

New Generation 1LE1/1PC1



1/2	Orientation
1/2	Overview
1/3	Benefits
1/4	Application
1/4	Technical specifications
1/5	Selection and ordering data
1/7	More information
1/8	General Line motors with shorter delivery time
1/8	Selection and ordering data
1/18	Self-ventilated energy-saving motors with improved efficiency
1/18	Selection and ordering data
1/22	Self-ventilated energy-saving motors with high efficiency
1/22	Selection and ordering data
1/30	Self-ventilated motors with increased output and improved efficiency
1/30	Selection and ordering data
1/34	Self-ventilated motors with increased output and high efficiency
1/34	Selection and ordering data
1/38	Forced-air cooled motors without external fan and fan cover with improved efficiency
1/38	Selection and ordering data
1/42	Forced-air cooled motors without external fan and fan cover with high efficiency
1/42	Selection and ordering data
1/46	Self-cooled motors without external fan and fan cover with improved efficiency
1/46	Selection and ordering data
1/50	Self-cooled motors without external fan and fan cover with high efficiency
1/50	Selection and ordering data
1/54	Special versions
1/54	Selection and ordering data
1/54	• Voltages
1/55	• Options
1/64	Accessories
1/64	Overview
1/64	More information
1/65	Dimensions
1/65	Overview
1/67	More information
1/68	Dimensional drawings

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Orientation

Overview

1



Increasing energy costs have resulted in greater emphasis on the power consumption of drive systems. It is extremely important to utilize the full potential for minimization here to secure competitiveness today and in the future. The environment will also profit from reduced energy consumption.

With this in mind, we have already developed a new generation of low-voltage motors that you can use in drives to move even more than before. Innovative copper rotors that we develop and manufacture entirely in-house create the perfect conditions for motors with a high degree of efficiency (EFF2 and EFF1 motors are located in the same housing). The new motors for EFF1 (High Efficiency) offer considerable energy savings and protect our environment.

The modular mounting concept also provides total flexibility: Each motor is based on a uniform concept for all markets worldwide. Our motors are manufactured in accordance with modern ecological principles and give machines and plants more drive. Worldwide and for every application. Efficiency over the complete life cycle is a clear benefit of our motors especially for the use of 1LE1/1PC1 designed to EFF1. All machine manufacturers and plant operators can profit from this – not to mention the environment. We will be launching our new 1LE1/1PC1 motors onto the market step by step.

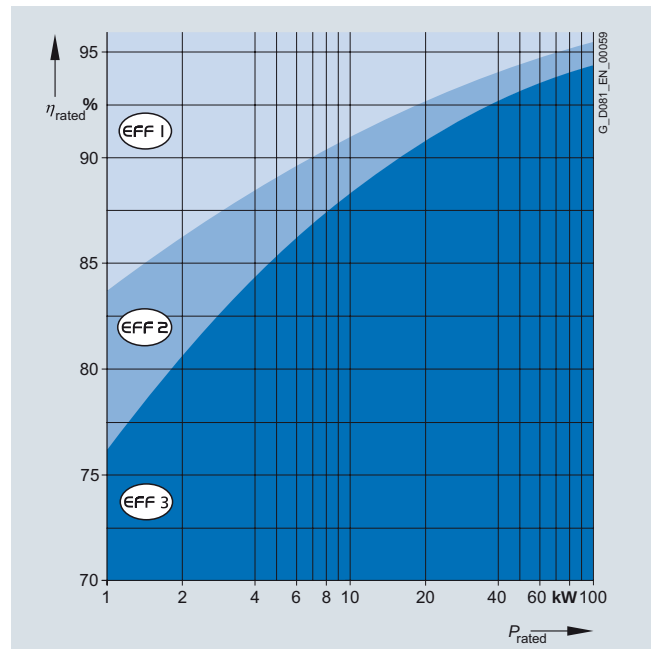
Classified energy-saving motors for an efficient energy balance

Depending on requirements, energy-saving motors are available for an efficient energy balance for the EU in accordance with CEMEP (European Committee of Manufacturers of Electrical Machines and Power Electronics) as well as for the North American market in accordance with EPACT (US Energy Policy Act).

Efficiency requirements according to CEMEP

CEMEP classifies efficiency levels for 2-pole and 4-pole motors with outputs of 1.1 to 90 kW. Three efficiency classes are defined:

- **EFF1** (High Efficiency motors – referred to below as “Motors with high efficiency”)
- **EFF2** (Improved Efficiency motors – referred to below as “Motors with improved efficiency”)
- **EFF3** (Conventional Efficiency motors)



At a glance: EU/CEMEP for Europe

- **Status**
Voluntary compliance with efficiency classification
- **Covers**
2-pole, 4-pole 50 Hz squirrel-cage motors from 1.1 to 90 kW (at 400 V and 50 Hz)
- **Required marking**
Efficiency class on the motor rating plate
 η_{rated} , $\eta_{3/4}$ load and efficiency class in the documentation

Efficiency requirements according to EPACT

In 1997, an act was passed in the US to define minimum efficiencies for low-voltage three-phase motors (EPACT).

An act is in force in Canada that is largely identical, although it is based on different verification methods. The efficiency is verified for these motors for the USA using IEEE 112, Test Method B and for Canada using CSA-C390. Apart from a few exceptions, all three-phase low-voltage motors imported into the USA or Canada must comply with the legal efficiency requirements. The law demands minimum efficiency levels for motors with a voltage of 230 and 460 V at 60 Hz, in the output range of 1 to 200 HP (0.75 to 150 kW) with 2, 4 and 6 poles. Explosion-proof motors must also be included.

The EPACT efficiency requirements exclude, for example:

- Motors whose frame size-output classification does not correspond with the standard series according to NEMA MG1-12.
- Flange-mounting motors
- Brake motors
- Converter-fed motors
- Motors with design letter C and higher

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Orientation

Overview (continued)

EPACT lays down that the nominal efficiency at full load and a "CC" number (Compliance Certification) must be included on the rating plate. The "CC" number is issued by the US Department of Energy (DOE). The following information is stamped on the rating plate of EPACT motors which must be marked by law:

- Nominal efficiency
- Design letter
- Code letter
- CONT
- CC No. CC 032A (Siemens) and NEMA MG1-12.

At a glance: EPACT/CSA for North America

- Status
Minimum efficiencies required by law
- Covers
2-, 4- and 6-pole 60 Hz squirrel-cage motors from 1 to 200 HP (0.75 to 150 kW) for 230 V and/or 460 V 60 Hz
- Required marking
Efficiency η_{rated} on the motor rating plate

Motors with increased output and compact construction (1LE1)

Motors with increased output and compact construction can be used to advantage in confined spaces. For a slightly longer overall length, the output is at least as high as that of the next larger shaft height. These compact motors are also optimized for efficiency. They are available in EFF1 and EFF2 and therefore reduce the operating costs.

Benefits

There is considerable potential in our new 1LE1/1PC1 series of low-voltage motors. As a consistent further development of our existing motors, the 1LE1/1PC1 motors offer numerous advantages:

Greater efficiency

Instead of cast-aluminum rotors, the new copper technology is used in the EFF1 motors. The motors are therefore considerably more compact. EFF2 and EFF1 motors are based on the same housing. For changeover to the higher efficiency class – from EFF2 to EFF1 – reconstruction of the machine is no longer necessary. Savings are achieved in time and costs. And what is more: You can save a considerable amount of energy with EFF1 motors because they have power losses of up to 40 % less than EFF2 motors. The energy saving potential and life cycle costs of the new motors can be calculated with our SinaSave™ software. You can download the SinaSave program in the Internet using the following link: <http://www.siemens.com/energysaving>. For more information, see catalog part 11 "Appendix", "Energy-saving program SinaSave". Our 1LE1 motors also impress customers with their extremely long life and their weight-optimized design has a positive effect on the stability of the equipment unit.

Motors without fan cover and external fan (1LE1 with order code F90)

Forced-air cooled motors with surface cooling without fan cover and external fan are mainly used for driving fans.

Standard motors with reduced output without fan cover and external fan (1PC1)

Self-cooled motors with surface cooling without fan cover and external fan are suitable for the following operating conditions:

- Types of duty with adequate cooling times (e.g. temporary duty for positioning drives)
- Environmental conditions that demand compact installation space (e.g. in motors with a stopping function)

Conditions under which an external fan has an adverse effect (e.g. simple cleaning in the food industry, textile industry)

Motors delivered ex-stock with shorter delivery time – General Line 1LE1

The most popular basic versions of the 1LE1 motor series can be supplied ex-stock and are termed the "General Line".

A so-called "Sector version" will be available soon for some of the motors available from stock. These include a located bearing at the drive end (DE), PTC thermistor and screwed-on feet for the IM B35 type of construction.

The normal delivery time for General Line motors is 1 to 2 days from the time of clarification of the order at the factory until delivery from the factory. To determine the time of arrival at the customer site, the appropriate shipping time must be added.

More application

The motors are approved and certified for worldwide use and meet high quality standards (confirmed, for example, by CSA ¹⁾, UL ²⁾, and CQC ³⁾).

Improved design

The new, optimized housing in modern EMC design has an attractive appearance and enhances functionality. The rotatable, accessible connection boxes, integral eyebolts, screwed-on feet and reinforced bearing plates ensure this.

Greater output

For the same shaft height, our high-performance motors offer an additional complete rated output level. The best is: We are also consistently implementing energy efficiency improvements here, too. The motors are offered – based on the categories of CEMEP – in high efficiency and improved efficiency versions.

More flexibility

The optimized architecture of the motors makes installation easier in general. Encoders, brakes and separately driven fans can be retrofitted easily. Connection boxes and feet for flexible mounting can be selected. Smaller inventories make stockkeeping easier and motor suppliers can respond to customer requirements more quickly. Optimized manufacturing processes support fast availability. All motors up to 460 V can be operated either directly on line or converter-fed – without the need for any additional measures.

¹⁾ Canadian Standard Association

²⁾ Underwriters Laboratories Inc.

³⁾ China Quality Certification

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Orientation

Application

As soon as the range of motors and options is complete, it will be possible to use the 1LE1/1PC1 motors from Siemens in all areas and sectors of industry due to their numerous options. They are suitable both for special environmental conditions such as those that predominate in the chemical or petrochemical industries as well as for most climatic requirements such as those of offshore applications. Their large range of mains voltages enables them to be used all over the world.

The wide field of implementation includes the following applications:

- Pumps
- Fans
- Compressors
- Conveyor systems such as cranes, belts and lifting gear
- High-bay warehouses
- Packaging machines
- Automation and Drives

Technical specifications

Technical data at a glance

This table lists the most important technical data. For more information and details, see catalog part 0 "Introduction".

Type of motor	IEC Squirrel-Cage Motors 1LE1/1PC1
Connection types	Star connection/delta connection You can establish the connection type used from the Order No. supplements in the selection and ordering data for the required motor.
Number of poles	2, 4, 6, 8
Frame sizes	100 L to 160 L
Rated output	0.75 ... 22 kW (motor series 1LE1)/0.3 ... 9 kW (motor series 1PC1)
Frequencies	50 Hz and 60 Hz
Versions	Self-ventilated 1LE1 energy-saving motors with: • Improved efficiency (EFF2) • High efficiency (EFF1) Self-ventilated 1LE1 motors with increased output and: • Improved efficiency (EFF2) • High efficiency (EFF1) Forced-air-cooled 1LE1 motors without external fan and fan cover with: • Improved efficiency (EFF2) • High efficiency (EFF1) Self-cooled 1PC1 motors without external fan and fan cover with: • Improved efficiency • High efficiency
Marking	EU/CEMEP efficiency classification, EFF1: 2-, 4-pole, EFF2: 2-, 4-pole US Energy Policy Act EPACT: 2-, 4-, 6-pole
Rated speed (synchronous speed)	750 ... 3000 rpm
Rated torque	9.9 ... 150 Nm (motor series 1LE1)/4.05 ... 60 Nm (motor series 1PC1)
Insulation of the stator winding according to EN 60034-1 (IEC 60034-1)	Temperature class 155 (F), used acc. to temperature class 130 (B) (also for motors with increased output) DURIGNIT IR 2000 insulation system
Degree of protection according to EN 60034-5 (IEC 60034-5)	IP55 as standard
Cooling according to EN 60034-6 (IEC 60034-6)	Self-ventilated (motor series 1LE1) frame sizes 100 L to 160 L (IC 411) Forced-air-cooled (motor series 1LE1 with order code F90) frame sizes 100 L to 160 L (IC 416) Self-cooled (motor series 1PC1) frame sizes 100 L to 160 L (IC 410)
Admissible coolant temperature and site altitude	–20 °C ... +40 °C as standard, site altitude up to 1000 m above sea level. See "Coolant temperature and site altitude" in catalog part 0 "Introduction".
Standard voltages according to EN 60038 (IEC 60038)	50 Hz: 230 V, 400 V, 500 V, 690 V The voltage to be used can be found in the selection and ordering data for the required motor.
Type of construction according to EN 60034-7 (IEC 60034-7)	Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6, IM V5 with protective cover With flange: IM B5, IM V1 without protective cover, IM V1 with protective cover, IM V3, IM B35 With standard flange and special flange (next larger flange): IM B14, IM V19, IM V18 without protective cover, IM V18 with protective cover, IM B34
Paint finish Suitability of paint finish for climate group according to IEC 60721, Part 2-1	Standard: Color RAL 7030 stone gray See "Paint finish" in catalog part 0 "Introduction".
Vibration quantity level according to EN 60034-14 (IEC 60034-14)	Level A (normal – without special vibration requirements) Optionally: Level B (with special vibration requirements) See "Balance and vibration quantity" in catalog part 0 "Introduction".
Shaft extension according to DIN 748 (IEC 60072)	Balance type: Half-key balancing as standard See "Balance and vibration quantity" in catalog part 0 "Introduction".
Sound pressure level according to DIN EN ISO 1680 (tolerance +3 dB)	The sound pressure level is listed in the selection and ordering data for the required motor.
Weights	The weight is listed in the selection and ordering data for the required motor.
Modular mounting concept	Rotary pulse encoder, brake, separately driven fan or prepared for mountings
Consistent series concept	• Cast housing feet, screw-mounted feet available as an option and retrofittable • Connection box obliquely partitioned and rotatable through 4 x 90° • Bearings at DE and NDE are of identical design, reinforced bearings available as an option
Options	See the selection and ordering data for "Special versions"

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Orientation

Selection and ordering data

Preliminary selection of the motor according to motor type/series, speed or number of poles, frame size, rated output, rated torque, rated speed and rated current

General Line motors with shorter delivery time

Speed	Frame size	Rated output	Rated speed	Rated torque	Rated current at 400 V	Detailed selection and ordering data Page
rpm		kW	rpm	Nm	A	
Aluminum series 1LE1 (motors with external fan)						
3000, 2-pole	100 L ... 160 L	3 ... 18.5	2835 ... 2935	10 ... 60	6 ... 34	1/8 ... 1/11
1500, 4-pole	100 L ... 160 L	2.2 ... 15	1425 ... 1460	14.8 ... 98	4.85 ... 29.5	1/12 ... 1/15
1000, 6-pole	100 L ... 160 L	1.5 ... 11	930 ... 970	15.3 ... 110	3.95 ... 23.5	1/16 ... 1/17

Self-ventilated energy-saving motors with improved efficiency (Improved Efficiency EFF2)

Speed	Frame size	Rated output	Rated speed	Rated torque	Rated current at 400 V	Detailed selection and ordering data Page
rpm		kW	rpm	Nm	A	
Aluminum series 1LE1 (motors with external fan)						
3000, 2-pole	100 L ... 160 L	3 ... 18.5	2835 ... 2935	10 ... 60	6 ... 34	1/18 ... 1/19
1500, 4-pole	100 L ... 160 L	2.2 ... 15	1425 ... 1460	14.8 ... 98	4.85 ... 29.5	1/18 ... 1/19
1000, 6-pole	100 L ... 160 L	1.5 ... 11	930 ... 970	15.3 ... 110	3.95 ... 23.5	1/18 ... 1/19
750, 8-pole	100 L ... 160 L	0.75 ... 7.5	700 ... 720	10.4 ... 100	2.65 ... 18.6	1/18 ... 1/19

Self-ventilated energy-saving motors with high efficiency (High Efficiency EFF1)

Speed	Frame size	Rated output	Rated speed	Rated torque	Rated current at 400 V	Detailed selection and ordering data Page
rpm		kW/HP	rpm	Nm	A	
Aluminum series 1LE1 (motors with external fan)						
For use according to CEMEP						
3000, 2-pole	100 L ... 160 L	3 ... 18.5	2905 ... 2955	9.9 ... 60	5.9 ... 33	1/22 ... 1/23
1500, 4-pole	100 L ... 160 L	2.2 ... 15	1455 ... 1475	14 ... 97	4.55 ... 27.5	1/22 ... 1/23
1000, 6-pole	100 L ... 160 L	1.5 ... 11	965 ... 975	15 ... 108	3.5 ... 22	1/22 ... 1/23
750, 8-pole	100 L ... 160 L	0.75 ... 7.5	720 ... 735	9.9 ... 98	2.75 ... 17.4	1/22 ... 1/23
For use in the North American market according to EPACT						
3000, 2-pole	100 L ... 160 L	4 ... 25	3520 ... 3565	8.1 ... 50	5.2 ... 29	1/26 ... 1/27
1500, 4-pole	100 L ... 160 L	3 ... 20	1760 ... 1780	12 ... 80	4.05 ... 24.5	1/26 ... 1/27
1000, 6-pole	100 L ... 160 L	2 ... 15	1170 ... 1180	12 ... 89	3.15 ... 19.6	1/26 ... 1/27

Self-ventilated motors with increased output and improved efficiency (Improved Efficiency EFF2)

Speed	Frame size	Rated output	Rated speed	Rated torque	Rated current at 400 V	Detailed selection and ordering data Page
rpm		kW	rpm	Nm	A	
Aluminum series 1LE1 (motors with external fan)						
3000, 2-pole	100 L ... 160 L	4 ... 22	2850 ... 2930	13.3 ... 72	7.9 ... 39.5	1/30 ... 1/31
1500, 4-pole	100 L ... 160 L	4 ... 18.5	1430 ... 1460	26.8 ... 121	8.5 ... 35	1/30 ... 1/31
1000, 6-pole	100 L ... 160 L	2.2 ... 15	930 ... 965	22.5 ... 148	5.3 ... 33	1/30 ... 1/31

Self-ventilated motors with increased output and high efficiency (High Efficiency EFF1)

Speed	Frame size	Rated output	Rated speed	Rated torque	Rated current at 400 V	Detailed selection and ordering data Page
rpm		kW	rpm	Nm	A	
Aluminum series 1LE1 (motors with external fan)						
3000, 2-pole	100 L ... 160 L	4 ... 22	2905 ... 2955	13 ... 71	7.6 ... 38.5	1/34 ... 1/35
1500, 4-pole	100 L ... 160 L	4 ... 18.5	1460 ... 1475	26 ... 120	8.2 ... 34	1/34 ... 1/35
1000, 6-pole	100 L ... 160 L	2.2 ... 15	960 ... 975	22 ... 147	4.95 ... 29.5	1/34 ... 1/35

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Orientation

Selection and ordering data (continued)

Forced-air cooled motors without external fan and fan cover with improved efficiency (Improved Efficiency EFF2)

Speed	Frame size	Rated output	Rated speed	Rated torque	Rated current at 400 V	Detailed selection and ordering data
rpm		kW	rpm	Nm	A	Page
Aluminum series 1LE1 (motors without external fan and fan cover)						
3000, 2-pole	100 L ... 160 L	3 ... 18.5	2835 ... 2935	10 ... 60	6 ... 34	1/38 ... 1/39
1500, 4-pole	100 L ... 160 L	2.2 ... 15	1425 ... 1460	14.8 ... 98	4.85 ... 29.5	1/38 ... 1/39
1000, 6-pole	100 L ... 160 L	1.5 ... 11	930 ... 970	15.3 ... 110	3.95 ... 23.5	1/38 ... 1/39
750, 8-pole	100 L ... 160 L	0.75 ... 7.5	700 ... 720	10.4 ... 100	2.65 ... 18.6	1/38 ... 1/39

Forced-air cooled motors without external fan and fan cover with high efficiency (High Efficiency EFF1)

Speed	Frame size	Rated output	Rated speed	Rated torque	Rated current at 400 V	Detailed selection and ordering data
rpm		kW	rpm	Nm	A	Page
Aluminum series 1LE1 (motors without external fan and fan cover)						
3000, 2-pole	100 L ... 160 L	3 ... 18.5	2905 ... 2955	9.9 ... 60	5.9 ... 33	1/42 ... 1/43
1500, 4-pole	100 L ... 160 L	2.2 ... 15	1455 ... 1475	14 ... 97	4.55 ... 27.5	1/42 ... 1/43
1000, 6-pole	100 L ... 160 L	1.5 ... 11	965 ... 975	15 ... 108	3.5 ... 22	1/42 ... 1/43
750, 8-pole	100 L ... 160 L	0.75 ... 7.5	720 ... 735	9.9 ... 98	2.75 ... 17.4	1/42 ... 1/43

Self-cooled motors without external fan and fan cover with improved efficiency

Speed	Frame size	Rated output	Rated speed	Rated torque	Rated current at 400 V	Detailed selection and ordering data
rpm		kW	rpm	Nm	A	Page
Aluminum series 1PC1 (motors without external fan and fan cover)						
3000, 2-pole	100 L ... 160 L	1.2 ... 7.4	2830 ... 2935	4.05 ... 24	2.3 ... 12.9	1/46 ... 1/47
1500, 4-pole	100 L ... 160 L	0.88 ... 6	1420 ... 1460	5.92 ... 39	1.8 ... 10.9	1/46 ... 1/47
1000, 6-pole	100 L ... 160 L	0.6 ... 4.4	930 ... 970	6.12 ... 43	1.4 ... 8.9	1/46 ... 1/47
750, 8-pole	100 L ... 160 L	0.3 ... 3	695 ... 730	4.05 ... 24	0.97 ... 6.8	1/46 ... 1/47

Self-cooled motors without external fan and fan cover with high efficiency

Speed	Frame size	Rated output	Rated speed	Rated torque	Rated current at 400 V	Detailed selection and ordering data
rpm		kW	rpm	Nm	A	Page
Aluminum series 1PC1 (motors without external fan and fan cover)						
3000, 2-pole	100 L ... 160 L	1.4 ... 9	2920 ... 2960	4.6 ... 29	2.6 ... 15.2	1/50 ... 1/51
1500, 4-pole	100 L ... 160 L	1.1 ... 6.2	1460 ... 1480	7.2 ... 40	2.2 ... 11.4	1/50 ... 1/51
1000, 6-pole	100 L ... 160 L	0.85 ... 6.5	960 ... 975	8.5 ... 64	1.92 ... 13.2	1/50 ... 1/51
750, 8-pole	100 L ... 160 L	0.37 ... 4.6	720 ... 730	4.8 ... 60	1.28 ... 10.8	1/50 ... 1/51

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Orientation**More information**

For further information, please get in touch with your local Siemens contact.

At
<http://www.siemens.com/automation/partner>
you can find details of Siemens contact partners worldwide responsible for particular technologies.

You can obtain in most cases a contact partner for

- technical support
- spare parts/repairs
- service
- training
- sales or
- technical support/engineering

The selection procedure starts with:

- a country
- a product or
- a sector.

By further specifying the remaining criteria you will find exactly the right contact partner with his/her respective expertise.

1

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

General Line motors with shorter delivery time

Selection and ordering data

Rated output at		Frame size	Operating values at rated output							Order No.	Price	Weight
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz			
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm	EFF2	η_{rated} %	η_{rated} %	$\cos\phi_{\text{rated}}$	I_{rated} A			m kg
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)												
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz												
230 VΔ/400 VY, 50 Hz; 460 VY, 60 Hz												
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾												
- Without motor protection												
3	3.45	100 L	2835	10	EFF2	82.6	83.2	0.87	6	1LE1002-1AA42-2AA0		20
4	4.6	112 M	2930	13	EFF2	84.8	84.4	0.86	7.9	1LE1002-1BA22-2AA0		25
5.5	6.3	132 S	2905	18	EFF2	86	86.6	0.89	10.4	1LE1002-1CA02-2AA0		35
7.5	8.6	132 S	2925	24	EFF2	87.6	88.7	0.88	14	1LE1002-1CA12-2AA0		40
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾												
- Without motor protection												
3	3.45	100 L	2835	10	EFF2	82.6	83.2	0.87	6	1LE1002-1AA42-2FA0		21
4	4.6	112 M	2930	13	EFF2	84.8	84.4	0.86	7.9	1LE1002-1BA22-2FA0		26
5.5	6.3	132 S	2905	18	EFF2	86	86.6	0.89	10.4	1LE1002-1CA02-2FA0		40
7.5	8.6	132 S	2925	24	EFF2	87.6	88.7	0.88	14	1LE1002-1CA12-2FA0		45
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping												
3	3.45	100 L	2835	10	EFF2	82.6	83.2	0.87	6	1LE1002-1AA42-2FB0		21
• With standard flange: IM B14, IM V18 without protective cover, IM V19 ³⁾												
- Without motor protection												
3	3.45	100 L	2835	10	EFF2	82.6	83.3	0.87	6	1LE1002-1AA42-2KA0		22
4	4.6	112 M	2930	13	EFF2	84.8	84.4	0.86	7.9	1LE1002-1BA22-2KA0		27

These motors are standard painted with special finish color RAL 7030 (stone gray).

Additional options like protective cover and condensation drainage holes are not possible.

(Connection box on top, cast feet, only basic versions possible, non-drive end (NDE) cannot be modified)

¹⁾ Only the type of construction IM B3 will be stamped on the rating plate.

²⁾ Only the type of construction IM B5 will be stamped on the rating plate.

³⁾ Only the type of construction IM B14 will be stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

General Line motors with shorter delivery time
Selection and ordering data (continued)

Order No.	Locked-rotor torque	Locked-rotor current	Breakdown torque	Torque class	Moment of inertia	Noise at rated output		Flange size according to DIN EN 50347
	with direct starting as multiple of rated torque	as multiple of rated current	torque			Measuring-surface sound pressure level at 50 Hz	Sound pressure level at 50 Hz	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	L_{pA} dB(A)	L_{WA} dB(A)	
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)								
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz								
230 VΔ/400 VY, 50 Hz; 460 VY, 60 Hz								
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾								
- Without motor protection								
1LE1002-1AA42-2AA0	3.2	6.2	2.9	16	0.0034	67	79	
1LE1002-1BA22-2AA0	2.7	7.3	3.7	16	0.0067	69	81	
1LE1002-1CA02-2AA0	2	5.6	2.6	16	0.01267	68	80	
1LE1002-1CA12-2AA0	2.2	6.4	3	16	0.01601	68	80	
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾								
- Without motor protection								
1LE1002-1AA42-2FA0	3.2	6.2	2.9	16	0.0034	67	79	FF 215
1LE1002-1BA22-2FA0	2.7	7.3	3.7	16	0.0067	69	81	FF 215
1LE1002-1CA02-2FA0	2	5.6	2.6	16	0.01267	68	80	FF 265
1LE1002-1CA12-2FA0	2.2	6.4	3	16	0.01601	68	80	FF 265
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping								
1LE1002-1AA42-2FB0	3.2	6.2	2.9	16	0.0034	67	79	FF 215
• With standard flange: IM B14, IM V18 without protective cover, IM V19 ³⁾								
- Without motor protection								
1LE1002-1AA42-2KA0	3.2	6.2	2.9	16	0.0034	67	79	FT 130
1LE1002-1BA22-2KA0	2.7	7.3	3.7	16	0.0067	69	81	FT 130

These motors are standard painted with special finish color RAL 7030 (stone gray).

Additional options like protective cover and condensation drainage holes are not possible.

(Connection box on top, cast feet, only basic versions possible, non-drive end (NDE) cannot be modified)

1) Only the type of construction IM B3 will be stamped on the rating plate.
 2) Only the type of construction IM B5 will be stamped on the rating plate.
 3) Only the type of construction IM B14 will be stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

General Line motors with shorter delivery time

Selection and ordering data (continued)

Rated output at		Frame size	Operating values at rated output							Order No.	Price	Weight
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz			
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm		η_{rated} %	η_{rated} %	$\cos\varphi_{\text{rated}}$	I_{rated} A			m kg
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)												
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz												
400 VΔ/690 VY, 50 Hz; 460 VΔ, 60 Hz												
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾												
- Without motor protection												
3	3.45	100 L	2835	10	EFF2	82.6	83.2	0.87	6	1LE1002-1AA43-4AA0	20	
4	4.6	112 M	2930	13	EFF2	84.8	84.4	0.86	7.9	1LE1002-1BA23-4AA0	25	
5.5	6.3	132 S	2905	18	EFF2	86	86.6	0.89	10.4	1LE1002-1CA03-4AA0	35	
7.5	8.6	132 S	2925	24	EFF2	87.6	88.7	0.88	14	1LE1002-1CA13-4AA0	40	
11	12.6	160 M	2920	36	EFF2	88.4	88.5	0.85	21	1LE1002-1DA23-4AA0	60	
15	17.3	160 M	2930	49	EFF2	89.5	89.7	0.84	29	1LE1002-1DA33-4AA0	68	
18.5	21.3	160 L	2935	60	EFF2	90.9	91	0.86	34	1LE1002-1DA43-4AA0	78	
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping												
3	3.45	100 L	2835	10	EFF2	82.6	83.2	0.87	6	1LE1002-1AA43-4AB0	20	
4	4.6	112 M	2930	13	EFF2	84.8	84.4	0.86	7.9	1LE1002-1BA23-4AB0	25	
5.5	6.3	132 S	2905	18	EFF2	86	86.6	0.89	10.4	1LE1002-1CA03-4AB0	35	
7.5	8.6	132 S	2925	24	EFF2	87.6	88.7	0.88	14	1LE1002-1CA13-4AB0	40	
11	12.6	160 M	2920	36	EFF2	88.4	88.5	0.85	21	1LE1002-1DA23-4AB0	60	
15	17.3	160 M	2930	49	EFF2	89.5	89.7	0.84	29	1LE1002-1DA33-4AB0	68	
18.5	21.3	160 L	2935	60	EFF2	90.9	91	0.86	34	1LE1002-1DA43-4AB0	78	
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾												
- Without motor protection												
3	3.45	100 L	2835	10	EFF2	82.6	83.2	0.87	6	1LE1002-1AA43-4FA0	21	
4	4.6	112 M	2930	13	EFF2	84.8	84.4	0.86	7.9	1LE1002-1BA23-4FA0	26	
5.5	6.3	132 S	2905	18	EFF2	86	86.6	0.89	10.4	1LE1002-1CA03-4FA0	40	
7.5	8.6	132 S	2925	24	EFF2	87.6	88.7	0.88	14	1LE1002-1CA13-4FA0	45	
11	12.6	160 M	2920	36	EFF2	88.4	88.5	0.85	21	1LE1002-1DA23-4FA0	69	
15	17.3	160 M	2930	49	EFF2	89.5	89.7	0.84	29	1LE1002-1DA33-4FA0	77	
18.5	21.3	160 L	2935	60	EFF2	90.9	91	0.86	34	1LE1002-1DA43-4FA0	87	
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping												
4	4.6	112 M	2930	13	EFF2	84.8	84.4	0.86	7.9	1LE1002-1BA23-4FB0	26	
5.5	6.3	132 S	2905	18	EFF2	86	86.6	0.89	10.4	1LE1002-1CA03-4FB0	40	
7.5	8.6	132 S	2925	24	EFF2	87.6	88.7	0.88	14	1LE1002-1CA13-4FB0	45	
11	12.6	160 M	2920	36	EFF2	88.4	88.5	0.85	21	1LE1002-1DA23-4FB0	69	
15	17.3	160 M	2930	49	EFF2	89.5	89.7	0.84	29	1LE1002-1DA33-4FB0	77	
18.5	21.3	160 L	2935	60	EFF2	90.9	91	0.86	34	1LE1002-1DA43-4FB0	87	

These motors are standard painted with special finish color RAL 7030 (stone gray).

