V standstill heating                                                                                      |
| <b>K46</b>     | 110 V standstill heating                                                                                      |
| <b>K83</b>     | Terminal box rotated through +90° (possible if 15th position of Article No. is V or W)                        |
| <b>K84</b>     | Terminal box rotated through -90° (possible if 15th position of Article No. is U or W)                        |
| <b>K85</b>     | Terminal box rotated through +180°                                                                            |
| <b>L00</b>     | Terminal box 1XB7820 (cable entry plate undrilled) instead of terminal box 1XB7712                            |
| <b>L12</b>     | Condensation water drain hole provided unsealed                                                               |
| <b>L29</b>     | Enhanced corrosion protection (possible if 11th position of Article No. is 1)                                 |
| <b>L50</b>     | Adapter base for mounting a fan                                                                               |
| <b>P00</b>     | Cable entry plate undrilled (with terminal box 1XB7712 only)                                                  |
| <b>P01</b>     | Cable entry plate 3 × M63 × 1.5 (only with terminal box 1XB7712)                                              |
| <b>P02</b>     | Cable entry plate 3 × M75 × 1.5 (only with terminal box 1XB7712)                                              |
| <b>P03</b>     | Cable entry plate 4 × M75 × 1.5 (only with terminal box 1XB7712)                                              |
| <b>P04</b>     | Cable entry plate 4 × M63 × 1.5 (only with terminal box 1XB7712)                                              |
| <b>P12</b>     | Cable entry plate 6 × M63 × 1.5 + 2 × M20 (only with terminal box 1XB7820)                                    |
| <b>P13</b>     | Cable entry plate 7 × M50 × 1.5 + 2 × M20 + 1 × M25 (only with terminal box 1XB7820)                          |
| <b>P14</b>     | Cable entry plate 6 × M63 × 1.5 + 1 × M20 + 1 × M25 (only with terminal box 1XB7820)                          |
| <b>P15</b>     | Cable entry plate 9 × M63 × 1.5 + 1 × M20 + 1 × M25 (only with terminal box 1XB7820)                          |
| <b>P16</b>     | Cable entry plate 12 × M63 × 1.5 + 1 × M20 + 1 × M25 (only with terminal box 1XB7820)                         |
| <b>Q00</b>     | Increased number of ground terminals in the terminal box (12 × M6 for 1XB771, 24 × M6 for 1XB7820)            |
| <b>Q14</b>     | Air filter for harsh environment                                                                              |
| <b>R60</b>     | Special fan for operation at 460 V / 60 Hz (±10 %)                                                            |
| <b>R61</b>     | Special fan for operation at 400 V / 60 Hz (±10 %)                                                            |
| <b>Y80</b>     | Additional rating plate with deviating rating plate data                                                      |
| <b>Y82</b>     | Additional rating plate with customer specifications                                                          |
| <b>Y84</b>     | Customer-specific information on rating plate (maximum 30 characters) <sup>1)</sup>                           |
| <b>Colors</b>  |                                                                                                               |
| –              | Standard paint is anthracite RAL 7016                                                                         |
| <b>X01</b>     | Standard finish in RAL 9005 (black)                                                                           |
| <b>K24</b>     | Primer                                                                                                        |
| <b>K23</b>     | Special paint finish worldwide (anthracite RAL 7016)                                                          |
| <b>K23+X..</b> | Special paint finish worldwide in another color X.. (on request)                                              |

Order No. supplement "-Z" with order code and plain text, if required.

<sup>1)</sup> Specify plain text when ordering.

