

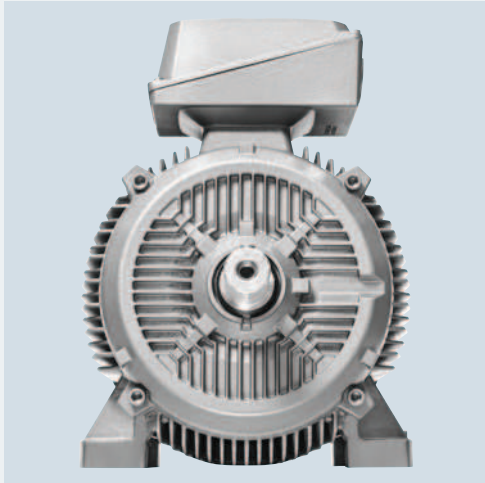
Motors

SIMOTICS

Low-Voltage Motors

Type series 1LE1, 1PC1, 1MB1

Catalog D 81.1 · 2014



The products and systems described in this catalog are manufactured/distributed under application of a certified quality management system in accordance with DIN EN ISO 9001 (Certified Registration No. DE-000357 QM). The certificate is recognized by all IQNet countries.

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Introduction

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Answers for industry.

Integrated technologies, vertical market expertise and services for greater productivity, energy efficiency, and flexibility.

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SIMOTICS GP/SD

1LE1/1PC1

Standard Motors

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SIMOTICS GP/SD 1LE1/1PC1 Standard Motors

Orientation

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Overview



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 minimizing energy consumption here to secure competitiveness today and in the future. The environment will also profit from reduced energy consumption.

This is the reason that already today we are developing a new generation of low-voltage motors. Innovative rotors create the best requisites for motors with a high degree of efficiency. IE1 and IE2 motors with the same output have the same dimensions. The new motors for IE2, IE3 and IE4 offer considerable energy savings and protect our environment. We also consider environmental sustainability during production to preserve resources. Potting compounds and coatings are, for example, solvent-free.

The modular mounting concept provides total flexibility. Each motor is based on a uniform concept for all markets worldwide. Our motors are manufactured in accordance with the latest ecological concepts and are launched on the market step by step.

The new 1LE1 motor family is therefore one of the most compact in the world, because it is manufactured using innovative technology. For an optimized design, a compound of highly conductive materials is used in the rotor (up to frame size 200). This results in minimum rotor losses and an excellent starting and switching response.

The design of the 1LE1 motors ensures maximum flexibility and minimum installation costs. Users benefit from integral eyebolts, screw-on feet, reinforced bearing plates with optimum mechanical properties and easily accessible terminal boxes. Encoders, brakes and separately driven fans can also be added without any problems. Smaller inventories make stockkeeping easier, so motor suppliers can respond to customer requirements more quickly.

The 1LE1/1PC1 motor family comprises two main series:

- SIMOTICS GP for general purpose applications: Motors with an aluminum housing

SIMOTICS GP 1LE1/1PC1 motors with an aluminum housing are suitable for a wide range of standard drive tasks in the industrial environment. Thanks to their particular low weight, they are predestined for applications in pumps, fans and compressors. But they also reliably fulfill their tasks in conveyor systems and lifting gear.

Brief overview	
Output and voltage range:	0.37 ... 22 kW for all commonly used voltages
Frame sizes and types of construction:	80 ... 160 in all common types of construction
Rated speed:	750 ... 3600 rpm
Number of poles:	2, 4, 6, 8
Efficiency classes:	<ul style="list-style-type: none"> • IE1 (Standard Efficiency) • IE2 (High Efficiency) • IE3 (Premium Efficiency) • NEE (NEMA Energy Efficient, according to NEMA MG, Table 12-11) • NPE (NEMA Premium Efficient, according to NEMA MG, Table 12-12)

- SIMOTICS SD for severe duty applications: Motors with cast-iron housing

SIMOTICS SD 1LE1 motors with a cast-iron housing are extremely rugged and are therefore the first choice for applications under harsh environmental conditions. They master dust or vibration in mills and mixers as well as the corrosive atmosphere in the petrochemical industry. Their design supports optimized heat dissipation and offers the same handling as the general purpose variants.

Brief overview	
Output and voltage range:	0.18 ... 200 kW for all commonly used voltages
Frame sizes and types of construction:	71 ... 315 in all common types of construction
Rated speed:	750 ... 3600 rpm
Number of poles:	2, 4, 6, 8
Efficiency classes:	<ul style="list-style-type: none"> • IE1 (Standard Efficiency) • IE2 (High Efficiency) • IE3 (Premium Efficiency) • NEE (NEMA Energy Efficient, according to NEMA MG, Table 12-11) • NPE (NEMA Premium Efficient, according to NEMA MG, Table 12-12)

Overview (continued)**High efficiency energy-saving motors for a positive energy balance**

Depending on requirements, energy-saving motors for a positive energy balance are available that are compliant with the legal requirements applicable in the European economic area in accordance with EU Directive 640/2009 as well as for the North American market in accordance with US federal law EISA (Energy Independence Security Act).

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 largest frame size. These compact motors are also optimized for efficiency. They are offered in IE2 and IE3 and therefore reduce operating costs.

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

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

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

Naturally cooled motors with surface cooling without fan cover and without 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)

Requirements which make an external fan disadvantageous, e.g. simple cleaning in the food industry, textile industry.

Preferred and Express motors

The most popular basic versions of motor series 1LE1 are available under special terms as so-called "Preferred motors". Most of the "Preferred motors" are also available with a shorter delivery time as so-called "Express motors".

The standard delivery time for "Express motors" is 1 to 2 days from the time of clarification of the order at the factory until dispatch from the factory. To determine the delivery date at the customer site, the appropriate shipping time must be added.

The complete range is covered by Price List D 81.1 P Part 1 "Preferred and Express Motors".

Benefits

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

Greater efficiency

Innovative rotor technology and manufacturing technology has been implemented for the IE1, IE2 and IE3 high efficiency motor variants. The energy-efficient motors are therefore considerably more compact.

The energy saving potential and life cycle costs of the new motors can be calculated with the SinaSave software. The SinaSave program can be downloaded from the Internet using the following link:
www.siemens.com/sinasave

The 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.

A wider range of applications

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

Improved design

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

Greater output

For the same frame size, the high-performance motors offer one complete rated output level more. We are also consistently implementing energy efficiency improvements here, too. The motors are offered (based on the categories of IEC 60034-30) in various efficiency classes.

More flexibility

The optimized design of the motors makes installation easier in general. Encoders, brakes and separately driven fans can be retrofitted easily. Terminal 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 500 V can be operated either directly on the line or converter-fed.

**For general purpose applications:
SIMOTICS GP motors with an aluminum housing**Particularly user friendly

The previously introduced, well-proven, obliquely partitioned terminal box is being implemented consistently throughout the entire motor series.

Special export line

For exporting to NAFTA, the Eagle Line is available. The motors are supplied with the electrical values stamped on the rating plate in accordance with EISA requirements.

Greater output

If the motor has to be extremely compact because there is insufficient space for a standard motor, a motor with increased output could be the solution. In efficiency class IE2, these motors allow the outputs of a standard motor to be achieved in the next smallest frame size.

¹⁾ Canadian Standard Association

²⁾ Underwriters Laboratories Inc.

³⁾ China Quality Certification

SIMOTICS GP/SD 1LE1/1PC1 Standard Motors

Orientation

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Benefits (continued)

For severe duty applications: SIMOTICS SD motors with a cast-iron housing

The right motor for various challenges

The following lines are available for severe duty applications:

- **Basic Line (1LE15):** rugged, reliable motors for machine construction
- **Performance Line (1LE16):** motors for the process industry with reinforced bearings and a rugged coating – for requirements that extend beyond the Basic Line
- **"Eagle Line":** motors for exporting to NAFTA; they fulfill the requirements of UL and CSA and are supplied with the electrical values stamped on the rating plate in accordance with EISA requirements

Comparison: Basic Line versus Performance Line

Function	Basic Line	Performance Line
Bearing size	62 (63 from frame size 280 upwards)	63
Relubrication	Optional (standard from frame size 280 upwards)	Standard from frame size 160 upwards (optional for frame size 100 to 132)
Paint system	Standard coating, corrosion class C2 ¹⁾	Special coating, corrosion class C3 ¹⁾
Drainage	Drain plugs	T drains
Rating plate	Plastic	Steel
Motor protection	Optional	PTC
Fan cover	Plastic	Steel
Warranty	12 months	36 months

Compact design

The size of a motor is often an important aspect in the case of machines. For this reason, the 1LE1 motors in IE2 and IE3 are no longer than their predecessors in the 1LG series in IE2.

Another highlight: some of the IE3 motors fit in the same housing as the IE2 motors. The efficiency classes naturally do not differ with regard to shaft height, so that the mechanical interface to the equipment unit remains the same. This also supports a largely problem-free efficiency upgrade to IE3 – without the need to adapt the mechanical design of a machine.

Greater output

In severe duty applications, increased output motors can also be the right solution if sufficient space is not available for a standard motor. Because these motors offer the same output in the next smallest frame size.

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 industry as well as for most climatic requirements such as those of offshore applications.

Their large range of line 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
- Manufacturing industry
- General machine construction

Motors with a cast-iron housing are particularly suitable for the following severe duty applications:

- Petrochemical industry
- Pharmaceuticals
- Chemical industry
- Printing industry
- Process industry

¹⁾ C2 and C3 are corrosion classes according to DIN EN ISO 12944. The corrosion protection must be selected in accordance with the expected corrosiveness of the environment at the installation location as well as the required service life. Five corrosion classes are defined in the above-mentioned standard, ranging from a non-corrosive indoor atmosphere (C1) to a highly corrosive industrial or marine environment (C5 I and C5 M).

Technical specifications

Overview of technical specifications

This table lists the most important technical specifications. For more information and details, see Catalog Section 1 "Introduction".

Type of motor	SIMOTICS GP/SD 1LE1/1PC1 IEC Low-Voltage Motors
Connection types	Star connection/delta connection The connection type to be used can be established from the Article No. supplements for the required motor.
Number of poles	2, 4, 6, 8
Frame sizes	71 M ... 315 L
Rated output	0.18 ... 200 kW (1LE1 motor series)/0.3 ... 9 kW (1PC1 motor series)
Frequencies	50 Hz and 60 Hz
Versions	Self-ventilated 1LE1 energy-saving motors with: <ul style="list-style-type: none"> • IE1 (Standard Efficiency) • IE2 (High Efficiency) • IE3 (Premium Efficiency) • NEE (NEMA Energy Efficient, according to NEMA MG, Table 12-11) • NPE (NEMA Premium Efficient, according to NEMA MG, Table 12-12) Self-ventilated 1LE1 motors with increased output and: <ul style="list-style-type: none"> • IE1 (Standard Efficiency) • IE2 (High Efficiency) Forced-air cooled 1LE1 motors without external fan and fan cover with: <ul style="list-style-type: none"> • IE1 (Standard Efficiency) • IE2 (High Efficiency) Naturally cooled 1PC1 motors without external fan and fan cover with: <ul style="list-style-type: none"> • IE1 (Standard Efficiency) • IE2 (High Efficiency)
Marking	IEC 60034-30 IE1, IE2, IE3: 2, 4 and 6-pole US Energy Independence Security Act EISA: 2, 4, 6 and 8-pole
Rated speed (synchronous speed)	750 ... 3000 rpm
Rated torque	2.6 ... 1703 Nm (1LE1 motor series)
Insulation of the stator winding in accordance with EN 60034-1 (IEC 60034-1)	Temperature class 155 (F), utilized 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)	<ul style="list-style-type: none"> • Self-ventilated (1LE1 motor series) frame size 80 M to 315 L (IC 411), • Forced-air cooled (1LE1 motor series with order code F90) frame size 80 M to 160 L (IC 418) • Naturally cooled (1PC1 motor series) frame size 100 L to 160 L (IC 410)
Admissible coolant temperature and site altitude	-20 ... +40 °C as standard, site altitude up to 1000 m above sea level. See "Coolant temperature and site altitude" in Catalog Section 1 "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)	<ul style="list-style-type: none"> • 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, IM V3, IM B35 • With standard flange and special flange (next larger flange): IM B14, IM V19, IM V18, 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 Section 1 "Introduction".
Vibration severity 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 Section 1 "Introduction".
Shaft extension according to DIN 748 (IEC 60072)	Balance type: half-key balancing as standard See "Balance and vibration quantity" in Catalog Section 1 "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	<ul style="list-style-type: none"> • Cast housing feet, screwed-on feet available as an option and retrofittable • Terminal 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 "Supplements to article numbers and special versions"

More information

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

At:

www.siemens.com/automation/partner

you can find out about certain technologies through Siemens contact partners worldwide.

Wherever possible, you will find a local contact partner for:

- Technical support
- Spare parts/repairs
- Service
- Training
- Marketing & Sales
- Technical consultation/engineering

You start by selecting a:

- country
- product or
- sector

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

SIMOTICS GP/SD 1LE1/1PC1 Standard Motors

Orientation

Converter-fed operation

Overview

Converter-fed operation up to 500 V +10 % line voltage

The standard insulation of 1LE1 motors is designed such that converter-fed operation is possible at line voltages up to $U_N \leq 500$ V. Compliance with the following limit values is essential (voltage values are peak values): $\dot{U}_{\text{phase-to-phase}} \leq 1500$ V, $\dot{U}_{\text{phase-to-ground}} \leq 1100$ V, voltage rise times of $t_s > 0.1$ μs . Operation of 1LE1 motors at higher voltage peaks (e.g. on converters with controlled input, e.g. AFE, ALM) requires motors with higher insulation resistance.

Please inquire in this case. For motors with protruding connection cables (order codes R20, R21, R22, R23 and R24) please inquire in the case of converter-fed operation.

During installation, the EMC guidelines must be complied with

Note:

When motors are operated on SINAMICS converters additional losses occur which, depending on the admissible winding temperature, can make it necessary to reduce the torque. The admissible torque values can be obtained from the SIZER configuring tool. The lowest frequency specified there is 5 Hz. For stationary converter-fed operation at lower frequencies, particularly in the case of frame sizes < 100, it is necessary to inquire at the Quotation Center.

2

Benefits

Motors operating with frequency converters offer the user numerous advantages.

The motors feature the future-oriented insulation system DURIGNIT IR 2000 (IR = Inverter Resistant). The DURIGNIT IR 2000 insulating system consists of high-quality enamel wires and insulating sheet materials in conjunction with temperature-resistant resin impregnation.

The motors specially developed for operation on a frequency converter with special insulation are converter-compatible at 690 V (+10 %).

Application

The motors can be used in numerous drive applications with variable-speed drives when they are combined with converters from the MICROMASTER and SINAMICS spectrum.

The wide field of implementation includes the following applications:

- Conveyor systems such as cranes, belts and lifting gear
- High-bay warehouses
- Packaging machines
- Automation and drives

Their large range of line voltages enables them to be used all over the world.

Technical specifications

General note

All the data listed in the catalog is applicable for a 50 Hz line supply. With converter-fed operation, the torque reduction factors for constant torque and drives for fans, pumps and compressors must be configured using the "SIZER for Siemens Drives" engineering tool. Higher noise levels must be expected at frequencies other than 50 Hz for motors operating with converters due to the harmonic content of the supply.