Additional options like protective cover and condensation drainage holes are not possible.

(Connection box on top, cast feet, only basic versions possible, non-drive end (NDE) cannot be modified)

¹⁾ Only the type of construction IM B3 will be stamped on the rating plate.

²⁾ Only the type of construction IM B5 will be stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

General Line motors with shorter delivery time
Selection and ordering data (continued)

Order No.	Locked-rotor torque	Locked-rotor current	Breakdown torque	Torque class	Moment of inertia	Noise at rated output		Flange size according to DIN EN 50347
	with direct starting as multiple of rated torque	as multiple of rated current	torque			Measuring-surface sound pressure level at 50 Hz	Sound pressure level at 50 Hz	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	L_{pA} dB(A)	L_{WA} dB(A)	
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)								
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz								
400 VΔ/690 VY, 50 Hz; 460 VΔ, 60 Hz								
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾								
- Without motor protection								
1LE1002-1AA43-4AA0	3.2	6.2	2.9	16	0.0034	67	79	
1LE1002-1BA23-4AA0	2.7	7.3	3.7	16	0.0067	69	81	
1LE1002-1CA03-4AA0	2	5.6	2.6	16	0.01267	68	80	
1LE1002-1CA13-4AA0	2.2	6.4	3	16	0.01601	68	80	
1LE1002-1DA23-4AA0	2.1	6.1	2.7	16	0.02971	70	82	
1LE1002-1DA33-4AA0	2.5	6.1	3.2	16	0.03619	70	82	
1LE1002-1DA43-4AA0	2.5	7	3.2	16	0.04395	70	82	
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping								
1LE1002-1AA43-4AB0	3.2	6.2	2.9	16	0.0034	67	79	
1LE1002-1BA23-4AB0	2.7	7.3	3.7	16	0.0067	69	81	
1LE1002-1CA03-4AB0	2	5.6	2.6	16	0.01267	68	80	
1LE1002-1CA13-4AB0	2.2	6.4	3	16	0.01601	68	80	
1LE1002-1DA23-4AB0	2.1	6.1	2.7	16	0.02971	70	82	
1LE1002-1DA33-4AB0	2.5	6.1	3.2	16	0.03619	70	82	
1LE1002-1DA43-4AB0	2.5	7	3.2	16	0.04395	70	82	
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾								
- Without motor protection								
1LE1002-1AA43-4FA0	3.2	6.2	2.9	16	0.0034	67	79	FF 215
1LE1002-1BA23-4FA0	2.7	7.3	3.7	16	0.0067	69	81	FF 215
1LE1002-1CA03-4FA0	2	5.6	2.6	16	0.01267	68	80	FF 265
1LE1002-1CA13-4FA0	2.2	6.4	3	16	0.01601	68	80	FF 265
1LE1002-1DA23-4FA0	2.1	6.1	2.7	16	0.02971	70	82	FF 300
1LE1002-1DA33-4FA0	2.5	6.1	3.2	16	0.03619	70	82	FF 300
1LE1002-1DA43-4FA0	2.5	7	3.2	16	0.04395	70	82	FF 300
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping								
1LE1002-1BA23-4FB0	2.7	7.3	3.7	16	0.0067	69	81	FF 215
1LE1002-1CA03-4FB0	2	5.6	2.6	16	0.01267	68	80	FF 265
1LE1002-1CA13-4FB0	2.2	6.4	3	16	0.01601	68	80	FF 265
1LE1002-1DA23-4FB0	2.1	6.1	2.7	16	0.02971	70	82	FF 300
1LE1002-1DA33-4FB0	2.5	6.1	3.2	16	0.03619	70	82	FF 300
1LE1002-1DA43-4FB0	2.5	7	3.2	16	0.04395	70	82	FF 300

These motors are standard painted with special finish color RAL 7030 (stone gray).

Additional options like protective cover and condensation drainage holes are not possible.

(Connection box on top, cast feet, only basic versions possible, non-drive end (NDE) cannot be modified)

¹⁾ Only the type of construction IM B3 will be stamped on the rating plate.

²⁾ Only the type of construction IM B5 will be stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

General Line motors with shorter delivery time

Selection and ordering data (continued)

Rated output at		Frame size	Operating values at rated output							Order No.	Price	Weight
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz			
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm	EFF2	η_{rated} %	η_{rated} %	$\cos \varphi_{\text{rated}}$	I_{rated} A			m kg
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)												
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz												
230 VΔ/400 VY, 50 Hz; 460 VY, 60 Hz												
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾												
- Without motor protection												
2.2	2.55	100 L	1425	14.8	EFF2	81	84	0.81	4.85	1LE1002-1AB42-2AA0		18
3	3.45	100 L	1425	20.2	EFF2	82.8	83.6	0.85	6.2	1LE1002-1AB52-2AA0		22
4	4.6	112 M	1435	27	EFF2	84.2	85.1	0.84	8.2	1LE1002-1BB22-2AA0		27
5.5	6.3	132 S	1450	36	EFF2	86	86.5	0.83	11.2	1LE1002-1CB02-2AA0		38
7.5	8.6	132 M	1450	49	EFF2	87	87.4	0.83	15	1LE1002-1CB22-2AA0		44
11	12.6	160 M	1460	72	EFF2	88.4	88.1	0.82	22	1LE1002-1DB22-2AA0		62
15	17.3	160 L	1460	98	EFF2	89.4	89.7	0.82	29.5	1LE1002-1DB42-2AA0		73
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping												
2.2	2.55	100 L	1425	14.8	EFF2	81	84	0.81	4.85	1LE1002-1AB42-2AB0		18
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾												
- Without motor protection												
2.2	2.55	100 L	1425	14.8	EFF2	81	84	0.81	4.85	1LE1002-1AB42-2FA0		19
3	3.45	100 L	1425	20.2	EFF2	82.8	83.6	0.85	6.2	1LE1002-1AB52-2FA0		23
4	4.6	112 M	1435	27	EFF2	84.2	85.1	0.84	8.2	1LE1002-1BB22-2FA0		28
5.5	6.3	132 S	1450	36	EFF2	86	86.5	0.83	11.2	1LE1002-1CB02-2FA0		43
7.5	8.6	132 M	1450	49	EFF2	87	87.4	0.83	15	1LE1002-1CB22-2FA0		49
11	12.6	160 M	1460	72	EFF2	88.4	88.1	0.82	22	1LE1002-1DB22-2FA0		71
15	17.3	160 L	1460	98	EFF2	89.4	89.7	0.82	29.5	1LE1002-1DB42-2FA0		82
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping												
2.2	2.55	100 L	1425	14.8	EFF2	81	84	0.81	4.85	1LE1002-1AB42-2FB0		19
3	3.45	100 L	1425	20.2	EFF2	82.8	83.6	0.85	6.2	1LE1002-1AB52-2FB0		23
4	4.6	112 M	1435	27	EFF2	84.2	85.1	0.84	8.2	1LE1002-1BB22-2FB0		28
• With standard flange: IM B14, IM V18 without protective cover, IM V19 ³⁾												
- Without motor protection												
2.2	2.55	100 L	1425	14.8	EFF2	81	84	0.81	4.85	1LE1002-1AB42-2KA0		20
3	3.45	100 L	1425	20.2	EFF2	82.8	83.6	0.85	6.2	1LE1002-1AB52-2KA0		24
4	4.6	112 M	1435	27	EFF2	84.2	85.1	0.84	8.2	1LE1002-1BB22-2KA0		29

These motors are standard painted with special finish color RAL 7030 (stone gray).

Additional options like protective cover and condensation drainage holes are not possible.

(Connection box on top, cast feet, only basic versions possible, non-drive end (NDE) cannot be modified)

¹⁾ Only the type of construction IM B3 will be stamped on the rating plate.

²⁾ Only the type of construction IM B5 will be stamped on the rating plate.

³⁾ Only the type of construction IM B14 will be stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

General Line motors with shorter delivery time
Selection and ordering data (continued)

Order No.	Locked-rotor torque with direct starting as multiple of rated torque T_{LR}/T_{rated}	Locked-rotor current current I_{LR}/I_{rated}	Breakdown torque torque T_B/T_{rated}	Torque class CL	Moment of inertia J kgm ²	Noise at rated output Measuring-surface sound pressure level at 50 Hz $L_{p(A)}$ dB(A)	Sound pressure level at 50 Hz L_{WA} dB(A)	Flange size according to DIN EN 50347
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)								
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz								
230 VΔ/400 VY, 50 Hz; 460 VY, 60 Hz								
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾								
- Without motor protection								
1LE1002-1AB42-2AA0	2.3	5.1	2.7	16	0.0059	60	72	
1LE1002-1AB52-2AA0	2.4	5.4	2.6	16	0.0078	60	72	
1LE1002-1BB22-2AA0	2.2	5.3	2.6	16	0.0102	58	70	
1LE1002-1CB02-2AA0	2.3	6.2	2.7	16	0.0186	64	76	
1LE1002-1CB22-2AA0	2.5	6.6	2.9	16	0.02371	64	76	
1LE1002-1DB22-2AA0	2.3	6.4	3.1	16	0.04395	65	77	
1LE1002-1DB42-2AA0	2.5	7	3.4	16	0.05616	65	77	
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping								
1LE1002-1AB42-2AB0	2.3	5.1	2.7	16	0.0059	63	75	
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾								
- Without motor protection								
1LE1002-1AB42-2FA0	2.3	5.1	2.7	16	0.0059	60	72	FF 215
1LE1002-1AB52-2FA0	2.4	5.4	2.6	16	0.0078	60	72	FF 215
1LE1002-1BB22-2FA0	2.2	5.3	2.6	16	0.0102	58	70	FF 215
1LE1002-1CB02-2FA0	2.3	6.2	2.7	16	0.0186	64	76	FF 265
1LE1002-1CB22-2FA0	2.5	6.6	2.9	16	0.02371	64	76	FF 265
1LE1002-1DB22-2FA0	2.3	6.4	3.1	16	0.04395	65	77	FF 300
1LE1002-1DB42-2FA0	2.5	7	3.4	16	0.05616	65	77	FF 300
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping								
1LE1002-1AB42-2FB0	2.3	5.1	2.7	16	0.0059	60	72	FF 215
1LE1002-1AB52-2FB0	2.4	5.4	2.6	16	0.0078	60	72	FF 215
1LE1002-1BB22-2FB0	2.2	5.3	2.6	16	0.0102	58	70	FF 215
• With standard flange: IM B14, IM V18 without protective cover, IM V19 ³⁾								
- Without motor protection								
1LE1002-1AB42-2KA0	2.3	5.1	2.7	16	0.0059	60	72	FT 130
1LE1002-1AB52-2KA0	2.4	5.4	2.6	16	0.0078	63	75	FT 130
1LE1002-1BB22-2KA0	2.2	5.3	2.6	16	0.0102	58	70	FT 130

These motors are standard painted with special finish color RAL 7030 (stone gray).

Additional options like protective cover and condensation drainage holes are not possible.

(Connection box on top, cast feet, only basic versions possible, non-drive end (NDE) cannot be modified)

1) Only the type of construction IM B3 will be stamped on the rating plate.
 2) Only the type of construction IM B5 will be stamped on the rating plate.
 3) Only the type of construction IM B14 will be stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

General Line motors with shorter delivery time

Selection and ordering data (continued)

Rated output at		Frame size	Operating values at rated output							Order No.	Price	Weight
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz			
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm		η_{rated} %	η_{rated} %	$\cos\varphi_{\text{rated}}$	I_{rated} A			m kg
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)												
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz												
400 VΔ/690 VY, 50 Hz; 460 VΔ, 60 Hz												
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾												
- Without motor protection												
2.2	2.55	100 L	1425	14.8	EFF2	81	84	0.81	4.85	1LE1002-1AB43-4AA0	18	
3	3.45	100 L	1425	20.2	EFF2	82.8	83.6	0.85	6.2	1LE1002-1AB53-4AA0	22	
4	4.6	112 M	1435	27	EFF2	84.2	85.1	0.84	8.2	1LE1002-1BB23-4AA0	27	
5.5	6.3	132 S	1450	36	EFF2	86	86.5	0.83	11.2	1LE1002-1CB03-4AA0	38	
7.5	8.6	132 M	1450	49	EFF2	87	87.4	0.83	15	1LE1002-1CB23-4AA0	44	
11	12.6	160 M	1460	72	EFF2	88.4	88.1	0.82	22	1LE1002-1DB23-4AA0	62	
15	17.3	160 L	1460	98	EFF2	89.4	89.7	0.82	29.5	1LE1002-1DB43-4AA0	73	
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping												
2.2	2.55	100 L	1425	14.8	EFF2	81	84	0.81	4.85	1LE1002-1AB43-4AB0	18	
3	3.45	100 L	1425	20.2	EFF2	82.8	83.6	0.85	6.2	1LE1002-1AB53-4AB0	22	
4	4.6	112 M	1435	27	EFF2	84.2	85.1	0.84	8.2	1LE1002-1BB23-4AB0	27	
5.5	6.3	132 S	1450	36	EFF2	86	86.5	0.83	11.2	1LE1002-1CB03-4AB0	38	
7.5	8.6	132 M	1450	49	EFF2	87	87.4	0.83	15	1LE1002-1CB23-4AB0	44	
11	12.6	160 M	1460	72	EFF2	88.4	88.1	0.82	22	1LE1002-1DB23-4AB0	62	
15	17.3	160 L	1460	98	EFF2	89.4	89.7	0.82	29.5	1LE1002-1DB43-4AB0	73	
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾												
- Without motor protection												
2.2	2.55	100 L	1425	14.8	EFF2	81	84	0.81	4.85	1LE1002-1AB43-4FA0	19	
3	3.45	100 L	1425	20.2	EFF2	82.8	83.6	0.85	6.2	1LE1002-1AB53-4FA0	23	
4	4.6	112 M	1435	27	EFF2	84.2	85.1	0.84	8.2	1LE1002-1BB23-4FA0	28	
5.5	6.3	132 S	1450	36	EFF2	86	86.5	0.83	11.2	1LE1002-1CB03-4FA0	43	
7.5	8.6	132 M	1450	49	EFF2	87	87.4	0.83	15	1LE1002-1CB23-4FA0	49	
11	12.6	160 M	1460	72	EFF2	88.4	88.1	0.82	22	1LE1002-1DB23-4FA0	71	
15	17.3	160 L	1460	98	EFF2	89.4	89.7	0.82	29.5	1LE1002-1DB43-4FA0	82	
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping												
4	4.6	112 M	1435	27	EFF2	84.2	85.1	0.84	8.2	1LE1002-1BB23-4FB0	28	
5.5	6.3	132 S	1450	36	EFF2	86	86.5	0.83	11.2	1LE1002-1CB03-4FB0	43	
7.5	8.6	132 M	1450	49	EFF2	87	87.4	0.83	15	1LE1002-1CB23-4FB0	49	
11	12.6	160 M	1460	72	EFF2	88.4	88.1	0.82	22	1LE1002-1DB23-4FB0	71	
15	17.3	160 L	1460	98	EFF2	89.4	89.7	0.82	29.5	1LE1002-1DB43-4FB0	82	
• With flange: IM B35												
- Without motor protection												
5.5	6.3	132 S	1450	36	EFF2	86	86.5	0.83	11.2	1LE1002-1CB03-4JA0	43	
7.5	8.6	132 M	1450	49	EFF2	87	87.4	0.83	15	1LE1002-1CB23-4JA0	49	
11	12.6	160 M	1460	72	EFF2	88.4	88.1	0.82	22	1LE1002-1DB23-4JA0	71	
15	17.3	160 L	1460	98	EFF2	89.4	89.7	0.82	29.5	1LE1002-1DB43-4JA0	82	

These motors are standard painted with special finish color RAL 7030 (stone gray).

Additional options like protective cover and condensation drainage holes are not possible.

(Connection box on top, cast feet, only basic versions possible, non-drive end (NDE) cannot be modified)

¹⁾ Only the type of construction IM B3 will be stamped on the rating plate.

²⁾ Only the type of construction IM B5 will be stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

General Line motors with shorter delivery time

Selection and ordering data (continued)

Order No.	Locked-rotor torque with direct starting as multiple of rated torque T_{LR}/T_{rated}	Locked-rotor current as multiple of rated current I_{LR}/I_{rated}	Breakdown torque torque T_B/T_{rated}	Torque class CL	Moment of inertia J kgm ²	Noise at rated output Measuring-surface sound pressure level at 50 Hz $L_{p(A)}$ dB(A)	Sound pressure level at 50 Hz L_{WA} dB(A)	Flange size according to DIN EN 50347
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)								
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz								
400 VΔ/690 VY, 50 Hz; 460 VΔ, 60 Hz								
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾								
- Without motor protection								
1LE1002-1AB43-4AA0	2.3	5.1	2.7	16	0.0059	60	72	
1LE1002-1AB53-4AA0	2.4	5.4	2.6	16	0.0078	60	72	
1LE1002-1BB23-4AA0	2.2	5.3	2.6	16	0.0102	58	70	
1LE1002-1CB03-4AA0	2.3	6.2	2.7	16	0.0186	64	76	
1LE1002-1CB23-4AA0	2.5	6.6	2.9	16	0.02371	64	76	
1LE1002-1DB23-4AA0	2.3	6.4	3.1	16	0.04395	65	77	
1LE1002-1DB43-4AA0	2.5	7	3.4	16	0.05616	65	77	
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping								
1LE1002-1AB43-4AB0	2.3	5.1	2.7	16	0.0059	60	72	
1LE1002-1AB53-4AB0	2.4	5.4	2.6	16	0.0078	60	72	
1LE1002-1BB23-4AB0	2.2	5.3	2.6	16	0.0102	58	70	
1LE1002-1CB03-4AB0	2.3	6.2	2.7	16	0.0186	64	76	
1LE1002-1CB23-4AB0	2.5	6.6	2.9	16	0.02371	64	76	
1LE1002-1DB23-4AB0	2.3	6.4	3.1	16	0.04395	65	77	
1LE1002-1DB43-4AB0	2.5	7	3.4	16	0.05616	65	77	
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾								
- Without motor protection								
1LE1002-1AB43-4FA0	2.3	5.1	2.7	16	0.0059	60	72	FF 215
1LE1002-1AB53-4FA0	2.4	5.4	2.6	16	0.0078	60	72	FF 215
1LE1002-1BB23-4FA0	2.2	5.3	2.6	16	0.0102	58	70	FF 215
1LE1002-1CB03-4FA0	2.3	6.2	2.7	16	0.0186	64	76	FF 265
1LE1002-1CB23-4FA0	2.5	6.6	2.9	16	0.02371	64	76	FF 265
1LE1002-1DB23-4FA0	2.3	6.4	3.1	16	0.04395	65	77	FF 300
1LE1002-1DB43-4FA0	2.5	7	3.4	16	0.05616	65	77	FF 300
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping								
1LE1002-1BB23-4FB0	2.2	5.3	2.6	16	0.0102	58	70	FF 215
1LE1002-1CB03-4FB0	2.3	6.2	2.7	16	0.0186	64	76	FF 265
1LE1002-1CB23-4FB0	2.5	6.6	2.9	16	0.02371	64	76	FF 265
1LE1002-1DB23-4FB0	2.3	6.4	3.1	16	0.04395	65	77	FF 300
1LE1002-1DB43-4FB0	2.5	7	3.4	16	0.05616	65	77	FF 300
• With flange: IM B35								
- Without motor protection								
1LE1002-1CB03-4JA0	2.3	6.2	2.7	16	0.0186	64	76	FF 265
1LE1002-1CB23-4JA0	2.5	6.6	2.9	16	0.02371	64	76	FF 265
1LE1002-1DB23-4JA0	2.3	6.4	3.1	16	0.04395	65	77	FF 300
1LE1002-1DB43-4JA0	2.5	7	3.4	16	0.05616	65	77	FF 300

These motors are standard painted with special finish color RAL 7030 (stone gray).

Additional options like protective cover and condensation drainage holes are not possible.

(Connection box on top, cast feet, only basic versions possible, non-drive end (NDE) cannot be modified)

¹⁾ Only the type of construction IM B3 will be stamped on the rating plate.

²⁾ Only the type of construction IM B5 will be stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

General Line motors with shorter delivery time

Selection and ordering data (continued)

Rated output at		Frame size	Operating values at rated output							Order No.	Price	Weight
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz			
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm		η_{rated} %	η_{rated} %	$\cos \varphi_{\text{rated}}$	I_{rated} A			m kg
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)												
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz												
230 VΔ/400 VY, 50 Hz; 460 VY, 60 Hz												
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾												
- Without motor protection												
1.5	1.75	100 L	940	15.3		74	72.6	0.74	3.95	1LE1002-1AC42-2AA0		19
2.2	2.55	112 M	930	23		78	78.1	0.77	5.3	1LE1002-1BC22-2AA0		25
3	3.45	132 S	955	30		80	79.4	0.74	7.3	1LE1002-1CC02-2AA0		34
4	4.6	132 M	950	40		83	83.4	0.76	9.2	1LE1002-1CC22-2AA0		39
5.5	6.3	132 M	950	55		85	85.3	0.75	12.4	1LE1002-1CC32-2AA0		48
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾												
- Without motor protection												
1.5	1.75	100 L	940	15.3		74	72.6	0.74	3.95	1LE1002-1AC42-2FA0		20
2.2	2.55	112 M	930	23		78	78.1	0.77	5.3	1LE1002-1BC22-2FA0		26
3	3.45	132 S	955	30		80	79.4	0.74	7.3	1LE1002-1CC02-2FA0		39
4	4.6	132 M	950	40		83	83.4	0.76	9.2	1LE1002-1CC22-2FA0		44
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping												
1.5	1.75	100 L	940	15.3		74	72.6	0.74	3.95	1LE1002-1AC42-2FB0		20
2.2	2.55	112 M	930	23		78	78.1	0.77	5.3	1LE1002-1BC22-2FB0		26
3	3.45	132 S	955	30		80	79.4	0.74	7.3	1LE1002-1CC02-2FB0		39
• With standard flange: IM B14, IM V18 without protective cover, IM V19 ³⁾												
- Without motor protection												
1.5	1.75	100 L	940	15.3		74	72.6	0.74	3.95	1LE1002-1AC42-2KA0		21
2.2	2.55	112 M	930	23		78	78.1	0.77	5.3	1LE1002-1BC22-2KA0		27
400 VΔ/690 VY, 50 Hz; 460 VΔ, 60 Hz												
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾												
- Without motor protection												
3	3.45	132 S	955	30		80	79.4	0.74	7.3	1LE1002-1CC03-4AA0		34
4	4.6	132 M	950	40		83	83.4	0.76	9.2	1LE1002-1CC23-4AA0		39
5.5	6.3	132 M	950	55		85	85.3	0.75	12.4	1LE1002-1CC33-4AA0		48
7.5	8.6	160 M	970	75		86	85.4	0.73	17.2	1LE1002-1DC23-4AA0		72
11	12.6	160 L	965	110		87.6	87.9	0.77	23.5	1LE1002-1DC43-4AA0		92
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping												
3	3.45	132 S	955	30		80	79.4	0.74	7.3	1LE1002-1CC03-4AB0		34
4	4.6	132 M	950	40		83	83.4	0.76	9.2	1LE1002-1CC23-4AB0		39
5.5	6.3	132 M	950	55		85	85.3	0.75	12.4	1LE1002-1CC33-4AB0		48
7.5	8.6	160 M	970	75		86	86.5	0.73	17.2	1LE1002-1DC23-4AB0		72
11	12.6	160 L	965	110		87.6	87.9	0.77	23.5	1LE1002-1DC43-4AB0		92
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾												
- Without motor protection												
3	3.45	132 S	955	30		80	79.4	0.74	7.3	1LE1002-1CC03-4FA0		39
4	4.6	132 M	950	40		83	83.4	0.76	9.2	1LE1002-1CC23-4FA0		44
5.5	6.3	132 M	950	55		85	85.3	0.75	12.4	1LE1002-1CC33-4FA0		53
7.5	8.6	160 M	970	75		86	85.4	0.73	17.2	1LE1002-1DC23-4FA0		81
11	12.6	160 L	965	110		87.6	87.9	0.77	23.5	1LE1002-1DC43-4FA0		101
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping												
4	4.6	132 M	950	40		83	83.4	0.76	9.2	1LE1002-1CC23-4FB0		44
5.5	6.3	132 M	950	55		85	85.3	0.75	12.4	1LE1002-1CC33-4FB0		53
7.5	8.6	160 M	970	75		86	85.4	0.73	17.2	1LE1002-1DC23-4FB0		81
11	12.6	160 L	965	110		87.6	87.9	0.77	23.5	1LE1002-1DC43-4FB0		101

These motors are standard painted with special finish color RAL 7030 (stone gray).

Additional options like protective cover and condensation drainage holes are not possible.

(Connection box on top, cast feet, only basic versions possible, non-drive end (NDE) cannot be modified)

¹⁾ Only the type of construction IM B3 will be stamped on the rating plate.

²⁾ Only the type of construction IM B5 will be stamped on the rating plate.

³⁾ Only the type of construction IM B14 will be stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

General Line motors with shorter delivery time
Selection and ordering data (continued)

Order No.	Locked-rotor torque with direct starting as multiple of rated torque T_{LR}/T_{rated}	Locked-rotor current as multiple of rated current I_{LR}/I_{rated}	Breakdown torque torque T_B/T_{rated}	Torque class CL	Moment of inertia J kgm ²	Noise at rated output Measuring-surface sound pressure level at 50 Hz L_{pA} dB(A)	Sound pressure level at 50 Hz L_{WA} dB(A)	Flange size according to DIN EN 50347
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)								
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz								
230 VΔ/400 VY, 50 Hz; 460 VY, 60 Hz								
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾								
- Without motor protection								
1LE1002-1AC42-2AA0	2	4	2.2	16	0.0065	59	71	
1LE1002-1BC22-2AA0	2.1	4.1	2.4	16	0.0065	57	69	
1LE1002-1CC02-2AA0	2	4.6	2.6	16	0.0167	63	75	
1LE1002-1CC22-2AA0	2.1	4.7	2.5	16	0.02116	63	75	
1LE1002-1CC32-2AA0	2.5	5.2	2.8	16	0.02734	63	75	
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾								
- Without motor protection								
1LE1002-1AC42-2FA0	2	4	2.2	16	0.0065	59	71	FF 215
1LE1002-1BC22-2FA0	2.3	4.1	2.5	16	0.0092	57	69	FF 215
1LE1002-1CC02-2FA0	2	4.6	2.6	16	0.0167	63	75	FF 265
1LE1002-1CC22-2FA0	2.1	4.7	2.5	16	0.02116	63	75	FF 265
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping								
1LE1002-1AC42-2FB0	2	4	2.2	16	0.0065	59	71	FF 215
1LE1002-1BC22-2FB0	2.3	4.1	2.5	16	0.0092	68	80	FF 215
1LE1002-1CC02-2FB0	2	4.6	2.6	16	0.0167	63	75	FF 265
• With standard flange: IM B14, IM V18 without protective cover, IM V19 ³⁾								
- Without motor protection								
1LE1002-1AC42-2KA0	2	4	2.2	16	0.0065	59	71	FT 130
1LE1002-1BC22-2KA0	2.3	4.1	2.5	16	0.0092	68	80	FT 130
400 VΔ/690 VY, 50 Hz; 460 VΔ, 60 Hz								
• Without flange: IM B3, IM B6, IM B7, IM B8, IM V5 without protective cover, IM V6 ¹⁾								
- Without motor protection								
1LE1002-1CC03-4AA0	2	4.6	2.6	16	0.017	63	75	
1LE1002-1CC23-4AA0	2.1	4.7	2.5	16	0.02116	63	75	
1LE1002-1CC33-4AA0	2.5	5.2	2.8	16	0.02734	63	75	
1LE1002-1DC23-4AA0	2.1	5.5	2.9	16	0.04993	68	80	
1LE1002-1DC43-4AA0	1.9	5.9	2.7	16	0.0678	68	80	
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping								
1LE1002-1CC03-4AB0	2	4.6	2.6	16	0.0167	63	75	
1LE1002-1CC23-4AB0	2.1	4.7	2.5	16	0.02116	63	75	
1LE1002-1CC33-4AB0	2.5	5.2	2.8	16	0.02734	63	75	
1LE1002-1DC23-4AB0	2.1	5.5	2.9	16	0.04993	68	80	
1LE1002-1DC43-4AB0	1.9	5.9	2.7	16	0.0678	68	80	
• With flange: IM B5, IM V1 without protective cover, IM V3 ²⁾								
- Without motor protection								
1LE1002-1CC03-4FA0	2	4.6	2.6	16	0.0167	63	75	FF 265
1LE1002-1CC23-4FA0	2.1	4.7	2.5	16	0.02116	63	75	FF 265
1LE1002-1CC33-4FA0	2.5	5.2	2.8	16	0.02734	63	75	FF 265
1LE1002-1DC23-4FA0	2.1	5.5	2.9	16	0.04993	68	80	FF 300
1LE1002-1DC43-4FA0	1.9	5.9	2.7	16	0.0678	68	80	FF 300
- With motor protection with PTC thermistors with 3 embedded temperature sensors for tripping								
1LE1002-1CC23-4FB0	2.1	4.7	2.5	16	0.02116	63	75	FF 265
1LE1002-1CC33-4FB0	2.5	5.2	2.8	16	0.02734	63	75	FF 265
1LE1002-1DC23-4FB0	2.1	5.5	2.9	16	0.04993	68	80	FF 300
1LE1002-1DC43-4FB0	1.9	5.9	2.7	16	0.0678	68	80	FF 300

These motors are standard painted with special finish color RAL 7030 (stone gray).