## Innomotics M – Main motors

### Options

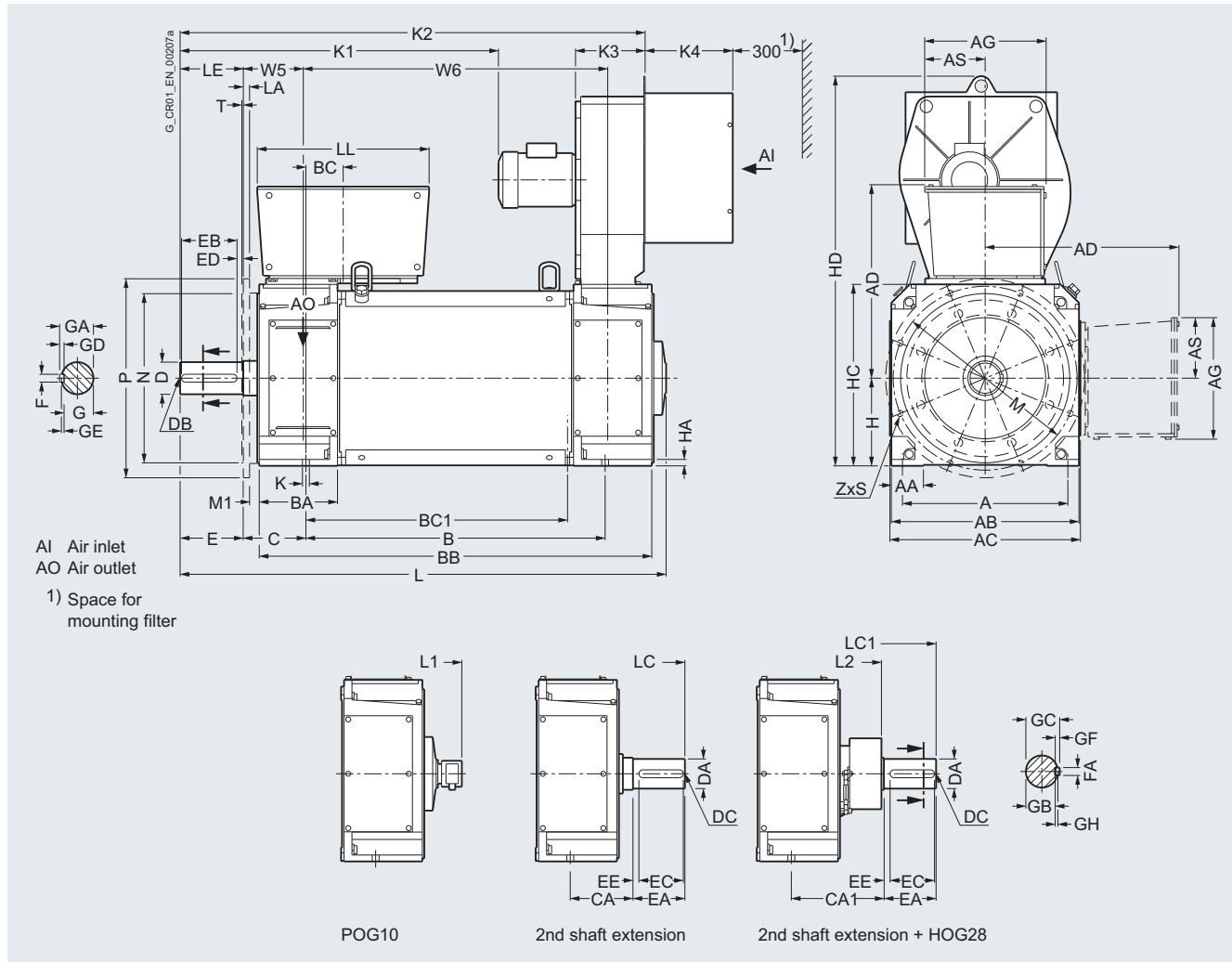
#### Options (continued)