Mechanical limit speeds

When the motor is operated at its rated frequency, it is important to note that the maximum speeds are limited by the limits for the roller bearings, critical rotor speed and rigidity of the rotating parts (see Table on page 1/44).

Motor protection

A motor protection function can be implemented using the \hat{P}_t sensing circuit implemented in the converter software.

If required, more precise motor protection can be afforded by direct temperature measurement using KTY-84 sensors or PTC thermistors in the motor winding. Some converters from Siemens determine the motor temperature using the resistance of the temperature sensor. They can be set to a required temperature for alarm and tripping.

Insulation

The insulation of 1LE motors is designed such that converter-fed operation is possible at voltages up to 500 V +10 %.

$\dot{U}_{\text{phase-to-phase}} \leq 1500$ V, $\dot{U}_{\text{phase-to-ground}} \leq 1100$ V, voltage rise times of $t_s > 0.1$ μs .

All motors with voltage codes 22 and 34 must be operated on a converter under these conditions. For converter-fed operation with the outputs specified in the catalog, the motors are used according to temperature class 155 (F), i.e. in this case neither a service factor > 1 nor an increased coolant temperature is possible (order codes N01, N02 and N03 cannot be ordered).

Selection and ordering data

The article number consists of a combination of digits and letters and is divided into three hyphenated blocks to provide a better overview, e.g.:

1LE1001-1DB22-2CB5-Z
H00

The first block (positions 1 to 7) identifies the motor type; the second block (positions 8 to 12) defines the motor frame size and length, the number of poles and in some cases the frequency/output; and in the third block (positions 13 to 16), the frequency/output, type of construction and other design features are encoded.

For deviations in the second and third block from the catalog codes, either **-Z** or **90** should be used as appropriate.

Ordering data:

- Complete Article No. and order code(s) or plain text
- If a quotation has been requested, please specify the quotation number in addition to the Article No.
- When ordering a complete motor as a spare part, please specify the works serial No. for the previously supplied motor as well as the Article No.

Structure of the Article No.:		Position:	1	2	3	4	5	6	7	-	8	9	10	11	12	-	13	14	15	16			
Positions 1 to 4: Digit, letter, letter, digit	<ul style="list-style-type: none"> Self-ventilated by fan mounted on and driven by rotor Forced-air cooled by air flow from the fan to be driven with option extension F90 Naturally cooled without external fan and fan cover 		1	L	E	1																	
Position 5: Digit	Aluminum housing Cast-iron housing Basic Line Cast-iron housing Performance Line						0 5 6																
Positions 6 to 7: 2 digits	Motors with High Efficiency IE2 Motors with Standard Efficiency IE1 Motors with Premium Efficiency IE3 Pole-changing motors with one winding connected in Dahlander circuit Pole-changing motors with two windings NEMA Energy Efficient MG1 motors, Table 12-11 – Eagle Line NEMA Premium Efficient MG1 motors, Table 12-12 – Eagle Line						0 0 0 1 1 2 2	1 2 3 1 2 1 3															
Positions 8, 9 and 11: Digit, letter, digit	Motor frame size (frame size as a combination of shaft height and overall length, encoded)										0 3	A E		0 6									
Position 10: Letter	No. of poles A: 2-pole, B: 4-pole, C: 6-pole, D: 8-pole, J: 4/2-pole const. load torque, L: 8/4-pole const. load torque, P: 4/2-pole square-law load torque, Q: 6/4-pole square-law load torque, R: 8/4-pole square-law Load torque												A R										
Positions 12 and 13: 2 digits	Voltage, circuit and frequency (encoded with two digits, 9-0 requires order code M.. (e. g. M1Y))														0 9		0 8						
Position 14: Letter	Type of construction (encoded with A ... V)																		A V				
Position 15: Letter	Motor protection (encoded with A ... Z; Z requires order code Q.. (e. g. Q2A))																			A Z			
Position 16: Digit	Terminal box position 4: Terminal box top, 5: Terminal box right, 6: Terminal box left, 7: Terminal box below																				4 7		
	Special order versions: encoded – additional order code required not encoded – additional plain text required																						

Ordering example

Selection criteria	Requirement	Structure of the Article No.
Motor type 1LE1	Standard motor with High Efficiency IE2, IP55 degree of protection, aluminum housing	1LE1001-■■■■■■-■■■■■
Motor frame size/No. of poles/Speed	160 M/4-pole/1500 rpm	1LE1001-1DB2■-■■■■■
Rated output	11 kW	
Voltage and frequency	230 VΔ/400 VY, 50 Hz	1LE1001-1DB22-2■■■■■
Type of construction with special version	IM V5 with protective cover ¹⁾	1LE1001-1DB22-2C■■■-Z H00
Motor protection	Motor protection with PTC thermistor with 3 embedded temperature sensors for tripping	1LE1001-1DB22-2CB■-Z H00
Terminal box position	Terminal box right (viewed from DE)	1LE1001-1DB22-2CB5-Z H00

¹⁾ Standard without protective cover – the protective cover is defined with order code **H00** and must be ordered in addition to the Article No. with **-Z** and this order code.

SIMOTICS GP 1LE1 Standard Motors

Motors with High Efficiency IE2

Self-ventilated or forced-air cooled motors
Aluminum series 1LE1001



Selection and ordering data

Operating values at rated output														Aluminum series		m _{IM} B3 J		Torque class				
P _{rated} , P _{rated} , 50 Hz, 60 Hz 1)	Frame size	n _{rated} , T _{rated} , 50 Hz, 60 Hz	IE class	η _{rated} , 50 Hz, 4/4	η _{rated} , 50 Hz, 3/4	η _{rated} , 50 Hz, 2/4	cosφ _{rated} , 50 Hz, 4/4	I _r , 400 V, 50 Hz	T _L /I _r , 50 Hz	I _L /I _r , 50 Hz	T _B /I _r , 50 Hz	L _{pfA} , 50 Hz	L _{WA} , 50 Hz	Article No.	kg	kgm ²	CL					
<ul style="list-style-type: none"> • Cooling: self-ventilated (IC 411) or with order code F90 forced-air cooled without external fan and fan cover (IC 416) • Efficiency: High Efficiency IE2, service factor (SF) 1.15 • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																						
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz ¹⁾																						
0.75	0.86	80 M	2805	2.6	IE2	IE2	77.4	79.5	78.8	0.84	1.67	1.9	4.9	2.3	60	71	1LE1001-0DA2	9.0	0.0080	16		
1.1	1.27	80 M	2835	3.7	IE2	IE2	79.6	81.3	80.8	0.83	2.40	2.7	6.0	3.1	60	71	1LE1001-0DA3	11	0.011	16		
1.5	1.75	90 S	2885	5.0	IE2	IE2	81.3	82.3	80.8	0.84	3.15	2.7	6.9	3.6	65	77	1LE1001-0EA0	13	0.017	16		
2.2	2.55	90 L	2890	7.3	IE2	IE2	83.2	83.9	82.3	0.85	4.5	2.5	7.1	3.7	65	77	1LE1001-0EA4	15	0.021	16		
3	3.45	100 L	2905	9.9	IE2	IE2	84.6	85.2	84.7	0.84	6.1	2.3	7.0	3.3	67	79	1LE1001-1AA4	21	0.044	16		
4	4.55	112 M	2950	13	IE2	IE2	85.8	86.7	86.1	0.86	7.8	2.4	7.4	3.3	69	81	1LE1001-1BA2	27	0.092	16		
5.5	6.3	132 S	2950	18	IE2	IE2	87.0	88.0	87.4	0.87	10.5	1.8	6.6	2.9	68	80	1LE1001-1CA0	39	0.20	16		
7.5	8.6	132 S	2950	24	IE2	IE2	88.1	88.7	88.6	0.87	14.1	2.2	7.5	3.1	68	80	1LE1001-1CA1	43	0.24	16		
11	12.6	160 M	2955	36	IE2	IE2	89.4	90.0	89.1	0.87	20.5	2.1	7.4	3.2	70	82	1LE1001-1DA2	67	0.045	16		
15	17.3	160 M	2955	48	IE2	IE2	90.3	90.9	90.3	0.88	27	2.4	7.6	3.4	70	82	1LE1001-1DA3	75	0.053	16		
18.5	21.3	160 L	2955	60	IE2	IE2	90.9	91.2	90.4	0.88	33.5	2.9	7.9	3.6	70	82	1LE1001-1DA4	84	0.061	16		
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz ¹⁾																						
0.55	0.63	80 M	1440	3.7	-	-	78.1	78.9	76.1	0.74	1.37	2.2	5.3	3.1	53	64	1LE1001-0DB2	10	0.0017	16		
0.75	0.86	80 M	1440	5.0	IE2	IE2	79.6	80.2	78.0	0.76	1.79	2.2	5.6	3.1	53	64	1LE1001-0DB3	11	0.0021	16		
1.1	1.27	90 S	1425	7.4	IE2	IE2	81.4	81.7	79.9	0.78	2.5	2.3	5.6	2.9	56	68	1LE1001-0EB0	13	0.0028	16		
1.5	1.75	90 L	1435	10	IE2	IE2	82.8	83.5	82.0	0.79	3.3	2.6	6.4	3.4	56	68	1LE1001-0EB4	16	0.0036	16		
2.2	2.55	100 L	1455	14	IE2	IE2	84.3	85.1	84.3	0.81	4.65	2.1	6.9	3.3	60	72	1LE1001-1AB4	21	0.0086	16		
3	3.45	100 L	1455	20	IE2	IE2	85.5	86.7	86.0	0.82	6.2	2.0	6.9	3.1	60	72	1LE1001-1AB5	25	0.011	16		
4	4.55	112 M	1460	26	IE2	IE2	86.6	87.3	86.5	0.81	8.2	2.5	7.1	3.2	58	70	1LE1001-1BB2	29	0.014	16		
5.5	6.3	132 S	1465	36	IE2	IE2	87.7	89.0	87.7	0.80	11.3	2.3	6.9	2.9	64	76	1LE1001-1CB0	42	0.027	16		
7.5	8.6	132 M	1465	49	IE2	IE2	88.7	90.3	88.8	0.83	14.7	2.3	6.9	2.9	64	76	1LE1001-1CB2	49	0.034	16		
11	12.6	160 M	1470	71	IE2	IE2	89.8	90.9	90.8	0.85	21	2.1	6.7	2.8	65	77	1LE1001-1DB2	71	0.065	16		
15	17.3	160 L	1475	97	IE2	IE2	90.6	91.3	91.0	0.85	28	2.3	7.3	3.0	65	77	1LE1001-1DB4	83	0.083	16		
Voltages		Motor protection	No. of poles	Frame size	Motor type	Version											Order code(s)					
Frame sizes 80 M to 90 L ²⁾																						
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	PTC thermistor with 1 temp. sensor	2, 4	80 M ... 90 L	1LE1001-0D ... -0E	Standard	2	2											-	
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	Without	2, 4	80 M ... 90 L	1LE1001-0D ... -0E	Standard	3	4											-	
50 Hz	400 VY	60 Hz ¹⁾	460 VY	Without	2, 4	80 M ... 90 L	1LE1001-0D ... -0E	Standard	0	2	A											-
Frame sizes 100 L to 160 L: use of the 4 x 90° rotatable terminal box																						
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	Any	2, 4	100 L ... 160 L	1LE1001-1A ... -1D	Standard	2	2											-	
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	Any	2, 4	100 L ... 160 L	1LE1001-1A ... -1D	Standard	3	4											-	
50 Hz	500 VY			Any	2, 4	100 L ... 160 L	1LE1001-1A ... -1D	Without add. charge	2	7											-	
50 Hz	500 VΔ			Any	2, 4	100 L ... 160 L	1LE1001-1A ... -1D	Without add. charge	4	0											-	
Further voltages ¹⁾		For price information, code numbers, order codes and descriptions, see from Page 2/38																				
Types of construction		No. of poles	Frame size	Motor type	Version											Order code(s)						
Without flange		IM B3 ³⁾	2, 4	80 M ... 160 L	1LE1001-0D ... -1D	Standard											A					
With flange		IM B5 ³⁾	2, 4	80 M ... 160 L	1LE1001-0D ... -1D	With additional charge											F					
With standard flange		IM B14 ³⁾	2, 4	80 M ... 160 L	1LE1001-0D ... -1D	With additional charge											K					
Further types of construction		For price information, code letters and descriptions, see from Page 2/41																				
...																						
Motor protection		No. of poles	Frame size	Motor type	Version											Order code(s)						
Without			2, 4	100 L ... 160 L	1LE1001-1A ... -1D	Standard											A					
PTC thermistor with 3 temperature sensors			2, 4	100 L ... 160 L	1LE1001-1A ... -1D	With additional charge											B					
Further motor protection		For price information, code letters and descriptions, see from Page 2/49																				
...																						
Terminal box position		No. of poles	Frame size	Motor type	Version											Order code(s)						
Terminal box at top			2, 4	80 M ... 160 L	1LE1001-0D ... -1D	Standard											4					
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/51																				
Special versions		No. of poles	Frame size	Motor type											Order code(s)							
Forced-air cooled motors without ext. fan/fan cover (IC 416)		2, 4	80 M ... 160 L	1LE1001-0D ... -1D											1LE1001-...-Z F90 +...+...+...							
Options		For price information, order codes and descriptions, see from Page 2/53																				
1LE1001-...-Z +...+...+...																						

¹⁾ Operating values at rated output for 60 Hz are available on request.

²⁾ For converter-fed operation of shaft heights 80 and 90, ordering with PTC thermistors and their connection to the converter is recommended.

³⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03) and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.