Additional options like protective cover and condensation drainage holes are not possible.

(Connection box on top, cast feet, only basic versions possible, non-drive end (NDE) cannot be modified)

¹⁾ Only the type of construction IM B3 will be stamped on the rating plate.

²⁾ Only the type of construction IM B5 will be stamped on the rating plate.

³⁾ Only the type of construction IM B14 will be stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with improved efficiency

Selection and ordering data

Rated output at		Frame size	Operating values at rated output							Order No.	Price	Weight		
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz	For Order No. supplements for voltage, type of construction, motor protection and connection box, see table from Page 1/20.	IM B3 type of construction	IM B3 type of construction approx.		
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm		η_{rated} %	η_{rated} %	$\cos\varphi_{\text{rated}}$	I_{rated} A				m kg	
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)														
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz														
3	3.45	100 L	2835	10	EFF2	82.6	83.2	0.87	6	1LE1002-1AA4Q-QQQQ		20		
4	4.6	112 M	2930	13	EFF2	84.8	84.4	0.86	7.9	1LE1002-1BA2Q-QQQQ		25		
5.5	6.3	132 S	2905	18	EFF2	86	86.6	0.89	10.4	1LE1002-1CA0Q-QQQQ		35		
7.5	8.6	132 S	2925	24	EFF2	87.6	88.7	0.88	14	1LE1002-1CA1Q-QQQQ		40		
11	12.6	160 M	2920	36	EFF2	88.4	88.5	0.85	21	1LE1002-1DA2Q-QQQQ		60		
15	17.3	160 M	2930	49	EFF2	89.5	89.7	0.84	29	1LE1002-1DA3Q-QQQQ		68		
18.5	21.3	160 L	2935	60	EFF2	90.9	91	0.86	34	1LE1002-1DA4Q-QQQQ		78		
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz														
2.2	2.55	100 L	1425	14.8	EFF2	81	84	0.81	4.85	1LE1002-1AB4Q-QQQQ		18		
3	3.45	100 L	1425	20.2	EFF2	82.8	83.6	0.85	6.2	1LE1002-1AB5Q-QQQQ		22		
4	4.6	112 M	1435	27	EFF2	84.2	85.1	0.84	8.2	1LE1002-1BB2Q-QQQQ		27		
5.5	6.3	132 S	1450	36	EFF2	86	86.5	0.83	11.2	1LE1002-1CB0Q-QQQQ		38		
7.5	8.6	132 M	1450	49	EFF2	87	87.4	0.83	15	1LE1002-1CB2Q-QQQQ		44		
11	12.6	160 M	1460	72	EFF2	88.4	88.1	0.82	22	1LE1002-1DB2Q-QQQQ		62		
15	17.3	160 L	1460	98	EFF2	89.4	89.7	0.82	29.5	1LE1002-1DB4Q-QQQQ		73		
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz														
1.5	1.75	100 L	940	15.3		74	72.6	0.74	3.95	1LE1002-1AC4Q-QQQQ		19		
2.2	2.55	112 M	930	23		78	78.1	0.77	5.3	1LE1002-1BC2Q-QQQQ		25		
3	3.45	132 S	955	30		80	79.4	0.74	7.3	1LE1002-1CC0Q-QQQQ		34		
4	4.6	132 M	950	40		83	83.4	0.76	9.2	1LE1002-1CC2Q-QQQQ		39		
5.5	6.3	132 M	950	55		85	85.3	0.75	12.4	1LE1002-1CC3Q-QQQQ		48		
7.5	8.6	160 M	970	75		86	85.4	0.73	17.2	1LE1002-1DC2Q-QQQQ		72		
11	12.6	160 L	965	110		87.6	87.9	0.77	23.5	1LE1002-1DC4Q-QQQQ		92		
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz														
0.75	0.86	100 L	705	10.4		65.4	60.2	0.62	2.65	1LE1002-1AD4Q-QQQQ		17		
1.1	1.3	100 L	705	15.1		68.3	67.6	0.63	3.7	1LE1002-1AD5Q-QQQQ		22		
1.5	1.75	112 M	700	20		75.9	72.8	0.68	4.2	1LE1002-1BD2Q-QQQQ		25		
2.2	2.55	132 S	715	29		81	80.4	0.66	5.9	1LE1002-1CD0Q-QQQQ		37		
3	3.45	132 M	710	40		81.6	81.4	0.68	7.8	1LE1002-1CD2Q-QQQQ		44		
4	4.6	160 M	720	53		80	78.7	0.69	10.4	1LE1002-1DD2Q-QQQQ		60		
5.5	6.3	160 M	720	73		83.5	83.9	0.70	13.6	1LE1002-1DD3Q-QQQQ		72		
7.5	8.6	160 L	715	100		83.5	84.7	0.70	18.6	1LE1002-1DD4Q-QQQQ		91		

Note:

The 2-, 4-, and 6-pole motors listed above can be delivered ex stock with shorter delivery time.

These motors can be selected from defined versions (voltages, types of construction, motor protection and position of the connection box) in section "General Line motors with shorter delivery time" on Pages 1/8 to 1/17.

Order No. supplements, see from Page 1/20.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with improved efficiency

Selection and ordering data (continued)

Order No.	Locked-rotor torque with direct starting torque	Locked-rotor current as multiple of rated current	Breakdown torque torque	Torque class	Moment of inertia	Noise at rated output	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	Measuring-surface sound pressure level at 50 Hz L_{pA} dB(A)	Sound pressure level at 50 Hz L_{WA} dB(A)
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)							
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz							
1LE1002-1AA4Q-QQQQ	3.2	6.2	2.9	16	0.0034	67	79
1LE1002-1BA2Q-QQQQ	2.7	7.3	3.7	16	0.0067	69	81
1LE1002-1CA0Q-QQQQ	2	5.6	2.6	16	0.01267	68	80
1LE1002-1CA1Q-QQQQ	2.2	6.4	3	16	0.01601	68	80
1LE1002-1DA2Q-QQQQ	2.1	6.1	2.7	16	0.02971	70	82
1LE1002-1DA3Q-QQQQ	2.5	6.1	3.2	16	0.03619	70	82
1LE1002-1DA4Q-QQQQ	2.5	7	3.2	16	0.04395	70	82
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz							
1LE1002-1AB4Q-QQQQ	2.3	5.1	2.7	16	0.0059	60	72
1LE1002-1AB5Q-QQQQ	2.4	5.4	2.6	16	0.0078	60	72
1LE1002-1BB2Q-QQQQ	2.2	5.3	2.6	16	0.0102	58	70
1LE1002-1CB0Q-QQQQ	2.3	6.2	2.7	16	0.0186	64	76
1LE1002-1CB2Q-QQQQ	2.5	6.6	2.9	16	0.02371	64	76
1LE1002-1DB2Q-QQQQ	2.3	6.4	3.1	16	0.04395	65	77
1LE1002-1DB4Q-QQQQ	2.5	7	3.4	16	0.05616	65	77
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz							
1LE1002-1AC4Q-QQQQ	2	4	2.2	16	0.0065	61	73
1LE1002-1BC2Q-QQQQ	2.3	4.1	2.5	16	0.0092	68	80
1LE1002-1CC0Q-QQQQ	2	4.6	2.6	16	0.0167	63	75
1LE1002-1CC2Q-QQQQ	2.1	4.7	2.5	16	0.02116	63	75
1LE1002-1CC3Q-QQQQ	2.5	5.2	2.8	16	0.02734	63	75
1LE1002-1DC2Q-QQQQ	2.1	5.5	2.9	16	0.04993	68	80
1LE1002-1DC4Q-QQQQ	1.9	5.9	2.7	16	0.0678	68	80
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz							
1LE1002-1AD4Q-QQQQ	1.9	3	2.2	16	0.0056	60	72
1LE1002-1AD5Q-QQQQ	2	3.2	2.3	16	0.0078	60	72
1LE1002-1BD2Q-QQQQ	1.9	3.4	2.1	16	0.0094	63	75
1LE1002-1CD0Q-QQQQ	1.7	3.9	2.4	13	0.0186	63	75
1LE1002-1CD2Q-QQQQ	1.8	3.9	2.2	13	0.02372	63	75
1LE1002-1DD2Q-QQQQ	1.7	3.8	2.3	13	0.0439	63	75
1LE1002-1DD3Q-QQQQ	1.6	4	2.2	13	0.0562	63	75
1LE1002-1DD4Q-QQQQ	1.7	3.8	2.2	13	0.0772	63	75

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with improved efficiency

Selection and ordering data (continued)

Order No. supplements

Motor type	Frame size	Positions 12 and 13: Voltages (voltage codes)							
		Standard voltages				Further voltages			
		50 Hz				50 Hz			
		230 VΔ/400 VY	400 VΔ/690 VY	500 VY	500 VΔ	220 VΔ/380 VY	380 VΔ/660 VY	415 VY	415 VΔ
		60 Hz				Rated voltage range			
		460 VY	460 VΔ			(210 ... 230 VΔ/ 360 ... 400 VY) ¹⁾	(360 ... 400 VΔ/ 625 ... 695 VY) ¹⁾	(395 ... 435 VY) ¹⁾	(395 ... 435 VΔ) ¹⁾
		see "Selection and ordering data" for outputs at 60 Hz							
		22	34	27	40	21	33	23	35
1LE1002-1A...-□-□...	100 L	○	○	○	○	✓	✓	✓	✓
1LE1002-1B...-□-□...	112 M	○	○	○	○	✓	✓	✓	✓
1LE1002-1C...-□-□...	132 S/M	○	○	○	○	✓	✓	✓	✓
1LE1002-1D...-□-□...	160 M/L	○	○	○	○	✓	✓	✓	✓

○ Without additional charge
✓ With additional charge

Order other voltages with voltage code **9** in position 12, code **0** in position 13 and the corresponding order code (see "Special versions" in the "Selection and ordering data" under "Voltages", Page 1/54).

Motor type	Frame size	Position 14: Types of construction (type letter)												
		Without flange							With flange (acc. to DIN EN 50347)					
		IM B3 2) 3)	IM B6 3)	IM B7 3)	IM B8 3)	IM V6 3)	IM V5 without protect- ive cover 3)	IM V5 with protect- ive cover 3) 4) 5)	Flange size	IM B5 3) 6)	IM V1 without protect- ive cover 3)	IM V1 with protect- ive cover 3) 4) 5)	IM V3 3)	IM B35
		A	T	U	V	D	C	C -Z H00	F	G	G -Z H00	H	J	
		Order No. sup- plement -Z with order code	-	-	-	-	-	-	-	-	-	-	-	-
1LE1002-1A...-□..	100 L	□	□	□	□	□	□	✓	FF 215	✓	✓	✓	✓	✓
1LE1002-1B...-□..	112 M	□	□	□	□	□	□	✓	FF 215	✓	✓	✓	✓	✓
1LE1002-1C...-□..	132 S/M	□	□	□	□	□	□	✓	FF 265	✓	✓	✓	✓	✓
1LE1002-1D...-□..	160 M/L	□	□	□	□	□	□	✓	FF 300	✓	✓	✓	✓	✓

Motor type	Frame size	Position 14: Types of construction (type letter)											
		With standard flange (acc. to DIN EN 50347)						With standard flange (next larger standard flange acc. to DIN EN 50347)					
		Flange size	IM B14 3) 7)	IM V19 3)	IM V18 without protective cover 3)	IM V18 with protective cover 3) 4) 5)	IM B34	Flange size	IM B14 3) 7)	IM V19 3)	IM V18 without protective cover 3)	IM V18 with protective cover 3) 4) 5)	IM B34
			K	L	M	M -Z H00	N		K	L	M	M -Z H00	N
		Order No. supplement -Z with order code											
1LE1002-1A...-□...	100 L	FT 130	✓	✓	✓	✓	✓	FT 165	✓	✓	✓	✓	✓
1LE1002-1B...-□...	112 M	FT 130	✓	✓	✓	✓	✓	FT 165	✓	✓	✓	✓	✓
1LE1002-1C...-□...	132 S/M	FT 165	✓	✓	✓	✓	✓	FT 215	✓	✓	✓	✓	✓
1LE1002-1D...-□...	160 M/L	FT 215	✓	✓	✓	✓	✓	-	-	-	-	-	-

- Standard version
✓ With additional charge

¹⁾ A rated voltage range is also specified on the rating plate.

²⁾ The types of construction IM B6/7/8, IM V6 and IM V5 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B3 is then stamped on the rating plate. With type of construction IM V5 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

³⁾ The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code **H03**), it is absolutely necessary to specify the type of construction for the exact position of the condensation drainage holes during manufacture.

⁴⁾ Option second shaft extension (order code **L05**) not possible.

⁵⁾ In combination with an encoder, it is not necessary to order the protective cover (order code **H00**), as this is delivered as a protection for the encoder as standard. In this case, the protective cover is standard design (without additional charge).

⁶⁾ The types of construction IM V3 and IM V1 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B5 is then stamped on the rating plate. With type of construction IM V1 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

⁷⁾ The types of construction IM V19 and IM V18 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B14 is then stamped on the rating plate. With type of construction IM V18 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with improved efficiency

Selection and ordering data (continued)

Motor type	Frame size	Position 15: Motor protection (motor protection letter)					
		Without motor protection	Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping ¹⁾	Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ¹⁾	Motor temperature detection with embedded temperature sensor KTY 84-130 ¹⁾	NTC thermistors for tripping	Temperature detectors for tripping ¹⁾
		A	B	C	F	Z Q2A	Z Q3A
	Order code						
1LE1002-1A...-...□	100 L	□	✓	✓	✓	✓	✓
1LE1002-1B...-...□	112 M	□	✓	✓	✓	✓	✓
1LE1002-1C...-...□	132 S/M	□	✓	✓	✓	✓	✓
1LE1002-1D...-...□	160 M/L	□	✓	✓	✓	✓	✓

- Standard version
✓ With additional charge

Motortyp	Frame size	Position 16: Connection box (connection box code)			
		Connection box top ²⁾	Connection box on RHS ³⁾	Connection box on LHS ³⁾	Connection box bottom ³⁾
		4	5	6	7
1LE1002-1A...-...□	100 L	□	✓	✓	✓
1LE1002-1B...-...□	112 M	□	✓	✓	✓
1LE1002-1C...-...□	132 S/M	□	✓	✓	✓
1LE1002-1D...-...□	160 M/L	□	✓	✓	✓

- Standard version
✓ With additional charge

¹⁾ Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended.

²⁾ With type of construction, cast feet as standard. Screwed-on feet are available with order code **H01**, see "Special versions".

³⁾ With type of construction, screwed-on feet as standard.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with high efficiency

Selection and ordering data

Rated output at		Frame size	Operating values at rated output							Order No.	Price	Weight		
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz	For Order No. supplements for voltage, type of construction, motor protection and connection box, see table from Page 1/24.	IM B3 type of construction	IM B3 type of construction approx.		
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm		η_{rated} %	η_{rated} %	$\cos\varphi_{\text{rated}}$	I_{rated} A				m kg	
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)														
For use according to CEMEP														
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz														
3	3.45	100 L	2905	9.9	EFF1	86.7	87.5	0.84	5.9	1LE1001-1AA4Q-QQQQ		21		
4	4.6	112 M	2950	13	EFF1	88	88.5	0.86	7.4	1LE1001-1BA2Q-QQQQ		27		
5.5	6.3	132 S	2950	18	EFF1	89.5	90.6	0.87	10.2	1LE1001-1CA0Q-QQQQ		39		
7.5	8.6	132 S	2950	24	EFF1	90	91	0.87	13.8	1LE1001-1CA1Q-QQQQ		43		
11	12.6	160 M	2955	36	EFF1	90.8	91	0.87	20	1LE1001-1DA2Q-QQQQ		67		
15	17.3	160 M	2955	48	EFF1	91.4	91.5	0.88	27	1LE1001-1DA3Q-QQQQ		75		
18.5	21.3	160 L	2955	60	EFF1	92	92.5	0.88	33	1LE1001-1DA4Q-QQQQ		84		
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz														
2.2	2.55	100 L	1455	14	EFF1	86.4	87	0.81	4.55	1LE1001-1AB4Q-QQQQ		21		
3	3.45	100 L	1455	20	EFF1	87.4	88	0.82	6	1LE1001-1AB5Q-QQQQ		25		
4	4.6	112 M	1460	26	EFF1	88.3	88.5	0.81	8.1	1LE1001-1BB2Q-QQQQ		29		
5.5	6.3	132 S	1465	36	EFF1	89.2	89.5	0.80	11.2	1LE1001-1CB0Q-QQQQ		42		
7.5	8.6	132 M	1465	49	EFF1	90.1	91	0.83	14.4	1LE1001-1CB2Q-QQQQ		49		
11	12.6	160 M	1470	71	EFF1	91.2	91.8	0.85	20.5	1LE1001-1DB2Q-QQQQ		71		
15	17.3	160 L	1475	97	EFF1	92	92.4	0.85	27.5	1LE1001-1DB4Q-QQQQ		83		
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz														
1.5	1.75	100 L	970	15		84.5	84.5	0.73	3.5	1LE1001-1AC4Q-QQQQ		25		
2.2	2.55	112 M	965	22		85	85	0.75	5	1LE1001-1BC2Q-QQQQ		29		
3	3.45	132 S	970	30		85	85	0.74	6.9	1LE1001-1CC0Q-QQQQ		38		
4	4.6	132 M	970	39		86	86	0.78	8.6	1LE1001-1CC2Q-QQQQ		43		
5.5	6.3	132 M	970	54		88	88	0.77	11.8	1LE1001-1CC3Q-QQQQ		52		
7.5	8.6	160 M	975	73		89	89	0.77	15.8	1LE1001-1DC2Q-QQQQ		77		
11	12.6	160 L	975	108		89.5	89	0.80	22	1LE1001-1DC4Q-QQQQ		93		
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz														
0.75	0.86	100 L	725	9.9		68	65	0.58	2.75	1LE1001-1AD4Q-QQQQ		21		
1.1	1.3	100 L	725	14		68	64.5	0.58	4.05	1LE1001-1AD5Q-QQQQ		25		
1.5	1.75	112 M	720	20		77	75.5	0.67	4.2	1LE1001-1BD2Q-QQQQ		29		
2.2	2.55	132 S	725	29		77.5	76.7	0.63	6.5	1LE1001-1CD0Q-QQQQ		41		
3	3.45	132 M	730	40		84	82	0.65	7.9	1LE1001-1CD2Q-QQQQ		49		
4	4.6	160 M	730	52		87	88	0.69	9.6	1LE1001-1DD2Q-QQQQ		69		
5.5	6.3	160 M	735	72		87.5	89	0.69	13.2	1LE1001-1DD3Q-QQQQ		82		
7.5	8.6	160 L	730	98		88	89	0.72	17	1LE1001-1DD4Q-QQQQ		94		

Order No. supplements, see from Page 1/24.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with high efficiency

Selection and ordering data (continued)

Order No.	Locked-rotor torque with direct starting torque	Locked-rotor current as multiple of rated current	Breakdown torque	Torque class	Moment of inertia	Noise at rated output	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	Measuring-surface sound pressure level at 50 Hz L_{pA} dB(A)	Sound pressure level at 50 Hz L_{WA} dB(A)
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)							
For use according to CEMEP							
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz							
1LE1001-1AA4Q-QQQQ	2.3	7	3.3	16	0.0044	67	79
1LE1001-1BA2Q-QQQQ	2.4	7.4	3.3	16	0.0092	69	81
1LE1001-1CA0Q-QQQQ	1.8	6.7	2.9	16	0.02012	68	80
1LE1001-1CA1Q-QQQQ	2.2	7.5	3.1	16	0.02353	68	80
1LE1001-1DA2Q-QQQQ	2.1	7.4	3.2	16	0.04471	70	82
1LE1001-1DA3Q-QQQQ	2.4	7.6	3.4	16	0.05277	70	82
1LE1001-1DA4Q-QQQQ	2.9	7.9	3.6	16	0.06085	70	82
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz							
1LE1001-1AB4Q-QQQQ	2.1	6.9	3.3	16	0.0086	60	72
1LE1001-1AB5Q-QQQQ	2	6.9	3.1	16	0.0109	60	72
1LE1001-1BB2Q-QQQQ	2.5	7.1	3.2	16	0.014	58	70
1LE1001-1CB0Q-QQQQ	2.3	6.9	2.9	16	0.02698	64	76
1LE1001-1CB2Q-QQQQ	2.3	6.9	2.9	16	0.03353	64	76
1LE1001-1DB2Q-QQQQ	2.2	6.7	2.8	16	0.06495	65	77
1LE1001-1DB4Q-QQQQ	2.5	7.3	3	16	0.08281	65	77
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz							
1LE1001-1AC4Q-QQQQ	2	6.2	2.9	16	0.0113	59	71
1LE1001-1BC2Q-QQQQ	2.1	6	3.1	16	0.0139	57	69
1LE1001-1CC0Q-QQQQ	1.6	5.6	2.6	13	0.02371	63	75
1LE1001-1CC2Q-QQQQ	1.6	5.6	2.5	13	0.02918	63	75
1LE1001-1CC3Q-QQQQ	1.9	6.1	2.8	16	0.03673	63	75
1LE1001-1DC2Q-QQQQ	1.8	6.3	2.8	16	0.0754	67	79
1LE1001-1DC4Q-QQQQ	1.7	6.2	2.7	16	0.0975	67	79
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz							
1LE1001-1AD4Q-QQQQ	1.6	4	2.8	13	0.0086	60	72
1LE1001-1AD5Q-QQQQ	1.8	4	2.8	13	0.0109	60	72
1LE1001-1BD2Q-QQQQ	1.4	4.2	2.4	13	0.014	63	75
1LE1001-1CD0Q-QQQQ	1.4	3.6	1.8	10	0.02698	63	75
1LE1001-1CD2Q-QQQQ	1.4	5	2.4	10	0.03463	63	75
1LE1001-1DD2Q-QQQQ	1.8	4.3	2	13	0.0649	63	75
1LE1001-1DD3Q-QQQQ	2.1	4.4	2.1	13	0.0828	63	75
1LE1001-1DD4Q-QQQQ	1.9	4.5	2.1	13	0.0982	63	75

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with high efficiency

Selection and ordering data (continued)

Order No. supplements

Motor type	Frame size	Positions 12 and 13: Voltages (voltage codes)							
		Standard voltages				Further voltages			
		50 Hz				50 Hz			
		230 VΔ/400 VY	400 VΔ/690 VY	500 VY	500 VΔ	220 VΔ/380 VY	380 VΔ/660 VY	415 VY	415 VΔ
		60 Hz				Rated voltage range			
		460 VY	460 VΔ			(210 ... 230 VΔ/ 360 ... 400 VY) ¹⁾	(360 ... 400 VΔ/ 625 ... 695 VY) ¹⁾	(395 ... 435 VY) ¹⁾	(395 ... 435 VΔ) ¹⁾
		see "Selection and ordering data" for outputs at 60 Hz							
		22	34	27	40	21	33	23	35
1LE1001-1A...-Q-...	100 L	○	○	○	○	✓	✓	✓	✓
1LE1001-1B...-Q-...	112 M	○	○	○	○	✓	✓	✓	✓
1LE1001-1C...-Q-...	132 S/M	○	○	○	○	✓	✓	✓	✓
1LE1001-1D...-Q-...	160 M/L	○	○	○	○	✓	✓	✓	✓

○ Without additional charge
✓ With additional charge

Order other voltages with voltage code **9** in position 12, code **0** in position 13 and the corresponding order code (see "Special versions" in the "Selection and ordering data" under "Voltages", Page 1/54).

Motor type	Frame size	Position 14: Types of construction (type letter)												
		Without flange							With flange (acc. to DIN EN 50347)					
		IM B3 2) 3)	IM B6 3)	IM B7 3)	IM B8 3)	IM V6 3)	IM V5 without protective cover 3)	IM V5 with protective cover 3) 4) 5)	Flange size	IM B5 3) 6)	IM V1 without protective cover 3)	IM V1 with protective cover 3) 4) 5)	IM V3 3)	IM B35
		A	T	U	V	D	C	C		F	G	G	H	J
		Order No. supplement -Z with order code	-	-	-	-	-	-	-Z H00	-	-	-Z H00	-	-
1LE1001-1A...-Q..	100 L	□	□	□	□	□	□	✓	FF 215	✓	✓	✓	✓	✓
1LE1001-1B...-Q..	112 M	□	□	□	□	□	□	✓	FF 215	✓	✓	✓	✓	✓
1LE1001-1C...-Q..	132 S/M	□	□	□	□	□	□	✓	FF 265	✓	✓	✓	✓	✓
1LE1001-1D...-Q..	160 M/L	□	□	□	□	□	□	✓	FF 300	✓	✓	✓	✓	✓

Motor type	Frame size	Position 14: Types of construction (type letter)											
		With standard flange (acc. to DIN EN 50347)						With standard flange (next larger standard flange acc. to DIN EN 50347)					
		Flange size	IM B14 3) 7)	IM V19 3)	IM V18 without protective cover 3)	IM V18 with protective cover 3) 4) 5)	IM B34	Flange size	IM B14 3) 7)	IM V19 3)	IM V18 without protective cover 3)	IM V18 with protective cover 3) 4) 5)	IM B34
			K	L	M	M	N		K	L	M	M	N
			-	-	-	-Z H00	-		-Z	-Z	-Z	-Z H00	-Z
		Order No. sup- plement -Z with order code							P01	P01	P01	P01	P01
1LE1001-1A...-Q..	100 L	FT 130	✓	✓	✓	✓	✓	FT 165	✓	✓	✓	✓	✓
1LE1001-1B...-Q..	112 M	FT 130	✓	✓	✓	✓	✓	FT 165	✓	✓	✓	✓	✓
1LE1001-1C...-Q..	132 S/M	FT 165	✓	✓	✓	✓	✓	FT 215	✓	✓	✓	✓	✓
1LE1001-1D...-Q..	160 M/L	FT 215	✓	✓	✓	✓	✓	-	-	-	-	-	-

- Standard version
✓ With additional charge

¹⁾ A rated voltage range is also specified on the rating plate.

²⁾ The types of construction IM B6/7/8, IM V6 and IM V5 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B3 is then stamped on the rating plate. With type of construction IM V5 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

³⁾ The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code **H03**), it is absolutely necessary to specify the type of construction for the exact position of the condensation drainage holes during manufacture.

⁴⁾ Option second shaft extension (order code **L05**) not possible.

⁵⁾ In combination with an encoder, it is not necessary to order the protective cover (order code **H00**), as this is delivered as a protection for the encoder as standard. In this case, the protective cover is standard design (without additional charge).

⁶⁾ The types of construction IM V3 and IM V1 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B5 is then stamped on the rating plate. With type of construction IM V1 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

⁷⁾ The types of construction IM V19 and IM V18 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B14 is then stamped on the rating plate. With type of construction IM V18 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with high efficiency

Selection and ordering data (continued)

Motor type	Frame size	Position 15: Motor protection (motor protection letter)					
		Without motor protection	Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping ¹⁾	Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ¹⁾	Motor temperature detection with embedded temperature sensor KTY 84-130 ¹⁾	NTC thermistors for tripping	Temperature detectors for tripping ¹⁾
Order code		A	B	C	F	Z Q2A	Z Q3A
1LE1001-1A...-...□	100 L	□	✓	✓	✓	✓	✓
1LE1001-1B...-...□	112 M	□	✓	✓	✓	✓	✓
1LE1001-1C...-...□	132 S/M	□	✓	✓	✓	✓	✓
1LE1001-1D...-...□	160 M/L	□	✓	✓	✓	✓	✓

- Standard version
✓ With additional charge

Motor type	Frame size	Position 16: Connection box (connection box code)			
		Connection box top ²⁾	Connection box on RHS ³⁾	Connection box on LHS ³⁾	Connection box bottom ³⁾
		4	5	6	7
1LE1001-1A...-...□	100 L	□	✓	✓	✓
1LE1001-1B...-...□	112 M	□	✓	✓	✓
1LE1001-1C...-...□	132 S/M	□	✓	✓	✓
1LE1001-1D...-...□	160 M/L	□	✓	✓	✓

- Standard version
✓ With additional charge

¹⁾ Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended.

²⁾ With type of construction, cast feet as standard. Screwed-on feet are available with order code **H01**, see "Special versions".