##### Ordering example

| Selection criteria                                          | Requirement                                                                                                                                                                                                                                                                                     | Structure of the Article No.        |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Motor type                                                  | Asynchronous motor, shaft height 355, IP55 degree of protection, type of construction IM B3, noise level 85 dB(A), operating speed 800 rpm, Supply voltage 690 V 3 AC, Intermittent duty S3-60 %, Rated output 445 kW, Rated torque 5312 Nm, Rated current 460 A, Terminal box type 1XB7712-P01 | 1PH8352-7KK10-■■■■■                 |
| Encoder systems                                             | Incremental encoder HTL 1024 S/R POG 10 (Baumer-Hübner)                                                                                                                                                                                                                                         | 1PH8352-7KK10-■■■■■                 |
| Shaft extension (DE)/balancing                              | Featherkey + full-key balancing                                                                                                                                                                                                                                                                 | 1PH8352-7KK10-1■■■■                 |
| Bearings                                                    | Standard (A/N)                                                                                                                                                                                                                                                                                  | 1PH8352-7KK10-1A■■■                 |
| Terminal box                                                | DE top, cable entry right                                                                                                                                                                                                                                                                       | 1PH8352-7KK10-1AX■                  |
| Temperature monitoring                                      | Temperature sensor PT1000 in the stator winding                                                                                                                                                                                                                                                 | 1PH8352-7KK10-1AX2                  |
| Special version                                             | Mounting of a supplied pulse encoder with POG 10 mounting flange                                                                                                                                                                                                                                | 1PH8352-7KK10-1AX2-Z<br>G80         |
|                                                             | 230 V standstill heating                                                                                                                                                                                                                                                                        | 1PH8352-7KK10-1AX2-Z<br>G80+K45     |
|                                                             | Cable entry plate 4 × M75 × 1.5                                                                                                                                                                                                                                                                 | 1PH8352-7KK10-1AX2-Z<br>G80+K45+P03 |
| Complete ordering information for required version of motor |                                                                                                                                                                                                                                                                                                 | 1PH8352-7KK10-1AX2-Z<br>G80+K45+P03 |

**Innomotics M – Main motors**

## Dimensional drawings

**Dimensional drawings**

## Innomotics M – Main motors

### Dimensional drawings

#### Dimensional drawings

| Shaft height | Dimensions to IEC |     |     |     |      |     |      |     |     |     |     |      |      |      |     |     |     |     |     |     |    |    |
|--------------|-------------------|-----|-----|-----|------|-----|------|-----|-----|-----|-----|------|------|------|-----|-----|-----|-----|-----|-----|----|----|
| 1PH8...      | A                 | AA  | AB  | AC  | B    | BA  | BB   | C   | CA  | CA1 | W5  | W6   | D    | DA   | DB  | DC  | E   | EA  | EB  | EC  | ED | EE |
| 350/351      | 670               | 130 | 760 | 781 | 772  | 317 | 1150 | 254 | 254 | 375 | 243 | 795  | Ø130 | Ø120 | M24 | M24 | 250 | 210 | 220 | 180 | 25 | 25 |
| 352          | 670               | 130 | 760 | 781 | 862  | 317 | 1240 | 254 | 254 | 375 | 243 | 885  | Ø130 | Ø120 | M24 | M24 | 250 | 210 | 220 | 180 | 25 | 25 |
| 354          | 670               | 130 | 760 | 781 | 972  | 317 | 1350 | 254 | 254 | 375 | 243 | 995  | Ø130 | Ø120 | M24 | M24 | 250 | 210 | 220 | 180 | 25 | 25 |
| 356          | 670               | 130 | 760 | 781 | 1092 | 317 | 1470 | 254 | 254 | 375 | 243 | 1115 | Ø130 | Ø120 | M24 | M24 | 250 | 210 | 220 | 180 | 25 | 25 |
| 358          | 670               | 130 | 760 | 781 | 1212 | 317 | 1590 | 254 | 254 | 375 | 243 | 1235 | Ø130 | Ø120 | M24 | M24 | 250 | 210 | 220 | 180 | 25 | 25 |