SIMOTICS GP 1LE1 Standard Motors

Motors with High Efficiency IE2



Self-ventilated or forced-air cooled motors
Aluminum series 1LE1001

Selection and ordering data (continued)

Operating values at rated output														Aluminum series		Torque class					
$P_{rated, 50 Hz}$	$P_{rated, 60 Hz}$	Frame size	$\eta_{rated, 50 Hz}$	$\eta_{rated, 60 Hz}$	IE class	$\eta_{rated, 50 Hz, 4/4}$	$\eta_{rated, 50 Hz, 3/4}$	$\eta_{rated, 50 Hz, 2/4}$	$\cos\phi_{rated, 4/4}$	$I_{rated, 50 Hz, 400 V}$	$T_{LR}/I_{rated, 50 Hz}$	$I_{LR}/I_{rated, 50 Hz}$	$T_p/I_{rated, 50 Hz}$	$L_{pFA, 50 Hz}$	$L_{WA, 50 Hz}$	1LE1001 – IE2 version in accordance with IEC 60034-30	$m_{IM B3, J}$	CL			
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A						Article No.	kg	kgm ²			
<ul style="list-style-type: none"> • Cooling: self-ventilated (IC 411) or with order code F90 forced-air cooled without external fan and fan cover (IC 416) • Efficiency: High Efficiency IE2, service factor (SF) 1.15 • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																					
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz ¹⁾																					
0.37	0.43	80 M	925	3.85	–	–	71.4	71.5	66.5	0.69	1.08	2.1	4.0	2.4	42	53	1LE1001-0DC2	9	0.0017		
0.55	0.63	80 M	935	5.6	–	–	74.0	74.0	70.5	0.66	1.63	2.5	4.4	2.9	42	53	1LE1001-0DC3	12	0.0025		
0.75	0.86	90 S	925	7.7	IE2	IE2	75.9	76.0	73.0	0.70	2.05	2.0	4.1	2.5	43	55	1LE1001-0EC0	13	0.0030		
1.1	1.27	90 L	935	11.2	IE2	–	78.1	78.5	75.0	0.70	2.90	2.2	4.4	2.6	43	55	1LE1001-0EC4	16	0.0040		
1.5	1.75	100 L	970	15	IE2	IE2	79.8	80.2	79.0	0.73	3.7	2.0	6.2	2.9	59	71	1LE1001-1AC4	25	0.011		
2.2	2.55	112 M	965	22	IE2	IE2	81.8	82.5	81.3	0.75	5.2	2.1	6.0	3.1	57	69	1LE1001-1BC2	29	0.014		
3	3.45	132 S	970	30	IE2	IE2	83.3	84.0	82.8	0.74	7.0	1.6	5.6	2.6	63	75	1LE1001-1CC0	38	0.024		
4	4.55	132 M	970	39	IE2	IE2	84.6	85.8	85.0	0.78	8.7	1.6	5.6	2.5	63	75	1LE1001-1CC2	43	0.029		
5.5	6.3	132 M	970	54	IE2	IE2	86.0	87.4	87.0	0.77	12	1.9	6.1	2.8	63	75	1LE1001-1CC3	52	0.037		
7.5	8.6	160 M	975	73	IE2	IE2	87.2	88.0	87.3	0.74	16.8	1.9	4.7	2.2	67	79	1LE1001-1DC2	77	0.075		
11	12.6	160 L	975	108	IE2	IE2	88.7	89.6	89.2	0.76	23.5	1.9	4.8	2.2	67	79	1LE1001-1DC4	93	0.098		
8-pole: 750 rpm at 50 Hz, 900 rpm at 60 Hz ¹⁾																					
0.75	0.86	100 L	725	9.9	–	–	68.3	65.8	59.3	0.58	2.75	1.6	4.0	2.8	60	72	1LE1001-1AD4	21	0.0086		
1.1	1.27	100 L	725	14	–	–	68.3	65.4	58.9	0.58	4.0	1.8	4.1	2.8	60	72	1LE1001-1AD5	25	0.011		
1.5	1.75	112 M	720	20	–	–	75.8	76.0	73.0	0.67	4.25	1.4	4.2	2.4	63	75	1LE1001-1BD2	29	0.014		
2.2	2.55	132 S	725	29	–	–	78.8	79.3	77.2	0.65	6.2	1.4	4.3	2.1	63	75	1LE1001-1CD0	41	0.027		
3	3.45	132 M	730	39	–	–	82.7	83.0	80.9	0.65	8.1	1.4	5.0	2.4	63	75	1LE1001-1CD2	49	0.035		
4	4.55	160 M	730	52	–	–	81.9	82.6	81.7	0.67	10.5	1.6	3.7	1.9	63	75	1LE1001-1DD2	69	0.065		
5.5	6.3	160 M	730	72	–	–	83.8	84.3	83.1	0.67	14.1	1.7	3.9	2	63	75	1LE1001-1DD3	82	0.083		
7.5	8.6	160 L	730	98	–	–	85.3	86.5	86.1	0.7	18.1	1.6	3.8	1.9	63	75	1LE1001-1DD4	94	0.098		
Voltages			No. of poles	Frame size	Motor type	Version												Order code(s)			
Frame sizes 80 M to 90 L ²⁾																					
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	PTC thermistor with 1 temp. sensor	6	80 M ... 90 L	1LE1001-0D ... -0E	Standard	2	2										–	
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	Without	6	80 M ... 90 L	1LE1001-0D ... -0E	Standard	3	4										–	
50 Hz	400 VY	60 Hz ¹⁾	460 VY	Without	6	80 M ... 90 L	1LE1001-0D ... -0E	Standard	0	2	A								–		
Frame sizes 100 L to 160 L: use of the 4 x 90° rotatable terminal box																					
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY		6, 8	100 L ... 160 L	1LE1001-1A ... -1D	Standard	2	2										–	
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ		6, 8	100 L ... 160 L	1LE1001-1A ... -1D	Standard	3	4										–	
50 Hz	500 VY				6, 8	100 L ... 160 L	1LE1001-1A ... -1D	Without add. charge	2	7										–	
50 Hz	500 VΔ				6, 8	100 L ... 160 L	1LE1001-1A ... -1D	Without add. charge	4	0										–	
Further voltages ¹⁾							For price information, code numbers, order codes and descriptions, see from Page 2/38														
Types of construction							No. of poles	Frame size	Motor type	Version								Order code(s)			
Without flange		IM B3 ³⁾		6, 8		80 M ... 160 L	1LE1001-0D ... -1D	Standard	A										–		
With flange		IM B5 ³⁾		6, 8		80 M ... 160 L	1LE1001-0D ... -1D	With additional charge	F										–		
With standard flange		IM B14 ³⁾		6, 8		80 M ... 160 L	1LE1001-0D ... -1D	With additional charge	K										–		
Further types of construction							For price information, code letters and descriptions, see from Page 2/41														
Motor protection							No. of poles	Frame size	Motor type	Version								Order code(s)			
Without							6, 8	100 L ... 160 L	1LE1001-1A ... -1D	Standard	A										–
PTC thermistor with 3 temperature sensors							6, 8	100 L ... 160 L	1LE1001-1A ... -1D	With additional charge	B										–
Further motor protection							For price information, code letters and descriptions, see from Page 2/49														
Terminal box position							No. of poles	Frame size	Motor type	Version								Order code(s)			
Terminal box at top							6, 8	80 M ... 160 L	1LE1001-0D ... -1D	Standard	4										–
Further terminal box positions							For price information, code numbers and descriptions, see from Page 2/51														
Special versions							No. of poles	Frame size	Motor type								Order code(s)				
Forced-air cooled motors without ext. fan/fan cover (IC 416)							6, 8	80 M ... 160 L	1LE1001-0D ... -1D	1LE1001-...-Z F90+...+...+...							–				
Options							For price information, order codes and descriptions, see from Page 2/53 1LE1001-...-Z ...+...+...+...														

¹⁾ Operating values at rated output for 60 Hz are available on request.

²⁾ For converter-fed operation of shaft heights 80 and 90, ordering with PTC thermistors and their connection to the converter is recommended.

³⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03) and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.



SIMOTICS GP 1LE1 Standard Motors

Motors with High Efficiency IE2

Self-ventilated motors
Aluminum series 1LE1001 with increased output



Selection and ordering data

Operating values at rated output															Aluminum series		m _{IM B3} J		Torque class
P _{rated} , P _{rated} , Frame size	η _{rated} , T _{rated}	IE class	η _{rated} , η _{rated} , η _{rated} , COS φ	I _{rated} , T _{LR} /I _R , I _R /I _B , T _B /T _{rated}	L _{pFA} , L _{WA}	1LE1001 – IE2 version in accordance with IEC 60034-30 with increased output Article No.													
50 Hz 60 Hz 1)	50 Hz 50 Hz		50 Hz, 50 Hz, 50 Hz, 4/4 3/4 2/4 50 Hz, 4/4	50 Hz, I _{rated} , I _{rated} , I _{rated} , 400 V 50 Hz 50 Hz 50 Hz	50 Hz 50 Hz	1LE1001-1AA6		kg kg ²		CL									
kW kW FS	rpm Nm	50 Hz 60 Hz %	% % %	A	dB(A) dB(A)		kg kg ²		CL										
<ul style="list-style-type: none"> Cooling: self-ventilated (IC 411) Efficiency: High Efficiency IE2, service factor (SF) 1.15 Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																			
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz ¹⁾																			
4	4.55	100 L	2905 13	IE2 IE2	85.8 87.2 87.0 0.86	7.8 2.5 7.6 3.5 67 79	1LE1001-1AA6		26	0.0054	16								
5.5	6.3	112 M	2950 18	IE2 IE2	87.0 87.5 87.2 0.89	10.3 2.2 7.7 3.3 69 81	1LE1001-1BA6		34	0.012	16								
11	12.6	132 M	2950 36	IE2 IE2	89.4 90.2 90.3 0.89	20 2.3 7.9 3.2 68 80	1LE1001-1CA6		57	0.031	16								
22	25.3	160 L	2955 71	IE2 IE2	91.3 91.7 91.3 0.89	39 3.1 8.4 3.7 70 82	1LE1001-1DA6		94	0.068	16								
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz ¹⁾																			
4	4.55	100 L	1460 26	IE2 IE2	86.6 87.4 86.7 0.80	8.3 2.2 7.5 3.5 60 72	1LE1001-1AB6		30	0.014	16								
5.5	6.3	112 M	1460 36	IE2 IE2	87.7 88.1 87.4 0.81	11.2 2.5 7.1 3.2 58 70	1LE1001-1BB6		34	0.017	16								
11	12.6	132 M	1465 72	IE2 IE2	89.8 90.6 90.4 0.84	21 2.6 7.7 3.1 64 76	1LE1001-1CB6		64	0.046	16								
18.5	21.3	160 L	1475 120	IE2 IE2	91.2 91.7 91.6 0.85	34.5 2.5 7.7 3.3 65 77	1LE1001-1DB6		100	0.099	16								
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz ¹⁾																			
2.2	2.55	100 L	965 22	IE2 IE2	81.8 82.5 81.5 0.76	5.1 1.9 5.7 2.9 59 71	1LE1001-1AC6		30	0.014	16								
3	3.45	112 M	960 30	IE2 IE2	83.3 84.1 83.6 0.79	6.6 2.1 6.0 3.1 57 69	1LE1001-1BC6		34	0.017	16								
7.5	8.6	132 M	970 74	IE2 IE2	87.2 87.8 87.3 0.77	16.1 2.1 6.5 3.0 63 75	1LE1001-1CC6		64	0.046	16								
15	17.3	160 L	975 147	IE2 IE1	89.7 90.3 89.7 0.75	32.0 2 5.2 2.4 67 79	1LE1001-1DC6		115	0.12	16								
Voltagess																			
No. of poles																			
Frame size																			
Motor type																			
Version																			
Order code(s)																			
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	2, 4, 6	100 L ... 160 L	1LE1001-1A ... -1D	Standard	2	2	-									
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	2, 4, 6	100 L ... 160 L	1LE1001-1A ... -1D	Standard	3	4	-									
50 Hz	500 VY			2, 4, 6	100 L ... 160 L	1LE1001-1A ... -1D	Without add. charge	2	7	-									
50 Hz	500 VΔ			2, 4, 6	100 L ... 160 L	1LE1001-1A ... -1D	Without add. charge	4	0	-									
Further voltages ¹⁾											9 0		...						
For price information, code numbers, order codes and descriptions, see from Page 2/38																			
Types of construction																			
No. of poles																			
Frame size																			
Motor type																			
Version																			
Order code(s)																			
Without flange	IM B3 ²⁾			2, 4, 6	100 L ... 160 L	1LE1001-1A ... -1D	Standard	A		-									
With flange	IM B5 ²⁾			2, 4, 6	100 L ... 160 L	1LE1001-1A ... -1D	With additional charge	F		-									
With standard flange	IM B14 ²⁾			2, 4, 6	100 L ... 160 L	1LE1001-1A ... -1D	With additional charge	K		-									
Further types of construction													...						
For price information, code letters and descriptions, see from Page 2/41																			
Motor protection																			
No. of poles																			
Frame size																			
Motor type																			
Version																			
Order code(s)																			
Without				2, 4, 6	100 L ... 160 L	1LE1001-1A ... -1D	Standard	A		-									
PTC thermistor with 3 temperature sensors				2, 4, 6	100 L ... 160 L	1LE1001-1A ... -1D	With additional charge	B		-									
Further motor protection													...						
For price information, code letters and descriptions, see from Page 2/49																			
Terminal box position																			
No. of poles																			
Frame size																			
Motor type																			
Version																			
Order code(s)																			
Terminal box at top				2, 4, 6	100 L ... 160 L	1LE1001-1A ... -1D	Standard	4		-									
Further terminal box positions													...						
For price information, code numbers and descriptions, see from Page 2/51																			
Special versions																			
No. of poles																			
Frame size																			
Motor type																			
Version																			
Order code(s)																			
Options								1LE1001- ...	Z	...+...+...+...									
For price information, order codes and descriptions, see from Page 2/53																			

1) Operating values at rated output for 60 Hz are available on request.
 2) Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03) and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.