³⁾ With type of construction, screwed-on feet as standard.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with high efficiency

Selection and ordering data (continued)

Rated output at		Frame size	Operating values at rated output						Order No.	Price	Weight
50 Hz	60 Hz		Rated speed at 60 Hz	Rated torque at 60 Hz	EPACT with CC-No. CCxxx	Nominal efficiency at 60 Hz	Power factor at 60 Hz 4/4-load	Rated current at 460 V, 60 Hz			
P_{rated} kW	P_{rated} HP	FS	n_{rated} rpm	T_{rated} Nm		η_{rated} %	$\cos\phi_{rated}$	I_{rated} A	For Order No. supplements for voltage, type of construction, motor protection and connection box, see from Page 1/28	IM B3 type of construction	IM B3 type of construction approx. m kg
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)											
For use in the North American market according to EPACT											
2-pole – 3600 rpm at 60 Hz											
3	4	100 L	3520	8.1	A. S.	86.5	0.83	5.2	1LE1001-1AA4Q-QQQQ		21
4	5	112 M	3565	9.9	A. S.	87.5	0.84	6.3	1LE1001-1BA2Q-QQQQ		27
5.5	7.5	132 S	3560	15	A. S.	89.5	0.86	9	1LE1001-1CA0Q-QQQQ		39
7.5	10	132 S	3560	20	A. S.	90.2	0.87	12	1LE1001-1CA1Q-QQQQ		43
11	15	160 M	3560	30	A. S.	90.2	0.86	17.8	1LE1001-1DA2Q-QQQQ		67
15	20	160 M	3565	40	A. S.	91	0.87	24	1LE1001-1DA3Q-QQQQ		75
18.5	25	160 L	3565	50	A. S.	91.7	0.87	29	1LE1001-1DA4Q-QQQQ		84
4-pole – 1800 rpm at 60 Hz											
2.2	3	100 L	1760	12	A. S.	87.5	0.78	4.05	1LE1001-1AB4Q-QQQQ		21
3	4	100 L	1765	16	A. S.	87.5	0.79	5.4	1LE1001-1AB5Q-QQQQ		25
4	5	112 M	1770	20	A. S.	88.5	0.77	6.8	1LE1001-1BB2Q-QQQQ		29
5.5	7.5	132 S	1770	30	A. S.	89.5	0.78	9.9	1LE1001-1CB0Q-QQQQ		42
7.5	10	132 M	1770	40	A. S.	89.5	0.82	12.8	1LE1001-1CB2Q-QQQQ		49
11	15	160 M	1775	59	A. S.	91	0.84	18.1	1LE1001-1DB2Q-QQQQ		71
15	20	160 L	1780	80	A. S.	91.7	0.84	24.5	1LE1001-1DB4Q-QQQQ		83
6-pole – 1200 rpm at 60 Hz											
1.5	2	100 L	1175	12	A. S.	86.5	0.69	3.15	1LE1001-1AC4Q-QQQQ		25
2.2	3	112 M	1170	18	A. S.	87.5	0.73	4.3	1LE1001-1BC2Q-QQQQ		29
3	4	132 S	1175	24	A. S.	87.5	0.7	6.1	1LE1001-1CC0Q-QQQQ		38
4	5	132 M	1180	30	A. S.	87.5	0.73	7.3	1LE1001-1CC2Q-QQQQ		43
5.5	7.5	132 M	1175	45	A. S.	89.5	0.74	10.4	1LE1001-1CC3Q-QQQQ		52
7.5	10	160 M	1180	61	A. S.	89.5	0.74	14.2	1LE1001-1DC2Q-QQQQ		77
11	15	160 L	1180	89	A. S.	90.2	0.78	19.6	1LE1001-1DC4Q-QQQQ		93

A. S. Available soon

Order No. supplements, see from Page 1/28.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with high efficiency

Selection and ordering data (continued)

Order No.	Locked-rotor torque with direct starting torque	Locked-rotor current as multiple of rated current	Breaddown torque	Torque class	Moment of inertia	Noise at rated output	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	Measuring-surface sound pressure level at 60 Hz $L_{p(A)}$	Sound pressure level at 60 Hz L_{WA}
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)							
For use in the North American market according to EPACT							
2-pole – 3600 rpm at 60 Hz							
1LE1001-1AA4Q-QQQQ	2.56	7.3	3.83	16	0.0044	71	83
1LE1001-1BA2Q-QQQQ	2.9	7.8	4	16	0.0092	73	85
1LE1001-1CA0Q-QQQQ	2.04	6.9	3.3	16	0.02012	72	84
1LE1001-1CA1Q-QQQQ	2.3	7.4	3.56	16	0.02353	72	84
1LE1001-1DA2Q-QQQQ	2.38	7.4	3.63	16	0.04471	77	89
1LE1001-1DA3Q-QQQQ	2.76	7.6	3.91	16	0.05277	77	89
1LE1001-1DA4Q-QQQQ	3.31	7.9	4.1	16	0.06085	77	89
4-pole – 1800 rpm at 60 Hz							
1LE1001-1AB4Q-QQQQ	2.45	7.3	3.85	16	0.0086	62	74
1LE1001-1AB5Q-QQQQ	2.38	7.5	3.68	16	0.0109	62	74
1LE1001-1BB2Q-QQQQ	3	7.5	4	16	0.014	62	74
1LE1001-1CB0Q-QQQQ	2.61	7.3	3.29	16	0.02698	68	80
1LE1001-1CB2Q-QQQQ	2.7	7.1	3.407	16	0.03353	68	80
1LE1001-1DB2Q-QQQQ	2.65	7	3.22	16	0.06495	69	81
1LE1001-1DB4Q-QQQQ	2.79	7.7	3.37	16	0.08281	69	81
6-pole – 1200 rpm at 60 Hz							
1LE1001-1AC4Q-QQQQ	2.33	6.4	3.38	16	0.0113	62	74
1LE1001-1BC2Q-QQQQ	2.3	6.5	3.4	16	0.0139	60	72
1LE1001-1CC0Q-QQQQ	1.75	5.8	3.03	13	0.02371	67	79
1LE1001-1CC2Q-QQQQ	2.08	5.8	3.166	13	0.02918	67	79
1LE1001-1CC3Q-QQQQ	2.04	6.3	3.17	16	0.03673	67	79
1LE1001-1DC2Q-QQQQ	1.95	6.3	3.213	16	0.0754	70	82
1LE1001-1DC4Q-QQQQ	1.834	6.2	2.98	16	0.0975	70	82

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with high efficiency

Selection and ordering data (continued)

Order No. supplements

Motor type	Frame size	Positions 12 and 13: Voltages (voltage codes)	
		Standard voltages	
		60 Hz	
		460 VY	460 VΔ
		see "Selection and ordering data" for outputs at 60 Hz	
		22	34
1LE1001-1A...-Q...	100 L	○	○
1LE1001-1B...-Q...	112 M	○	○
1LE1001-1C...-Q...	132 S/M	○	○
1LE1001-1D...-Q...	160 M/L	○	○

- Without additional charge
✓ With additional charge

Order other voltages with voltage code **9** in position 12, code **0** in position 13 and the corresponding order code (see "Special versions" in the "Selection and ordering data" under "Voltages", Page 1/54).

Motor type	Frame size	Position 14: Type of construction (type letter)												
		With flange							With flange (acc. to DIN EN 50347)					
		IM B3 1) 2)	IM B6 2)	IM B7 2)	IM B8 2)	IM V6 2)	IM V5 without protection cover 2)	IM V5 with protection cover 2) 3) 4)	Flange size	IM B5 2) 5)	IM V1 without protection cover 2)	IM V1 with protection cover 2) 3) 4)	IM V3 2)	IM B35
		A	T	U	V	D	C	C		F	G	G	H	J
		Order No. supplement -Z with order code	–	–	–	–	–	–	-Z H00	–	–	-Z H00	–	–
1LE1001-1A...-Q..	100 L	□	□	□	□	□	□	✓	FF 215	✓	✓	✓	✓	✓
1LE1001-1B...-Q..	112 M	□	□	□	□	□	□	✓	FF 215	✓	✓	✓	✓	✓
1LE1001-1C...-Q..	132 S/M	□	□	□	□	□	□	✓	FF 265	✓	✓	✓	✓	✓
1LE1001-1D...-Q..	160 M/L	□	□	□	□	□	□	✓	FF 300	✓	✓	✓	✓	✓

Motor type	Frame size	Position 14: Type of construction (type letter)											
		With standard flange (acc. to DIN EN 50347)						With standard flange (next larger standard flange acc. to DIN EN 50347)					
		Flange size	IM B14 2) 6)	IM V19 2)	IM V18 without protective cover 2)	IM V18 with protective cover 2) 3) 4)	IM B34	Flange size	IM B14 2) 6)	IM V19 2)	IM V18 without protective cover 2)	IM V18 with protective cover 2) 3) 4)	IM B34
			K	L	M	M	N		K	L	M	M	N
			-	-	-	-Z H00	-		-Z	-Z	-Z	-Z H00	-Z
									P01	P01	P01	P01	P01
1LE1001-1A...-Q..	100 L	FT 130	✓	✓	✓	✓	✓	FT 165	✓	✓	✓	✓	✓
1LE1001-1B...-Q..	112 M	FT 130	✓	✓	✓	✓	✓	FT 165	✓	✓	✓	✓	✓
1LE1001-1C...-Q..	132 S/M	FT 165	✓	✓	✓	✓	✓	FT 215	✓	✓	✓	✓	✓
1LE1001-1D...-Q..	160 M/L	FT 215	✓	✓	✓	✓	✓	-	-	-	-	-	-

- Standard version
✓ With additional charge

- The types of construction IM B6/7/8, IM V6 and IM V5 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B3 is then stamped on the rating plate. With type of construction IM V5 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.
- The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code **H03**), it is absolutely necessary to specify the type of construction for the exact position of the condensation drainage holes during manufacture.
- Option second shaft extension (order code **L05**) not possible
- In combination with an encoder, it is not necessary to order the protective cover (order code **H00**), as this is delivered as a protection for the encoder as standard. In this case, the protective cover is standard design (without additional charge).

- The types of construction IM V3 and IM V1 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B5 is then stamped on the rating plate. With type of construction IM V1 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.
- The types of construction IM V19 and IM V18 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B14 is then stamped on the rating plate. With type of construction IM V18 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated energy-saving motors
with high efficiency

Selection and ordering data (continued)

Motor type	Frame size	Position 15: Motor protection (motor protection letter)					
		Without motor protection	Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping ¹⁾	Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ¹⁾	Motor temperature detection with embedded temperature sensor KTY 84-130 ¹⁾	NTC thermistors for tripping	Temperature detectors for tripping ¹⁾
		A	B	C	F	Z Q2A	Z Q3A
	Order code						
1LE1001-1A...-...□	100 L	□	✓	✓	✓	✓	✓
1LE1001-1B...-...□	112 M	□	✓	✓	✓	✓	✓
1LE1001-1C...-...□	132 S/M	□	✓	✓	✓	✓	✓
1LE1001-1D...-...□	160 M/L	□	✓	✓	✓	✓	✓

- Standard version
✓ With additional charge

Motor type	Frame size	Position 16: Connection box (connection box code)			
		Connection box top ²⁾	Connection box on RHS ³⁾	Connection box on LHS ³⁾	Connection box bottom ³⁾
		4	5	6	7
1LE1001-1A...-...□	100 L	□	✓	✓	✓
1LE1001-1B...-...□	112 M	□	✓	✓	✓
1LE1001-1C...-...□	132 S/M	□	✓	✓	✓
1LE1001-1D...-...□	160 M/L	□	✓	✓	✓

- Standard version
✓ With additional charge

¹⁾ Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended.

²⁾ With type of construction, cast feet as standard. Screwed-on feet are available with order code **H01**, see "Special versions".

³⁾ With type of construction, screwed-on feet as standard.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated motors with increased output
and improved efficiency

Selection and ordering data

Rated output at		Frame size	Operating values at rated output							Order No.	Price	Weight		
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz	For Order No. supplements for voltage, type of construction, motor protection and connection box, see table from Page 1/32.	IM B3 type of construction	IM B3 type of construction approx.		
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm		η_{rated} %	η_{rated} %	$\cos\varphi_{\text{rated}}$	I_{rated} A				m kg	
Motor version: temperature class 155 (F), IP55 degree of protection, with increased output, used acc. to temperature class 130 (B) ¹⁾														
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz														
4	4.6	100 L	2850	13.3	EFF2	85.6	86.2	0.85	7.9	1LE1002-1AA6Q-□□□□		25		
5.5	6.3	112 M	2935	18	EFF2	87	85.5	0.86	10.6	1LE1002-1BA6Q-□□□□		31		
11	12.6	132 M	2920	36	EFF2	90	90.7	0.90	19.6	1LE1002-1CA6Q-□□□□		53		
22	24.5	160 L	2930	72	EFF2	91.6	91.4	0.88	39.5	1LE1002-1DA6Q-□□□□		85		
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz														
4	4.6	100 L	1430	26.8	EFF2	84.2	85.1	0.81	8.5	1LE1002-1AB6Q-□□□□		27		
5.5	6.3	112 M	1420	37	EFF2	85.7	86.5	0.81	11	1LE1002-1BB6Q-□□□□		33		
11	12.6	132 M	1450	72	EFF2	88.8	89.3	0.84	21.5	1LE1002-1CB6Q-□□□□		58		
18.5	21.3	160 L	1460	121	EFF2	90	90.2	0.85	35	1LE1002-1DB6Q-□□□□		85		
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz														
2.2	2.55	100 L	930	22.5		76	77.3	0.78	5.3	1LE1002-1AC6Q-□□□□		24		
3	3.45	112 M	945	30		79	78.2	0.72	7.6	1LE1002-1BC6Q-□□□□		32		
7.5	8.6	132 M	950	75		85.5	85.7	0.74	17.2	1LE1002-1CC6Q-□□□□		54		
15	17.3	160 L	965	148		88	88	0.75	33	1LE1002-1DC6Q-□□□□		109		

Order No. supplements, see from Page 1/32.

¹⁾ For Order No. 1LE1002-1CC6Q-□□□□ use acc. to temperature class 155 (F).

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated motors with increased output
and improved efficiency

Selection and ordering data (continued)

Order No.	Locked-rotor torque with direct starting torque	Locked-rotor current as multiple of rated current	Breakdown torque	Torque class	Moment of inertia	Noise at rated output	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	Measuring-surface sound pressure level at 50 Hz L_{pA} dB(A)	Sound pressure level at 50 Hz L_{WA} dB(A)
Motor version: temperature class 155 (F), IP55 degree of protection, with increased output, used acc. to temperature class 130 (B)							
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz							
1LE1002-1AA6Q-QQQQ	4.5	7	4.1	16	0.0044	67	79
1LE1002-1BA6Q-QQQQ	2.9	7.5	3.8	16	0.0085	69	81
1LE1002-1CA6Q-QQQQ	2.8	7.5	3.7	16	0.02233	68	80
1LE1002-1DA6Q-QQQQ	2.6	7.5	3.4	16	0.04913	70	82
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz							
1LE1002-1AB6Q-QQQQ	2.9	5.8	3.1	16	0.01	60	72
1LE1002-1BB6Q-QQQQ	3	5.8	3.1	16	0.0124	58	70
1LE1002-1CB6Q-QQQQ	2.5	7.2	3	16	0.03259	64	76
1LE1002-1DB6Q-QQQQ	2.7	7.2	3.2	16	0.06843	65	77
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz							
1LE1002-1AC6Q-QQQQ	2	4	2.2	16	0.0084	59	71
1LE1002-1BC6Q-QQQQ	2.9	4.6	3	16	0.0128	57	69
1LE1002-1CC6Q-QQQQ	2.4	5.3	3	16	0.032	63	75
1LE1002-1DC6Q-QQQQ	2.9	6	3.4	16	0.0936	67	79

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated motors with increased output and improved efficiency

Selection and ordering data (continued)

Order No. supplements

Motor type	Frame size	Positions 12 and 13: Voltages (voltage codes)							
		Standard voltages				Further voltages			
		50 Hz				50 Hz			
		230 VΔ/400 VY	400 VΔ/690 VY	500 VY	500 VΔ	220 VΔ/380 VY	380 VΔ/660 VY	415 VY	415 VΔ
		60 Hz				Rated voltage range			
		460 VY	460 VΔ			(210 ... 230 VΔ/ 360 ... 400 VY) ¹⁾	(360 ... 400 VΔ/ 625 ... 695 VY) ¹⁾	(395 ... 435 VY) ¹⁾	(395 ... 435 VΔ) ¹⁾
		see "Selection and ordering data" for outputs at 60 Hz							
		22	34	27	40	21	33	23	35
1LE1002-1A...-Q-Q...	100 L	○	○	○	○	✓	✓	✓	✓
1LE1002-1B...-Q-Q...	112 M	○	○	○	○	✓	✓	✓	✓
1LE1002-1C...-Q-Q...	132 M	○	○	○	○	✓	✓	✓	✓
1LE1002-1D...-Q-Q...	160 L	○	○	○	○	✓	✓	✓	✓

○ Without additional charge
✓ With additional charge

Order other voltages with voltage code **9** in position 12, code **0** in position 13 and the corresponding order code (see "Special versions" in the "Selection and ordering data" under "Voltages", Page 1/54).

Motor type	Frame size	Position 14: Types of construction (type letter)												
		Without flange							With flange (acc. to DIN EN 50347)					
		IM B3 2) 3)	IM B6 3)	IM B7 3)	IM B8 3)	IM V6 3)	IM V5 without protective cover 3)	IM V5 with protective cover 3) 4) 5)	Flange size	IM B5 3) 6)	IM V1 without protective cover 3)	IM V1 with protective cover 3) 4) 5)	IM V3 3)	IM B35
		A	T	U	V	D	C	C		F	G	G	H	J
		Order No. supplement -Z with order code	-	-	-	-	-	-	-Z H00		-	-	-Z H00	-
1LE1002-1A...-Q..	100 L	□	□	□	□	□	□	✓	FF 215	✓	✓	✓	✓	✓
1LE1002-1B...-Q..	112 M	□	□	□	□	□	□	✓	FF 215	✓	✓	✓	✓	✓
1LE1002-1C...-Q..	132 M	□	□	□	□	□	□	✓	FF 265	✓	✓	✓	✓	✓
1LE1002-1D...-Q..	160 L	□	□	□	□	□	□	✓	FF 300	✓	✓	✓	✓	✓

Motor type	Frame size	Position 14: Types of construction (type letter)											
		With standard flange (acc. to DIN EN 50347)						With standard flange (next larger standard flange acc. to DIN EN 50347)					
		Flange size	IM B14 3) 7)	IM V19 3)	IM V18 without protective cover 3)	IM V18 with protective cover 3) 4) 5)	IM B34	Flange size	IM B14 3) 7)	IM V19 3)	IM V18 without protective cover 3)	IM V18 with protective cover 3) 4) 5)	IM B34
			K	L	M	M -Z H00	N		K	L	M	M -Z H00	N
		Order No. supplement -Z with order code	-	-	-		-		-Z	-Z	-Z	-Z H00	-Z
		P01	P01	P01	P01	P01							
1LE1002-1A...-Q..	100 L	FT 130	✓	✓	✓	✓	✓	FT 165	✓	✓	✓	✓	✓
1LE1002-1B...-Q..	112 M	FT 130	✓	✓	✓	✓	✓	FT 165	✓	✓	✓	✓	✓
1LE1002-1C...-Q..	132 S/M	FT 165	✓	✓	✓	✓	✓	FT 215	✓	✓	✓	✓	✓
1LE1002-1D...-Q..	160 M/L	FT 215	✓	✓	✓	✓	✓	-	-	-	-	-	-

□ Standard version
✓ With additional charge

¹⁾ A rated voltage range is also specified on the rating plate.

²⁾ The types of construction IM B6/7/8, IM V6 and IM V5 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B3 is then stamped on the rating plate. With type of construction IM V5 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

³⁾ The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code **H03**), it is absolutely necessary to specify the type of construction for the exact position of the condensation drainage holes during manufacture.

⁴⁾ Option second shaft extension (order code **L05**) not possible.

⁵⁾ In combination with an encoder, it is not necessary to order the protective cover (order code **H00**), as this is delivered as a protection for the encoder as standard. In this case, the protective cover is standard design (without additional charge).

⁶⁾ The types of construction IM V3 and IM V1 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B5 is then stamped on the rating plate. With type of construction IM V1 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

⁷⁾ The types of construction IM V19 and IM V18 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B14 is then stamped on the rating plate. With type of construction IM V18 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated motors with increased output
and improved efficiency

Selection and ordering data (continued)

Motor type	Frame size	Position 15: Motor protection (motor protection letter)					
		Without motor protection	Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping ¹⁾	Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ¹⁾	Motor temperature detection with embedded temperature sensor KTY 84-130 ¹⁾	NTC thermistors for tripping	Temperature detectors for tripping ¹⁾
		A	B	C	F	Z Q2A	Z Q3A
Order code							
1LE1002-1A...-...□	100 L	□	✓	✓	✓	✓	✓
1LE1002-1B...-...□	112 M	□	✓	✓	✓	✓	✓
1LE1002-1C...-...□	132 M	□	✓	✓	✓	✓	✓
1LE1002-1D...-...□	160 L	□	✓	✓	✓	✓	✓

- Standard version
✓ With additional charge

Motor type	Frame size	Position 16: Connection box (connection box code)			
		Connection box top ²⁾	Connection box on RHS ²⁾	Connection box on LHS ²⁾	Connection box bottom ²⁾
		4	5	6	7
1LE1002-1A...-...□	100 L	□	✓	✓	✓
1LE1002-1B...-...□	112 M	□	✓	✓	✓
1LE1002-1C...-...□	132 M	□	✓	✓	✓
1LE1002-1D...-...□	160 L	□	✓	✓	✓

- Standard version
✓ With additional charge

¹⁾ Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended.

²⁾ With type of construction, screwed-on feet as standard.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated motors with increased output and high efficiency

Selection and ordering data

Rated output at		Frame size	Operating values at rated output							Order No.	Price	Weight			
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz	For Order No. supplements for voltage, type of construction, motor protection and connection box, see table from Page 1/36.	IM B3 type of construction	IM B3 type of construction approx.			
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm		η_{rated} %	η_{rated} %	$\cos\varphi_{\text{rated}}$	I_{rated} A				m kg		
Motor version: temperature class 155 (F), IP55 degree of protection, with increased output, used acc. to temperature class 130 (B)															
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz															
4	4.6	100 L	2905	13	EFF1	88	89	0.86	7.6	1LE1001-1AA6Q-QQQQ		26			
5.5	6.3	112 M	2950	18	EFF1	89	88.5	0.89	10	1LE1001-1BA6Q-QQQQ		34			
11	12.6	132 M	2955	36	EFF1	91.5	92.5	0.89	19.4	1LE1001-1CA6Q-QQQQ		57			
22	25.3	160 L	2955	71	EFF1	92.8	93.5	0.89	38.5	1LE1001-1DA6Q-QQQQ		94			
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz															
4	4.6	100 L	1460	26	EFF1	88.3	88.3	0.8	8.2	1LE1001-1AB6Q-QQQQ		30			
5.5	6.3	112 M	1460	36	EFF1	89.2	89.2	0.81	11	1LE1001-1BB6Q-QQQQ		34			
11	12.6	132 M	1465	72	EFF1	91	91.0	0.84	21	1LE1001-1CB6Q-QQQQ		64			
18.5	21.3	160 L	1475	120	EFF1	92.4	92.4	0.85	34	1LE1001-1DB6Q-QQQQ		100			
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz															
2.2	2.55	100 L	965	22		84.5	85.6	0.76	4.95	1LE1001-1AC6Q-QQQQ		30			
3	3.45	112 M	960	30		84.5	84.7	0.79	6.5	1LE1001-1BC6Q-QQQQ		34			
7.5	8.6	132 M	970	74		88.5	88.5	0.77	15.4	1LE1001-1CC6Q-QQQQ		64			
15	17.3	160 L	975	147		90.6	91	0.81	29.5	1LE1001-1DC6Q-QQQQ		115			

Order No. supplements, see from Page 1/36.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated motors with increased output
and high efficiency

Selection and ordering data (continued)

Order No.	Locked-rotor torque with direct starting torque	Locked-rotor current as multiple of rated current	Breakdown torque	Torque class	Moment of inertia	Noise at rated output	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	Measuring-surface sound pressure level at 50 Hz L_{pA} dB(A)	Sound pressure level at 50 Hz L_{WA} dB(A)
Motor version: temperature class 155 (F), IP55 degree of protection, with increased output, used acc. to temperature class 130 (B)							
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz							
1LE1001-1AA6Q-QQQQ	2.5	7.6	3.5	16	0.0054	67	79
1LE1001-1BA6Q-QQQQ	2.2	7.7	3.3	16	0.0119	73	85
1LE1001-1CA6Q-QQQQ	2.5	7.9	3.2	16	0.03143	68	80
1LE1001-1DA6Q-QQQQ	3.1	8.4	3.7	16	0.06764	70	82
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz							
1LE1001-1AB6Q-QQQQ	2.2	7.5	3.5	16	0.0137	60	72
1LE1001-1BB6Q-QQQQ	2.5	7.1	3.1	16	0.0166	58	70
1LE1001-1CB6Q-QQQQ	2.9	7.7	3.1	16	0.04571	64	76
1LE1001-1DB6Q-QQQQ	2.8	7.7	3.3	16	0.09854	65	77
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz							
1LE1001-1AC6Q-QQQQ	1.9	5.7	2.9	16	0.0137	59	71
1LE1001-1BC6Q-QQQQ	2.1	6	3.1	16	0.0166	57	69
1LE1001-1CC6Q-QQQQ	2.1	6.5	3	16	0.04572	63	75
1LE1001-1DC6Q-QQQQ	1.9	6.5	2.9	16	0.1208	67	79

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated motors with increased output and high efficiency

Selection and ordering data (continued)

Order No. supplements

Motor type	Frame size	Positions 12 and 13: Voltages (voltage codes)							
		Standard voltages				Further voltages			
		50 Hz				50 Hz			
		230 VΔ/400 VY	400 VΔ/690 VY	500 VY	500 VΔ	220 VΔ/380 VY	380 VΔ/660 VY	415 VY	415 VΔ
		60 Hz				Rated voltage range			
		460 VY	460 VΔ			(210 ... 230 VΔ/ 360 ... 400 VY) ¹⁾	(360 ... 400 VΔ/ 625 ... 695 VY) ¹⁾	(395 ... 435 VY) ¹⁾	(395 ... 435 VΔ) ¹⁾
		see "Selection and ordering data" for outputs at 60 Hz							
		22	34	27	40	21	33	23	35
1LE1001-1A...-Q-...	100 L	○	○	○	○	✓	✓	✓	✓
1LE1001-1B...-Q-...	112 M	○	○	○	○	✓	✓	✓	✓
1LE1001-1C...-Q-...	132 M	○	○	○	○	✓	✓	✓	✓
1LE1001-1D...-Q-...	160 L	○	○	○	○	✓	✓	✓	✓

○ Without additional charge
✓ With additional charge

Order other voltages with voltage code **9** in position 12, code **0** in position 13 and the corresponding order code (see "Special versions" in the "Selection and ordering data" under "Voltages", Page 1/54).

Motor type	Frame size	Position 14: Types of construction (type letter)												
		Without flange							With flange (acc. to DIN EN 50347)					
		IM B3 2) 3)	IM B6 3)	IM B7 3)	IM B8 3)	IM V6 3)	IM V5 without protective cover 3)	IM V5 with protective cover 3) 4) 5)	Flange size	IM B5 3) 6)	IM V1 without protective cover 3)	IM V1 with protective cover 3) 4) 5)	IM V3 3)	IM B35
		A	T	U	V	D	C	C		F	G	G	H	J
		Order No. supplement -Z with order code	–	–	–	–	–	–	-Z H00	–	–	-Z H00	–	–
1LE1001-1A...-Q..	100 L	□	□	□	□	□	□	✓	FF 215	✓	✓	✓	✓	✓
1LE1001-1B...-Q..	112 M	□	□	□	□	□	□	✓	FF 215	✓	✓	✓	✓	✓
1LE1001-1C...-Q..	132 M	□	□	□	□	□	□	✓	FF 265	✓	✓	✓	✓	✓
1LE1001-1D...-Q..	160 L	□	□	□	□	□	□	✓	FF 300	✓	✓	✓	✓	✓

Motor type	Frame size	Position 14: Types of construction (type letter)											
		With standard flange (acc. to DIN EN 50347)						With standard flange (next larger standard flange acc. to DIN EN 50347)					
		Flange size	IM B14 3) 7)	IM V19 3)	IM V18 without protective cover 3)	IM V18 with protective cover 3) 4) 5)	IM B34	Flange size	IM B14 3) 7)	IM V19 3)	IM V18 without protective cover 3)	IM V18 with protective cover 3) 4) 5)	IM B34
			K	L	M	M	N		K	L	M	M	N
			-	-	-	-Z H00	-		-Z	-Z	-Z	-Z H00	-Z
		Order No. supplement -Z with order code							P01	P01	P01	P01	P01
1LE1001-1A...-Q..	100 L	FT 130	✓	✓	✓	✓	✓	FT 165	✓	✓	✓	✓	✓
1LE1001-1B...-Q..	112 M	FT 130	✓	✓	✓	✓	✓	FT 165	✓	✓	✓	✓	✓
1LE1001-1C...-Q..	132 S/M	FT 165	✓	✓	✓	✓	✓	FT 215	✓	✓	✓	✓	✓
1LE1001-1D...-Q..	160 M/L	FT 215	✓	✓	✓	✓	✓	-	-	-	-	-	-

□ Standard version
✓ With additional charge

¹⁾ A rated voltage range is also specified on the rating plate.

²⁾ The types of construction IM B6/7/8, IM V6 and IM V5 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B3 is then stamped on the rating plate. With type of construction IM V5 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

³⁾ The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code **H03**), it is absolutely necessary to specify the type of construction for the exact position of the condensation drainage holes during manufacture.

⁴⁾ Option second shaft extension (order code **L05**) not possible.

⁵⁾ In combination with an encoder, it is not necessary to order the protective cover (order code **H00**), as this is delivered as a protection for the encoder as standard. In this case, the protective cover is standard design (without additional charge).

⁶⁾ The types of construction IM V3 and IM V1 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B5 is then stamped on the rating plate. With type of construction IM V1 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

⁷⁾ The types of construction IM V19 and IM V18 without protective cover/with protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B14 is then stamped on the rating plate. With type of construction IM V18 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-ventilated motors with increased output
and high efficiency

Selection and ordering data (continued)

Motor type	Frame size	Position 15: Motor protection (motor protection letter)					
		Without motor protection	Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping ¹⁾	Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ¹⁾	Motor temperature detection with embedded temperature sensor KTY 84-130 ¹⁾	NTC thermistors for tripping	Temperature detectors for tripping ¹⁾
		A	B	C	F	Z Q2A	Z Q3A
Order code							
1LE1001-1A...-□	100 L	□	✓	✓	✓	✓	✓
1LE1001-1B...-□	112 M	□	✓	✓	✓	✓	✓
1LE1001-1C...-□	132 M	□	✓	✓	✓	✓	✓
1LE1001-1D...-□	160 L	□	✓	✓	✓	✓	✓

- Standard version
✓ With additional charge

Motor type	Frame size	Position 16: Connection box (connection box code)			
		Connection box top ²⁾	Connection box on RHS ²⁾	Connection box on LHS ²⁾	Connection box bottom ²⁾
		4	5	6	7
1LE1001-1A...-...□	100 L	□	✓	✓	✓
1LE1001-1B...-...□	112 M	□	✓	✓	✓
1LE1001-1C...-...□	132 M	□	✓	✓	✓
1LE1001-1D...-...□	160 L	□	✓	✓	✓

- Standard version
✓ With additional charge

¹⁾ Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended.