| Shaft height | Dimensions to IEC |    |     |     |     |     |    |    |    |    |     |    |     |     |      |      |      |      |      |
|--------------|-------------------|----|-----|-----|-----|-----|----|----|----|----|-----|----|-----|-----|------|------|------|------|------|
| 1PH8...      | F                 | FA | G   | GA  | GB  | GC  | GD | GE | GF | GH | H   | HA | HC  | K   | L    | L1   | L2   | LC   | LC1  |
| 350/351      | 32                | 32 | 119 | 137 | 114 | 127 | 18 | 11 | 18 | 11 | 355 | 26 | 735 | Ø28 | 1523 | 1625 | 1644 | 1740 | 1861 |
| 352          | 32                | 32 | 119 | 137 | 114 | 127 | 18 | 11 | 18 | 11 | 355 | 26 | 735 | Ø28 | 1613 | 1715 | 1734 | 1830 | 1951 |
| 354          | 32                | 32 | 119 | 137 | 114 | 127 | 18 | 11 | 18 | 11 | 355 | 26 | 735 | Ø28 | 1723 | 1825 | 1844 | 1940 | 2061 |
| 356          | 32                | 32 | 119 | 137 | 114 | 127 | 18 | 11 | 18 | 11 | 355 | 26 | 735 | Ø28 | 1843 | 1945 | 1964 | 2060 | 2181 |
| 358          | 32                | 32 | 119 | 137 | 114 | 127 | 18 | 11 | 18 | 11 | 355 | 26 | 735 | Ø28 | 1963 | 2065 | 2084 | 2180 | 2301 |

| Shaft height | Terminal box      |     |     |     |      |     | Fan                      |      |     |     |      | Flange |     |      |    |      |      |     |   |   |
|--------------|-------------------|-----|-----|-----|------|-----|--------------------------|------|-----|-----|------|--------|-----|------|----|------|------|-----|---|---|
| 1PH8...      | AD                | AG  | DE  | BC  | BC1  | LL  | K1                       | K2   | K3  | K4  | HD   | LA     | LE  | M    | M1 | N    | P    | S   | T | Z |
|              | <b>1 X B7 820</b> |     |     |     |      |     | <b>85 dB (A)</b>         |      |     |     |      |        |     |      |    |      |      |     |   |   |
| 350/351      | 784               | 492 | 245 | 151 | 861  | 696 | 844                      | 1438 | 282 | 355 | 1578 | 25     | 250 | Ø740 | 40 | Ø680 | Ø800 | Ø24 | 6 | 8 |
| 352          | 784               | 492 | 245 | 151 | 951  | 696 | 934                      | 1528 | 282 | 355 | 1578 | 25     | 250 | Ø740 | 40 | Ø680 | Ø800 | Ø24 | 6 | 8 |
| 354          | 784               | 492 | 245 | 151 | 1061 | 696 | 1044                     | 1638 | 282 | 355 | 1578 | 25     | 250 | Ø740 | 40 | Ø680 | Ø800 | Ø24 | 6 | 8 |
| 356          | 784               | 492 | 245 | 151 | 1181 | 696 | 1164                     | 1758 | 282 | 355 | 1578 | 25     | 250 | Ø740 | 40 | Ø680 | Ø800 | Ø24 | 6 | 8 |
| 358          | 784               | 492 | 245 | 151 | 1301 | 696 | 1284                     | 1878 | 282 | 355 | 1578 | 25     | 250 | Ø740 | 40 | Ø680 | Ø800 | Ø24 | 6 | 8 |
|              | <b>1 X B7 712</b> |     |     |     |      |     | <b>R60/R61 fan 60 Hz</b> |      |     |     |      |        |     |      |    |      |      |     |   |   |
| 350/351      | 640               | 377 | 201 | -12 | 784  | 370 | 802                      | 1438 | 282 | 355 | 1578 |        |     |      |    |      |      |     |   |   |
| 352          | 640               | 377 | 201 | -12 | 874  | 370 | 892                      | 1528 | 282 | 355 | 1578 |        |     |      |    |      |      |     |   |   |
| 354          | 640               | 377 | 201 | -12 | 984  | 370 | 1002                     | 1638 | 282 | 355 | 1578 |        |     |      |    |      |      |     |   |   |
| 356          | 640               | 377 | 201 | -12 | 1104 | 370 | 1122                     | 1758 | 282 | 355 | 1578 |        |     |      |    |      |      |     |   |   |
| 358          | 640               | 377 | 201 | -12 | 1224 | 370 | 1242                     | 1878 | 282 | 355 | 1578 |        |     |      |    |      |      |     |   |   |



# Appendix

4



# 4 Appendix

## 4/2 Industry Services

4/3 Industry Services – Portfolio overview

## 4/4 Metal surcharges

1

2

3

4

**Overview****4****Keep your business running and shaping your digital future – with Customer Services for Innomotics**

Optimizing the productivity of your equipment and operations can be a challenge, especially with constantly changing market conditions. Working with our service experts makes it easier. We understand your industry's unique processes and provide the services needed so that you can better achieve your business goals.