SIMOTICS GP 1PC1 Standard Motors

Motors with High Efficiency IE2



Naturally cooled motors without external fan
Aluminum series 1PC1001

Selection and ordering data

Operating values at rated output														Aluminum series		m _{IM B3} J		Torque class		
P _{rated} , 50 Hz	P _{rated} , 60 Hz 1)	Frame size	n _{rated} , 50 Hz	n _{rated} , 60 Hz	IE class	η _{rated} , 50 Hz, 4/4	η _{rated} , 50 Hz, 3/4	η _{rated} , 50 Hz, 2/4	COSφ _{rated} , 50 Hz, 4/4	I _{rated} , 50 Hz, 400 V	T _{LR} /I _{rated} , 50 Hz	I _{LR} /I _{rated} , 50 Hz	T _B /I _{rated} , 50 Hz	L _{pA} , 50 Hz	L _{WA} , 50 Hz	Article No.	kg	kgm ²	CL	
kW	kW	FS	rpm	Nm	%	%	%		A											
<ul style="list-style-type: none"> • Cooling: naturally cooled without external fan (IC 410) • Efficiency: High Efficiency IE2, service factor (SF) 1.15 • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																				
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz ¹⁾																				
1.4	-	100 L	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1AA4	21	0.0044	13	
1.6	-	112 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1BA2	27	0.0092	16	
3.1	-	132 S	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1CA0	39	0.020	13	
4.3	-	132 S	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1CA1	43	0.024	13	
6.3	-	160 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1DA2	67	0.045	10	
6.5	-	160 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1DA3	75	0.053	13	
9	-	160 L	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1DA4	84	0.061	16	
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz ¹⁾																				
1.1	-	100 L	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1AB4	21	0.0086	13	
1.5	-	100 L	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1AB5	25	0.011	13	
2	-	112 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1BB2	29	0.014	13	
2.6	-	132 S	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1CB0	42	0.027	13	
4	-	132 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1CB2	49	0.034	13	
6	-	160 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1DB2	71	0.065	10	
6.2	-	160 L	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1DB4	83	0.083	16	
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz ¹⁾																				
0.85	-	100 L	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1AC4	25	0.011	10	
1.2	-	112 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1BC2	29	0.014	10	
1.5	-	132 S	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1CC0	38	0.024	7	
2.5	-	132 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1CC2	43	0.029	7	
2.7	-	132 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1CC3	52	0.037	13	
5	-	160 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1DC2	77	0.075	10	
6.5	-	160 L	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1DC4	93	0.098	10	
8-pole: 750 rpm at 50 Hz, 900 rpm at 60 Hz ¹⁾																				
0.37	-	100 L	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1AD4	21	0.0086	10	
0.55	-	100 L	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1AD5	25	0.011	10	
0.75	-	112 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1BD2	29	0.014	7	
1.1	-	132 S	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1CD0	41	0.027	7	
1.5	-	132 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1CD2	49	0.035	7	
2.4	-	160 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1DD2	69	0.065	10	
3.3	-	160 M	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1DD3	82	0.083	10	
4.6	-	160 L	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	-	-	1PC1001-1DD4	94	0.098	10	
Voltagess																				
50 Hz		230 VΔ/400 VY	60 Hz ¹⁾		460 VY	No. of poles		2, 4, 6, 8	Frame size		100 L ... 160 L	Motor type		1PC1001-1A ... -1D	Version		Standard	Order code(s)		-
50 Hz		400 VΔ/690 VY	60 Hz ¹⁾		460 VA	No. of poles		2, 4, 6, 8	Frame size		100 L ... 160 L	Motor type		1PC1001-1A ... -1D	Version		Standard	Order code(s)		-
50 Hz		500 VY				No. of poles		2, 4, 6, 8	Frame size		100 L ... 160 L	Motor type		1PC1001-1A ... -1D	Version		Without add. charge	Order code(s)		-
50 Hz		500 VΔ				No. of poles		2, 4, 6, 8	Frame size		100 L ... 160 L	Motor type		1PC1001-1A ... -1D	Version		Without add. charge	Order code(s)		-
Further voltages ¹⁾		For price information, code numbers, order codes and descriptions, see from Page 2/38																		
Types of construction																				
Without flange		IM B3 ²⁾		No. of poles		2, 4, 6, 8	Frame size		100 L ... 160 L	Motor type		1PC1001-1A ... -1D	Version		Standard	Order code(s)		A	-	
With flange		IM B5 ²⁾		No. of poles		2, 4, 6, 8	Frame size		100 L ... 160 L	Motor type		1PC1001-1A ... -1D	Version		With additional charge	Order code(s)		F	-	
With standard flange		IM B14 ²⁾		No. of poles		2, 4, 6, 8	Frame size		100 L ... 160 L	Motor type		1PC1001-1A ... -1D	Version		With additional charge	Order code(s)		K	-	
Further types of construction		For price information, code letters and descriptions, see from Page 2/41																		
Motor protection																				
Without		No. of poles		2, 4, 6, 8	Frame size		100 L ... 160 L	Motor type		1PC1001-1A ... -1D	Version		Standard	Order code(s)		A	-			
PTC thermistor with 3 temperature sensors		No. of poles		2, 4, 6, 8	Frame size		100 L ... 160 L	Motor type		1PC1001-1A ... -1D	Version		With additional charge	Order code(s)		B	-			
Further motor protection		For price information, code letters and descriptions, see from Page 2/49																		
Terminal box position																				
Terminal box at top		No. of poles		2, 4, 6, 8	Frame size		100 L ... 160 L	Motor type		1PC1001-1A ... -1D	Version		Standard	Order code(s)		4	-			
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/51																		
Special versions																				
Options		No. of poles		2, 4, 6, 8	Frame size		100 L ... 160 L	Motor type		1PC1001-1A ... -1D	Version		Standard	Order code(s)		1LE1001- ... -Z	...			
Further options		For price information, order codes and descriptions, see from Page 2/53																		

Note: The rated outputs and weights may change slightly after they have been checked. Further electrical data can be calculated and supplied on receipt of order.

¹⁾ Operating values at rated output for 60 Hz are available on request.
²⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03)

and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.



SIMOTICS SD 1LE1 Standard Motors

Motors with High Efficiency IE2

Self-ventilated motors
Cast-iron series 1LE1501/1LE1601 Basic/Performance Line



Selection and ordering data

Operating values at rated output														Cast-iron series		m _{IM B3} J	Torque class			
P _{rated} , 50 Hz	P _{rated} , 60 Hz	Frame size	n _{rated} , 50 Hz	T _{rated} , 50 Hz	IE class	η _{rated} , 50 Hz	η _{rated} , 50 Hz	η _{rated} , 50 Hz	COS φ, 50 Hz	I _{rated} , 50 Hz	T _{LR} /I _{rated} , 50 Hz	I _{LR} /I _{rated} , 50 Hz	T _B /I _{rated} , 50 Hz	L _{pFA} , 50 Hz	L _{WA} , 50 Hz			1LE1501 – Basic Line	1LE1601 – Performance Line	Article No.
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A				dB(A)	dB(A)	▲ New	kg	kgm ²	CL	
0.37	0.5	71 M	2770	1.3	IE2	69.5	70.5	68.5	0.81	0.95	2.5	4.1	2.5	52	63	▲	1LE1 5 01-0CA2	11.5	0.00035	16
0.55	0.75	71 M	2780	1.9	IE2	74.1	75.0	73.1	0.80	1.34	2.6	4.6	2.6	52	63	▲	1LE1 5 01-0CA3	13	0.00045	16
0.75	1	80 M	2805	2.6	IE2	77.4	79.5	78.8	0.84	1.67	1.9	4.9	2.3	60	71	▲	1LE1 5 01-0DA2	16	0.00080	16
1.1	1.5	80 M	2835	3.7	IE2	79.6	81.3	80.8	0.83	2.40	2.7	6.0	3.1	60	71	▲	1LE1 5 01-0DA3	18	0.0011	16
1.5	2	90 S	2885	5.0	IE2	81.3	82.3	80.8	0.84	3.15	2.7	6.9	3.6	65	77	▲	1LE1 5 01-0EA0	23	0.0017	16
2.2	3	90 L	2890	7.3	IE2	83.2	83.9	82.3	0.85	4.5	2.5	7.1	3.7	65	77	▲	1LE1 5 01-0EA4	25.5	0.0021	16
3	3.45	100 L	2905	9.9	IE2	84.6	85.2	84.7	0.84	6.1	2.3	7.0	3.3	67	79		1LE1 01-1AA4	32	0.0044	16
4	4.55	112 M	2950	13	IE2	85.8	86.7	86.1	0.86	7.8	2.4	7.4	3.3	69	81		1LE1 01-1BA2	39	0.0092	16
5.5	6.3	132 S	2950	18	IE2	87.0	88.0	87.4	0.87	10.5	1.8	6.6	2.9	68	80		1LE1 01-1CA0	57	0.020	16
7.5	8.6	132 S	2950	24	IE2	88.1	88.7	88.6	0.87	14.1	2.2	7.5	3.1	68	80		1LE1 01-1CA1	61	0.024	16
11	12.6	160 M	2955	36	IE2	89.4	90.0	89.1	0.87	20.5	2.1	7.4	3.2	70	82		1LE1 01-1DA2	96	0.045	16
15	17.3	160 M	2955	48	IE2	90.3	90.9	90.3	0.88	27	2.4	7.6	3.4	70	82		1LE1 01-1DA3	104	0.053	16
18.5	21.3	160 L	2955	60	IE2	90.9	91.2	90.4	0.88	33.5	2.9	7.9	3.6	70	82		1LE1 01-1DA4	113	0.061	16
22	24.5	180 M	2940	71	IE2	91.3	91.8	91.4	0.87	40.5	2.7	7.4	3.6	69	83		1LE1 01-1EA2	145	0.069	16
30	33.5	200 L	2955	97	IE2	92.0	92.3	91.7	0.87	54	2.5	6.9	3.3	72	85		1LE1 01-2AA4	200	0.13	16
37	41.5	200 L	2960	119	IE2	92.5	92.8	92.3	0.88	66	2.7	7.4	3.5	69	82		1LE1 01-2AA5	225	0.15	16
45	51	225 M	2965	145	IE2	92.9	93.1	92.5	0.88	79	2.7	7.8	3.7	76	89		1LE1 01-2BA2	295	0.23	16
55	62	250 M	2970	177	IE2	93.2	93.3	92.4	0.88	97	2.3	6.8	3.1	76	89		1LE1 01-2CA2	360	0.40	13
75	84	280 S	2978	240	IE2	93.8	93.6	92.4	0.86	137	2.5	7.2	3.2	76	89		1LE1 01-2DA0	490	0.71	13
90	101	280 M	2975	289	IE2	94.1	94.2	93.5	0.88	157	2.5	7.1	3.1	76	89		1LE1 01-2DA2	530	0.83	13
110	123	315 S	2982	352	IE2	94.3	94.2	93.3	0.90	187	2.4	7.3	3.0	77	91		1LE1 01-3AA0	720	1.3	13
132	148	315 M	2982	423	IE2	94.6	94.7	94.1	0.91	220	2.4	7.2	3.1	77	91		1LE1 01-3AA2	880	1.6	13
160	180	315 L	2982	512	IE2	94.8	94.9	94.3	0.92	265	2.3	7.0	3.1	80	95		1LE1 01-3AA4	930	1.8	13
200	224	315 L	2982	640	IE2	95.0	95.2	94.8	0.92	330	2.5	7.3	3.0	80	95		1LE1 01-3AA5	1130	2.2	13

Relubrication	Motor protection	Fan cover	Bearing size	Converter-fed operation, motor mode	Liability for defects	Version	Order code(s)	
Optional (standard from FS 280 upwards)	Optional	Plastic	62 (63 from FS 280 upwards)	up to 500 V	12 months	5		
Standard from FS 160 (optional for FS 100 to 132)	Standard PTC	Steel	63	Up to 500 V	36 months	6		
Voltages ²⁾		No. of poles	Frame size	Motor type	Version	Order code(s)		
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	2	71 M ... 315 L	1LE1 01-0C ... -3A	Standard 2 2	
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	2	71 M ... 315 L	1LE1 01-0C ... -3A	Standard 3 4	
50 Hz	500 VY			2	71 M ... 315 L	1LE1 01-0C ... -3A	Without add. charge 2 7	
50 Hz	500 VΔ			2	71 M ... 315 L	1LE1 01-0C ... -3A	Without add. charge 4 0	
Further voltages ¹⁾		For price information, code numbers, order codes and descriptions, see from Page 2/40					9 0	...
Types of construction		No. of poles	Frame size	Motor type	Version	Order code(s)		
Without flange	IM B3 ³⁾	2	71 M ... 315 L	1LE1 01-0C ... -3A	Standard	A		
With flange	IM B5 ³⁾	2	71 M ... 315 M	1LE1 01-0C ... -3A	With additional charge	F		
With standard flange	IM B14 ³⁾	2	71 M ... 160 L	1LE1 01-0C ... -1D	With additional charge	K		
Further types of construction		For price information, code letters and descriptions, see from Page 2/45					...	
Motor protection		Line	No. of poles	Frame size	Motor type	Version	Order code(s)	
Without PTC thermistor with 3 temperature sensors	Only possible for Basic Line	Basic Line	2	71 M ... 315 L	1LE1501-0C ... -3A	Standard	A	
Further motor protection	Performance Line	Performance Line	2	71 M ... 315 L	1LE1601-0C ... -3A	Standard	B	
Further motor protection		For price information, code letters and descriptions, see from Page 2/50					...	
Terminal box position		No. of poles	Frame size	Motor type	Version	Order code(s)		
Terminal box at top		2	71 M ... 315 L	1LE1 01-0C ... -3A	Standard	4		
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/52						
Special versions		No. of poles	Frame size	Motor type	Version	Order code(s)		
Options		For price information, order codes and descriptions, see from Page 2/58					1LE1 01- ... -Z ... + ... + ... + ...	

¹⁾ Operating values at rated output for 60 Hz are available on request.

²⁾ Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code R52) or a larger terminal box (Order code R50) can be used. Order codes R52 and R50 alter the motor dimensions.

³⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.

SIMOTICS SD 1LE1 Standard Motors

Motors with High Efficiency IE2



Self-ventilated motors
Cast-iron series 1LE1501/1LE1601 Basic/Performance Line

Selection and ordering data (continued)

P _{rated} , P _{rated} 50 Hz 60 Hz 1)		Frame size	Operating values at rated output n _{rated} , T _{rated} , IE class 50 Hz 50 Hz		η _{rated} , η _{rated} , η _{rated} 50 Hz, 50 Hz, 50 Hz, 4/4 3/4 2/4		cos φ _{rated} 50 Hz, 4/4	I _r , I _r /I _r , I _r /I _r , I _B / 400 V 50 Hz 50 Hz 50 Hz	L _{pfA} , L _{WA} , 50 Hz	Cast-iron series 1LE1501 – Basic Line 1LE1601 – Performance Line IE2 version in accordance with IEC 60034-30 Article No.		m _{IM B3} J	Tor- que class							
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	A	dB(A)	dB(A)	▲ New	kg	kgm ²	CL					
0.25	0.33	71 M	1395	1.7	IE2		68.5	68.2	63.8	0.69	0.76	2.4	3.7	2.5	44	55	▲ 1LE1 5 01-0CB2	12	0.00076	16
0.37	0.5	71 M	1380	2.6	IE2		72.7	73.2	70.2	0.72	1.02	2.3	3.8	2.4	44	55	▲ 1LE1 5 01-0CB3	13	0.00095	16
0.55	0.75	80 M	1440	3.7	IE2		78.1	78.9	76.1	0.74	1.37	2.2	5.3	3.1	53	64	▲ 1LE1 5 01-0DB2	17	0.0017	16
0.75	1	80 M	1440	5.0	IE2		79.6	80.2	78.0	0.76	1.79	2.2	5.6	3.1	53	64	▲ 1LE1 5 01-0DB3	18.5	0.0021	16
1.1	1.5	90 S	1425	7.4	IE2		81.4	81.7	79.9	0.78	2.5	2.3	5.6	2.9	56	68	▲ 1LE1 5 01-0EB0	23	0.0028	16
1.5	2	90 L	1435	10	IE2		82.8	83.5	82.0	0.79	3.3	2.6	6.4	3.4	56	68	▲ 1LE1 5 01-0EA4	25	0.0036	16
2.2	2.55	100 L	1455	14	IE2	IE2	84.3	85.1	84.3	0.81	4.65	2.1	6.9	3.3	60	72	1LE1 01-1AB4	32	0.0086	16
3	3.45	100 L	1455	20	IE2	IE2	85.5	86.7	86.0	0.82	6.2	2.0	6.9	3.1	60	72	1LE1 01-1AB5	37	0.011	16
4	4.55	112 M	1460	26	IE2	IE2	86.6	87.3	86.5	0.81	8.2	2.5	7.1	3.2	58	70	1LE1 01-1BB2	46	0.014	16
5.5	6.3	132 S	1465	36	IE2	IE2	87.7	89.0	87.7	0.80	11.3	2.3	6.9	2.9	64	76	1LE1 01-1CB0	61	0.027	16
7.5	8.6	132 M	1465	49	IE2	IE2	88.7	90.3	88.8	0.83	14.7	2.3	6.9	2.9	64	76	1LE1 01-1CB2	75	0.034	16
11	12.6	160 M	1470	71	IE2	IE2	89.8	90.9	90.8	0.85	21	2.1	6.7	2.8	65	77	1LE1 01-1DB2	96	0.065	16
15	17.3	160 L	1475	97	IE2	IE2	90.6	91.3	91.0	0.85	28	2.3	7.3	3.0	65	77	1LE1 01-1DB4	104	0.083	16
18.5	21.3	180 M	1465	121	IE2	IE2	91.2	92.0	91.9	0.84	35	2.5	7.2	3.4	61	74	1LE1 01-1EB2	160	0.12	16
22	25.3	180 L	1465	143	IE2	IE2	91.6	92.2	91.9	0.84	41.5	2.6	7.3	3.5	62	75	1LE1 01-1EB4	170	0.13	16
30	34.5	200 L	1470	195	IE2	IE2	92.3	92.8	92.6	0.84	56	2.5	6.7	3.3	64	77	1LE1 01-2AB5	230	0.20	16
37	42.5	225 S	1470	240	IE2	IE2	92.7	93.5	93.5	0.88	65	2.3	6.6	2.9	66	79	1LE1 01-2BB0	280	0.42	16
45	52	225 M	1475	291	IE2	IE2	93.1	93.8	93.7	0.87	80	2.5	6.9	3.1	66	79	1LE1 01-2BB2	305	0.46	16
55	63	250 M	1480	355	IE2	IE2	93.5	93.9	93.5	0.85	100	2.7	6.8	3.0	66	79	1LE1 01-2CB2	385	0.75	16
75	86	280 S	1485	482	IE2	IE2	94.0	94.2	93.8	0.87	132	2.5	6.8	3.0	71	85	1LE1 01-2DB0	550	1.3	16
90	104	280 M	1486	578	IE2	IE2	94.2	94.3	93.6	0.87	159	2.6	7.3	3.1	71	85	1LE1 01-2DB2	570	1.4	16
110	127	315 S	1490	705	IE2	IE2	94.5	94.6	94.0	0.86	195	2.7	7.4	3.0	72	86	1LE1 01-3AB0	740	2.0	16
132	152	315 M	1490	846	IE2	IE2	94.7	94.9	94.6	0.87	230	2.7	7.1	2.9	75	89	1LE1 01-3AB2	870	2.3	16
160	184	315 L	1490	1025	IE2	IE2	94.9	95.0	94.5	0.87	280	2.8	7.2	3.1	76	91	1LE1 01-3AB4	940	2.8	16
200	230	315 L	1490	1282	IE2	IE2	95.1	95.3	94.7	0.87	350	3.1	7.5	3.2	77	92	1LE1 01-3AB5	1140	3.5	16