²⁾ With type of construction, screwed-on feet as standard.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Forced-air cooled motors without external fan and fan cover with improved efficiency

Selection and ordering data

Rated output at		Frame size	Operating values at rated output							Order No. with -Z and order code	Price	Weight
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz			
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm	EFF2	η_{rated} %	η_{rated} %	$\cos\varphi_{rated}$	I_{rated} A	For Order No. supplements for voltage, type of construction, motor protection and connection box, see table from Page 1/40.	IM B3 type of construction	IM B3 type of construction approx. m kg
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)												
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz												
3	3.45	100 L	2835	10	EFF2	82.6	83.2	0.87	6	1LE1002-1AA4Q-0000-Z F90		20
4	4.6	112 M	2930	13	EFF2	84.8	84.4	0.86	7.9	1LE1002-1BA2Q-0000-Z F90		25
5.5	6.3	132 S	2905	18	EFF2	86	86.6	0.89	10.4	1LE1002-1CA0Q-0000-Z F90		35
7.5	8.6	132 S	2925	24	EFF2	87.6	88.7	0.88	14	1LE1002-1CA1Q-0000-Z F90		40
11	12.6	160 M	2920	36	EFF2	88.4	88.5	0.85	21	1LE1002-1DA2Q-0000-Z F90		60
15	17.3	160 M	2930	49	EFF2	89.5	89.7	0.84	29	1LE1002-1DA3Q-0000-Z F90		68
18.5	21.3	160 L	2935	60	EFF2	90.9	91	0.86	34	1LE1002-1DA4Q-0000-Z F90		78
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz												
2.2	2.55	100 L	1425	14.8	EFF2	81	84	0.81	4.85	1LE1002-1AB4Q-0000-Z F90		18
3	3.45	100 L	1425	20.2	EFF2	82.8	83.6	0.85	6.2	1LE1002-1AB5Q-0000-Z F90		22
4	4.6	112 M	1435	27	EFF2	84.2	85.1	0.84	8.2	1LE1002-1BB2Q-0000-Z F90		27
5.5	6.3	132 S	1450	36	EFF2	86	86.5	0.83	11.2	1LE1002-1CB0Q-0000-Z F90		38
7.5	8.6	132 M	1450	49	EFF2	87	87.4	0.83	15	1LE1002-1CB2Q-0000-Z F90		44
11	12.6	160 M	1460	72	EFF2	88.4	88.1	0.82	22	1LE1002-1DB2Q-0000-Z F90		62
15	17.3	160 L	1460	98	EFF2	89.4	89.7	0.82	29.5	1LE1002-1DB4Q-0000-Z F90		73
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz												
1.5	1.75	100 L	940	15.3		74	72.6	0.74	3.95	1LE1002-1AC4Q-0000-Z F90		19
2.2	2.55	112 M	930	23		78	78.1	0.77	5.3	1LE1002-1BC2Q-0000-Z F90		25
3	3.45	132 S	955	30		80	79.4	0.74	7.3	1LE1002-1CC0Q-0000-Z F90		34
4	4.6	132 M	950	40		83	83.4	0.76	9.2	1LE1002-1CC2Q-0000-Z F90		39
5.5	6.3	132 M	950	55		85	85.3	0.75	12.4	1LE1002-1CC3Q-0000-Z F90		48
7.5	8.6	160 M	970	75		86	85.4	0.73	17.2	1LE1002-1DC2Q-0000-Z F90		72
11	12.6	160 L	965	110		87.6	87.9	0.77	23.5	1LE1002-1DC4Q-0000-Z F90		92
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz												
0.75	0.86	100 L	705	10.4		65.4	60.2	0.62	2.65	1LE1002-1AD4Q-0000-Z F90		17
1.1	1.3	100 L	705	15.1		68.3	67.6	0.63	3.71	1LE1002-1AD5Q-0000-Z F90		22
1.5	1.75	112 M	700	20		75.9	72.8	0.68	4.2	1LE1002-1BD2Q-0000-Z F90		25
2.2	2.55	132 S	715	29		81	80	0.66	5.9	1LE1002-1CD0Q-0000-Z F90		37
3	3.45	132 M	710	40		81.6	81	0.68	7.8	1LE1002-1CD2Q-0000-Z F90		44
4	4.6	160 M	720	53		80	78.7	0.69	10.4	1LE1002-1DD2Q-0000-Z F90		60
5.5	6.3	160 M	720	73		83.5	83.9	0.70	13.6	1LE1002-1DD3Q-0000-Z F90		72
7.5	8.6	160 L	715	100		83.5	84.7	0.70	18.6	1LE1002-1DD4Q-0000-Z F90		91

Order No. supplements, see from Page 1/40.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Forced-air cooled motors without external fan and fan cover with improved efficiency

Selection and ordering data (continued)

Order No. with -Z and order code	Locked-rotor torque	Locked-rotor current	Breakdown torque	Torque class	Moment of inertia	Noise at rated output	
	with direct starting as multiple of rated torque	as multiple of rated current	torque			Measuring-surface sound pressure level at 50 Hz	Sound pressure level at 50 Hz
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	L_{pA} dB(A)	L_{WA} dB(A)
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)							
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz							
1LE1002-1AA4Q-QQQQ-Z F90	3.2	6.2	2.9	16	0.0034	67	79
1LE1002-1BA2Q-QQQQ-Z F90	2.7	7.3	3.7	16	0.0067	69	81
1LE1002-1CA0Q-QQQQ-Z F90	2	5.6	2.6	16	0.01267	68	80
1LE1002-1CA1Q-QQQQ-Z F90	2.2	6.4	3	16	0.01601	68	80
1LE1002-1DA2Q-QQQQ-Z F90	2.1	6.1	2.7	16	0.02971	70	82
1LE1002-1DA3Q-QQQQ-Z F90	2.5	6.1	3.2	16	0.03619	70	82
1LE1002-1DA4Q-QQQQ-Z F90	2.5	7	3.2	16	0.04395	70	82
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz							
1LE1002-1AB4Q-QQQQ-Z F90	2.3	5.1	2.7	16	0.0059	60	72
1LE1002-1AB5Q-QQQQ-Z F90	2.4	5.4	2.6	16	0.0078	60	72
1LE1002-1BB2Q-QQQQ-Z F90	2.2	5.3	2.6	16	0.0102	58	70
1LE1002-1CB0Q-QQQQ-Z F90	2.3	6.2	2.7	16	0.0186	64	76
1LE1002-1CB2Q-QQQQ-Z F90	2.5	6.6	2.9	16	0.02371	64	76
1LE1002-1DB2Q-QQQQ-Z F90	2.3	6.4	3.1	16	0.04395	65	77
1LE1002-1DB4Q-QQQQ-Z F90	2.5	7	3.4	16	0.05616	65	77
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz							
1LE1002-1AC4Q-QQQQ-Z F90	2	4	2.2	16	0.0065	59	71
1LE1002-1BC2Q-QQQQ-Z F90	2.3	4.1	2.5	16	0.0092	57	69
1LE1002-1CC0Q-QQQQ-Z F90	2	4.6	2.6	16	0.0167	63	75
1LE1002-1CC2Q-QQQQ-Z F90	2.1	4.7	2.5	16	0.02116	63	75
1LE1002-1CC3Q-QQQQ-Z F90	2.5	5.2	2.8	16	0.02734	63	75
1LE1002-1DC2Q-QQQQ-Z F90	2.1	5.5	2.9	16	0.04993	68	80
1LE1002-1DC4Q-QQQQ-Z F90	1.9	5.9	2.7	16	0.0678	68	80
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz							
1LE1002-1AD4Q-QQQQ-Z F90	1.9	3	2.2	16	0.0056	60	72
1LE1002-1AD5Q-QQQQ-Z F90	2	3.2	2.3	16	0.0078	60	72
1LE1002-1BD2Q-QQQQ-Z F90	1.9	3.4	2.1	16	0.0094	63	75
1LE1002-1CD0Q-QQQQ-Z F90	1.7	3.9	2.4	13	0.0186	63	75
1LE1002-1CD2Q-QQQQ-Z F90	1.8	3.9	2.2	13	0.02372	63	75
1LE1002-1DD2Q-QQQQ-Z F90	1.7	3.8	2.3	13	0.0439	63	75
1LE1002-1DD3Q-QQQQ-Z F90	1.6	4	2.2	13	0.0562	63	75
1LE1002-1DD4Q-QQQQ-Z F90	1.7	3.8	2.2	13	0.0772	63	75

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Forced-air cooled motors without external fan and fan cover with improved efficiency

Selection and ordering data (continued)

Order No. supplements

Motor type	Frame size	Positions 12 and 13: Voltages (voltage codes)					Further voltages			
		Standard voltages					50 Hz			
		50 Hz					220 VΔ/380 VY	380 VΔ/660 VY	415 VY	415 VΔ
		230 VΔ/400 VY	400 VΔ/690 VY	500 VY	500 VΔ					
		60 Hz					Rated voltage range			
		460 VY	460 VΔ				(210 ... 230 VΔ/360 ... 400 VY) ¹⁾	(360 ... 400 VΔ/625 ... 695 VY) ¹⁾	(395 ... 435 VY) ¹⁾	(395 ... 435 VΔ) ¹⁾
		see "Selection and ordering data" for outputs at 60 Hz								
		22	34	27	40	21	33	23	35	
1LE1002-1A...-Q...-Z	100 L	○	○	○	○	✓	✓	✓	✓	
1LE1002-1B...-Q...-Z	112 M	○	○	○	○	✓	✓	✓	✓	
1LE1002-1C...-Q...-Z	132 S/M	○	○	○	○	✓	✓	✓	✓	
1LE1002-1D...-Q...-Z	160 M/L	○	○	○	○	✓	✓	✓	✓	

○ Without additional charge
✓ With additional charge

Order other voltages with voltage code **9** in position 12, code **0** in position 13 and the corresponding order code (see "Special versions" in the "Selection and ordering data" under "Voltages", Page 1/54).

Motor type	Frame size	Position 14: Types of construction (type letter)										
		Without flange							With flange (acc. to DIN EN 50347)			
		IM B3 2) 3)	IM B6 3)	IM B7 3)	IM B8 3)	IM V6 3)	IM V5 without protective cover 3)	Flange size	IM B5 3) 4)	IM V1 without protective cover 3)	IM V3 3)	IM B35
		A	T	U	V	D	C		F	G	H	J
		Order No. supplement -Z with order code	–	–	–	–	–	–	–	–	–	–
1LE1002-1A...-Q...-Z F90	100 L	□	□	□	□	□	□	FF 215	✓	✓	✓	✓
1LE1002-1B...-Q...-Z F90	112 M	□	□	□	□	□	□	FF 215	✓	✓	✓	✓
1LE1002-1C...-Q...-Z F90	132 S/M	□	□	□	□	□	□	FF 265	✓	✓	✓	✓
1LE1002-1D...-Q...-Z F90	160 M/L	□	□	□	□	□	□	FF 300	✓	✓	✓	✓

Motor type	Frame size	Position 14: Types of construction (type letter)									
		With standard flange (acc. to DIN EN 50347)					With standard flange (next larger standard flange acc. to DIN EN 50347)				
		Flange size	IM B14 3)5)	IM V19 3)	IM V18 without protective cover 3)	IM B34	Flange size	IM B14 3)5)	IM V19 3)	IM V18 without protective cover 3)	IM B34
			K	L	M	N		K	L	M	N
		Order No. sup- plement -Z with order code	–	–	–	–		-Z	-Z	-Z	-Z
			P01	P01	P01	P01					
1LE1002-1A...-Q...-Z F90	100 L	FT 130	✓	✓	✓	✓	FT 165	✓	✓	✓	✓
1LE1002-1B...-Q...-Z F90	112 M	FT 130	✓	✓	✓	✓	FT 165	✓	✓	✓	✓
1LE1002-1C...-Q...-Z F90	132 S/M	FT 165	✓	✓	✓	✓	FT 215	✓	✓	✓	✓
1LE1002-1D...-Q...-Z F90	160 M/L	FT 215	✓	✓	✓	✓	–	–	–	–	–

□ Standard version
✓ With additional charge

¹⁾ A rated voltage range is also specified on the rating plate.

²⁾ The types of construction IM B6/7/8, IM V6 and IM V5 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B3 is then stamped on the rating plate.

³⁾ The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code **H03**), it is absolutely necessary to specify the type of construction for the exact position of the condensation drainage holes during manufacture.

⁴⁾ The types of construction IM V3 and IM V1 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B5 is then stamped on the rating plate.

⁵⁾ The types of construction IM V19 and IM V18 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B14 is then stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Forced-air cooled motors without external fan and fan cover with improved efficiency

Selection and ordering data (continued)

Motor type	Frame size	Position 15: Motor protection (motor protection letter)					
		Without motor protection	Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping ¹⁾	Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ¹⁾	Motor temperature detection with embedded temperature sensor KTY 84-130 ¹⁾	NTC thermistors for tripping	Temperature detectors for tripping ¹⁾
		A	B	C	F	Z Q2A	Z Q3A
Order code							
1LE1002-1A...-...Q-Z F90	100 L	□	✓	✓	✓	✓	✓
1LE1002-1B...-...Q-Z F90	112 M	□	✓	✓	✓	✓	✓
1LE1002-1C...-...Q-Z F90	132 S/M	□	✓	✓	✓	✓	✓
1LE1002-1D...-...Q-Z F90	160 M/L	□	✓	✓	✓	✓	✓

- Standard version
 ✓ With additional charge

Motor type	Frame size	Position 16: Connection box (connection box code)			
		Connection box top ²⁾	Connection box on RHS ³⁾	Connection box on LHS ³⁾	Connection box bottom ³⁾
		4	5	6	7
1LE1002-1A...-...Q-Z F90	100 L	□	✓	✓	✓
1LE1002-1B...-...Q-Z F90	112 M	□	✓	✓	✓
1LE1002-1C...-...Q-Z F90	132 S/M	□	✓	✓	✓
1LE1002-1D...-...Q-Z F90	160 M/L	□	✓	✓	✓

- Standard version
 ✓ With additional charge

¹⁾ Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended.

²⁾ With type of construction, cast feet as standard. Screwed-on feet are available with order code **H01**, see "Special versions".

³⁾ With type of construction, screwed-on feet as standard.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Forced-air cooled motors without external fan and fan cover with high efficiency

Selection and ordering data (continued)

Rated output at		Frame size	Operating values at rated output							Order No. with -Z and order code	Price	Weight
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz			
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm	EFF I	η_{rated} %	η_{rated} %	$\cos\varphi_{\text{rated}}$	I_{rated} A	For Order No. supplements for voltage, type of construction, motor protection and connection box, see table from Page 1/44.	IM B3 type of construction	IM B3 type of construction approx. m kg
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)												
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz												
3	3.45	100 L	2905	9.9	EFF1	86.7	87.5	0.84	5.9	1LE1001-1AA4Q-0000-Z F90		21
4	4.6	112 M	2950	13	EFF1	88	88.5	0.86	7.4	1LE1001-1BA2Q-0000-Z F90		27
5.5	6.3	132 S	2950	18	EFF1	89.5	90.6	0.87	10.2	1LE1001-1CA0Q-0000-Z F90		39
7.5	8.6	132 S	2950	24	EFF1	90	91	0.87	13.8	1LE1001-1CA1Q-0000-Z F90		43
11	12.6	160 M	2955	36	EFF1	90.8	91	0.87	20	1LE1001-1DA2Q-0000-Z F90		67
15	17.3	160 M	2955	48	EFF1	91.4	91.5	0.88	27	1LE1001-1DA3Q-0000-Z F90		75
18.5	21.3	160 L	2955	60	EFF1	92	92.5	0.88	33	1LE1001-1DA4Q-0000-Z F90		84
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz												
2.2	2.55	100 L	1455	14	EFF1	86.4	87	0.81	4.55	1LE1001-1AB4Q-0000-Z F90		21
3	3.45	100 L	1455	20	EFF1	87.4	88	0.82	6	1LE1001-1AB5Q-0000-Z F90		25
4	4.6	112 M	1460	26	EFF1	88.3	88.5	0.81	8.1	1LE1001-1BB2Q-0000-Z F90		29
5.5	6.3	132 S	1465	36	EFF1	89.2	89.5	0.80	11.2	1LE1001-1CB0Q-0000-Z F90		42
7.5	8.6	132 M	1465	49	EFF1	90.1	91	0.83	14.4	1LE1001-1CB2Q-0000-Z F90		49
11	12.6	160 M	1470	71	EFF1	91.2	91.8	0.85	20.5	1LE1001-1DB2Q-0000-Z F90		71
15	17.3	160 L	1475	97	EFF1	92	92.4	0.85	27.5	1LE1001-1DB4Q-0000-Z F90		83
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz												
1.5	1.75	100 L	970	15		84.5	84.5	0.73	3.5	1LE1001-1AC4Q-0000-Z F90		25
2.2	2.55	112 M	965	22		85	85	0.75	5	1LE1001-1BC2Q-0000-Z F90		29
3	3.45	132 S	970	30		85	85	0.74	6.9	1LE1001-1CC0Q-0000-Z F90		38
4	4.6	132 M	970	39		86	86	0.78	8.6	1LE1001-1CC2Q-0000-Z F90		43
5.5	6.3	132 M	970	54		88	88	0.77	11.8	1LE1001-1CC3Q-0000-Z F90		52
7.5	8.6	160 M	975	73		89	89	0.77	15.8	1LE1001-1DC2Q-0000-Z F90		77
11	12.6	160 L	975	108		89.5	89	0.80	22	1LE1001-1DC4Q-0000-Z F90		93
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz												
0.75	0.86	100 L	725	9.9		68	65	0.58	2.75	1LE1001-1AD4Q-0000-Z F90		21
1.1	1.3	110 L	725	14		68	64.5	0.58	4.05	1LE1001-1AD5Q-0000-Z F90		25
1.5	1.75	112 M	720	20		77	75.5	0.67	4.2	1LE1001-1BD2Q-0000-Z F90		29
2.2	2.55	132 S	725	29		77.5	76.7	0.63	6.5	1LE1001-1CD0Q-0000-Z F90		41
3	3.45	132 M	730	40		84	82	0.65	7.9	1LE1001-1CD2Q-0000-Z F90		49
4	4.6	160 M	730	52		87	88	0.69	9.6	1LE1001-1DD2Q-0000-Z F90		69
5.5	6.3	160 M	735	72		87.5	89	0.69	13.2	1LE1001-1DD3Q-0000-Z F90		82
7.5	8.6	160 L	730	98		88	89	0.72	17	1LE1001-1DD4Q-0000-Z F90		94

Order No. supplements, see from Page 1/44.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Forced-air cooled motors without external fan and fan cover with high efficiency

Selection and ordering data (continued)

Order No. with -Z and order code	Locked-rotor torque	Locked-rotor current	Breakdown torque	Torque class	Moment of inertia	Noise at rated output	
	with direct starting as multiple of rated torque	as multiple of rated current	torque			Measuring-surface sound pressure level at 50 Hz	Sound pressure level at 50 Hz
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	L_{pA} dB(A)	L_{WA} dB(A)
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)							
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz							
1LE1001-1AA4Q-QQQQ-Z F90	2.3	7	3.3	16	0.0044	67	79
1LE1001-1BA2Q-QQQQ-Z F90	2.4	7.4	3.3	16	0.0092	69	81
1LE1001-1CA0Q-QQQQ-Z F90	1.8	6.7	2.9	16	0.02012	68	80
1LE1001-1CA1Q-QQQQ-Z F90	2.2	7.5	3.1	16	0.02353	68	80
1LE1001-1DA2Q-QQQQ-Z F90	2.1	7.4	3.2	16	0.04471	70	82
1LE1001-1DA3Q-QQQQ-Z F90	2.4	7.6	3.4	16	0.05277	70	82
1LE1001-1DA4Q-QQQQ-Z F90	2.9	7.9	3.6	16	0.06085	70	82
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz							
1LE1001-1AB4Q-QQQQ-Z F90	2.1	6.9	3.3	16	0.0086	60	72
1LE1001-1AB5Q-QQQQ-Z F90	2	6.9	3.1	16	0.0109	60	72
1LE1001-1BB2Q-QQQQ-Z F90	2.5	7.1	3.2	16	0.014	58	70
1LE1001-1CB0Q-QQQQ-Z F90	2.3	6.9	2.9	16	0.02698	64	76
1LE1001-1CB2Q-QQQQ-Z F90	2.3	6.9	2.9	16	0.03353	64	76
1LE1001-1DB2Q-QQQQ-Z F90	2.2	6.7	2.8	16	0.06495	65	77
1LE1001-1DB4Q-QQQQ-Z F90	2.5	7.3	3	16	0.08281	65	77
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz							
1LE1001-1AC4Q-QQQQ-Z F90	2	6.2	2.9	16	0.0113	59	71
1LE1001-1BC2Q-QQQQ-Z F90	2.1	6	3.1	16	0.0139	57	69
1LE1001-1CC0Q-QQQQ-Z F90	1.6	5.6	2.6	13	0.02371	63	75
1LE1001-1CC2Q-QQQQ-Z F90	1.6	5.6	2.5	13	0.02918	63	75
1LE1001-1CC3Q-QQQQ-Z F90	1.9	6.1	2.8	16	0.03673	63	75
1LE1001-1DC2Q-QQQQ-Z F90	1.8	6.3	2.8	16	0.0754	67	79
1LE1001-1DC4Q-QQQQ-Z F90	1.7	6.2	2.7	16	0.0975	67	79
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz							
1LE1001-1AD4Q-QQQQ-Z F90	1.6	4	2.8	13	0.0086	60	72
1LE1001-1AD5Q-QQQQ-Z F90	1.8	4	2.8	13	0.0109	60	72
1LE1001-1BD2Q-QQQQ-Z F90	1.4	4.2	2.4	13	0.014	63	75
1LE1001-1CD0Q-QQQQ-Z F90	1.4	3.6	1.8	10	0.02698	63	75
1LE1001-1CD2Q-QQQQ-Z F90	1.4	5	2.4	10	0.03463	63	75
1LE1001-1DD2Q-QQQQ-Z F90	1.8	4.3	2	13	0.0649	63	75
1LE1001-1DD3Q-QQQQ-Z F90	2.1	4.4	2.1	13	0.0828	63	75
1LE1001-1DD4Q-QQQQ-Z F90	1.9	4.5	2.1	13	0.0982	63	75

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Forced-air cooled motors without external fan and fan cover with high efficiency

Selection and ordering data (continued)

Order No. supplements

Motor type	Frame size	Positions 12 and 13: Voltages (voltage codes)					Further voltages			
		Standard voltages					50 Hz			
		230 VΔ/400 VY	400 VΔ/690 VY	500 VY	500 VΔ		220 VΔ/380 VY	380 VΔ/660 VY	415 VY	415 VΔ
		60 Hz					Rated voltage range			
		460 VY	460 VΔ				(210 ... 230 VΔ/360 ... 400 VY) ¹⁾	(360 ... 400 VΔ/625 ... 695 VY) ¹⁾	(395 ... 435 VY) ¹⁾	(395 ... 435 VΔ) ¹⁾
		see "Selection and ordering data" for outputs at 60 Hz								
		22	34	27	40	21	33	23	35	
1LE1001-1A...-Q...-Z F90	100 L	○	○	○	○	✓	✓	✓	✓	
1LE1001-1B...-Q...-Z F90	112 M	○	○	○	○	✓	✓	✓	✓	
1LE1001-1C...-Q...-Z F90	132 S/M	○	○	○	○	✓	✓	✓	✓	
1LE1001-1D...-Q...-Z F90	160 M/L	○	○	○	○	✓	✓	✓	✓	

- Without additional charge
✓ With additional charge

Order other voltages with voltage code **9** in position 12, code **0** in position 13 and the corresponding order code (see "Special versions" in the "Selection and ordering data" under "Voltages", Page 1/54).

Motor type	Frame size	Position 14: Types of construction (type letter)										
		Without flange							With flange (acc. to DIN EN 50347)			
		IM B3 2) 3)	IM B6 3)	IM B7 3)	IM B8 3)	IM V6 3)	IM V5 without protective cover 3)	Flange size	IM B5 3) 4)	IM V1 without protective cover 3)	IM V3 3)	IM B35
		A	T	U	V	D	C		F	G	H	J
		Order No. supplement -Z with order code	–	–	–	–	–	–	–	–	–	–
1LE1001-1A...-Q...-Z F90	100 L	□	□	□	□	□	□	FF 215	✓	✓	✓	✓
1LE1001-1B...-Q...-Z F90	112 M	□	□	□	□	□	□	FF 215	✓	✓	✓	✓
1LE1001-1C...-Q...-Z F90	132 S/M	□	□	□	□	□	□	FF 265	✓	✓	✓	✓
1LE1001-1D...-Q...-Z F90	160 M/L	□	□	□	□	□	□	FF 300	✓	✓	✓	✓

Motor type	Frame size	Position 14: Types of construction (type letter)									
		With standard flange (acc. to DIN EN 50347)					With standard flange (next larger standard flange acc. to DIN EN 50347)				
		Flange size	IM B14 3) 5)	IM V19 3)	IM V18 without protective cover 3)	IM B34	Flange size	IM B14 3) 5)	IM V19 3)	IM V18 without protective cover 3)	IM B34
			K	L	M	N		K	L	M	N
		Order No. sup- plement -Z with order code	–	–	–	–		-Z	-Z	-Z	-Z
			P01	P01	P01	P01					
1LE1001-1A...-Q...-Z F90	100 L	FT 130	✓	✓	✓	✓	FT 165	✓	✓	✓	✓
1LE1001-1B...-Q...-Z F90	112 M	FT 130	✓	✓	✓	✓	FT 165	✓	✓	✓	✓
1LE1001-1C...-Q...-Z F90	132 S/M	FT 165	✓	✓	✓	✓	FT 215	✓	✓	✓	✓
1LE1001-1D...-Q...-Z F90	160 M/L	FT 215	✓	✓	✓	✓	–	–	–	–	–

- Standard version
✓ With extra price

- ¹⁾ A rated voltage range is also specified on the rating plate.
²⁾ The types of construction IM B6/7/8, IM V6 and IM V5 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B3 is then stamped on the rating plate.
³⁾ The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code **H03**), it is absolutely necessary to specify the type of construction for the exact position of the condensation drainage holes during manufacture.

- ⁴⁾ The types of construction IM V3 and IM V1 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B5 is then stamped on the rating plate.
⁵⁾ The types of construction IM V19 and IM V18 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B14 is then stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Forced-air cooled motors without external fan and fan cover with high efficiency

Selection and ordering data (continued)

Motor type	Frame size	Position 15: Motor protection (motor protection letter)					
		Without motor protection	Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping ¹⁾	Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ¹⁾	Motor temperature detection with embedded temperature sensor KTY 84-130 ¹⁾	NTC thermistors for tripping	Temperature detectors for tripping ¹⁾
		A	B	C	F	Z Q2A	Z Q3A
Order code							
1LE1001-1A...-Q-Z F90	100 L	□	✓	✓	✓	✓	✓
1LE1001-1B...-Q-Z F90	112 M	□	✓	✓	✓	✓	✓
1LE1001-1C...-Q-Z F90	132 S/M	□	✓	✓	✓	✓	✓
1LE1001-1D...-Q-Z F90	160 M/L	□	✓	✓	✓	✓	✓

- Standard version
 ✓ With additional charge

Motor type	Frame size	Position 16: Connection box (connection box code)			
		Connection box top ²⁾	Connection box on RHS ³⁾	Connection box on LHS ³⁾	Connection box bottom ³⁾
		4	5	6	7
1LE1001-1A ...-Q-Z F90	100 L	□	✓	✓	✓
1LE1001-1B ...-Q-Z F90	112 M	□	✓	✓	✓
1LE1001-1C ...-Q-Z F90	132 S/M	□	✓	✓	✓
1LE1001-1D ...-Q-Z F90	160 M/L	□	✓	✓	✓

- Standard version
 ✓ With additional charge

¹⁾ Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended.

²⁾ With type of construction, cast feet as standard. Screwed-on feet are available with order code **H01**, see "Special versions".