You can count on us to maximize your uptime and minimize your downtime, increasing your operations' productivity and reliability. When your operations have to be changed quickly to meet a new demand or business opportunity, our services give you the flexibility to adapt.

We assist in keeping your operations as energy and resource efficient as possible and reducing your total cost of ownership. As a trendsetter, we ensure that you can capitalize on the opportunities of digitalization and by applying data analytics to enhance decision making: You can be sure that your plant reaches its full potential and retains this over the longer life-span.

You can rely on our highly dedicated team of engineers, technicians and specialists to deliver the services you need – safely, professionally and in compliance with all regulations. We are there for you, where you need us, when you need us.

[innomotics.com/services](https://innomotics.com/services)

## Overview



Benefit from our wide range of **Support and Consulting Services**: Our Innomotics portal offers you comprehensive information, application examples, FAQs and support request options at [portal.innomotics.com](https://portal.innomotics.com). This also comprises Technical Support and Diagnostics, including advice and answers to inquiries about functionality, application and fault clearance..



**Spare Parts Services** means optimum system availability in two ways: fast delivery of original spare parts for up to ten years, with optimized logistics processes - and preventive spare parts provisioning at the customer's premises through coordinated spare parts packages for individual products, custom-assembled drive components and entire integrated drive trains.



As part of **Field and Maintenance Services**, our global network of specialists offers you high-quality maintenance services and optimized commissioning times. Maximize the availability of your systems by offering regular inspections and "health checks" and optimize your production processes.



Use **Retrofit and Upgrade Services** to extend the service life of your machines and plants. Optimize the availability, reliability and energy efficiency of your installed motors and drives by retrofitting existing products and systems. Your benefit: Optimized performance, higher productivity and stable production processes with highly available drives.



**Training Services** are geared entirely towards offering our know-how as a manufacturer didactically concentrated to the industry and expanding the competence of your employees in handling the entire spectrum of Innomotics products. This ranges from basic skills training courses to specialized training for advanced technical skills.



Two service packages from our digital Inspire IQ range provide you with optimum support for your work. The first package **Rapid Response**, is all about getting your devices up and running again as quickly as possible. The second, **Guided Supervision**, is a service package specifically for the challenges of continuous monitoring.



We offer **Repair Services** with specialized service technicians on site and in regional repair centers to quickly restore the functionality of faulty devices. Extended repair services are also available, including additional diagnostic and repair measures as well as emergency services.



The **Service Agreements** give you the opportunity to bundle a variety of services in a single annual or multi-year contract. You can select these individually to match your requirements or fill gaps in your organization's maintenance capacities. Programs and agreements can be contracted on a KPI-based and/or performance-based basis.

## Appendix

### Metal surcharges

#### Explanation of the raw material/metal surcharges<sup>1)</sup>

##### Surcharge calculation

To compensate for variations in the price of the raw materials silver, copper, aluminum, lead, gold, dysprosium<sup>2)</sup> and/or neodym<sup>2)</sup>, surcharges are calculated on a daily basis using the so-called metal factor for products containing these raw materials. A surcharge for the respective raw material is calculated as a supplement to the price of a product if the basic official price of the raw material in question is exceeded.

The surcharges are calculated in accordance with the following criteria:

- \_ Basic official price of the raw material  
Basic official price from the day prior to receipt of the order or prior to release order (daily price) for<sup>3)</sup>
  - \_ Silver (sales price, processed)
  - \_ Gold (sales price, processed)
- and for<sup>4)</sup>
  - \_ Copper (lower DEL notation + 1 %)
  - \_ Aluminum (aluminum in cables)
  - \_ Lead (lead in cables)
- \_ Metal factor of the products  
Certain products are displayed with a metal factor. The metal factor determines the official price (for those raw materials concerned) as of which the metal surcharges are applied and the calculation method used (weight or percentage method). An exact explanation is given below.