Relubrication		Motor protec- tion	Fan cover	Bearing size	Converter- Liability for fed opera- tion, motor mode	Version	Order code(s)	
Basic Line	Optional (standard from FS 280 upwards)	Optional	Plastic	62 (63 from FS 280 upwards)	Up to 500 V 12 months	5		
Performance Line	Standard from FS 160 (optional for FS 100 to 132)	Standard PTC	Steel	63	Up to 500 V 36 months	6		
Voltages ²⁾		No. of poles	Frame size	Motor type	Version	Order code(s)		
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	4	71 M ... 315 L	1LE1 01-0C ... -3A	Standard	
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	4	71 M ... 315 L	1LE1 01-0C ... -3A	Standard	
50 Hz	500 VY			4	71 M ... 315 L	1LE1 01-0C ... -3A	Without add. charge	
50 Hz	500 VΔ			4	71 M ... 315 L	1LE1 01-0C ... -3A	Without add. charge	
Further voltages ¹⁾		For price information, code numbers, order codes and descriptions, see from Page 2/40					9 0	...
Types of construction		No. of poles	Frame size	Motor type	Version	Order code(s)		
Without flange	IM B3 ³⁾	4	71 M ... 315 L	1LE1 01-0C ... -3A	Standard	A		
With flange	IM B5 ³⁾	4	71 M ... 315 M	1LE1 01-0C ... -3A	With additional charge	F		
With standard flange	IM B14 ³⁾	4	71 M ... 160 L	1LE1 01-0C ... -1D	With additional charge	K		
Further types of construction		For price information, code letters and descriptions, see from Page 2/45					...	
Motor protection		Line	No. of poles	Frame size	Motor type	Version	Order code(s)	
Without PTC thermistor with 3 temperature sensors	Only possible for Basic Line	Basic Line	4	71 M ... 315 L	1LE1501-0C ... -3A	Standard	A	
			4	71 M ... 315 L	1LE1501-0C ... -3A	With additional charge	B	
		Performance Line	4	71 M ... 315 L	1LE1601-0C ... -3A	Standard	B	
Further motor protection		For price information, code letters and descriptions, see from Page 2/50					...	
Terminal box position		No. of poles	Frame size	Motor type	Version	Order code(s)		
Terminal box at top		4	71 M ... 315 L	1LE1 01-0C ... -3A	Standard	4		
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/52						
Special versions		No. of poles	Frame size	Motor type	Version	Order code(s)		
Options		For price information, order codes and descriptions, see from Page 2/58					1LE1 01-... -Z ... + ... + ... + ...	

1) Operating values at rated output for 60 Hz are available on request.

2) Parallel supply lines are required in the case of connection to ≤ 240 V.
For frame size 315 with connection to ≤ 240 V, due to the high current,
a drilled, removable entry plate (Order code **R52**) or a larger terminal box
(Order code **R50**) can be used. Order codes **R52** and **R50** alter the motor
dimensions.

3) Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5
(IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible,
provided that no requirement exists for stamping of the type on the rating
plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the
rating plate. If mounted in a different position, the position must be
specified to ensure that the condensation drainage holes are positioned
correctly.



SIMOTICS SD 1LE1 Standard Motors

Motors with High Efficiency IE2

Self-ventilated motors
Cast-iron series 1LE1501/1LE1601 Basic/Performance Line



Selection and ordering data (continued)

Operating values at rated output												Cast-iron series		m _{IM B3} J	Torque class						
P _{rated} 50 Hz	P _{rated} 60 Hz	Frame size	n _{rated} 50 Hz	T _{rated} 50 Hz	IE class	η _{rated} 50 Hz	η _{rated} 50 Hz	η _{rated} 50 Hz	cos φ _{rated}	I _{LR} 50 Hz	T _{LR} 50 Hz	I _{LR} 50 Hz	T _B 50 Hz			L _{pfA} 50 Hz	L _{WA} 50 Hz	Article No.	kg	kgm ²	CL
0.18	0.25	71 M	875	2	IE2	56.6	57.0	53.5	0.68	0.68	2.2	2.5	2.3	39	50	▲ 1LE1 5 01-0CC2	11.5	0.0008	16		
0.25	0.33	71 M	870	2.7	IE2	61.6	62.7	60.0	0.70	0.84	2.3	2.6	2.3	39	50	▲ 1LE1 5 01-0CC3	12.5	0.0010	16		
0.37	0.5	80 M	925	3.8	IE2	71.4	71.5	66.5	0.69	1.08	2.1	4.0	2.4	42	53	▲ 1LE1 5 01-0DC2	16.5	0.0017	16		
0.55	0.75	80 M	935	5.6	IE2	74.0	74.0	70.5	0.66	1.63	2.5	4.4	2.9	42	53	▲ 1LE1 5 01-0DC3	18.5	0.0025	16		
0.75	1	90 S	925	7.7	IE2	75.9	76.0	73.0	0.70	2.05	2.0	4.1	2.5	43	55	▲ 1LE1 5 01-0EC0	23	0.0030	16		
1.1	1.5	90 L	935	11	IE2	78.1	78.5	75.0	0.70	2.90	2.2	4.4	2.6	43	55	▲ 1LE1 5 01-0EC4	26.5	0.0040	16		
1.5	1.75	100 L	970	15	IE2	79.8	80.2	79.0	0.73	3.7	2.0	6.2	2.9	59	71	1LE1 01-1AC4	36	0.011	16		
2.2	2.55	112 M	965	22	IE2	81.8	82.5	81.3	0.75	5.2	2.1	6.0	3.1	57	69	1LE1 01-1BC2	41	0.014	16		
3	3.45	132 S	970	30	IE2	83.3	84.0	82.8	0.74	7.0	1.6	5.6	2.6	63	75	1LE1 01-1CC0	56	0.024	13		
4	4.55	132 M	970	39	IE2	84.6	85.8	85.0	0.78	8.7	1.6	5.6	2.5	63	75	1LE1 01-1CC2	61	0.029	13		
5.5	6.3	132 M	970	54	IE2	86.0	87.4	87.0	0.77	12	1.9	6.1	2.8	63	75	1LE1 01-1CC3	70	0.037	16		
7.5	8.6	160 M	975	73	IE2	87.2	88.0	87.3	0.74	16.8	1.9	4.7	2.2	67	79	1LE1 01-1DC2	106	0.075	16		
11	12.6	160 L	975	108	IE2	88.7	89.6	89.2	0.76	23.5	1.9	4.8	2.2	67	79	1LE1 01-1DC4	122	0.098	16		
15	18	180 L	975	147	IE2	89.7	90.1	90.2	0.78	31	2.5	6.0	3.1	57	70	1LE1 01-1EC4	155	0.17	16		
18.5	22	200 L	978	181	IE2	90.4	91.3	91.2	0.82	36	2.4	5.8	2.6	57	71	1LE1 01-2AC4	200	0.25	16		
22	26.5	200 L	978	215	IE2	90.9	91.6	91.2	0.82	42.5	2.5	6.2	2.6	61	74	1LE1 01-2AC5	220	0.30	16		
30	36	225 M	980	292	IE2	91.7	92.5	92.3	0.83	57	2.5	5.6	2.7	65	78	1LE1 01-2BC2	300	0.58	16		
37	44.5	250 M	982	360	IE2	92.2	93.1	93.1	0.83	70	2.8	6.0	2.5	62	77	1LE1 01-2CC2	370	0.86	16		
45	54	280 S	985	436	IE2	92.7	93.4	93.2	0.84	83	2.7	6.3	2.6	65	79	1LE1 01-2DC0	460	1.1	16		
55	66	280 M	985	533	IE2	93.1	93.9	94.0	0.86	99	2.5	6.4	2.6	65	79	1LE1 01-2DC2	510	1.4	16		
75	90	315 S	988	725	IE2	93.7	94.0	93.6	0.84	138	2.5	6.7	2.8	65	79	1LE1 01-3AC0	660	2.1	16		
90	108	315 M	988	870	IE2	94.0	94.3	93.6	0.84	165	2.6	6.9	2.8	65	79	1LE1 01-3AC2	730	2.5	16		
110	132	315 L	988	1063	IE2	94.3	94.6	94.5	0.86	196	2.7	7.0	2.8	68	82	1LE1 01-3AC4	940	3.6	16		
132	158	315 L	988	1276	IE2	94.6	94.9	94.7	0.86	235	3.0	7.5	2.9	69	84	1LE1 01-3AC5	990	4.0	16		
160	192	315 L	988	1546	IE2	94.8	94.7	94.4	0.86	285	3.1	7.7	3.3	69	84	1LE1 01-3AC6	1160	4.7	16		
Relubrication		Motor protection		Fan cover	Bearing size	Converter- Liability for fed operation, motor mode															
Basic Line		Optional (standard from FS 280 upwards)		Optional	Plastic	62 (63 from FS 280 upwards)	Up to 500 V 12 months		5												
Performance Line		Standard from FS 160 (optional for FS 100 to 132)		Standard PTC	Steel	63	Up to 500 V 36 months		6												
Voltages ²⁾				No. of poles	Frame size	Motor type	Version												Order code(s)		
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	6	71 M ... 315 L	1LE1 01-0C ... -3A	Standard		2 2										-		
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	6	71 M ... 315 L	1LE1 01-0C ... -3A	Standard		3 4										-		
50 Hz	500 VY			6	71 M ... 315 L	1LE1 01-0C ... -3A	Without add. charge		2 7										-		
50 Hz	500 VΔ			6	71 M ... 315 L	1LE1 01-0C ... -3A	Without add. charge		4 0										-		
Further voltages ¹⁾		For price information, code numbers, order codes and descriptions, see from Page 2/40						9 0												...	
Types of construction				No. of poles	Frame size	Motor type	Version												Order code(s)		
Without flange		IM B3 ³⁾		6	71 M ... 315 L	1LE1 01-0C ... -3A	Standard		A										-		
With flange		IM B5 ³⁾		6	71 M ... 315 M	1LE1 01-0C ... -3A	With additional charge		F										-		
With standard flange		IM B14 ³⁾		6	71 M ... 160 L	1LE1 01-0C ... -1D	With additional charge		K										-		
Further types of construction		For price information, code letters and descriptions, see from Page 2/45																		...	
Motor protection		Line		No. of poles	Frame size	Motor type	Version												Order code(s)		
Without PTC thermistor with 3 temperature sensors		Only possible for Basic Line		6	71 M ... 315 L	1LE1501-0C ... -3A	Standard		A										-		
		Basic Line		6	71 M ... 315 L	1LE1501-0C ... -3A	With additional charge		B										-		
		Performance Line		6	71 M ... 315 L	1LE1601-0C ... -3A	Standard		B										-		
Further motor protection		For price information, code letters and descriptions, see from Page 2/50																		...	
Terminal box position				No. of poles	Frame size	Motor type	Version												Order code(s)		
Terminal box at top				6	71 M ... 315 L	1LE1 01-0C ... -3A	Standard		4										-		
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/52																			
Special versions				No. of poles	Frame size	Motor type	Version												Order code(s)		
Options		For price information, order codes and descriptions, see from Page 2/58						1LE1 01-... -Z ...+...+...+...													

¹⁾ Operating values at rated output for 60 Hz are available on request.

²⁾ Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code **R52**) or a larger terminal box (Order code **R50**) can be used. Order codes **R52** and **R50** alter the motor dimensions.

³⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.