³⁾ With type of construction, screwed-on feet as standard.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-cooled motors without external fan and fan cover with improved efficiency

Selection and ordering data

Rated output at		Frame size	Operating values at rated output							Order No.	Price	Weight
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz			
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm		η_{rated} %	η_{rated} %	$\cos\phi_{\text{rated}}$	I_{rated} A	For Order No. supplements for voltage, type of construction, motor protection and connection box, see from Page 1/48	IM B3 type of construction	IM B3 type of construction approx.
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)												
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz												
1.2		100 L	2830	4.05		81.4		0.92	2.3	1PC1002-1AA4Q-0000Q		20
1.6		112 M	2925	5.2		83.6		0.93	2.95	1PC1002-1BA2Q-0000Q		25
2.2		132 S	2910	7.24		84		0.94	4	1PC1002-1CA0Q-0000Q		35
3		132 S	2920	9.8		87		0.93	5.35	1PC1002-1CA1Q-0000Q		40
4.4		160 M	2830	15		89.6		0.9	7.9	1PC1002-1DA2Q-0000Q		60
6		160 M	2935	20		90		0.91	10.6	1PC1002-1DA3Q-0000Q		68
7.4		160 L	2930	24		90.6		0.92	12.9	1PC1002-1DA4Q-0000Q		78
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz												
0.88		100 L	1420	5.92		80.7		0.88	1.8	1PC1002-1AB4Q-0000Q		18
1.2		100 L	1420	8.06		83		0.89	2.35	1PC1002-1AB5Q-0000Q		22
1.6		112 M	1430	11		83.7		0.89	3.1	1PC1002-1BB2Q-0000Q		27
2.2		132 S	1450	14.53		85.8		0.89	4.15	1PC1002-1CB0Q-0000Q		38
3		132 M	1450	19.8		87.2		0.89	5.58	1PC1002-1CB2Q-0000Q		44
4.4		160 M	1460	29		88		0.88	8.2	1PC1002-1DB2Q-0000Q		62
6		160 L	1460	39		89.5		0.89	10.9	1PC1002-1DB4Q-0000Q		73
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz												
0.6		100 L	935	6.12		76.1		0.81	1.4	1PC1002-1AC4Q-0000Q		19
0.88		112 M	930	9		79		0.82	1.96	1PC1002-1BC2Q-0000Q		25
1.2		132 S	950	12		80.7		0.83	2.58	1PC1002-1CC0Q-0000Q		34
1.6		132 M	950	16		83.2		0.83	3.35	1PC1002-1CC2Q-0000Q		39
2.2		132 M	950	22.13		85.1		0.83	4.5	1PC1002-1CC3Q-0000Q		48
3		160 M	970	30		86.5		0.81	6.2	1PC1002-1DC2Q-0000Q		72
4.4		160 L	970	43		88		0.81	8.9	1PC1002-1DC4Q-0000Q		92
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz												
0.3		100 L	710	4.05		66.3		0.67	0.97	1PC1002-1AD4Q-0000Q		17
0.44		100 L	705	6		71		0.69	1.3	1PC1002-1AD5Q-0000Q		22
0.6		112 M	695	8.2		75.2		0.72	1.6	1PC1002-1BD2Q-0000Q		25
0.88		132 S	720	11.66		80.6		0.71	2.2	1PC1002-1CD0Q-0000Q		37
1.2		132 M	720	16		81.5		0.72	2.95	1PC1002-1CD2Q-0000Q		44
1.6		160 M	730	21		82		0.74	3.8	1PC1002-1DD2Q-0000Q		60
2.2		160 M	730	29		85		0.74	5.1	1PC1002-1DD3Q-0000Q		72
3		160 L	730	39		86		0.74	6.8	1PC1002-1DD4Q-0000Q		91

Order No. supplements, see from Page 1/48.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-cooled motors without external fan and fan cover with improved efficiency

Selection and ordering data (continued)

Order No.	Locked-rotor torque with direct starting torque	Locked-rotor current as multiple of rated current	Breaddown torque	Torque class	Moment of inertia	Noise at rated output	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	Measuring-surface sound pressure level at 50 Hz $L_{p(A)}$	Sound pressure level at 50 Hz L_{WA}
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)							
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz							
1PC1002-1AA4Q-□□□□	3	6	3	16	0.0034	67	79
1PC1002-1BA2Q-□□□□	2.3	7.2	3	13	0.0067	69	81
1PC1002-1CA0Q-□□□□	1.7	5.3	2.3	10	0.0127	62	74
1PC1002-1CA1Q-□□□□	2	6.3	2.8	13	0.0160	62	74
1PC1002-1DA2Q-□□□□	2.1	6.3	2.9	13	0.0297	60	72
1PC1002-1DA3Q-□□□□	2.5	7	3.1	16	0.0362	60	72
1PC1002-1DA4Q-□□□□	2.5	7	3.1	16	0.0439	60	72
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz							
1PC1002-1AB4Q-□□□□	2	5.1	2.2	13	0.0059	60	72
1PC1002-1AB5Q-□□□□	2.2	5.4	2.4	13	0.0078	60	72
1PC1002-1BB2Q-□□□□	1.9	5.4	2.2	13	0.0102	58	70
1PC1002-1CB0Q-□□□□	2.2	5.7	2.6	13	0.0186	64	76
1PC1002-1CB2Q-□□□□	2.4	6.4	2.7	16	0.0237	64	76
1PC1002-1DB2Q-□□□□	2.1	7	2.8	13	0.0439	64	76
1PC1002-1DB4Q-□□□□	2.4	7.5	3	16	0.0562	64	76
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz							
1PC1002-1AC4Q-□□□□	1.8	4.1	2	10	0.0065	59	71
1PC1002-1BC2Q-□□□□	2.1	4.2	2.2	13	0.0092	55	67
1PC1002-1CC0Q-□□□□	1.7	4.5	2.2	10	0.0167	63	75
1PC1002-1CC2Q-□□□□	1.9	4.6	2.2	13	0.0212	63	75
1PC1002-1CC3Q-□□□□	2.2	5	2.5	13	0.0274	63	75
1PC1002-1DC2Q-□□□□	2.1	6	2.7	13	0.0563	67	79
1PC1002-1DC4Q-□□□□	2.1	6.4	2.8	13	0.0780	67	79
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz							
1PC1002-1AD4Q-□□□□	1.8	3.3	2.2	10	0.0056	60	72
1PC1002-1AD5Q-□□□□	1.8	3.4	2.2	10	0.0078	60	72
1PC1002-1BD2Q-□□□□	1.7	3.3	1.9	10	0.0094	63	75
1PC1002-1CD0Q-□□□□	1.6	4.2	2.3	10	0.0186	63	75
1PC1002-1CD2Q-□□□□	1.7	4.2	2.3	10	0.0237	63	75
1PC1002-1DD2Q-□□□□	1.7	4.9	2.3	10	0.0439	63	75
1PC1002-1DD3Q-□□□□	1.5	5	2.3	10	0.0562	63	75
1PC1002-1DD4Q-□□□□	1.8	5.4	2.5	10	0.0772	63	75

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-cooled motors without external fan and fan cover with improved efficiency

Selection and ordering data (continued)

Order No. supplements

Motor type	Frame size	Positions 12 and 13: Voltages (voltage codes)							
		Standard voltages				Further voltages			
		50 Hz				50 Hz			
		230 VΔ/400 VY	400 VΔ/690 VY	500 VY	500 VΔ	220 VΔ/380 VY	380 VΔ/660 VY	415 VY	415 VΔ
		60 Hz				Rated voltage range			
		460 VY	460 VΔ			(210 ... 230 VΔ/ 360 ... 400 VY) ¹⁾	(360 ... 400 VΔ/ 625 ... 695 VY) ¹⁾	(395 ... 435 VY) ¹⁾	(395 ... 435 VΔ) ¹⁾
		see "Selection and ordering data" for outputs at 60 Hz							
		22	34	27	40	21	33	23	35
1PC1002-1A...-Q...	100 L	○	○	○	○	✓	✓	✓	✓
1PC1002-1B...-Q...	112 M	○	○	○	○	✓	✓	✓	✓
1PC1002-1C...-Q...	132 S/M	○	○	○	○	✓	✓	✓	✓
1PC1002-1D...-Q...	160 M/L	○	○	○	○	✓	✓	✓	✓

○ Without additional charge
✓ With additional charge

Order other voltages with voltage code **9** in position 12, code **0** in position 13 and the corresponding order code (see "Special versions" in the "Selection and ordering data" under "Voltages", Page 1/54).

Motor type	Frame size	Position 14: Type of construction (type letter)										
		With flange						With flange (acc. to DIN EN 50347)				
		IM B3 2) 3)	IM B6 3)	IM B7 3)	IM B8 3)	IM V6 3)	IM V5 without protective cover ³⁾	Flange size	IM B5 3) 4)	IM V1 without protective cover ³⁾	IM V3 3)	IM B35
		A	T	U	V	D	C		F	G	H	J
		Order No. supplement -Z with order code										
1PC1002-1A...-Q...	100 L	□	□	□	□	□	□	FF 215	✓	✓	✓	✓
1PC1002-1B...-Q...	112 M	□	□	□	□	□	□	FF 215	✓	✓	✓	✓
1PC1002-1C...-Q...	132 S/M	□	□	□	□	□	□	FF 265	✓	✓	✓	✓
1PC1002-1D...-Q...	160 M/L	□	□	□	□	□	□	FF 300	✓	✓	✓	✓

Motor type	Frame size	Position 14: Type of construction (type letter)									
		With standard flange (acc. to DIN EN 50347)				With standard flange (next larger standard flange acc. to DIN EN 50347)					
		Flange size	IM B14 3) 5)	IM V19 3)	IM V18 without protective cover ³⁾	IM B34	Flange size	IM B14 3) 5)	IM V19 3)	IM V18 without protective cover ³⁾	IM B34
			K	L	M	N		K	L	M	N
		Order No. supplement -Z with order code									
			-Z	-Z	-Z	-Z		-Z	-Z	-Z	-Z
			P01	P01	P01	P01		P01	P01	P01	P01
1PC1002-1A...-Q...	100 L	FT 130	✓	✓	✓	✓	FT 165	✓	✓	✓	✓
1PC1002-1B...-Q...	112 M	FT 130	✓	✓	✓	✓	FT 165	✓	✓	✓	✓
1PC1002-1C...-Q...	132 S/M	FT 165	✓	✓	✓	✓	FT 215	✓	✓	✓	✓
1PC1002-1D...-Q...	160 M/L	FT 215	✓	✓	✓	✓	-	-	-	-	-

□ Standard version
✓ With additional charge

¹⁾ A rated voltage range is also specified on the rating plate.

²⁾ The types of construction IM B6/7/8, IM V6 and IM V5 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B3 is then stamped on the rating plate.

³⁾ The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code **H03**), it is absolutely necessary to specify the type of construction for the exact position of the condensation drainage holes during manufacture.

⁴⁾ The types of construction IM V3 and IM V1 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B5 is then stamped on the rating plate.

⁵⁾ The types of construction IM V19 and IM V18 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B14 is then stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-cooled motors without external fan and fan cover with improved efficiency

Selection and ordering data (continued)

Motor type	Frame size	Position 15: Motor protection (motor protection letter)					
		Without motor protection	Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping ¹⁾	Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ¹⁾	Motor temperature detection with embedded temperature sensor KTY 84-130 ¹⁾	NTC thermistors for tripping	Temperature detectors for tripping ¹⁾
		A	B	C	F	Z Q2A	Z Q3A
	Order code						
1PC1002-1A...-...□	100 L	□	✓	✓	✓	✓	✓
1PC1002-1B...-...□	112 M	□	✓	✓	✓	✓	✓
1PC1002-1C...-...□	132 S/M	□	✓	✓	✓	✓	✓
1PC1002-1D...-...□	160 M/L	□	✓	✓	✓	✓	✓

- Standard version
 ✓ With additional charge

Motor type	Frame size	Position 16: Connection box (connection box code)			
		Connection box top ²⁾	Connection box on RHS ³⁾	Connection box on LHS ³⁾	Connection box bottom ³⁾
		4	5	6	7
1PC1002-1A...-...□	100 L	□	✓	✓	✓
1PC1002-1B...-...□	112 M	□	✓	✓	✓
1PC1002-1C...-...□	132 S/M	□	✓	✓	✓
1PC1002-1D...-...□	160 M/L	□	✓	✓	✓

- Standard version
 ✓ With additional charge

¹⁾ Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended.

²⁾ With type of construction, cast feet as standard. Screwed-on feet are available with order code **H01**, see "Special versions".

³⁾ With type of construction, screwed-on feet as standard.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-cooled motors without external fan and fan cover with high efficiency

Selection and ordering data

Rated output at		Frame size	Operating values at rated output							Order No.	Price	Weight
50 Hz	60 Hz		Rated speed at 50 Hz	Rated torque at 50 Hz	Efficiency Class according to CEMEP	Efficiency at 50 Hz 4/4-load	Efficiency at 50 Hz 3/4-load	Power factor at 50 Hz 4/4-load	Rated current at 400 V, 50 Hz			
P_{rated} kW	P_{rated} kW	FS	n_{rated} rpm	T_{rated} Nm		η_{rated} %	η_{rated} %	$\cos\phi_{\text{rated}}$	I_{rated} A	For Order No. supplements for voltage, type of construction, motor protection and connection box, see from Page 1/52	IM B3 type of construction	IM B3 type of construction approx.
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)												
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz												
1.4		100 L	2920	4.6		87.5		0.88	2.6	1PC1001-1AA4Q-0000Q		21
1.6		112 M	2955	5.2		82		0.9	3.15	1PC1001-1BA2Q-0000Q		27
3.1		132 S	2955	10		91		0.89	5.5	1PC1001-1CA0Q-0000Q		39
4.3		132 S	2955	14		91.5		0.9	7.5	1PC1001-1CA1Q-0000Q		43
6.3		160 M	2955	20		94.5		0.89	10.8	1PC1001-1DA2Q-0000Q		67
6.5		160 M	2960	21		91.5		0.9	11.4	1PC1001-1DA3Q-0000Q		75
9		160 L	2960	29		93.5		0.91	15.2	1PC1001-1DA4Q-0000Q		84
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz												
1.1		100 L	1460	7.2		86		0.83	2.2	1PC1001-1AB4Q-0000Q		21
1.5		100 L	1460	9.8		86		0.84	3	1PC1001-1AB5Q-0000Q		25
2		112 M	1460	13		88.5		0.83	3.95	1PC1001-1BB2Q-0000Q		29
2.6		132 S	1465	17		89.5		0.83	5.1	1PC1001-1CB0Q-0000Q		42
4		132 M	1465	26		89.5		0.84	7.7	1PC1001-1CB2Q-0000Q		49
6		160 M	1470	39		91		0.87	11	1PC1001-1DB2Q-0000Q		71
6.2		160 L	1480	40		91.5		0.86	11.4	1PC1001-1DB4Q-0000Q		83
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz												
0.85		100 L	960	8.5		85		0.75	1.92	1PC1001-1AC4Q-0000Q		25
1.2		112 M	960	12		83.5		0.75	2.75	1PC1001-1BC2Q-0000Q		29
1.5		132 S	970	15		86.5		0.77	3.25	1PC1001-1CC0Q-0000Q		38
2.5		132 M	970	25		87		0.79	5.3	1PC1001-1CC2Q-0000Q		43
2.7		132 M	975	26		88		0.77	5.8	1PC1001-1CC3Q-0000Q		52
5		160 M	975	49		89		0.77	10.6	1PC1001-1DC2Q-0000Q		77
6.5		160 L	975	64		89.5		0.8	13.2	1PC1001-1DC4Q-0000Q		93
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz												
0.37		100 L	730	4.8		72.5		0.58	1.28	1PC1001-1AD4Q-0000Q		21
0.55		100 L	720	7.3		73		0.62	1.76	1PC1001-1AD5Q-0000Q		25
0.75		112 M	720	9.9		77.5		0.66	2.1	1PC1001-1BD2Q-0000Q		29
1.1		132 S	730	14		82.5		0.65	2.95	1PC1001-1CD0Q-0000Q		41
1.5		132 M	730	20		84		0.68	3.8	1PC1001-1CD2Q-0000Q		49
2.4		160 M	730	31		88.5		0.7	5.6	1PC1001-1DD2Q-0000Q		69
3.3		160 M	730	43		88		0.7	7.7	1PC1001-1DD3Q-0000Q		82
4.6		160 L	730	60		88		0.7	10.8	1PC1001-1DD4Q-0000Q		94

Order No. supplements, see from Page 1/52.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-cooled motors without external fan and fan cover with high efficiency

Selection and ordering data (continued)

Order No.	Locked-rotor torque with direct starting torque	Locked-rotor current as multiple of rated current	Breaddown torque	Torque class	Moment of inertia	Noise at rated output	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	Measuring-surface sound pressure level at 50 Hz $L_{p(A)}$	Sound pressure level at 50 Hz L_{WA}
Motor version: temperature class 155 (F), IP55 degree of protection, used acc. to temperature class 130 (B)							
2-pole – 3000 rpm at 50 Hz, 3600 rpm at 60 Hz							
1PC1001-1AA4Q-QQQQ	2.1	8.3	3.6	13	0.0044	67	79
1PC1001-1BA2Q-QQQQ	2.5	9.5	3.5	16	0.0092	69	81
1PC1001-1CA0Q-QQQQ	1.9	7.1	2.9	13	0.0201	62	74
1PC1001-1CA1Q-QQQQ	1.9	7.6	2.9	13	0.0235	62	74
1PC1001-1DA2Q-QQQQ	1.8	7.1	3	10	0.0447	60	72
1PC1001-1DA3Q-QQQQ	2.3	8.7	3.3	13	0.0528	60	72
1PC1001-1DA4Q-QQQQ	2.4	8.7	3.2	16	0.0608	60	72
4-pole – 1500 rpm at 50 Hz, 1800 rpm at 60 Hz							
1PC1001-1AB4Q-QQQQ	2.1	7.6	3.3	13	0.0086	60	72
1PC1001-1AB5Q-QQQQ	2.2	7.8	3.5	13	0.0109	60	72
1PC1001-1BB2Q-QQQQ	2.3	7.4	3.1	13	0.0140	58	70
1PC1001-1CB0Q-QQQQ	2.2	7.5	2.8	13	0.0270	64	76
1PC1001-1CB2Q-QQQQ	2.1	7.3	2.9	13	0.0335	64	76
1PC1001-1DB2Q-QQQQ	1.8	6	2.5	10	0.0649	64	76
1PC1001-1DB4Q-QQQQ	2.6	8.6	3.5	16	0.0828	64	76
6-pole – 1000 rpm at 50 Hz, 1200 rpm at 60 Hz							
1PC1001-1AC4Q-QQQQ	1.7	5.5	2.6	10	0.0113	59	71
1PC1001-1BC2Q-QQQQ	1.7	5.7	2.7	10	0.0139	55	67
1PC1001-1CC0Q-QQQQ	1.4	5.5	2.4	7	0.0237	63	75
1PC1001-1CC2Q-QQQQ	1.4	5.4	2.3	7	0.0292	63	75
1PC1001-1CC3Q-QQQQ	1.9	6.8	3	13	0.0367	63	75
1PC1001-1DC2Q-QQQQ	1.6	6	2.6	10	0.0754	67	79
1PC1001-1DC4Q-QQQQ	1.6	6	2.6	10	0.0975	67	79
8-pole – 750 rpm at 50 Hz, 900 rpm at 60 Hz							
1PC1001-1AD4Q-QQQQ	1.5	4.5	2.7	10	0.0086	60	72
1PC1001-1AD5Q-QQQQ	1.6	4.4	2.5	10	0.0109	60	72
1PC1001-1BD2Q-QQQQ	1.3	4.4	2.4	7	0.0140	63	75
1PC1001-1CD0Q-QQQQ	1.2	4.5	2.1	7	0.0270	63	75
1PC1001-1CD2Q-QQQQ	1.2	4.7	2.3	7	0.0346	63	75
1PC1001-1DD2Q-QQQQ	1.6	4.4	1.8	10	0.0649	63	75
1PC1001-1DD3Q-QQQQ	1.6	4.6	1.8	10	0.0828	63	75
1PC1001-1DD4Q-QQQQ	1.5	4.5	1.8	10	0.0982	63	75

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-cooled motors without external fan and fan cover with high efficiency

Selection and ordering data (continued)

Order No. supplements

Motor type	Frame size	Positions 12 and 13: Voltages (voltage codes)							
		Standard voltages				Further voltages			
		50 Hz				50 Hz			
		230 VΔ/400 VY	400 VΔ/690 VY	500 VY	500 VΔ	220 VΔ/380 VY	380 VΔ/660 VY	415 VY	415 VΔ
		60 Hz				Rated voltage range			
		460 VY	460 VΔ			(210 ... 230 VΔ/ 360 ... 400 VY) ¹⁾	(360 ... 400 VΔ/ 625 ... 695 VY) ¹⁾	(395 ... 435 VY) ¹⁾	(395 ... 435 VΔ) ¹⁾
		see "Selection and ordering data" for outputs at 60 Hz							
		22	34	27	40	21	33	23	35
1PC1001-1A...-Q...	100 L	○	○	○	○	✓	✓	✓	✓
1PC1001-1B...-Q...	112 M	○	○	○	○	✓	✓	✓	✓
1PC1001-1C...-Q...	132 S/M	○	○	○	○	✓	✓	✓	✓
1PC1001-1D...-Q...	160 M/L	○	○	○	○	✓	✓	✓	✓

○ Without additional charge
✓ With additional charge

Order other voltages with voltage code **9** in position 12, code **0** in position 13 and the corresponding order code (see "Special versions" in the "Selection and ordering data" under "Voltages", Page 1/54).

Motor type	Frame size	Position 14: Type of construction (type letter)										
		With flange						With flange (acc. to DIN EN 50347)				
		IM B3 2) 3)	IM B6 3)	IM B7 3)	IM B8 3)	IM V6 3)	IM V5 without protective cover ³⁾	Flange size	IM B5 3) 4)	IM V1 without protective cover ³⁾	IM V3 3)	IM B35
		A	T	U	V	D	C		F	G	H	J
		Order No. supplement -Z with order code										
1PC1001-1A...-Q...	100 L	□	□	□	□	□	□	FF 215	✓	✓	✓	✓
1PC1001-1B...-Q...	112 M	□	□	□	□	□	□	FF 215	✓	✓	✓	✓
1PC1001-1C...-Q...	132 S/M	□	□	□	□	□	□	FF 265	✓	✓	✓	✓
1PC1001-1D...-Q...	160 M/L	□	□	□	□	□	□	FF 300	✓	✓	✓	✓

Motor type	Frame size	Position 14: Type of construction (type letter)									
		With standard flange (acc. to DIN EN 50347)				With standard flange (next larger standard flange acc. to DIN EN 50347)					
		Flange size	IM B14 3) 5)	IM V19 3)	IM V18 without protective cover ³⁾	IM B34	Flange size	IM B14 3) 5)	IM V19 3)	IM V18 without protective cover ³⁾	IM B34
			K	L	M	N		K	L	M	N
		Order No. supplement -Z with order code									
			-Z	-Z	-Z	-Z		-Z	-Z	-Z	-Z
			P01	P01	P01	P01		P01	P01	P01	P01
1PC1001-1A...-Q...	100 L	FT 130	✓	✓	✓	✓	FT 165	✓	✓	✓	✓
1PC1001-1B...-Q...	112 M	FT 130	✓	✓	✓	✓	FT 165	✓	✓	✓	✓
1PC1001-1C...-Q...	132 S/M	FT 165	✓	✓	✓	✓	FT 215	✓	✓	✓	✓
1PC1001-1D...-Q...	160 M/L	FT 215	✓	✓	✓	✓	-	-	-	-	-

□ Standard version
✓ With additional charge

¹⁾ A rated voltage range is also specified on the rating plate.

²⁾ The types of construction IM B6/7/8, IM V6 and IM V5 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B3 is then stamped on the rating plate.

³⁾ The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code **H03**), it is absolutely necessary to specify the type of construction for the exact position of the condensation drainage holes during manufacture.

⁴⁾ The types of construction IM V3 and IM V1 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B5 is then stamped on the rating plate.

⁵⁾ The types of construction IM V19 and IM V18 without protective cover are also possible as long as no condensation drainage holes (order code **H03**) and no stamping of these types of construction on the rating plate are required. As standard, the type of construction IM B14 is then stamped on the rating plate.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Self-cooled motors without external fan and fan cover with high efficiency

Selection and ordering data (continued)

Motor type	Frame size	Position 15: Motor protection (motor protection letter)					
		Without motor protection	Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping ¹⁾	Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ¹⁾	Motor temperature detection with embedded temperature sensor KTY 84-130 ¹⁾	NTC thermistors for tripping	Temperature detectors for tripping ¹⁾
		A	B	C	F	Z Q2A	Z Q3A
	Order code						
1PC1001-1A...-...□	100 L	□	✓	✓	✓	✓	✓
1PC1001-1B...-...□	112 M	□	✓	✓	✓	✓	✓
1PC1001-1C...-...□	132 S/M	□	✓	✓	✓	✓	✓
1PC1001-1D...-...□	160 M/L	□	✓	✓	✓	✓	✓

- Standard version
 ✓ With additional charge

Motor type	Frame size	Position 16: Connection box (connection box code)			
		Connection box top ²⁾	Connection box on RHS ³⁾	Connection box on LHS ³⁾	Connection box bottom ³⁾
		4	5	6	7
1PC1001-1A...-...□	100 L	□	✓	✓	✓
1PC1001-1B...-...□	112 M	□	✓	✓	✓
1PC1001-1C...-...□	132 S/M	□	✓	✓	✓
1PC1001-1D...-...□	160 M/L	□	✓	✓	✓

- Standard version
 ✓ With additional charge

¹⁾ Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended.

²⁾ With type of construction, cast feet as standard. Screwed-on feet are available with order code **H01**, see "Special versions".

³⁾ With type of construction, screwed-on feet as standard.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Special versions

Selection and ordering data

Voltages

Additional order codes for other voltages or voltage codes
(without **-Z** supplement)

Not possible for General Line motors with shorter delivery time.

For some non-standard voltages at 50 or 60 Hz, order codes are specified. They are ordered by specifying the code digit **9** for voltage in the 12th position and **0** in the 13th position of the Order No. and the appropriate order code.

Special versions	Voltage code 12th / 13th position of the Order No.	Additional identi- fication code with order code and plain text if required	Motor type frame size								
			56	63	71	80	90	100	112	132	160
Self-ventilated energy-saving motors with improved efficiency Self-ventilated energy-saving motors with high efficiency Self-ventilated motors with increased output and improved efficiency Self-ventilated motors with increased output and high efficiency Forced-air cooled motors without external fan and fan cover with improved efficiency Forced-air cooled motors without external fan and fan cover with high efficiency Self-cooled motors without external fan and fan cover with improved efficiency Self-cooled motors without external fan and fan cover with high efficiency											
			1LE1/1PC1 (Aluminum)								
Voltage at 60 Hz											
220 VΔ/380 VY; 50 Hz output	9	0	M2A					✓	✓	✓	✓
220 VΔ/380 VY; 60 Hz output	9	0	M1A					✓	✓	✓	✓
380 VΔ/660 VY; 50 Hz output	9	0	M2B					✓	✓	✓	✓
380 VΔ/660 VY; 60 Hz output	9	0	M1B					✓	✓	✓	✓
440 VY; 50 Hz output	9	0	M2C					✓	✓	✓	✓
440 VY; 60 Hz output	9	0	M1C					✓	✓	✓	✓
440 VΔ; 50 Hz output	9	0	M2D					✓	✓	✓	✓
440 VΔ; 60 Hz output	9	0	M1D					✓	✓	✓	✓
460 VY; 50 Hz output	9	0	M2E					✓	✓	✓	✓
460 VY; 60 Hz output	9	0	M1E					○	○	○	○
460 VΔ; 50 Hz output	9	0	M2F					✓	✓	✓	✓
460 VΔ; 60 Hz output	9	0	M1F					○	○	○	○
575 VY; 50 Hz output	9	0	M2G					✓	✓	✓	✓
575 VY; 60 Hz output	9	0	M1G					✓	✓	✓	✓
575 VΔ; 50 Hz output	9	0	M2H					✓	✓	✓	✓
575 VΔ; 60 Hz output	9	0	M1H					✓	✓	✓	✓
Non-standard voltages and / or frequencies											
Non-standard winding for volt- ages between 200 V and 690 V (voltages outside this range are available on request) ¹⁾	9	0	M1Y					✓	✓	✓	✓

- Without additional charge
✓ With additional charge

¹⁾ Plain text must be specified in the order: voltage, frequency, circuit, required rated output in kW.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Special versions

Options

Options or order codes (supplement **-Z** is required)

Not possible for General Line motors with shorter delivery time.