##### Structure of the metal factor

The metal factor consists of several digits; the first digit indicates whether the percentage method of calculation refers to the list price or a possible discounted price (customer net price) (L = list price / N = customer net price).

The remaining digits indicate the method of calculation used for the respective raw material. If no surcharge is added for a raw material, a "-" is used.

|           |                                                        |
|-----------|--------------------------------------------------------|
| 1st digit | List or customer net price using the percentage method |
| 2nd digit | for silver (AG)                                        |
| 3rd digit | for copper (CU)                                        |
| 4th digit | for aluminum (AL)                                      |
| 5th digit | for lead (PB)                                          |
| 6th digit | for gold (AU)                                          |
| 7th digit | for dysprosium (Dy) <sup>2)</sup>                      |
| 8th digit | for neodym (Nd) <sup>2)</sup>                          |

##### Weight method

The weight method uses the basic official price, the daily price and the raw material weight. In order to calculate the surcharge, the basic official price must be subtracted from the daily price. The difference is then multiplied by the raw material weight.

The basic official price can be found in the table below using the number (1 to 9) of the respective digit of the metal factor. The raw material weight can be found in the respective product descriptions.

##### Percentage method

Use of the percentage method is indicated by the letters A-Z at the respective digit of the metal factor.

The surcharge is increased - dependent on the deviation of the daily price compared with the basic official price - using the percentage method in "steps" and consequently offers surcharges that remain constant within the framework of this "step range". A higher percentage rate is charged for each new step. The respective percentage level can be found in the table below.

##### Metal factor examples

###### L E A - - - - -

Basis for % surcharge: List price  
Silver Basis 150 €, Step 50 €, 0.5 %  
Copper Basis 150 €, Step 50 €, 0.1 %  
No surcharge for aluminum  
No surcharge for lead  
No surcharge for gold  
No surcharge for dysprosium  
No surcharge for neodym

###### N - A 6 - - - -

Basis for % surcharge: Customer net price  
No surcharge for silver  
Copper Basis 150 €, Step 50 €, 0.1 %  
Aluminum acc. to weight, basic offic. price 225 €  
No surcharge for lead  
No surcharge for gold  
No surcharge for dysprosium  
No surcharge for neodym

###### - - 3 - - - -

No basis necessary  
No surcharge for silver  
Copper acc. to weight, basic official price 150 €  
No surcharge for aluminum  
No surcharge for lead  
No surcharge for gold  
No surcharge for dysprosium  
No surcharge for neodym

<sup>1)</sup> Refer to the separate explanation on the next page regarding the raw materials dysprosium and neodym (= rare earths).

<sup>2)</sup> For a different method of calculation, refer to the separate explanation for these raw materials on the next page.

<sup>3)</sup> Source: Umicore, Hanau ([www.metalsmanagement.umicore.com](http://www.metalsmanagement.umicore.com)).

<sup>4)</sup> Source: Schutzvereinigung DEL-Notiz e.V. ([www.del-notiz.org](http://www.del-notiz.org)).

**Explanation of the raw material/metal surcharges for dysprosium and neodym (rare earths)****Surcharge calculation**

To compensate for variations in the price of the raw materials silver<sup>1)</sup>, copper<sup>1)</sup>, aluminum<sup>1)</sup>, lead<sup>1)</sup>, gold<sup>1)</sup>, dysprosium and/or neodym, surcharges are calculated on a daily basis using the so-called metal factor for products containing these raw materials. The surcharge for dysprosium and neodym is calculated as a supplement to the price of a product if the basic official price of the raw material in question is exceeded.

The surcharge is calculated in accordance with the following criteria:

- \_ Basic official price of the raw material<sup>2)</sup>
  - Three-month basic average price (see below) in the period before the quarter in which the order was received or the release order took place (= average official price) for
    - \_ dysprosium (Dy metal, 99 % min. FOB China; USD/kg)
    - \_ neodym (Nd metal, 99 % min. FOB China; USD/kg)
- \_ Metal factor of the products
 

Certain products are displayed with a metal factor. The metal factor indicates (for those raw materials concerned) the basic official price as of which the surcharges for dysprosium and neodym are calculated using the weight method. An exact explanation of the metal factor is given below.