SIMOTICS SD 1LE1 Standard Motors

Motors with High Efficiency IE2



Self-ventilated motors
Cast-iron series 1LE1501/1LE1601 Basic/Performance Line

Selection and ordering data (continued)

Operating values at rated output														Cast-iron series		m _{IM} B3 J		Torque class				
P _{rated} , P _{rated} , Frame size	T _{rated} , T _{rated} , IE class	η _{rated} , η _{rated} , η _{rated}	cos φ	I _{rated} , I _L /I _{rated} , I _L /I _{rated} , I _B /I _{rated} , L _p fA, L _{WA}	50 Hz, 60 Hz, 50 Hz, 60 Hz, 50 Hz, 60 Hz, 50 Hz, 60 Hz	4/4, 3/4, 2/4, 4/4	50 Hz, 60 Hz, 50 Hz, 60 Hz, 50 Hz, 60 Hz, 50 Hz, 60 Hz	400 V, 50 Hz, 50 Hz, 50 Hz	1LE1501 – Basic Line 1LE1601 – Performance Line IE2 version in accordance with IEC 60034-30 Article No.	kg	kgm ²	CL	▲ New									
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	A													
0.75	0.86	100 L	725	9.9	–	–	68.3	65.8	59.3	0.58	2.8	1.6	4.0	2.8	60	72	1LE1 01-1AD4	32	0.0086	13		
1.1	1.3	100 L	725	14	–	–	68.3	65.4	58.9	0.58	4.0	1.8	4.1	2.8	60	72	1LE1 01-1AD5	36	0.011	13		
1.5	1.75	112 M	720	20	–	–	75.8	76.0	73.0	0.67	4.25	1.4	4.2	2.4	63	75	1LE1 01-1BD2	51	0.014	13		
2.2	2.55	132 S	725	29	–	–	78.8	79.3	77.2	0.65	6.2	1.4	4.3	2.1	63	75	1LE1 01-1CD0	59	0.027	10		
3	3.45	132 M	730	39	–	–	82.7	83.0	80.9	0.65	8.1	1.4	5.0	2.4	63	75	1LE1 01-1CD2	67	0.035	10		
4	4.55	160 M	730	52	–	–	81.9	82.6	81.7	0.67	10.5	1.6	3.7	1.9	63	75	1LE1 01-1DD2	98	0.065	13		
5.5	6.3	160 M	730	72	–	–	83.8	84.3	83.1	0.67	14.1	1.7	3.9	2	63	75	1LE1 01-1DD3	111	0.083	13		
7.5	8.6	160 L	730	98	–	–	85.3	86.5	86.1	0.7	18.1	1.6	3.8	1.9	63	75	1LE1 01-1DD4	123	0.098	13		
11	13.2	180 L	720	146	–	–	86.6	87.6	87.1	0.70	26	2.3	4.9	2.6	65	78	1LE1 01-1ED4	155	0.20	13		
15	18	200 L	718	200	–	–	88.9	90.8	91.2	0.76	32	2.4	5.4	2.8	55	69	1LE1 01-2AD5	220	0.34	13		
18.5	22	225 S	730	242	–	–	89.0	89.9	89.5	0.78	38.5	2.2	5.4	2.7	59	72	1LE1 01-2BD0	250	0.43	13		
22	26.5	225 M	730	288	–	–	90.3	91.3	91.1	0.80	44	2.3	5.5	2.7	58	71	1LE1 01-2BD2	270	0.50	13		
30	36	250 M	732	391	–	–	91.3	92.2	92.0	0.80	59	2.4	5.6	2.7	60	73	1LE1 01-2CD2	370	0.86	13		
37	44.5	280 S	736	480	–	–	91.9	92.5	92.1	0.78	75	2.3	5.4	2.4	63	77	1LE1 01-2DD0	460	1.10	13		
45	54	280 M	738	582	–	–	92.4	92.8	92.4	0.79	89	2.5	5.7	2.5	66	80	1LE1 01-2DD2	510	1.40	13		
55	66	315 S	740	710	–	–	92.9	93.3	92.9	0.80	107	2.2	5.8	2.6	69	83	1LE1 01-3AD0	640	2.00	13		
75	90	315 M	738	970	–	–	93.5	94.4	94.5	0.81	143	2.3	5.9	2.7	69	84	1LE1 01-3AD2	710	2.50	13		
90	108	315 L	740	1161	–	–	93.5	94.3	94.4	0.83	167	2.2	5.8	2.5	69	84	1LE1 01-3AD4	860	3.10	13		
110	132	315 L	740	1419	–	–	94.2	95.0	95.1	0.82	205	2.7	6.7	2.9	74	88	1LE1 01-3AD5	980	3.90	13		
132	158	315 L	740	1703	–	–	94.4	94.8	94.4	0.81	250	2.9	7.2	3.3	76	90	1LE1 01-3AD6	1060	4.50	16		
Relubrication		Motor protection		Fan cover		Bearing size		Converter-fed operation, motor mode		Liability for defects												
Basic Line		Optional (standard from FS 280 upwards)		Optional		Plastic		62 (63 from FS 280 upwards)		Up to 500 V 12 months		5										
Performance Line		Standard from FS 160 (optional for FS 100 to 132)		Standard		Steel		63		Up to 500 V 36 months		6										
Voltages ²⁾				No. of poles		Frame size		Motor type		Version										Order code(s)		
50 Hz		230 VΔ/400 VY		60 Hz ¹⁾		460 VY		8 100 L ... 315 L		1LE1 01-1A ... -3A		Standard		2 2						–		
50 Hz		400 VΔ/690 VY		60 Hz ¹⁾		460 VΔ		8 100 L ... 315 L		1LE1 01-1A ... -3A		Standard		3 4						–		
50 Hz		500 VY						8 100 L ... 315 L		1LE1 01-1A ... -3A		Without add. charge		2 7						–		
50 Hz		500 VΔ						8 100 L ... 315 L		1LE1 01-1A ... -3A		Without add. charge		4 0						–		
Further voltages ¹⁾														9 0						...		
Types of construction				No. of poles		Frame size		Motor type		Version										Order code(s)		
Without flange		IM B3 ³⁾		8		100 L ... 315 L		1LE1 01-1A ... -3A		Standard		A								–		
With flange		IM B5 ³⁾		8		100 L ... 315 M		1LE1 01-1A ... -3A		With additional charge		F								–		
With standard flange		IM B14 ³⁾		8		100 L ... 160 L		1LE1 01-1A ... -1D		With additional charge		K								–		
Further types of construction																				...		
Motor protection		Line		No. of poles		Frame size		Motor type		Version										Order code(s)		
Without PTC thermistor with 3 temperature sensors		Only possible for Basic Line		8		100 L ... 315 L		1LE1501-1A ... -3A		Standard		A								–		
Further motor protection		Performance Line		8		100 L ... 315 L		1LE1501-1A ... -3A		With additional charge		B								–		
Terminal box position				No. of poles		Frame size		Motor type		Version										Order code(s)		
Terminal box at top				8		100 L ... 315 L		1LE1 01-1A ... -3A		Standard		4								–		
Further terminal box positions																				...		
Special versions				No. of poles		Frame size		Motor type		Version										Order code(s)		
Options																				1LE1 01-... -Z ...+...+...+...		

1) Operating values at rated output for 60 Hz are available on request.
2) Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code R52) or a larger terminal box (Order code R50) can be used. Order codes R52 and R50 alter the motor dimensions.

3) Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.



SIMOTICS SD 1LE1 Standard Motors

Motors with High Efficiency IE2

Self-ventilated motors
Cast-iron series 1LE1501/1LE1601 with increased output



Selection and ordering data

P _{rated} , P _{rated} 50 Hz 60 Hz 1)		Frame size	Operating values at rated output n _{rated} , T _{rated} , IE class 50 Hz 50 Hz		η _{rated} , η _{rated} , η _{rated} 50 Hz, 50 Hz, 50 Hz, 4/4 3/4 2/4			COS φ rated, 50 Hz, 4/4	I _{rated} , I _{LR} 50 Hz, 400 V	I _{LR} 50 Hz	I _{LR} 50 Hz	T _B 50 Hz	L _p IA, 50 Hz	L _{WA} , 50 Hz	Cast-iron series 1LE1501 – Basic Line 1LE1601 – Performance Line IE2 version in accordance with IEC 60034-30 with increased output Article No.	m _{IM} B3 J	Torque class			
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A					kg	kgm ²	CL			
<ul style="list-style-type: none"> Cooling: self-ventilated (IC 411) Efficiency: High Efficiency IE2, service factor (SF) 1.15 Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																				
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz ¹⁾																				
4	4.55	100 L	2905	13	IE2	IE2	85.8	87.2	87.0	0.86	7.8	2.5	7.6	3.5	67	79	1LE1 01-1AA6	45	0.0054	16
5.5	6.3	112 M	2950	18	IE2	IE2	87.0	87.5	87.2	0.89	10.3	2.2	7.7	3.3	69	81	1LE1 01-1BA6	53	0.012	16
11	12.6	132 M	2950	36	IE2	IE2	89.4	90.2	90.3	0.89	20	2.3	7.9	3.2	68	80	1LE1 01-1CA6	80	0.031	16
22	25.3	160 L	2955	71	IE2	IE2	91.3	91.7	91.3	0.89	39	3.1	8.4	3.7	70	82	1LE1 01-1DA6	126	0.068	16
30	33.5	180 L	2940	97	IE2	IE2	92.0	92.5	92.2	0.89	53	2.3	7.8	3.4	70	83	1LE1 01-1EA6	180	0.09	16
45	51	200 L	2950	146	IE2	IE2	92.9	93.4	93.1	0.87	81	2.5	7.1	3.2	72	85	1LE1 01-2AA6	245	0.18	16
55	62	225 M	2960	177	IE2	IE2	93.2	93.6	93.2	0.86	99	2.5	7.0	3.3	76	89	1LE1 01-2BA6	320	0.26	16
75	84	250 M	2970	241	IE2	IE2	93.8	93.6	92.6	0.84	137	2.2	7.0	3.3	75	89	1LE1 01-2CA6	390	0.46	13
110	123	280 M	2978	353	IE2	IE2	94.3	94.5	94.1	0.90	187	2.9	8.5	3.6	80	91	1LE1 01-2DA6	650	1.20	16
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz ¹⁾																				
4	4.55	100 L	1460	26	IE2	IE2	86.6	87.4	86.7	0.80	8.3	2.2	7.5	3.5	60	72	1LE1 01-1AB6	46	0.014	16
5.5	6.3	112 M	1460	36	IE2	IE2	87.7	88.1	87.4	0.81	11.2	2.5	7.1	3.2	58	70	1LE1 01-1BB6	58	0.017	16
11	12.6	132 M	1465	72	IE2	IE2	89.8	90.6	90.4	0.84	21	2.6	7.7	3.1	64	76	1LE1 01-1CB6	80	0.046	16
18.5	21.3	160 L	1475	120	IE2	IE2	91.2	91.7	91.6	0.85	34.5	2.5	7.7	3.3	65	77	1LE1 01-1DB6	116	0.099	16
30	34.5	180 L	1465	196	IE2	IE2	92.3	93.0	92.9	0.81	58	2.5	7.3	3.3	64	77	1LE1 01-1EB6	185	0.16	16
37	42.5	200 L	1470	240	IE2	IE2	92.7	93.6	93.8	0.84	69	2.4	7.0	3.0	62	75	1LE1 01-2AB6	240	0.25	16
55	63	225 M	1475	356	IE2	IE2	93.5	94.2	94.1	0.84	101	2.5	5.8	2.7	69	82	1LE1 01-2BB6	320	0.47	16
75	86	250 M	1480	484	IE2	IE2	94.0	94.5	94.3	0.86	134	2.3	6.2	2.8	74	87	1LE1 01-2CB6	440	0.85	13
110	127	280 M	1485	707	IE2	IE2	94.5	94.9	94.8	0.87	193	2.5	6.9	3.0	73	87	1LE1 01-2DB6	680	1.70	13
Relubrication		Motor protection		Fan cover		Bearing size		Converter-fed operation, motor defects mode		Liability for defects										
Basic Line		Optional (standard from FS 280 upwards)		Optional		Plastic		62 (63 from FS 280 upwards)		Up to 500 V 12 months		5								
Performance Line		Standard from FS 160 (optional for FS 100 to 132)		Standard PTC		Steel		63		Up to 500 V 36 months		6								
Voltages ²⁾			No. of poles		Frame size		Motor type		Version		Order code(s)									
50 Hz		230 VΔ/400 VY		60 Hz ¹⁾		460 VY		2, 4		100 L ... 280 M		1LE1 01-1A ... -2D		Standard		2 2		-		
50 Hz		400 VΔ/690 VY		60 Hz ¹⁾		460 VΔ		2, 4		100 L ... 280 M		1LE1 01-1A ... -2D		Standard		3 4		-		
50 Hz		500 VY						2, 4		100 L ... 280 M		1LE1 01-1A ... -2D		Without add. charge		2 7		-		
50 Hz		500 VΔ						2, 4		100 L ... 280 M		1LE1 01-1A ... -2D		Without add. charge		4 0		-		
Further voltages ¹⁾			For price information, code numbers, order codes and descriptions, see from Page 2/40																	
Types of construction			No. of poles		Frame size		Motor type		Version		Order code(s)									
Without flange		IM B3 ³⁾		2, 4		100 L ... 280 M		1LE1 01-1A ... -2D		Standard		A								
With flange		IM B5 ³⁾		2, 4		100 L ... 280 M		1LE1 01-1A ... -2D		With additional charge		F								
With standard flange		IM B14 ³⁾		2, 4		100 L ... 280 M		1LE1 01-1A ... -2D		With additional charge		K								
Further types of construction			For price information, code letters and descriptions, see from Page 2/45																	
Motor protection			Line		No. of poles		Frame size		Motor type		Version		Order code(s)							
Without PTC thermistor with 3 temperature sensors		Only possible for Basic Line		2, 4		100 L ... 280 M		1LE1501-1A ... -2D		Standard		A								
Further motor protection		Performance Line		2, 4		100 L ... 280 M		1LE1601-1A ... -2D		Standard		B								
Terminal box position			No. of poles		Frame size		Motor type		Version		Order code(s)									
Terminal box at top				2, 4		100 L ... 280 M		1LE1 01-1A ... -2D		Standard		4								
Special versions			No. of poles		Frame size		Motor type		Version		Order code(s)									
Forced-air cooled motors without ext. fan/fan cover (IC 416)		Options		2, 4		100 L ... 280 M		1LE1 01-1A ... -2D		1LE1 01-1A ... -2D		F90 + . . . + . . .								
			For price information, order codes and descriptions, see from Page 2/58																	

1) Operating values at rated output for 60 Hz are available on request.
2) Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code R52) or a larger terminal box (Order code R50) can be used. Order codes R52 and R50 alter the motor dimensions.

3) Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.