Special versions	Additional identification code -Z with order code and plain text if required	Motor type frame size								
		56	63	71	80	90	100	112	132	160
Self-ventilated energy-saving motors with improved efficiency										
Self-ventilated energy-saving motors with high efficiency										
Self-ventilated motors with increased output and improved efficiency										
Self-ventilated motors with increased output and high efficiency										
							1LE1 (Aluminum)			
Motor connection and connection box										
One cable gland, metal	R15						✓	✓	✓	✓
Rotation of the connection box through 90°, entry from DE	R10						○	○	○	○
Rotation of the connection box through 90°, entry from NDE	R11						○	○	○	○
Rotation of the connection box through 180°	R12						○	○	○	○
Larger connection box	R50						✓	✓	✓	✓
Reduction piece for M cable gland in accordance with British standard, both cable entries mounted ¹⁾	R30						✓	✓	✓	✓
External earthing	H04						✓	✓	✓	✓
3 cables protruding, 0.5 m long ²⁾³⁾	R20						✓	✓	✓	✓
3 cables protruding, 1.5 m long ²⁾³⁾	R21						✓	✓	✓	✓
6 cables protruding, 0.5 m long ²⁾	R22						✓	✓	✓	✓
6 cables protruding, 1.5 m long ²⁾	R23						✓	✓	✓	✓
6 cables protruding, 3 m long ²⁾	R24						✓	✓	✓	✓
Connection box on NDE ⁴⁾	H08						✓	✓	✓	✓
Windings and insulation										
Temperature class 155 (F), used acc. to 155 (F), with service factor (SF)	N01						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), with increased output	N02						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), with increased coolant temperature	N03						✓	✓	✓	✓
Temperature class 180 (H) at rated power and max. CT 60 °C ⁵⁾	N11						✓	✓	✓	✓
Increased air humidity/temperature, with 30 to 60 g water per m³ of air	N20						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 %	N05						✓	✓	✓	✓

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Special versions

Special versions	Additional identification code -Z with order code and plain text if required	Motor type frame size								
		56	63	71	80	90	100	112	132	160
Self-ventilated energy-saving motors with improved efficiency										
Self-ventilated energy-saving motors with high efficiency										
Self-ventilated motors with increased output and improved efficiency										
Self-ventilated motors with increased output and high efficiency										
		1LE1 (Aluminum)								
Windings and insulation (continued)										
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 %	N06					✓	✓	✓	✓	
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 %	N07					✓	✓	✓	✓	
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N08					✓	✓	✓	✓	
Increased air humidity/temperature, with 60 to 100 g water per m ³ of air	N21					✓	✓	✓	✓	
Temperature class 155 (F), used acc. to 155 (F), other requirements	Y52 • and identification code					✓	✓	✓	✓	
Colors and paint finish										
Special finish in RAL 7030 stone gray						□	□	□	□	
Special 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, Page 0/101	Y54 • and special finish RAL....					✓	✓	✓	✓	
Special finish in special RAL colors: for RAL colors, see "Special finish in special RAL colors", Page 0/101	Y51 • and special finish RAL....					✓	✓	✓	✓	
Special finish sea air resistant	S03					O. R.	O. R.	O. R.	O. R.	
Unpainted (only cast iron parts primed)	S00					○	○	○	○	
Unpainted, only primed	S01					✓	✓	✓	✓	
Modular technology – Basic versions ⁶⁾										
Mounting of separately driven fan	F70					✓	✓	✓	✓	
Mounting of brake ⁷⁾	F01					✓	✓	✓	✓	
Mounting of 1XP8012-10 (HTL) rotary pulse encoder ⁸⁾	G01					✓	✓	✓	✓	
Mounting of 1XP8012-20 (TTL) rotary pulse encoder ⁸⁾	G02					✓	✓	✓	✓	
Modular technology – Additional versions										
Brake supply voltage 24 V DC	F10					✓	✓	✓	✓	
Brake supply voltage 230 V AC, 50/60 Hz	F11					○	○	○	○	
Brake supply voltage 400 V AC, 50/60 Hz	F12					✓	✓	✓	✓	
Mechanical manual brake release with lever (no locking)	F50					✓	✓	✓	✓	

For legend and footnotes, see Page 1/59.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Special versions

Special versions	Additional identification code -Z with order code and plain text if required	Motor type frame size								
		56	63	71	80	90	100	112	132	160
Self-ventilated energy-saving motors with improved efficiency										
Self-ventilated energy-saving motors with high efficiency										
Self-ventilated motors with increased output and improved efficiency										
Self-ventilated motors with increased output and high efficiency										
							1LE1 (Aluminum)			
Special technology ⁶⁾										
Mounting of LL 861 900 220 rotary pulse encoder ⁸⁾	G04						✓	✓	✓	✓
Mounting of HOG 9 D 1024 I rotary pulse encoder ⁸⁾	G05						✓	✓	✓	✓
Mounting of HOG 10 D 1024 I rotary pulse encoder ⁸⁾	G06						✓	✓	✓	✓
Mechanical design and degrees of protection										
Protective cover for types of construction ⁸⁾	H00						✓	✓	✓	✓
Screwed-on feet (instead of cast)	H01						✓	✓	✓	✓
Radial seal on DE for flange-mounting motors with oil resistance to 0.1 bar ⁹⁾	H23						✓	✓	✓	✓
Low-noise version for 2-pole motors with clockwise direction of rotation	F77						–	–	✓	✓
Low-noise version for 2-pole motors with counter-clockwise direction of rotation	F78						–	–	✓	✓
IP65 degree of protection ¹⁰⁾	H20						✓	✓	✓	✓
IP56 degree of protection (non-heavy-sea) ¹¹⁾	H22						✓	✓	✓	✓
Vibration-proof version	H02						✓	✓	✓	✓
Condensation drainage holes ¹²⁾	H03						✓	✓	✓	✓
Non-rusting screws (externally)	H07						✓	✓	✓	✓
Prepared for mountings, only center hole ¹³⁾	G40						✓	✓	✓	✓
Prepared for mountings with D12 shaft ¹³⁾	G41						✓	✓	✓	✓
Prepared for mountings with D16 shaft ¹³⁾	G42						✓	✓	✓	✓
Protective cover for encoder (loosely enclosed – only for mountings acc. to order codes G40, G41 and G42)	G43						✓	✓	✓	✓
Coolant temperature and site altitude										
Coolant temperature –40 °C to +40 °C ¹⁴⁾	D03						✓	✓	✓	✓
Coolant temperature –30 °C to +40 °C ¹⁴⁾	D04						✓	✓	✓	✓
Designs in accordance with standards and specifications										
Electrical according to NEMA MG1-12 ¹⁵⁾	D30						✓	✓	✓	✓
Design according to UL with “Recognition Mark” ¹⁶⁾	D31						✓	✓	✓	✓
Canadian regulations (CSA) ¹⁷⁾	D40						✓	✓	✓	✓
PSE Mark Japan ¹⁸⁾	D46						✓	✓	✓	–

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Special versions

Special versions	Additional identification code -Z with order code and plain text if required	Motor type frame size								
		56	63	71	80	90	100	112	132	160
Self-ventilated energy-saving motors with improved efficiency										
Self-ventilated energy-saving motors with high efficiency										
Self-ventilated motors with increased output and improved efficiency										
Self-ventilated motors with increased output and high efficiency										
		1LE1 (Aluminum)								
Bearings and lubrication										
Measuring nipple for SPM shock pulse measurement for bearing inspection ¹⁹⁾	Q01						✓	✓	✓	✓
Bearing design for increased cantilever forces	L22						✓	✓	✓	✓
Special bearing for DE and NDE, bearing size 63	L25						✓	✓	✓	✓
Regreasing device ¹⁹⁾	L23						✓	✓	✓	✓
Located bearing at DE	L20						✓	✓	✓	✓
Located bearing at NDE	L21						✓	✓	✓	□
Balance and vibration quantity										
Vibration quantity A							□	□	□	□
Vibration quantity B	L00						✓	✓	✓	✓
Half-key balancing (standard)							□	□	□	□
Full-key balancing	L02						✓	✓	✓	✓
Balancing without key	L01						✓	✓	✓	✓
Shaft and rotor										
Concentricity of shaft extension, coaxiality and linear movement in accordance with DIN 42955 Tolerance R for flange-mounting motors	L08						✓	✓	✓	✓
Second standard shaft extension	L05						✓	✓	✓	✓
Shaft extension with standard dimensions, without featherkey way	L04						✓	✓	✓	✓
Concentricity of shaft extension in accordance with DIN 42955 Tolerance R	L07						✓	✓	✓	✓
Standard shaft made of non-rusting steel	L06						✓	✓	✓	✓
Non-standard cylindrical shaft extension ²⁰⁾	Y55 • and identification code						✓	✓	✓	✓
Heating and ventilation										
Fan cover for textile industry	F75						✓	✓	✓	✓
Metal external fan ²¹⁾	F76						✓	✓	✓	✓
Anti-condensation heaters for 230 V	Q02						✓	✓	✓	✓
Anti-condensation heaters for 115 V	Q03						✓	✓	✓	✓
Sheet metal fan cover	F74						✓	✓	✓	✓
Rating plate and extra rating plates										
Second rating plate, loose	M10						✓	✓	✓	✓
Nirosta rating plate	M11						✓	✓	✓	✓
Extra rating plate or rating plate with deviating rating plate data	Y80 • and identification code						✓	✓	✓	✓
Extra rating plate with identification codes	Y82 • and identification code						✓	✓	✓	✓
Additional information on rating plate and on package label (max. of 20 characters)	Y84 • and identification code						✓	✓	✓	✓

For legend and footnotes, see Page 1/59.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Special versions

Special versions	Additional identification code -Z with order code and plain text if required	Motor type frame size								
		56	63	71	80	90	100	112	132	160
Self-ventilated energy-saving motors with improved efficiency										
Self-ventilated energy-saving motors with high efficiency										
Self-ventilated motors with increased output and improved efficiency										
Self-ventilated motors with increased output and high efficiency										
							1LE1 (Aluminum)			
Packaging, safety notes, documentation and test certificates										
Without safety and commissioning note. Customer's declaration of renouncement required.	B00						○	○	○	○
With one safety and start-up guide per box pallet	B01						○	○	○	○
Acceptance test certificate 3.1 in accordance with EN 10204	B02						✓	✓	✓	✓
Printed operating instructions English/German enclosed	B04						✓	✓	✓	✓
Type test with heat run for horizontal motors, with acceptance	B83						✓	✓	✓	✓
Wire-lattice pallet	B99						○	○	○	○
Connected in star for dispatch	M01						✓	✓	✓	✓
Connected in delta for dispatch	M02						✓	✓	✓	✓

- Standard version
- Without additional charge
- This order code only determines the price of the version – Additional plain text is required.
- R. Available on request
- ✓ With additional charge

- 1) Not possible in combination with order code **R15** "One cable gland, metal".
- 2) In combination with motor protection (position 15 of the Order No.) or with option anti-condensation heater request required.
- 3) Not possible in combination with voltage code **22** or **34**.
- 4) Not possible in combination with the following order codes: **N01, N02, N03, N05, N06, N07, N08, N11**.
Use according to temperature class 155 (F) possible only.
- 5) Cannot be used for motors in UL version (order code **D31**). The grease lifetime specified in catalog part 0 "Introduction" refers to CT 40 °C. When the coolant temperature rises by 10 K, the grease lifetime or relubrication interval is halved.
- 6) A second shaft extension is not possible. Please inquire for mounted brakes.
- 7) When quoting or ordering, it is necessary to provide the brake supply voltage for order codes **F10, F11** and **F12**.
- 8) All encoders are supplied with a protective cover as standard. The protective cover is not supplied with the combination rotary pulse encoder with separately driven fan, as, in this case, the rotary pulse encoder is installed under the fan cover.
- 9) Not possible for type of construction IM V3.
- 10) Not possible in combination with rotary pulse encoder HOG 9 D 10241 (order code **G05**) and/or brake 2LM8 (order code **F01**).
- 11) Not possible in combination with brake 2LM8 – order code **F01**.
- 12) Supplied with the condensation drainage holes sealed at the drive end (DE) and non-drive end (NDE) (IP55, IP56, IP65). If condensation drainage holes are required for motors with IM B6, IM B7 or IM B8 type of construction (feet located on side or top), it is necessary to order the motors in their respective type of construction and order code **H03**, so that the condensation drainage holes can be mounted in the correct positional arrangement.

- 13) Motors that are prepared for additional mountings (order codes **G40, G41, G42**) are supplied without protective cover as standard. If a protective cover is requested as cover or as mechanical protection for mounting provided by the customer, it can be ordered with order code **G43**.
Not possible in combination with order code **L00**, vibration quantity level B.
- 14) In connection with mountings, the respective technical data must be observed; request required.
- 15) 1LE1 motors in EFF1 version without additional charge (standard version).
- 16) Possible up to 600 V max. The rated voltage is indicated on the rating plate without voltage range.
- 17) The rated voltage is indicated on the rating plate without voltage range.
- 18) "Small power motors" with a rated output of up to 3 kW which are exported to Japan must bear the PSE marking.
- 19) Not possible when brake is mounted.
- 20) When motors are ordered that have a longer or shorter shaft extension than normal, the required position and length of the featherkey way must be specified in a sketch. It must be ensured that only featherkeys in accordance with DIN 6885, Form A are permitted to be used. The featherkey way is positioned centrally on the shaft extension. The length is defined by the manufacturer normatively. Not valid for: Conical shafts, non-standard threaded journals, non-standard shaft tolerances, friction welded journals, extremely "thin" shafts, special geometry dimensions (e.g. square journals), hollow shafts. Valid for non-standard shaft extensions DE or NDE. The featherkeys are supplied in every case. For order codes **Y55** and **L05**:
- Dimensions D and DA ≤ internal diameter of roller bearing (see dimension tables under "Dimensions")
- Dimensions E and EA ≤ 2 x length E (normal) of the shaft extension
For an explanation of the order codes, see catalog part 0 "Introduction".
- 21) For 1LE1 motors with metal external fan, converter-fed operation is permitted. The metal external fan is not possible in combination with the low-noise version – order code **F77** or **F78**.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Special versions

Options or order codes (supplement **-Z** is required)

Not possible for General Line motors with shorter delivery time.

Special versions	Additional identification code -Z with order code and plain text if required	Motor type frame size								
		56	63	71	80	90	100	112	132	160
Forced-air cooled motors without external fan and fan cover with improved efficiency										
Forced-air cooled motors without external fan and fan cover with high efficiency										
Self-cooled motors without external fan and fan cover with improved efficiency										
Self-cooled motors without external fan and fan cover with high efficiency										
		1LE1/1PC1 (Aluminum)								
Motor connection and connection box										
One cable gland, metal	R15						✓	✓	✓	✓
Rotation of the connection box through 90°, entry from DE	R10						○	○	○	○
Rotation of the connection box through 90°, entry from NDE	R11						○	○	○	○
Rotation of the connection box through 180°	R12						○	○	○	○
Larger connection box	R50						✓	✓	✓	✓
Reduction piece for M cable gland in accordance with British standard, both cable entries mounted ¹⁾	R30						✓	✓	✓	✓
External earthing	H04						✓	✓	✓	✓
3 cables protruding, 0.5 m long ²⁾³⁾	R20						✓	✓	✓	✓
3 cables protruding, 1.5 m long ²⁾³⁾	R21						✓	✓	✓	✓
6 cables protruding, 0.5 m long ²⁾	R22						✓	✓	✓	✓
6 cables protruding, 1.5 m long ²⁾	R23						✓	✓	✓	✓
6 cables protruding, 3 m long ²⁾	R24						✓	✓	✓	✓
Connection box on NDE ⁴⁾	H08						✓	✓	✓	✓
Windings and insulation										
Temperature class 155 (F), used acc. to 155 (F), with service factor (SF)	N01						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), with increased output	N02						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), with increased coolant temperature	N03						✓	✓	✓	✓
Temperature class 180 (H) at rated power and max. CT 60 °C ⁵⁾	N11						✓	✓	✓	✓
Increased air humidity/temperature with 30 to 60 g water per m ³ of air	N20						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 %	N05						✓	✓	✓	✓

For legend and footnotes, see Page 1/63.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Special versions

Special versions	Additional identification code -Z with order code and plain text if required	Motor type frame size								
		56	63	71	80	90	100	112	132	160
Forced-air cooled motors without external fan and fan cover with improved efficiency										
Forced-air cooled motors without external fan and fan cover with high efficiency										
Self-cooled motors without external fan and fan cover with improved efficiency										
Self-cooled motors without external fan and fan cover with high efficiency										
							1LE1/1PC1 (Aluminum)			
Windings and insulation (continued)										
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 %	N06						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 %	N07						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N08						✓	✓	✓	✓
Increased air humidity/temperature, with 60 to 100 g water per m ³ of air	N21						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), other requirements	Y52 • and identification code						✓	✓	✓	✓
Colors and paint finish										
Special finish in RAL 7030 stone gray							□	□	□	□
Special 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, Page 0/101	Y54 • and special finish RAL....						✓	✓	✓	✓
Special finish in special-RAL colors: for RAL colors, see "Special finish in special RAL colors", Page 0/101	Y51 • and special finish RAL....						✓	✓	✓	✓
Special finish sea air resistant	S03						O. R.	O. R.	O. R.	O. R.
Unpainted (only cast iron parts primed)	S00						O	O	O	O
Unpainted, only primed	S01						✓	✓	✓	✓
Mechanical design and degree of protection										
Screwed-on feet (instead of cast)	H01						✓	✓	✓	✓
Radial seal on DE for flange-mounting motors with oil resistance to 0.1 bar ⁶⁾	H23						✓	✓	✓	✓
IP65 degree of protection	H20						✓	✓	✓	✓
IP56 degree of protection (non-heavy-sea)	H22						✓	✓	✓	✓
Vibration-proof version	H02						✓	✓	✓	✓
Condensation drainage holes ⁷⁾	H03						✓	✓	✓	✓
Non-rusting screws (externally)	H07						✓	✓	✓	✓
Coolant temperature and site altitude										
Coolant temperature –40 °C to +40 °C	D03						✓	✓	✓	✓
Coolant temperature –30 °C to +40 °C	D04						✓	✓	✓	✓

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Special versions

1

Special versions	Additional identification code -Z with order code and plain text if required	Motor type frame size								
		56	63	71	80	90	100	112	132	160
Forced-air cooled motors without external fan and fan cover with improved efficiency										
Forced-air cooled motors without external fan and fan cover with high efficiency										
Self-cooled motors without external fan and fan cover with improved efficiency										
Self-cooled motors without external fan and fan cover with high efficiency										
		1LE1/1PC1 (Aluminum)								
Designs in accordance with standards and specifications										
Electrical according to NEMA MG1-12 ⁸⁾	D30						✓	✓	✓	✓
Design according to UL with "Recognition Mark" ⁹⁾	D31						✓	✓	✓	✓
Canadian regulations (CSA) ¹⁰⁾	D40						✓	✓	✓	✓
PSE Mark Japan ¹¹⁾	D46						✓	✓	✓	–
Bearings and lubrication										
Measuring nipple for SPM shock pulse measurement for bearing inspection	Q01						✓	✓	✓	✓
Bearing design for increased canteliver forces	L22						✓	✓	✓	✓
Special bearing for DE and NDE, bearing size 63	L25						✓	✓	✓	✓
Regreasing device	L23						✓	✓	✓	✓
Located bearing at DE	L20						✓	✓	✓	✓
Located bearing at NDE	L21						✓	✓	✓	□
Balance and vibration quantity										
Vibration quantity A							□	□	□	□
Vibration quantity B	L00						✓	✓	✓	✓
Half-key balancing (standard)							□	□	□	□
Full-key balancing	L02						✓	✓	✓	✓
Balancing without key	L01						✓	✓	✓	✓
Shaft and rotor										
Concentricity of shaft extension, coaxiality and linear movement in accordance with DIN 42955 Tolerance R for flange-mounting motors	L08						✓	✓	✓	✓
Shaft extension with standard dimensions, without featherkey way	L04						✓	✓	✓	✓
Concentricity of shaft extension in accordance with DIN 42955 Tolerance R	L07						✓	✓	✓	✓
Standard shaft made of non-rusting steel	L06						✓	✓	✓	✓
Non-standard cylindrical shaft extension ¹²⁾	Y55 • and identification code						✓	✓	✓	✓
Heating and ventilation										
Anti-condensation heaters for 230 V	Q02						✓	✓	✓	✓
Anti-condensation heaters for 115 V	Q03						✓	✓	✓	✓

For legend and footnotes, see Page 1/63.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Special versions

Special versions	Additional identification code -Z with order code and plain text if required	Motor type frame size								
		56	63	71	80	90	100	112	132	160
Forced-air cooled motors without external fan and fan cover with improved efficiency										
Forced-air cooled motors without external fan and fan cover with high efficiency										
Self-cooled motors without external fan and fan cover with improved efficiency										
Self-cooled motors without external fan and fan cover with high efficiency										
							1LE1/1PC1 (Aluminum)			
Rating plate and extra rating plates										
Second rating plate, loose	M10						✓	✓	✓	✓
Nirosta rating plate	M11						✓	✓	✓	✓
Extra rating plate or rating plate with deviating rating plate data	Y80 • and identification code						✓	✓	✓	✓
Extra rating plate with identification codes	Y82 • and identification code						✓	✓	✓	✓
Additional information on rating plate and on package label (max. of 20 characters)	Y84 • and identification code						✓	✓	✓	✓
Packaging, safety notes, documentation and test certificates										
Without safety and commissioning note. Customer's declaration of renouncement required.	B00						○	○	○	○
With one safety and start-up guide per box pallet	B01						○	○	○	○
Acceptance test certificate 3.1 in accordance with EN 10204	B02						✓	✓	✓	✓
Printed operating instructions English/German enclosed	B04						✓	✓	✓	✓
Type test with heat run for horizontal motors, with acceptance	B83						✓	✓	✓	✓
Wire-lattice pallet	B99						○	○	○	○
Connected in star for dispatch	M01						✓	✓	✓	✓
Connected in delta for dispatch	M02						✓	✓	✓	✓

- Standard version
- Without additional charge
- This order code only determines the price of the version – Additional plain text is required.
- R. Available on request
- ✓ With additional charge

- 1) Not possible in combination with order code **R15** "One cable gland, metal".
- 2) In combination with motor protection (position 15 of the Order No.) or with option anti-condensation heater request required.
- 3) Not possible in combination with voltage code **22** or **34**.
- 4) Not possible in combination with the following order codes: **N01, N02, N03, N05, N06, N07, N08, N11**. Use according to temperature class 155 (F) possible only.
- 5) Cannot be used for motors in UL version (order code **D31**). The grease lifetime specified in catalog part 0 "Introduction" refers to CT 40 °C. When the coolant temperature rises by 10 K, the grease lifetime or relubrication interval is halved.
- 6) Not possible for type of construction IM V3.
- 7) Supplied with the condensation drainage holes sealed at the drive end (DE) and non-drive end (NDE) (IP55, IP56, IP65). If condensation drainage holes are required for motors with IM B6, IM B7 or IM B8 type of construction (feet located on side or top), it is necessary to order the motors in their respective type of construction and order code **H03**, so that the condensation drainage holes can be mounted in the correct positional arrangement.

- 8) 1LE1 motors in EFF1 version without additional charge (standard version).
- 9) Possible up to 600 V max. The rated voltage is indicated on the rating plate without voltage range.
- 10) The rated voltage is indicated on the rating plate without voltage range.
- 11) "Small power motors" with a rated output of up to 3 kW which are exported to Japan must bear the PSE marking.
- 12) When motors are ordered that have a longer or shorter shaft extension than normal, the required position and length of the featherkey way must be specified in a sketch. It must be ensured that only featherkeys in accordance with DIN 6885, Form A are permitted to be used. The featherkey way is positioned centrally on the shaft extension. The length is defined by the manufacturer normatively. Not valid for: Conical shafts, non-standard threaded journals, non-standard shaft tolerances, friction welded journals, extremely "thin" shafts, special geometry dimensions (e.g. square journals), hollow shafts. Valid for non-standard shaft extensions DE or NDE. The featherkeys are supplied in every case. For order code **Y55**:
 - Dimensions D and DA ≤ internal diameter of roller bearing (see dimension tables under "Dimensions")
 - Dimensions E and EA ≤ 2 x length E (normal) of the shaft extension
 For an explanation of the order codes, see catalog part 0 "Introduction".

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Accessories

Overview

Couplings

The motor from Siemens is connected to the machine or gear unit through a coupling. Flender is an important coupling manufacturer with a wide range of products. For standard applications, Siemens recommends that elastic couplings of Flender types N-Eupex and Rupex or torsionally rigid couplings of types Arpex and Zapex are used. For special applications, Fludex and Elpex couplings are recommended.

Source of supply:
Siemens contact partner – ordering from Catalog Siemens
MD 10.1 "FLENDER Standard Couplings"

or

A. Friedr. Flender AG
Kupplungswerk Mussum
Industriepark Bocholt
Schlavenhorst 100
46395 Bocholt, Germany
Tel. +49 (0) 2871-92 2185
Fax +49 (0) 2871-92 2579

<http://www.flender.com>
e-mail: couplings@flender.com

Mounting of encoder

In the case of mounting by the customer.

Baumer Hübner GmbH
Planufer 92b
10967 Berlin, Germany
Tel. +49 (0) 30-690 03-0
Fax +49 (0) 30-690 03-104

<http://www.baumerhuebner.com>
e-mail: info@baumerhuebner.com

Leine & Linde (Deutschland) GmbH
Bahnhofstraße 36
73430 Aalen, Germany
Tel. +49 (0) 7361-78 093-0
Fax +49 (0) 7361-78 093-11

<http://www.leinelinde.com>
e-mail: info@leinelinde.se

More information

Spare motors and repair parts

- Supply commitment for spare motors and repair parts following delivery of the motor
 - For up to 5 years, in the event of total motor failure, Siemens will supply a comparable motor with regard to the mounting dimensions and functions (the type series may vary).
 - Repair parts will be supplied for up to 5 years.
 - For up to 10 years, Siemens will provide information and will, if necessary, supply documentation for repair parts.
- When repair parts are ordered, the following details must be provided:
 - Designation and part number
 - Order No. and factory number of the motor
- For bearing types, see the „Orientation“, „Technical data“, Page 0/124.
- For standard components, a supply commitment does not apply.
- Support – Hotline
In Germany
Tel.: 01 80 – 5 05 04 48

You will find telephone numbers for other countries on our Internet site:

<http://www.siemens.com/automation/service&support>

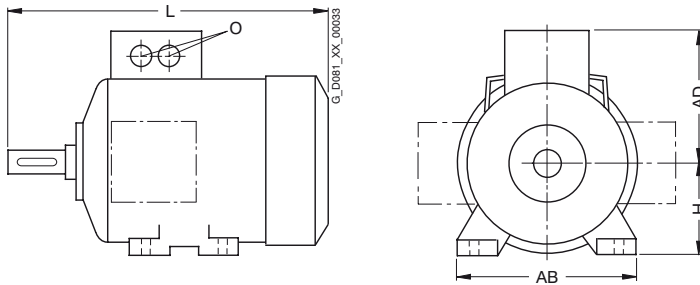
IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Dimensions

Overview

Overall dimensions



Frame size	Type	Number of poles	Dimensions	L	AD	H	AB	O
100 L	General Line motors with shorter delivery time			395.5 ¹⁾	166	100	196	2 x M32 x 1.5
	Self-ventilated energy-saving motors with improved/high efficiency			395.5 ¹⁾	166	100	196	2 x M32 x 1.5
	Self-ventilated motors with increased output and improved/high efficiency			430.5 ¹⁾	166	100	196	2 x M32 x 1.5
	Forced-air-cooled motors without external fan and fan cover with improved/high efficiency			321.5	166	100	196	2 x M32 x 1.5
	Self-cooled motors without external fan and fan cover with improved/high efficiency			321.5	166	100	196	2 x M32 x 1.5
112 M	General Line motors with shorter delivery time			389 ¹⁾	177	112	226	2 x M32 x 1.5
	Self-ventilated energy-saving motors with improved/high efficiency			389 ¹⁾	177	112	226	2 x M32 x 1.5
	Self-ventilated motors with increased output and improved/high efficiency			414 ¹⁾	177	112	226	2 x M32 x 1.5
	Forced-air-cooled motors without external fan and fan cover with improved/high efficiency			311	177	112	226	2 x M32 x 1.5
	Self-cooled motors without external fan and fan cover with improved/high efficiency			311	177	112	226	2 x M32 x 1.5

Frame size	Type	Number of poles	Dimensions	L	AD	H	AB	O
132 S/ 132 M	General Line motors with shorter delivery time			465 ¹⁾	202	132	256	2 x M32 x 1.5
	Self-ventilated energy-saving motors with improved/high efficiency			465 ¹⁾	202	132	256	2 x M32 x 1.5
	Self-ventilated motors with increased output and improved/high efficiency			515 ¹⁾	202	132	256	2 x M32 x 1.5
	Forced-air-cooled motors without external fan and fan cover with improved/high efficiency			380.5	202	132	256	2 x M32 x 1.5
	Self-cooled motors without external fan and fan cover with improved/high efficiency			380.5	202	132	256	2 x M32 x 1.5
160 M/ 160 L	General Line motors with shorter delivery time			604 ¹⁾	236.5	160	300	2 x M40 x 1.5
	Self-ventilated energy-saving motors with improved/high efficiency			604 ¹⁾	236.5	160	300	2 x M40 x 1.5
	Self-ventilated motors with increased output and improved/high efficiency			664 ¹⁾	236.5	160	300	2 x M40 x 1.5
	Forced-air-cooled motors without external fan and fan cover with improved/high efficiency			510	236.5	160	300	2 x M40 x 1.5
	Self-cooled motors without external fan and fan cover with improved/high efficiency			510	236.5	160	300	2 x M40 x 1.5

¹⁾ The length is specified as far as the tip of the fan cover.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Dimensions

Overview (continued)

Notes on the dimensions

■ Dimension drawings according to DIN EN 50347 and IEC 60072.

■ Fits

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

Dimension designation	ISO fit DIN ISO 286-2	
D, DA	up to 30	j6
	over 30 to 50	k6
	over 50	m6
N	up to 250	j6
	over 250	h6
F, FA		h9
K		H17
S	Flange (FF)	H17

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

■ Dimension tolerances

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

Dimension designation	Dimensions	Admissible deviation
H	up to 250	−0.5
	over 250	−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.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Dimensions

More information

SD configurator

SD configurator (on DVD of the interactive catalog CA01 “Products for Automation and Drives”)



The interactive Catalog CA 01 contains over 100 000 products with approximately 5 million potential drive system product variants.

The **SD configurator** has been developed to facilitate selection of the correct motor and/or converter from the wide spectrum of A&D SD products. It is integrated as a “selection aid” in this catalog.

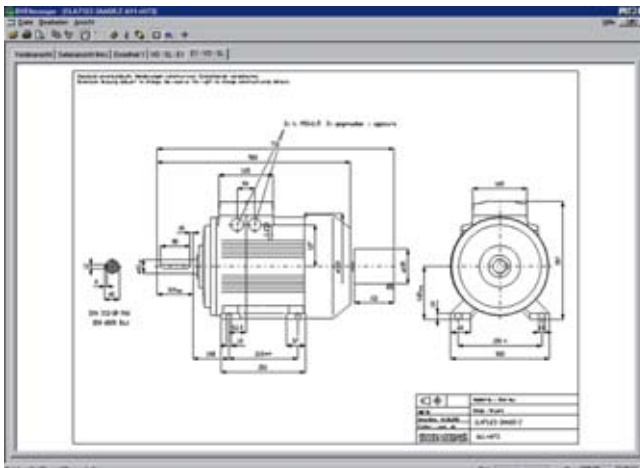
The **SD configurator** makes it easier to find the right drive solution. It supplies the correct order number as well as the corresponding documentation.

It can display operating instructions, factory test certificate, terminal box documentation, etc. and generates data sheets, dimension drawings and a start-up calculation for the relevant products.

Dimension sheet generator

(part of the SD configurator)

A dimension drawing can be created in the SD configurator for every configurable motor. A dimension drawing can be requested for every other motor.



It is also easy to assign a suitable converter to the selected motor.

The extensive help function not only explains the program functions, it also contains extensive technical background material.

SD configurator product range:

Low-voltage motors (energy-saving motors) with corresponding documentation and dimension drawings, low-voltage converters of the MICROMASTER 4 product series, SINAMICS G110 and SINAMICS G120 inverter chassis units as well as SINAMICS G120D distributed frequency inverters, and SIMATIC ET 200S FC and SIMATIC ET 200pro FC frequency converters for distributed I/O.

The interactive CA 01 catalog can be ordered from your local Siemens sales representative or on the Internet at <http://www.siemens.com/automation/CA01>

Links to tips, tricks and downloads for functional or content updates can be found at this address.

Order No. for CA 01, English International:

DVD: **E86060-D4001-A510-C7-7600**

Note: The SD configurator offline tool within CA 01 can be updated for the new 1LE1 motor series online over the Internet.

When a complete Order No. is entered with or without order codes, a dimension drawing can be called up under the “Documentation” tab.

These dimension 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.

The SD configurator has been integrated into the CA 01 electronic catalog as a selection aid (for further information, see above).

The interactive CA 01 catalog can be ordered from your local Siemens sales representative or on the Internet at <http://www.siemens.com/automation/CA01>.

At this address, you will also find links to Tips & Tricks and to downloads for function or content updates.

Order No. for CA 01, English International

DVD: **E86060-D4001-A510-C7-7600**

Note:

The SD configurator offline tool within CA01 can be updated for the new 1LE1 motor series online over the Internet.