**Three-month average price**

The prices of rare earths vary according to the foreign currency, and there is no freely accessible stock exchange listing. This makes it more difficult for all parties involved to monitor changes in price. In order to avoid continuous adjustment of the surcharges, but to still ensure fair, transparent pricing, an average price is calculated over a three-month period using the average monthly foreign exchange rate from USD to EUR (source: European Central Bank). Since not all facts are immediately available at the start of each month, a one-month buffer is allowed before the new average price applies.

Examples of calculation of the average official price:

| Period for calculation of the average price: | Period during which the order/release order is effected and the average price applies: |
|----------------------------------------------|----------------------------------------------------------------------------------------|
| Sep 2012 - Nov 2012                          | Q1 in 2013 (Jan - Mar)                                                                 |
| Dec 2012 - Feb 2013                          | Q2 in 2013 (Apr - Jun)                                                                 |
| Mar 2013 - May 2013                          | Q3 in 2013 (Jul - Sep)                                                                 |
| Jun 2013 - Aug 2013                          | Q4 in 2013 (Oct - Dec)                                                                 |

**Structure of the metal factor**

The metal factor consists of several digits; the first digit is not relevant to the calculation of dysprosium and neodym.

The remaining digits indicate the method of calculation used for the respective raw material. If no surcharge is added for a raw material, a "-" is used.

|           |                                                        |
|-----------|--------------------------------------------------------|
| 1st digit | List or customer net price using the percentage method |
| 2nd digit | for silver (AG) <sup>1)</sup>                          |
| 3rd digit | for copper (CU) <sup>1)</sup>                          |
| 4th digit | for aluminum (AL) <sup>1)</sup>                        |
| 5th digit | for lead (PB) <sup>1)</sup>                            |
| 6th digit | for gold (AU) <sup>1)</sup>                            |
| 7th digit | for dysprosium (Dy)                                    |
| 8th digit | for neodym (Nd)                                        |

**Weight method**

The weight method uses the basic official price, the average price and the raw material weight. In order to calculate the surcharge, the basic official price must be subtracted from the average price. The difference is then multiplied by the raw material weight.

The basic official price can be found in the table below using the number (1 to 9) of the respective digit of the metal factor. Your Sales contact can inform you of the raw material weight.

**Metal factor examples**

|         |                                                       |
|---------|-------------------------------------------------------|
| -----71 |                                                       |
| ↑       | No basis necessary                                    |
| ↑       | No surcharge for silver                               |
| ↑       | No surcharge for copper                               |
| ↑       | No surcharge for aluminum                             |
| ↑       | No surcharge for lead                                 |
| ↑       | No surcharge for gold                                 |
| ↑       | Dysprosium acc. to weight, basic official price 300 € |
| ↑       | Neodym acc. to weight, basic official price 50 €      |

<sup>1)</sup> For a different method of calculation, refer to the separate explanation for these raw materials on the previous page.

<sup>2)</sup> Source: Asian Metal Ltd ([www.asianmetal.com](http://www.asianmetal.com))