SIMOTICS SD 1LE1 Standard Motors

Motors with High Efficiency IE2



Self-ventilated motors
Cast-iron series 1LE1501/1LE1601 with increased output

Selection and ordering data (continued)

Operating values at rated output														Cast-iron series		m _{IM B3} J		Torque class			
P _{rated} , 50 Hz	P _{rated} , 60 Hz	Frame size	n _{rated} , 50 Hz	T _{rated} , 50 Hz	IE class	η _{rated} , 50 Hz, 4/4	η _{rated} , 50 Hz, 3/4	η _{rated} , 50 Hz, 2/4	COS φ _{rated} , 50 Hz, 4/4	I _{rated} , 50 Hz, 400 V	T _{LR} /I _{rated} , 50 Hz	I _{LR} /I _{rated} , 50 Hz	T _B /I _{rated} , 50 Hz	L _{pFA} , 50 Hz	L _{WA} , 50 Hz	1LE1501 – Basic Line	1LE1601 – Performance Line	kg	kgm ²	CL	
<ul style="list-style-type: none"> Cooling: self-ventilated (IC 411) Efficiency: High Efficiency IE2, service factor (SF) 1.15 Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																					
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz ¹⁾																					
2.2	2.55	100 L	965	22	IE2	IE2	81.8	82.5	81.5	0.76	5.1	1.9	5.7	2.9	59	71	1LE1 01-1AC6	49	0.014	16	
3	3.45	112 M	960	30	IE2	IE2	83.3	84.1	83.6	0.79	6.6	2.1	6.0	3.1	57	69	1LE1 01-1BC6	53	0.017	16	
7.5	8.6	132 M	970	74	IE2	IE2	87.2	87.8	87.3	0.77	16.1	2.1	6.5	3.0	63	75	1LE1 01-1CC6	87	0.046	16	
15	17.3	160 L	975	147	IE2	IE1	89.7	90.3	89.7	0.75	32.0	2	5.2	2.4	67	79	1LE1 01-1DC6	147	0.12	16	
18.5	22	180 L	975	181	IE2	IE2	90.4	91.1	90.8	0.77	38.5	2.3	6.0	2.9	67	80	1LE1 01-1EC6	165	0.21	16	
30	34.5	200 L	975	294	IE2	IE2	91.7	92.5	92.5	0.77	61	2.6	6.3	2.7	62	75	1LE1 01-2AC6	245	0.38	16	
37	44.5	225 M	978	361	IE2	IE1	92.2	93.0	92.9	0.83	70	2.5	6.3	2.9	64	77	1LE1 01-2BC6	325	0.67	16	
45	54	250 M	985	436	IE2	IE1	92.7	93.7	94.0	0.84	83	2.4	6.6	2.7	67	81	1LE1 01-2CC6	410	1.00	16	
75	90	280 M	986	726	IE2	IE2	93.7	94.3	94.4	0.85	136	3.2	7.0	2.9	66	80	1LE1 01-2DC6	570	1.80	16	
8-pole: 750 rpm at 50 Hz, 900 rpm at 60 Hz ¹⁾																					
15	18	180 L	720	199	IE2	IE2	87.9	88.9	88.2	0.73	33.5	2.2	4.9	2.5	67	75	1LE1 01-1ED6	190	0.26	13	
18.5	22	200 L	720	245	IE2	IE2	88.6	89.9	90.1	0.78	38.5	2.6	5.8	3.0	65	72	1LE1 01-2AD6	250	0.42	13	
30	36	225 M	732	391	IE2	IE2	90.8	92.0	92.1	0.76	63	2.8	6.1	3.2	62	76	1LE1 01-2BD6	325	0.67	16	
37	44.5	250 M	730	484	IE2	IE2	91.6	92.6	92.7	0.83	70	2.3	5.5	2.6	63	77	1LE1 01-2CD6	405	1.00	13	
55	66	280 M	736	714	IE2	IE2	92.9	93.4	93.0	0.8	107	2.5	5.9	2.5	70	81	1LE1 01-2DD6	550	1.60	13	
Relubrication		Motor protection		Fan cover		Bearing size		Converter-fed operation, motor defects mode		Liability for defects											
Basic Line		Optional (standard from FS 280 upwards)		Optional		Plastic		62 (63 from FS 280 upwards)		Up to 500 V 12 months		5									
Performance Line		Standard from FS 160 (optional for FS 100 to 132)		Standard PTC		Steel		63		Up to 500 V 36 months		6									
Voltages ²⁾				No. of poles		Frame size		Motor type		Version										Order code(s)	
50 Hz		230 VΔ/400 VY		60 Hz ¹⁾		460 VY		6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		Standard		2 2				-	
50 Hz		400 VΔ/690 VY		60 Hz ¹⁾		460 VΔ		6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		Standard		3 4				-	
50 Hz		500 VY						6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		Without add. charge		2 7				-	
50 Hz		500 VΔ						6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		Without add. charge		4 0				-	
Further voltages ¹⁾																9 0				...	
Types of construction				No. of poles		Frame size		Motor type		Version										Order code(s)	
Without flange		IM B3 ³⁾		6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		Standard		A								-	
With flange		IM B5 ³⁾		6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		With additional charge		F								-	
With standard flange		IM B14 ³⁾		6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		With additional charge		K								-	
Further types of construction																				...	
Motor protection		Line		No. of poles		Frame size		Motor type		Version										Order code(s)	
Without PTC thermistor with 3 temperature sensors		Only possible for Basic Line		6, 8		100 L ... 280 M		1LE1501-1A ... -2D		Standard		A								-	
Further motor protection		Basic Line		6, 8		100 L ... 280 M		1LE1501-1A ... -2D		With additional charge		B								-	
Further motor protection		Performance Line		6, 8		100 L ... 280 M		1LE1601-1A ... -2D		Standard		B								-	
Further motor protection																				...	
Terminal box position				No. of poles		Frame size		Motor type		Version										Order code(s)	
Terminal box at top				6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		Standard		4								-	
Further terminal box positions																				...	
Special versions				No. of poles		Frame size		Motor type		Version										Order code(s)	
Forced-air cooled motors without ext. fan/fan cover (IC 416)				6, 8		100 L ... 280 M		1LE1 01-1A ... -2D		1LE1 01-1A ... -2D		F90 + . . . + . . . + . . .								-	
Options																				...	

¹⁾ Operating values at rated output for 60 Hz are available on request.
²⁾ Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code **R52**) or a larger terminal box (Order code **R50**) can be used. Order codes **R52** and **R50** alter the motor dimensions.

³⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.



SIMOTICS GP 1LE1 Standard Motors

Motors with Premium Efficiency IE3

Self-ventilated motors
Aluminum series 1LE1003



Selection and ordering data

Operating values at rated output															Aluminum series		m _{IM B3} J		Torque class			
P _{rated} , 50 Hz	P _{rated} , 60 Hz	Frame size	n _{rated} , 50 Hz	T _{rated} , 50 Hz	IE class	η _{rated} , 50 Hz, 4/4	η _{rated} , 50 Hz, 3/4	η _{rated} , 50 Hz, 2/4	COS φ _{rated} , 50 Hz, 4/4	I _r , 50 Hz, 400 V	T _{LR} / I _r , 50 Hz	I _{LR} / I _r , 50 Hz	T _B / I _r , 50 Hz	L _p IA, 50 Hz	L _{WA} , 50 Hz	Article No.	kg	kgm ²	CL			
kW	kW	FS	rpm	Nm	50 Hz 60 Hz	%	%	%	%	A						▲ New						
• Cooling: self-ventilated (IC 411) • Efficiency: Premium Efficiency IE3, service factor (SF) 1.15 • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																						
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz ¹⁾																						
0.75	0.86	80 M	2850	2.5	IE3	IE3	80.7	82.0	81.5	0.86	1.56	2.6	6.2	3.0	60	71	1LE1003-0DA2	11	0.0011	16		
1.1	1.3	80 M	2885	3.6	IE3	IE3	82.7	82.7	81.7	0.85	2.25	2.8	7.4	3.8	60	71	1LE1003-0DA3	12	0.0013	16		
1.5	1.75	90 S	2910	4.9	IE3	IE3	84.2	84.5	83.5	0.86	3.00	2.7	8.1	4.2	65	77	1LE1003-0EA0	15	0.0021	16		
2.2	2.55	90 L	2920	7.2	IE3	IE3	85.9	86.8	86.1	0.88	4.2	2.6	8.3	4.0	65	77	1LE1003-0EA4	19	0.0031	16		
3	3.45	100 L	2920	9.8	IE3	IE2	87.1	87.1	86.1	0.88	5.6	2.8	8.0	4.3	67	79	1LE1003-1AA4	26	0.0054	16		
4	4.55	112 M	2950	12.9	IE3	IE2	88.1	88.1	87.1	0.89	7.4	1.9	7.5	3.9	69	81	1LE1003-1BA2	34	0.012	16		
5.5	6.3	132 S	2950	17.8	IE3	IE3	89.2	89.2	88.2	0.90	9.9	1.8	7.4	3.6	68	80	1LE1003-1CA0	43	0.024	16		
7.5	8.6	132 S	2950	24.3	IE3	IE3	90.1	90.1	89.1	0.92	13.1	1.9	8.3	3.9	68	80	1LE1003-1CA1	57	0.031	16		
11	12.6	160 M	2955	35.5	IE3	IE3	91.2	91.2	90.2	0.89	19.6	2.4	7.9	3.8	70	82	1LE1003-1DA2	75	0.053	16		
15	18	160 M	2960	48.4	IE3	IE3	91.9	91.9	90.9	0.87	27.0	2.7	8.7	4.3	70	82	1LE1003-1DA3	84	0.061	16		
18.5	22	160 L	2955	60.0	IE3	IE3	92.4	92.4	91.4	0.90	32.0	2.8	9.0	4.2	70	82	1LE1003-1DA4	94	0.068	16		
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz ¹⁾																						
0.55	0.63	80 M	1440	3.6	-	-	81.3	82.0	80.2	0.78	1.25	2.1	5.9	3.1	53	64	1LE1003-0DB2	11	0.0021	16		
0.75	0.86	80 M	1450	4.9	IE3	IE3	82.5	82.3	80.0	0.75	1.75	2.7	7.1	3.9	53	64	1LE1003-0DB3	14	0.0029	16		
1.1	1.3	90 S	1440	7.3	IE3	IE3	84.1	84.6	83.5	0.78	2.4	2.9	6.9	3.6	56	68	1LE1003-0EB0	16	0.0036	16		
1.5	1.75	90 L	1445	9.9	IE3	IE3	85.3	85.9	84.9	0.80	3.15	2.6	7.2	2.7	56	68	1LE1003-0EB4	19	0.0049	16		
2.2	2.55	100 L	1465	14.3	IE3	IE2	86.7	86.7	85.7	0.83	4.4	2.1	7.6	3.6	60	72	1LE1003-1AB4	30	0.014	16		
3	3.45	100 L	1460	19.6	IE3	IE3	87.7	87.7	86.7	0.83	5.9	2.3	7.3	3.7	60	72	1LE1003-1AB5	30	0.014	16		
4	4.55	112 M	1460	26.0	IE3	IE3	88.6	88.6	87.6	0.82	7.9	2.4	7.1	3.7	58	70	1LE1003-1BB2	34	0.017	16		
5.5	6.3	132 S	1470	35.7	IE3	IE2	89.6	89.6	88.6	0.84	10.5	2.1	7.2	3.4	64	76	1LE1003-1CB0	64	0.046	16		
7.5	8.6	132 M	1470	48.7	IE3	IE2	90.4	90.4	89.4	0.84	14.3	2.4	7.4	3.5	64	76	1LE1003-1CB2	64	0.046	16		
11	12.6	160 M	1475	71.0	IE3	IE3	91.4	91.4	90.4	0.84	20.5	2.2	6.9	3.2	65	77	1LE1003-1DB2	83	0.083	16		
15	17.3	160 L	1475	97.0	IE3	IE3	92.1	92.1	91.1	0.82	28.5	2.5	8.5	3.8	65	77	1LE1003-1DB4	100	0.099	16		
Voltages		Motor protection	No. of poles	Frame size	Motor type	Version														Order code(s)		
Frame sizes 80 M to 90 L: use of the 360° freely rotatable terminal box for 2 and 4-pole motors ²⁾																						
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	PTC thermistor with 1 temp. sensor	2, 4	80 M ... 90 L	1LE1003-0D ... -0E	Standard	2	2											-	
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	Without	2, 4	80 M ... 90 L	1LE1003-0D ... -0E	Standard	3	4											-	
50 Hz	400 VY	60 Hz ¹⁾	460 VY	Without	2, 4	80 M ... 90 L	1LE1003-0D ... -0E	Standard	0	2	A											-
Frame sizes 100 L to 160 L: use of the 4 x 90° rotatable terminal box																						
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	Any	2, 4	100 L ... 160 L	1LE1003-1A ... -1D	Standard	2	2											-	
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	Any	2, 4	100 L ... 160 L	1LE1003-1A ... -1D	Standard	3	4											-	
50 Hz	500 VY			Any	2, 4	100 L ... 160 L	1LE1003-1A ... -1D	Without add. charge	2	7											-	
50 Hz	500 VΔ			Any	2, 4	100 L ... 160 L	1LE1003-1A ... -1D	Without add. charge	4	0											-	
Further voltages ¹⁾		For price information, code numbers, order codes and descriptions, see from Page 2/38																				
Types of construction		No. of poles	Frame size	Motor type	Version														Order code(s)			
Without flange		IM B3 ³⁾	2, 4	80 M ... 160 L	1LE1003-0D ... -1D	Standard											A	-				
With flange		IM B5 ³⁾	2, 4	80 M ... 160 L	1LE1003-0D ... -1D	With add. charge											F	-				
With standard flange		IM B14 ³⁾	2, 4	80 M ... 160 L	1LE1003-0D ... -1D	With add. charge											K	-				
Further types of construction		For price information, code letters and descriptions, see from Page 2/41																				
Motor protection		No. of poles	Frame size	Motor type	Version														Order code(s)			
Without			2, 4	80 L ... 160 L	1LE1003-0D ... -1D	Standard											A	-				
PTC thermistor with 3 temperature sensors			2, 4	80 L ... 160 L	1LE1003-0D ... -1D	With add. charge											B	-				
Further motor protection		For price information, code letters and descriptions, see from Page 2/49																				
Terminal box position		No. of poles	Frame size	Motor type	Version														Order code(s)			
Terminal box at top			2, 4	80 M ... 160 L	1LE1003-0D ... -1D	Standard											4	-				
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/51																				
Special versions		No. of poles	Frame size	Motor type														Order code(s)				
Forced-air cooled motors without ext. fan/fan cover (IC 416)		2, 4	80 M ... 160 L	1LE1003-0D ... -1D	1LE1003- ... -Z F90 + . . . + . . .													-Z F90 + . . . + . . .				
Options		For price information, order codes and descriptions, see from Page 2/53																				

1) Operating values at rated output for 60 Hz are available on request.

2) For converter-fed operation of shaft heights 80 and 90, ordering with PTC thermistors and their connection to the converter is recommended.

3) Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03) and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.