IEC Squirrel-Cage Motors

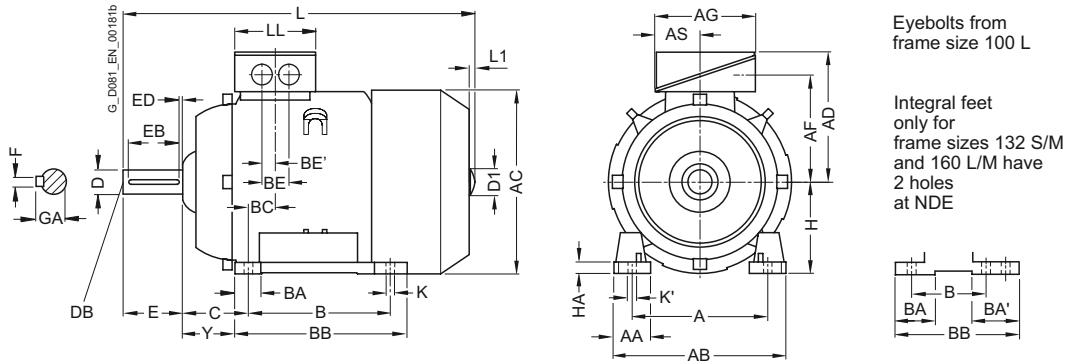
New Generation 1LE1/1PC1

Dimensions

Dimensional drawings

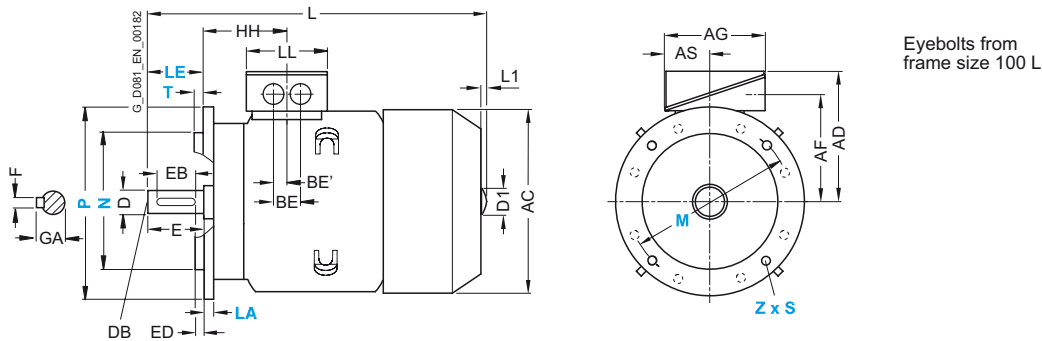
Aluminum series 1LE1, frame sizes 100 to 160 – General Line motors with shorter delivery time

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 1/76 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC																		
Frame size	Number of poles	A	AA	AB	AC	AD	AF	AG	AS	B*	BA	BA'	BB	BC	BE	BE'	C	H	HA	Y ¹⁾
100 L	2, 4, 6, 8	160	42	196	198	166	125.5	135	63.5	140	37.5	–	176	33.5	50	25	63	100	12	45
112 M	2, 4, 6, 8	190	46	226	222	177	136.5	135	63.5	140	35.4	–	176	26	50	25	70	112	12	52
132 S	2, 4, 6, 8	216	53	256	262	202	159.5	155	70.5	140	38	76	218	26.5	48	24	89	132	15	69
132 M	2, 4, 6, 8	216	53	256	262	202	159.5	155	70.5	178	38	76	218	26.5	48	24	89	132	15	69
160 M	2, 4, 6, 8	254	60	300	314	236.5	190	175	77.5	210	44	89	300	47	57	28.5	108	160	18	85
160 L	2, 4, 6, 8	254	60	300	314	236.5	190	175	77.5	254	44	89	300	47	57	28.5	108	160	18	85

* This dimension is assigned in DIN EN 50347 to the frame size listed.

¹⁾ Additional information: not a standard dimension acc. to DIN 50347.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

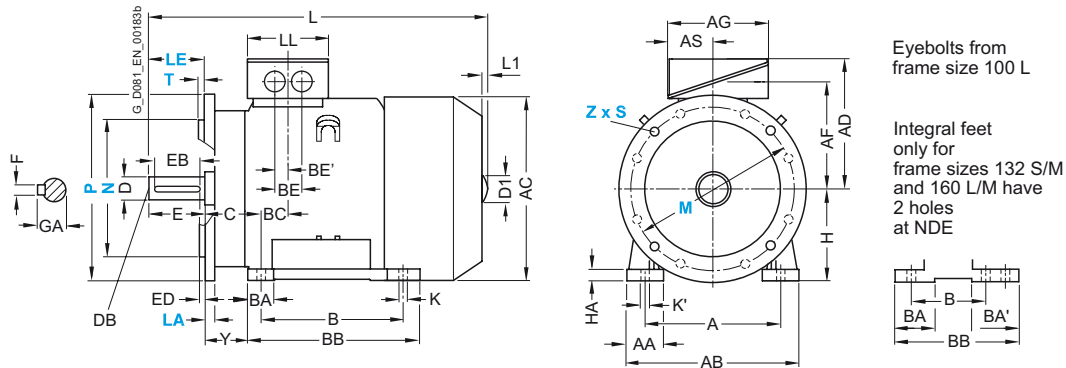
Dimensions

Dimensional drawings (continued)

Aluminum series 1LE1, frame sizes 100 to 160 – General Line motors with shorter delivery time

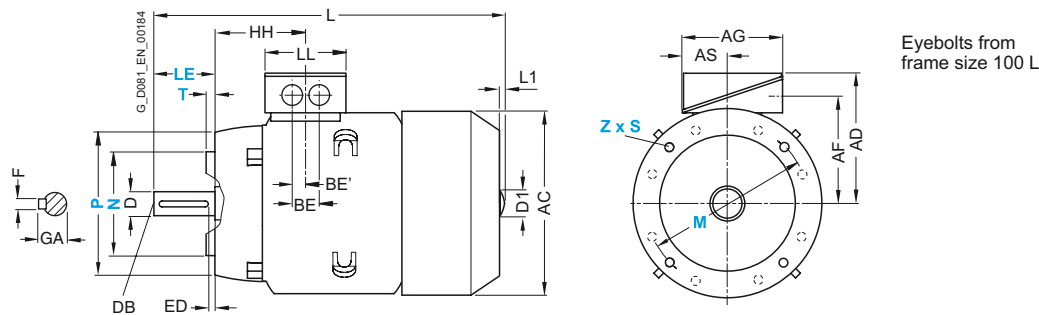
Type of construction IM B35

For flange dimensions, see Page 1/76 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see Page 1/76 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC							DE shaft extension						
Frame size	Number of poles	HH	K	K'	L ¹⁾	L1	D1	LL	D	DB	E	EB	ED	F	GA
100 L	2, 4, 6, 8	96.5	12	16	395.5	7	32	112	28	M10	60	50	5	8	31
112 M	2, 4, 6, 8	96	12	16	389	7	32	112	28	M10	60	50	5	8	31
132 S	2, 4, 6, 8	115.5	12	16	465	8.5	39	130	38	M12	80	70	5	10	41
132 M	2, 4, 6, 8	115.5	12	16	465	8.5	39	130	38	M12	80	70	5	10	41
160 M	2, 4, 6, 8	155	15	19	604	10	45	145	42	M16	110	90	10	12	45
160 L	2, 4, 6, 8	155	15	19	604	10	45	145	42	M16	110	90	10	12	45

¹⁾ The length is specified as far as the tip of the fan cover.

IEC Squirrel-Cage Motors

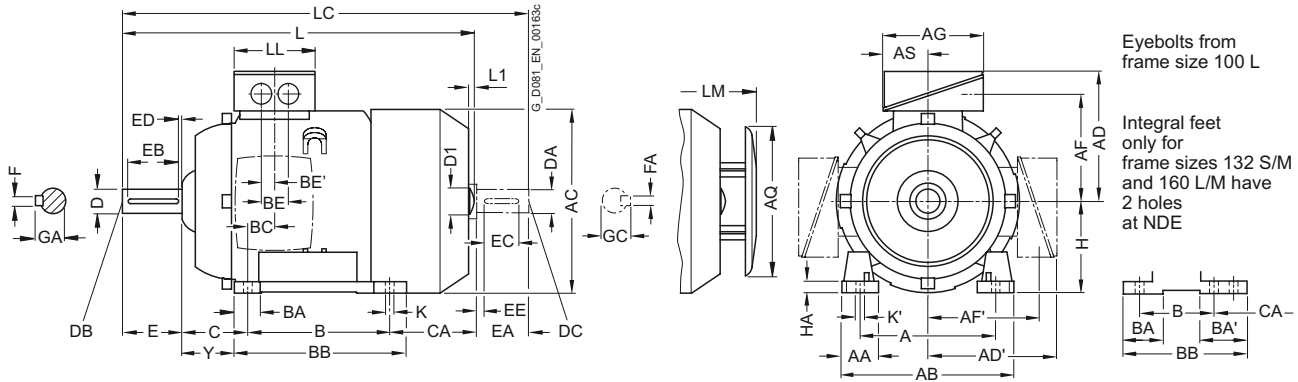
New Generation 1LE1/1PC1

Dimensions

Dimensional drawings (continued)

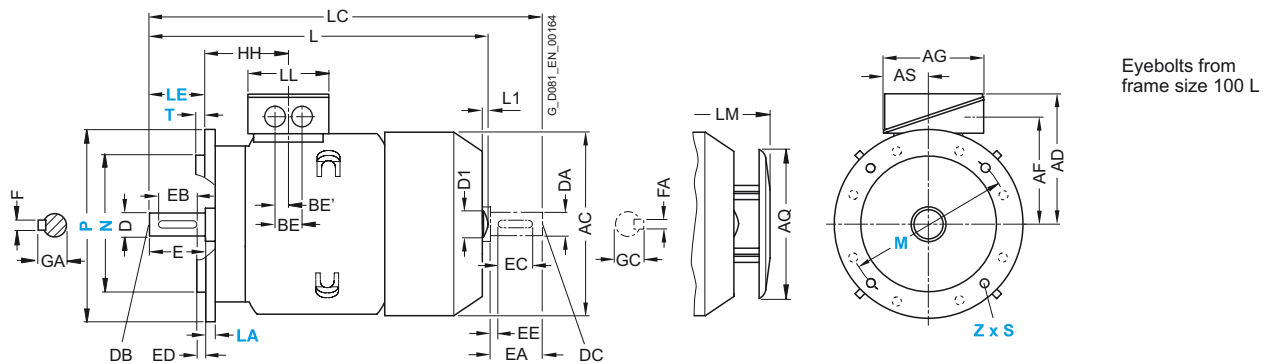
Aluminum series 1LE1, frame sizes 100 to 160 – self-ventilated motors with improved/high efficiency

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 1/76 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC																						
Frame size	Number of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AQ	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*	H	HA	Y ¹⁾
100 L	2, 4, 6, 8	160	42	196	198	166	166	125.5	125.5	135	195	63.5	140	37.5	–	176	33.5	50	25	63	141	100	12	45
112 M	2, 4, 6, 8	190	46	226	222	177	177	136.5	136.5	135	195	63.5	140	35.4	–	176	26	50	25	70	129.7	112	12	52
132 S	2, 4, 6, 8	216	53	256	262	202	202	159.5	159.5	155	260	70.5	140	38	76 ²⁾	218 ³⁾	26.5	48	24	89	128.5 ⁴⁾	132	15	69
132 M	2, 4, 6, 8	216	53	256	262	202	202	159.5	159.5	155	260	70.5	178	38	76	218	26.5	48	24	89	128.5 ⁴⁾	132	15	69
160 M	2, 4, 6, 8	254	60	300	314	236.5	236.5	190	190	175	260	77.5	210	44	89 ⁵⁾	300 ⁶⁾	47	57	28.5	108	148 ⁷⁾	160	18	85
160 L	2, 4, 6, 8	254	60	300	314	236.5	236.5	190	190	175	260	77.5	254	44	89	300	47	57	28.5	108	148 ⁷⁾	160	18	85

* This dimension is assigned in DIN EN 50347 to the frame size listed.

1) Additional information: not a standard dimension acc. to DIN 50347.

2) With screwed-on feet, dimension BA' is 38 mm.

3) With screwed-on feet, dimension BB is 180 mm.

4) With screwed-on feet, dimension CA is 166.5 mm.

5) With screwed-on feet, dimension BA' is 44 mm.

6) With screwed-on feet, dimension BB is 256 mm.

7) With screwed-on feet, dimension CA is 192 mm.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

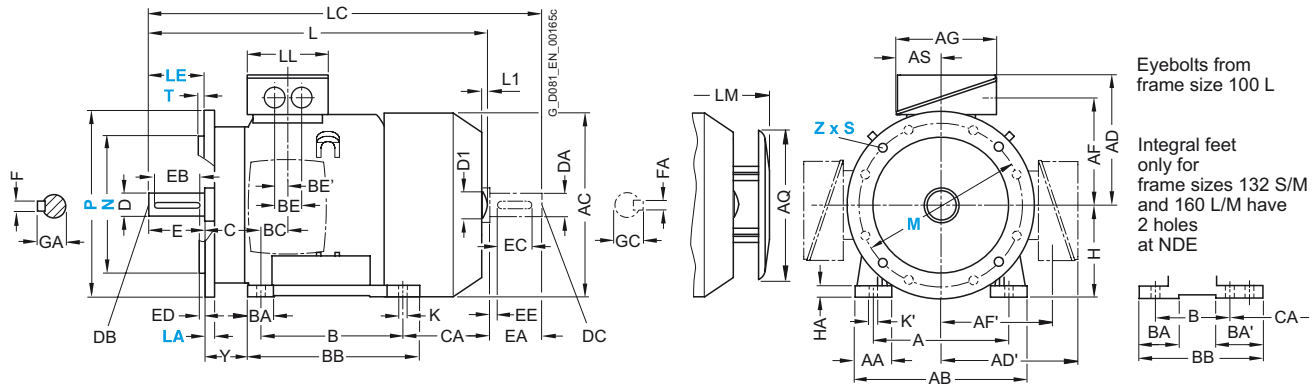
Dimensions

Dimensional drawings (continued)

Aluminum series 1LE1, frame sizes 100 to 160 – self-ventilated motors with improved/high efficiency

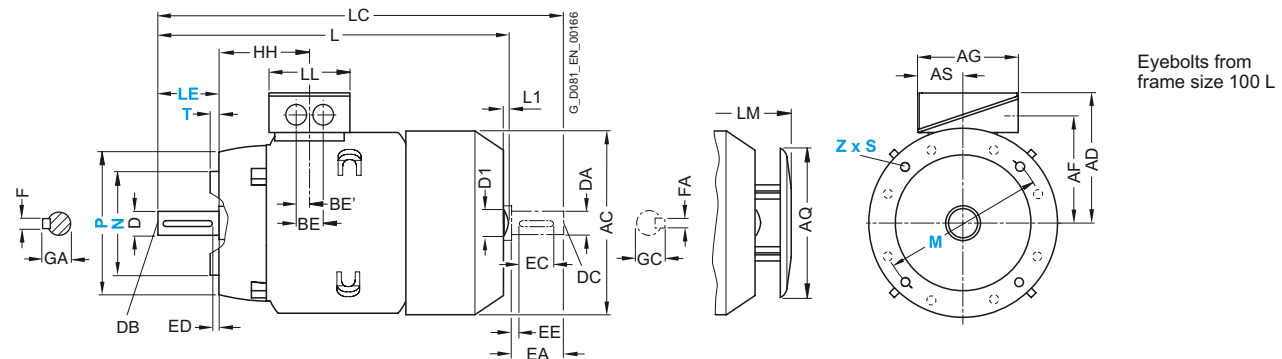
Type of construction IM B35

For flange dimensions, see Page 1/76 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see Page 1/76 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC										DE shaft extension							NDE shaft extension									
Frame size	Number of poles	HH	K	K'	L ¹⁾	L1	D1	LC	LL	LM	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC				
100 L	2, 4, 6, 8	96.5	12	16	395.5	7	32	454	112	428.5	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27				
112 M	2, 4, 6, 8	96	12	16	389	7	32	450	112	422	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27				
132 S	2, 4, 6, 8	115.5	12	16	465	8.5	39	535.5	130	500.5	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31				
132 M	2, 4, 6, 8	115.5	12	16	465	8.5	39	535.5	130	500.5	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31				
160 M	2, 4, 6, 8	155	15	19	604	10	45	730	145	638	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45				
160 L	2, 4, 6, 8	155	15	19	604	10	45	730	145	638	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45				

¹⁾ The length is specified as far as the tip of the fan cover.

IEC Squirrel-Cage Motors

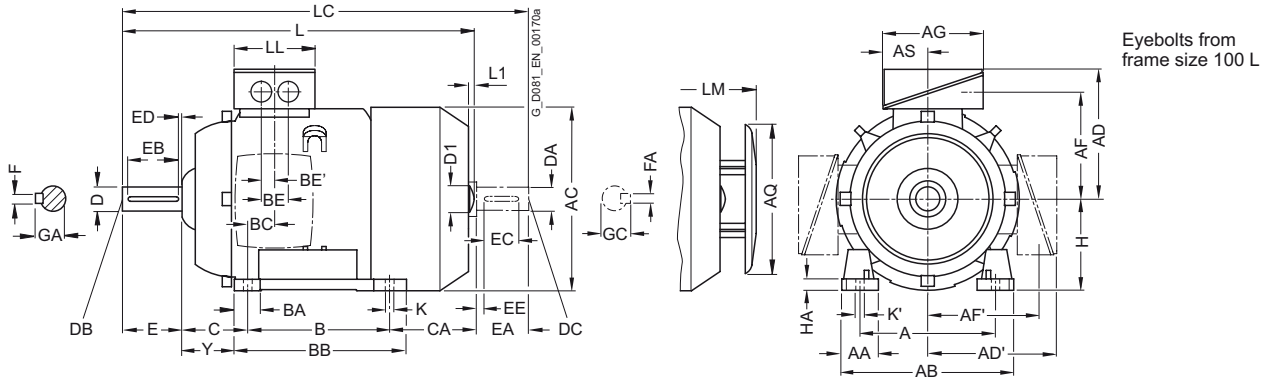
New Generation 1LE1/1PC1

Dimensions

Dimensional drawings (continued)

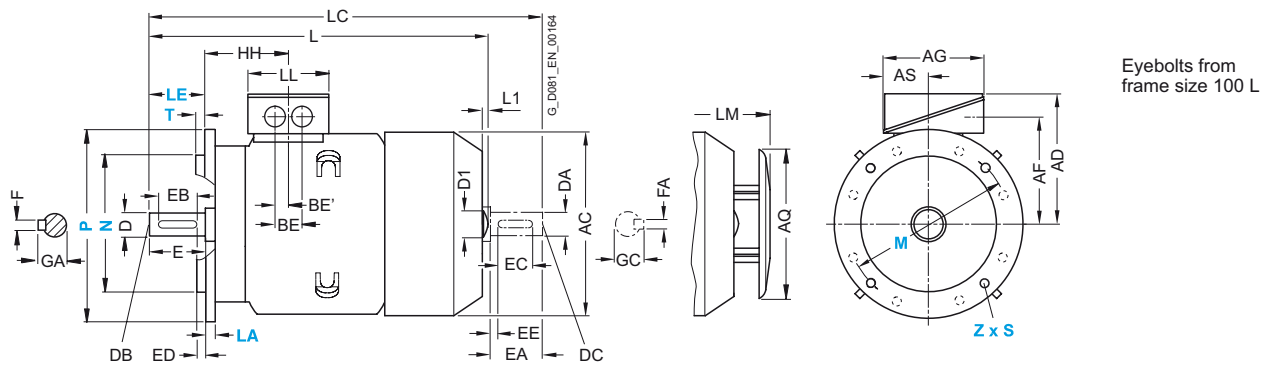
Aluminum series 1LE1, frame sizes 100 to 160 – self-ventilated motors with increased output and improved/high efficiency

Type of construction IM B3



Type of construction IM B5 and IM V1

For flange dimensions, see Page 1/76 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC																						
Frame size	Number of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AQ	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*	H	HA	Y ¹⁾
100 L	2, 4, 6, 8	160	42	196	198	166	166	125.5	125.5	135	195	63.5	140	37.5	–	176	33.5	50	25	63	176	100	12	45
112 M	2, 4, 6, 8	190	46	226	222	177	177	136.5	136.5	135	195	63.5	140	35.4	–	176	26	50	25	70	155	112	12	52
132 M	2, 4, 6, 8	216	53	256	262	202	202	159.5	159.5	155	260	70.5	178	38	–	218	26.5	48	24	89	178.5	132	15	69
160 L	2, 4, 6, 8	254	60	300	314	236.5	236.5	190	190	175	260	77.5	254	44	–	300	47	57	28.5	108	208	160	18	85

* This dimension is assigned in DIN EN 50347 to the frame size listed.

¹⁾ Additional information: not a standard dimension acc. to DIN 50347.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

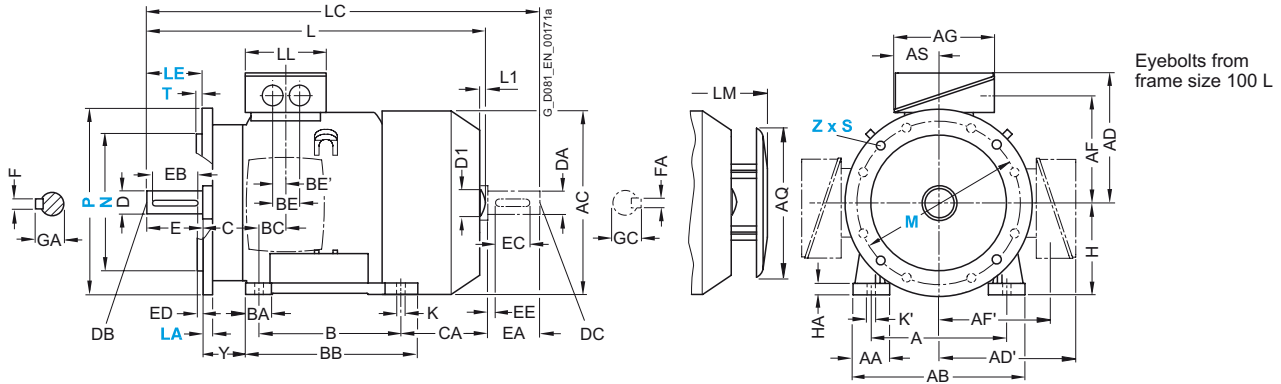
Dimensions

Dimensional drawings (continued)

Aluminum series 1LE1, frame sizes 100 to 160 – self-ventilated motors with increased output and improved/high efficiency

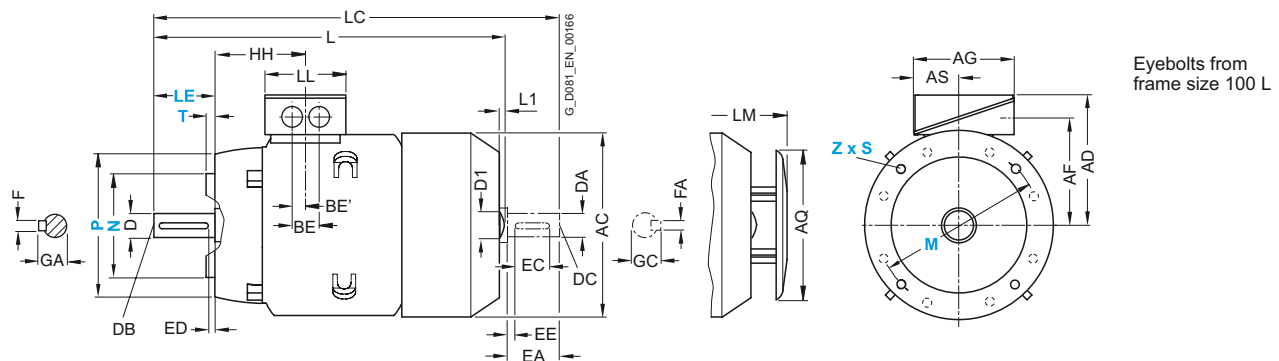
Type of construction IM B35

For flange dimensions, see Page 1/76 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see Page 1/76 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC									DE shaft extension							NDE shaft extension							
Frame size	Number of poles	HH	K	K'	L ¹⁾	L1	D1	LC	LL	LM	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC	
100 L	2, 4, 6, 8	96.5	12	16	430.5	7	32	489	112	463.5	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27	
112 M	2, 4, 6, 8	96	12	16	414	7	32	475	112	447	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27	
132 M	2, 4, 6, 8	115.5	12	16	515	8.5	39	585.5	130	550.5	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31	
160 L	2, 4, 6, 8	155	15	19	664	10	45	790	145	698	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45	

¹⁾ The length is specified as far as the tip of the fan cover.

IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

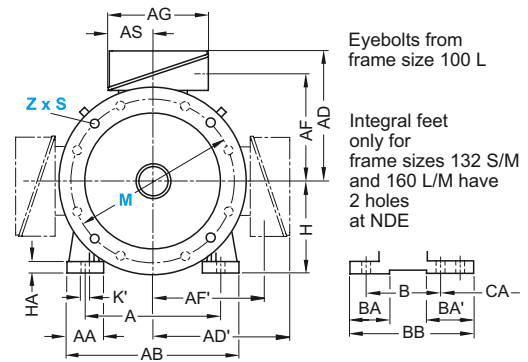
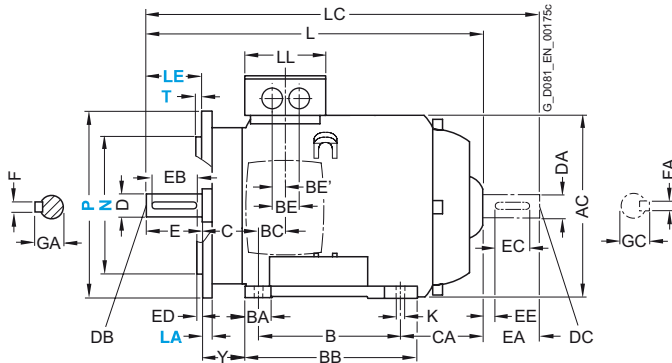
Dimensions

Dimensional drawings (continued)

Aluminum series 1LE1, frame sizes 100 to 160 – forced-air cooled motors with improved/high efficiency
Aluminum series 1PC1, frame sizes 100 to 160 – self-cooled motors with improved/high efficiency

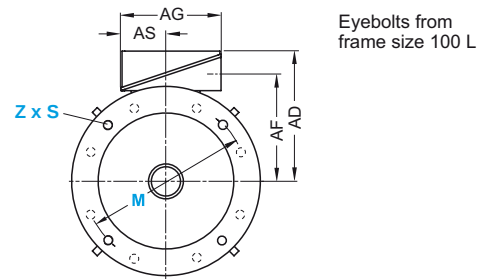
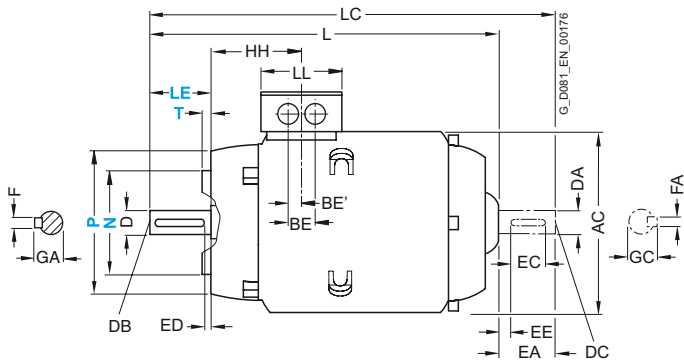
Type of construction IM B35

For flange dimensions, see Page 1/76 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see Page 1/76 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC						DE shaft extension						NDE shaft extension							
Frame size	Number of poles	HH	K	K'	L	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
100 L	2, 4, 6, 8	96.5	12	16	321.5	–	112	28	M10	60	50	5	8	31	–	–	–	–	–	–	–
112 M	2, 4, 6, 8	96	12	16	311	–	112	28	M10	60	50	5	8	31	–	–	–	–	–	–	–
132 S	2, 4, 6, 8	115.5	12	16	380.5	–	130	38	M12	80	70	5	10	41	–	–	–	–	–	–	–
132 M	2, 4, 6, 8	115.5	12	16	380.5	–	130	38	M12	80	70	5	10	41	–	–	–	–	–	–	–
160 M	2, 4, 6, 8	155	15	19	510	–	145	42	M16	110	90	10	12	45	–	–	–	–	–	–	–
160 L	2, 4, 6, 8	155	15	19	510	–	145	42	M16	110	90	10	12	45	–	–	–	–	–	–	–

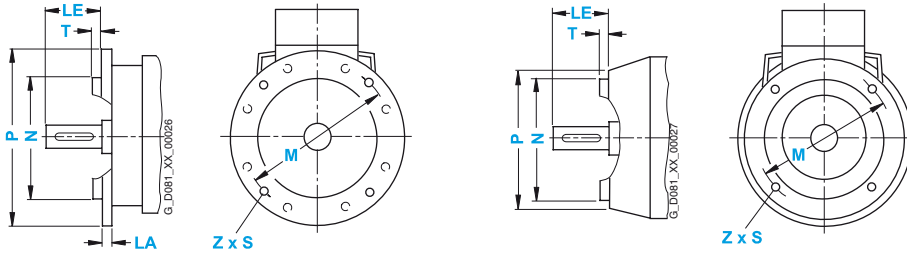
IEC Squirrel-Cage Motors

New Generation 1LE1/1PC1

Dimensions

Dimensional drawings (continued)

Flange dimensions



In DIN EN 50347, flanges FF with through holes and flanges FT with tapped holes are assigned to frame sizes. The designation of flange A and C according to DIN 42948 (invalid since 09/2003) are also listed for information purposes. See the table below. (Z = the number of retaining holes)

Frame size	Type of construction	Flange type	Flange with		Dimension designation acc. to IEC								
			Through holes (FF/A) Tapped holes (FT/C)		LA	LE	M	N	P	S	T	Z	
100 L	IM B5, IM B35, IM V1, IM V3	Flange	FF 215	A 250	11	60	215	180	250	14.5	4	4	
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT 130	C 160	–	60	130	110	160	M8	3.5	4	
	IM B14, IM B34, IM V18, IM V19	Special flange (next larger standard flange)	FT 165	C 200	–	60	165	130	200	M10	3.5	4	
112 M	IM B5, IM B35, IM V1, IM V3	Flange	FF 215	A 250	11	60	215	180	250	14.5	4	4	
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT 130	C 160	–	60	130	110	160	M8	3.5	4	
	IM B14, IM B34, IM V18, IM V19	Special flange (next larger standard flange)	FT 165	C 200	–	60	165	130	200	M10	3.5	4	
132 S, 132 M	IM B5, IM B35, IM V1, IM V3	Flange	FF 265	A 300	12	80	265	230	300	14.5	4	4	
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT 165	C 200	–	80	165	130	200	M10	3.5	4	
	IM B14, IM B34, IM V18, IM V19	Special flange (next larger standard flange)	FT 215	C 250	–	80	215	180	250	M12	4	4	
160 M, 160 L	IM B5, IM B35, IM V1, IM V3	Flansch	FF 300	A 350	13	110	300	250	350	18.5	5	4	
	IM B14, IM B34, IM V18, IM V19	Normflansch	FT 215	C 250	–	110	215	180	250	M12	4	4	