## Appendix

### Metal surcharges

#### Values of the metal factor

| Percentage method                                                     | Basic official price in € | Step range in €                          | % surcharge 1st step<br>Price in €<br>150.01 - 200.00 | % surcharge 2nd step<br>Price in €<br>200.01 - 250.00 | % surcharge 3rd step<br>Price in €<br>250.01 - 300.00 | % surcharge 4th step<br>Price in €<br>300.01 - 350.00 | % surcharge per additional step |
|-----------------------------------------------------------------------|---------------------------|------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|---------------------------------|
| A                                                                     | 150                       | 50                                       | 0.1                                                   | 0.2                                                   | 0.3                                                   | 0.4                                                   | 0.1                             |
| B                                                                     | 150                       | 50                                       | 0.2                                                   | 0.4                                                   | 0.6                                                   | 0.8                                                   | 0.2                             |
| C                                                                     | 150                       | 50                                       | 0.3                                                   | 0.6                                                   | 0.9                                                   | 1.2                                                   | 0.3                             |
| D                                                                     | 150                       | 50                                       | 0.4                                                   | 0.8                                                   | 1.2                                                   | 1.6                                                   | 0.4                             |
| E                                                                     | 150                       | 50                                       | 0.5                                                   | 1.0                                                   | 1.5                                                   | 2.0                                                   | 0.5                             |
| F                                                                     | 150                       | 50                                       | 0.6                                                   | 1.2                                                   | 1.8                                                   | 2.4                                                   | 0.6                             |
| G                                                                     | 150                       | 50                                       | 1.0                                                   | 2.0                                                   | 3.0                                                   | 4.0                                                   | 1.0                             |
| H                                                                     | 150                       | 50                                       | 1.2                                                   | 2.4                                                   | 3.6                                                   | 4.8                                                   | 1.2                             |
| I                                                                     | 150                       | 50                                       | 1.6                                                   | 3.2                                                   | 4.8                                                   | 6.4                                                   | 1.6                             |
| J                                                                     | 150                       | 50                                       | 1.8                                                   | 3.6                                                   | 5.4                                                   | 7.2                                                   | 1.8                             |
|                                                                       |                           |                                          | 175.01 - 225.00                                       | 225.01 - 275.00                                       | 275.01 - 325.00                                       | 325.01 - 375.00                                       |                                 |
| O                                                                     | 175                       | 50                                       | 0.1                                                   | 0.2                                                   | 0.3                                                   | 0.4                                                   | 0.1                             |
| P                                                                     | 175                       | 50                                       | 0.2                                                   | 0.4                                                   | 0.6                                                   | 0.8                                                   | 0.2                             |
| R                                                                     | 175                       | 50                                       | 0.5                                                   | 1.0                                                   | 1.5                                                   | 2.0                                                   | 0.5                             |
|                                                                       |                           |                                          | 225.01 - 275.00                                       | 275.01 - 325.00                                       | 325.01 - 375.00                                       | 375.01 - 425.00                                       |                                 |
| S                                                                     | 225                       | 50                                       | 0.2                                                   | 0.4                                                   | 0.6                                                   | 0.8                                                   | 0.2                             |
| U                                                                     | 225                       | 50                                       | 1.0                                                   | 2.0                                                   | 3.0                                                   | 4.0                                                   | 1.0                             |
| V                                                                     | 225                       | 50                                       | 1.0                                                   | 1.5                                                   | 2.0                                                   | 3.0                                                   | 1.0                             |
| W                                                                     | 225                       | 50                                       | 1.2                                                   | 2.5                                                   | 3.5                                                   | 4.5                                                   | 1.0                             |
|                                                                       |                           |                                          | 150.01 - 175.00                                       | 175.01 - 200.00                                       | 200.01 - 225.00                                       | 225.01 - 250.00                                       |                                 |
| Y                                                                     | 150                       | 25                                       | 0.3                                                   | 0.6                                                   | 0.9                                                   | 1.2                                                   | 0.3                             |
|                                                                       |                           |                                          | 400.01 - 425.00                                       | 425.01 - 450.00                                       | 450.01 - 475.00                                       | 475.01 - 500.00                                       |                                 |
| Z                                                                     | 400                       | 25                                       | 0.1                                                   | 0.2                                                   | 0.3                                                   | 0.4                                                   | 0.1                             |
| Price basis (1st digit)                                               |                           |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| L Calculation based on the list price                                 |                           |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| N Calculation based on the customer net price (discounted list price) |                           |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| Weight method                                                         | Basic official price in € |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| 1                                                                     | 50                        | Calculation based on raw material weight |                                                       |                                                       |                                                       |                                                       |                                 |
| 2                                                                     | 100                       |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| 3                                                                     | 150                       |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| 4                                                                     | 175                       |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| 5                                                                     | 200                       |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| 6                                                                     | 225                       |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| 7                                                                     | 300                       |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| 8                                                                     | 400                       |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| 9                                                                     | 555                       |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| Miscellaneous                                                         |                           |                                          |                                                       |                                                       |                                                       |                                                       |                                 |
| -                                                                     | No metal surcharge        |                                          |                                                       |                                                       |                                                       |                                                       |                                 |



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