SIMOTICS GP 1LE1 Standard Motors

Motors with Premium Efficiency IE3



Self-ventilated motors
Aluminum series 1LE1003

Selection and ordering data (continued)

Operating values at rated output															Aluminum series		m _M B3 J		Torque class		
P _{rated} , P _{rated} , 50 Hz 60 Hz 1)	Frame size	n _{rated} , 50 Hz	T _{rated} , 50 Hz	IE class	η _{rated} , 50 Hz, 4/4	η _{rated} , 50 Hz, 3/4	η _{rated} , 50 Hz, 2/4	COS φ _{rated} , 50 Hz, 4/4	I _{rated} , 50 Hz, 400 V	T _{LR} / I _{rated} , 50 Hz	I _{LR} / I _{rated} , 50 Hz	T _B / T _{rated} , 50 Hz	L _p fA, 50 Hz	L _{WA} , 50 Hz	Article No.	kg	J	CL			
kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A						▲ New		kgm ²				
• Cooling: self-ventilated (IC 411) • Efficiency: Premium Efficiency IE3, service factor (SF) 1.15 • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																					
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz ¹⁾																					
0.37	0.43	80 M	940	3.8	-	-	74.8	74.3	70.5	0.66	1.08	2.3	4.2	2.7	42	53	1LE1003-0DC2	12	0.0025	13	
0.55	0.63	80 M	935	5.6	-	-	77.2	77.2	75.5	0.67	1.53	2.5	4.5	2.8	42	53	1LE1003-0DC3	14	0.0031	13	
0.75	0.86	90 S	945	7.6	IE3	IE3	78.9	80.0	78.5	0.70	1.96	2.2	4.6	2.6	43	55	1LE1003-0EC0	16	0.0040	13	
1.1	1.3	90 L	940	11.0	IE3	-	81.0	81.0	79.5	0.69	2.85	2.3	4.6	2.7	43	55	1LE1003-0EC4	19	0.0048	13	
1.5	1.75	100 L	970	15.0	IE3	IE2	82.5	82.5	81.5	0.76	3.45	1.9	6.9	3.0	59	71	1LE1003-1AC4	30	0.014	13	
2.2	2.55	112 M	970	22.0	IE3	IE2	84.3	84.3	83.3	0.8	4.7	2.3	6.8	3.4	59	71	1LE1003-1BC2	29	0.014	13	
3	3.45	132 S	970	29.4	IE3	IE2	85.6	85.6	84.6	0.77	6.6	1.7	5.2	2.6	63	75	1LE1003-1CC0	43	0.029	13	
4	4.55	132 M	970	39.3	IE3	IE2	86.8	86.8	85.8	0.77	8.6	1.9	5.7	2.9	63	75	1LE1003-1CC2	52	0.037	13	
5.5	6.3	132 M	970	54.0	IE3	IE2	88.0	88.0	87.0	0.78	11.6	1.9	5.9	2.9	63	75	1LE1003-1CC3	52	0.037	13	
7.5	8.6	160 M	980	73.0	IE3	IE2	89.1	89.9	89.3	0.76	16.0	1.9	4.9	2.3	67	79	1LE1003-1DC2	93	0.098	13	
11	12.6	160 L	975	108.0	IE3	IE2	90.3	91.1	90.7	0.77	23.0	1.9	5	2.3	67	79	1LE1003-1DC4	115	0.12	13	
Voltages		Motor protection	No. of poles	Frame size	Motor type	Version												Order code(s)			
Frame sizes 80 M to 90 L: use of the 360° freely rotatable terminal box for 2 and 4-pole motors ²⁾																					
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	PTC thermistor with 1 temp. sensor	6	80 M ... 90 L	1LE1003-0D ... -0E	Standard												2 2	-
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	Without	6	80 M ... 90 L	1LE1003-0D ... -0E	Standard												3 4	-
50 Hz	400 VY	60 Hz ¹⁾	460 VY	Without	6	80 M ... 90 L	1LE1003-0D ... -0E	Standard												0 2 A	-
Frame sizes 100 L to 160 L: use of the 4 x 90° rotatable terminal box																					
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	Any	6	100 L ... 160 L	1LE1003-1A ... -1D	Standard												2 2	-
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	Any	6	100 L ... 160 L	1LE1003-1A ... -1D	Standard												3 4	-
50 Hz	500 VY			Any	6	100 L ... 160 L	1LE1003-1A ... -1D	Without add. charge												2 7	-
50 Hz	500 VΔ			Any	6	100 L ... 160 L	1LE1003-1A ... -1D	Without add. charge												4 0	-
Further voltages ¹⁾ For price information, code numbers, order codes and descriptions, see from Page 2/38																					
9 0 ...																					
Types of construction		No. of poles	Frame size	Motor type	Version												Order code(s)				
Without flange	IM B3 ³⁾	6	80 M ... 160 L	1LE1003-0D ... -1D	Standard												A	-			
With flange	IM B5 ³⁾	6	80 M ... 160 L	1LE1003-0D ... -1D	With additional charge												F	-			
With standard flange	IM B14 ³⁾	6	80 M ... 160 L	1LE1003-0D ... -1D	With additional charge												K	-			
Further types of construction For price information, code letters and descriptions, see from Page 2/41																					
...																					
Motor protection		No. of poles	Frame size	Motor type	Version												Order code(s)				
Frame sizes 100 L to 160 L: use of the 4 x 90° rotatable terminal box																					
Without		6	80 L ... 160 L	1LE1003-0D ... -1D	Standard												A	-			
PTC thermistor with 3 temperature sensors		6	80 L ... 160 L	1LE1003-0D ... -1D	With additional charge												B	-			
Further motor protection For price information, code letters and descriptions, see from Page 2/49																					
...																					
Terminal box position		No. of poles	Frame size	Motor type	Version												Order code(s)				
Terminal box at top		6	80 M ... 160 L	1LE1003-0D ... -1D	Standard												4	-			
Further terminal box positions For price information, code numbers and descriptions, see from Page 2/51																					
Special versions		No. of poles	Frame size	Motor type												Order code(s)					
Forced-air cooled motors without ext. fan/fan cover (IC 416)		6	80 M ... 160 L	1LE1003-0D ... -1D	1LE1003- ... -Z F90 + . . . + . . .																
Options		For price information, order codes and descriptions, see from Page 2/53											1LE1003- ... -Z . . . + . . . + . . .								

1) Operating values at rated output for 60 Hz are available on request.

2) For converter-fed operation of shaft heights 80 and 90, ordering with PTC thermistors and their connection to the converter is recommended.

3) Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03) and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.



SIMOTICS SD 1LE1 Standard Motors

Motors with Premium Efficiency IE3

Self-ventilated motors
Cast-iron series 1LE1503/1LE1603 Basic/Performance Line



Selection and ordering data

Operating values at rated output														Cast-iron series		m _{IM} B3 J		Torque class				
P _{rated} , 50 Hz	P _{rated} , 60 Hz	Frame size	n _{rated} , 50 Hz	T _{rated} , 50 Hz	IE class	η _{rated} , 50 Hz	η _{rated} , 50 Hz	η _{rated} , 50 Hz	cos φ, rated	I _{rated} , 50 Hz	T _{LR} /I _{rated} , 50 Hz	I _{LR} /I _{rated} , 50 Hz	T _B /I _{rated} , 50 Hz	L _{pTA} , 50 Hz	L _{WA} , 50 Hz	1LE1503 – Basic Line	1LE1603 – Performance Line	IE3 version in accordance with IEC 60034-30	Article No.	kg	kgm ²	CL

kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A	dB(A)	dB(A)	▲ New	kg	kgm ²	CL					
0.37	0.5	71 M	2850	1.2	IE3		73.8	73.2	69.6	0.76	0.95	3.5	5.8	3.5	52	63	▲ 1LE1 5 03-0CA2		13	0.00045	16
0.55	0.75	71 M	2860	1.8	IE3		77.8	77.4	74.3	0.76	1.34	3.5	6.1	3.5	52	63	▲ 1LE1 5 03-0CA3		14.5	0.00056	16
0.75	1	80 M	2850	2.5	IE3		80.7	82.0	81.5	0.86	1.56	2.6	6.2	3.0	60	71	▲ 1LE1 5 03-0DA2		18	0.0011	16
1.1	1.5	80 M	2885	3.6	IE3		82.7	82.7	81.7	0.85	2.25	2.8	7.4	3.8	60	71	▲ 1LE1 5 03-0DA3		21	0.0013	16
1.5	2	90 S	2910	4.9	IE3		84.2	84.5	83.5	0.86	3	2.7	8.1	4.2	65	77	▲ 1LE1 5 03-0EA0		25.5	0.0021	16
2.2	3	90 L	2920	7.2	IE3		85.9	86.8	86.1	0.88	4.2	2.6	8.3	4.0	65	77	▲ 1LE1 5 03-0EA4		32	0.0031	16
3	3.45	100 L	2920	9.8	IE3	IE3	87.1	87.1	86.1	0.88	5.6	2.8	8.0	4.3	67	79	1LE1 03-1AA4		36	0.0054	16
4	4.55	112 M	2950	12.9	IE3	IE3	88.1	88.1	87.1	0.89	7.4	1.9	7.5	3.9	69	81	1LE1 03-1BA2		45	0.012	16
5.5	6.3	132 S	2950	17.8	IE3	IE3	89.2	89.2	88.2	0.90	9.9	1.8	7.4	3.6	68	80	1LE1 03-1CA0		58	0.024	16
7.5	8.6	132 S	2950	24.3	IE3	IE3	90.1	90.1	89.1	0.92	13.1	1.9	8.3	3.9	68	80	1LE1 03-1CA1		73	0.031	16
11	12.6	160 M	2955	35.5	IE3	IE3	91.2	91.2	90.2	0.89	19.6	2.4	7.9	3.8	70	82	1LE1 03-1DA2		100	0.053	16
15	17.3	160 M	2960	48.4	IE3	IE3	91.9	91.9	90.9	0.87	27.0	2.7	8.7	4.3	70	82	1LE1 03-1DA3		110	0.061	16
18.5	21.3	160 L	2955	60.0	IE3	IE3	92.4	92.4	91.4	0.90	32.0	2.8	9.0	4.2	70	82	1LE1 03-1DA4		127	0.068	16
22	24.5	180 M	2950	71	IE3	IE3	92.7	93.0	92.4	0.89	38.5	2.5	7.5	3.5	73	80	1LE1 03-1EA2		160	0.080	16
30	33.5	200 L	2955	97	IE3	IE3	93.3	93.7	93.3	0.87	53	2.5	6.6	3.3	73	80	1LE1 03-2AA4		225	0.13	16
37	41.5	200 L	2955	120	IE3	IE3	93.7	94.1	93.8	0.88	65	2.5	6.6	3.2	74	81	1LE1 03-2AA5		250	0.16	16
45	51	225 M	2960	145	IE3	IE3	94.0	94.5	94.4	0.89	78	2.4	6.9	3.3	73	87	1LE1 03-2BA2		315	0.26	16
55	62	250 M	2975	177	IE3	IE3	94.3	94.5	93.9	0.89	95	2.3	6.7	3.1	73	87	1LE1 03-2CA2		385	0.46	13
75	84	280 S	2975	241	IE3	IE3	94.7	94.8	94.1	0.89	128	2.4	6.8	3.0	74	88	1LE1 03-2DA0		510	0.77	13
90	101	280 M	2975	289	IE3	IE3	95.0	95.1	94.6	0.90	152	2.4	7.2	3.1	74	88	1LE1 03-2DA2		590	0.94	13
110	123	315 S	2982	352	IE3	IE3	95.2	95.4	94.9	0.91	183	2.4	7.1	3.1	75	89	1LE1 03-3AA0		750	1.4	13
132	148	315 M	2982	423	IE3	IE3	95.4	95.5	95.2	0.91	220	2.5	7.2	3.1	75	89	1LE1 03-3AA2		880	1.6	13
160	180	315 L	2982	512	IE3	IE3	95.6	95.7	95.2	0.92	265	2.8	7.8	3.3	77	91	1LE1 03-3AA4		980	1.9	13
200	224	315 L	2982	640	IE3	IE3	95.8	95.9	95.5	0.92	330	2.5	7.2	3.0	77	91	1LE1 03-3AA5		1150	2.3	13

Relubrication		Motor protection	Fan cover	Bearing size	Converted operation, motor mode	Liability for defects						
Basic Line	Optional (standard from FS 280 upwards)	Optional	Plastic	62 (63 from FS 280 upwards)	up to 500 V	12 months	5					
Performance Line	Standard from FS 160 (optional for FS 100 to 132)	Standard PTC	Steel	63	Up to 500 V	36 months	6					
Voltages ²⁾		No. of poles	Frame size	Motor type	Version					Order code(s)		
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	2	71 M ... 315 L	1LE1 03-0C ... -3A	Standard	2	2		-	
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	2	71 M ... 315 L	1LE1 03-0C ... -3A	Standard	3	4		-	
50 Hz	500 VY			2	71 M ... 315 L	1LE1 03-0C ... -3A	Without add. charge	2	7		-	
50 Hz	500 VΔ			2	71 M ... 315 L	1LE1 03-0C ... -3A	Without add. charge	4	0		-	
Further voltages ¹⁾		For price information, code numbers, order codes and descriptions, see from Page 2/40										
Types of construction		No. of poles	Frame size	Motor type	Version					Order code(s)		
Without flange	IM B3 ³⁾	2	71 M ... 315 L	1LE1 03-0C ... -3A	Standard					A		
With flange	IM B5 ³⁾	2	71 M ... 315 M	1LE1 03-0C ... -3A	With additional charge					F		
Further types of construction		For price information, code letters and descriptions, see from Page 2/45										
Motor protection		No. of poles	Frame size	Motor type	Version					Order code(s)		
Without PTC thermistor with 3 temperature sensors	Only possible for Basic Line	2	71 M ... 315 L	1LE1503-0C ... -3A	Standard					A		
Further motor protection	Performance Line	2	71 M ... 315 L	1LE1603-0C ... -3A	Standard					B		
Further motor protection		For price information, code letters and descriptions, see from Page 2/50										
Terminal box position		No. of poles	Frame size	Motor type	Version					Order code(s)		
Terminal box at top		2	71 M ... 315 L	1LE1 03-0C ... -3A	Standard					4		
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/52										
Special versions		No. of poles	Frame size	Motor type							Order code(s)	
Options		For price information, order codes and descriptions, see from Page 2/58										

¹⁾ Operating values at rated output for 60 Hz are available on request.

²⁾ Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code **R52**) or a larger terminal box (Order code **R50**) can be used. Order codes **R52** and **R50** alter the motor dimensions.

³⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.

SIMOTICS SD 1LE1 Standard Motors

Motors with Premium Efficiency IE3



Self-ventilated motors
Cast-iron series 1LE1503/1LE1603 Basic/Performance Line

Selection and ordering data (continued)

Operating values at rated output															Cast-iron series		m _{IM B3} J		Torque class	
P _{rated} , P _{rated} , Frame size	η _{rated} , T _{rated} , IE class	η _{rated} , η _{rated} , η _{rated} , COS φ	I _{rated} , T _{LR} /I _{rated} , I _{LR} /I _{rated} , T _B /I _{rated} , L _{pTA} , L _{WA}	50 Hz, 60 Hz, 50 Hz, 50 Hz	50 Hz, 50 Hz, 50 Hz, 50 Hz, 4/4	50 Hz, 50 Hz, 50 Hz, 50 Hz, 4/4	50 Hz, 50 Hz, 50 Hz, 50 Hz, 4/4	50 Hz, 50 Hz, 50 Hz, 50 Hz, 4/4	50 Hz, 50 Hz, 50 Hz, 50 Hz, 4/4	50 Hz, 50 Hz, 50 Hz, 50 Hz, 4/4	50 Hz, 50 Hz, 50 Hz, 50 Hz, 4/4	50 Hz, 50 Hz, 50 Hz, 50 Hz, 4/4	50 Hz, 50 Hz, 50 Hz, 50 Hz, 4/4	50 Hz, 50 Hz, 50 Hz, 50 Hz, 4/4	1LE1503 – Basic Line 1LE1603 – Performance Line IE3 version in accordance with IEC 60034-30 Article No.	kg	kgm ²	CL		
kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A	dB(A)	dB(A)	▲ New							
0.25	0.37	71 M	1395	1.7	IE3		73.5	73.6	70.3	0.72	0.68	2.5	4.2	2.6	44	55	▲ 1LE1 5 03-0CB2	13	0.00095	16
0.37	0.5	71 M	1410	2.5	IE3		77.3	76.5	72.7	0.69	1	2.6	4.5	2.8	44	55	▲ 1LE1 5 03-0CB3	16	0.0014	16
0.55	0.75	80 M	1440	3.6	IE3		81.3	82.0	80.2	0.78	1.25	2.1	5.9	3.1	53	64	▲ 1LE1 5 03-0DB2	18.5	0.0021	16
0.75	1	80 M	1450	4.9	IE3		82.5	82.3	80.0	0.75	1.75	2.7	7.1	3.9	53	64	▲ 1LE1 5 03-0DB3	22.5	0.0029	16
1.1	1.5	90 S	1440	7.3	IE3		84.1	84.6	83.5	0.78	2.4	2.9	6.9	3.6	56	68	▲ 1LE1 5 03-0EB0	25	0.0036	16
1.5	2	90 L	1445	9.9	IE3		85.3	85.9	84.9	0.80	3.15	2.6	7.2	2.7	56	68	▲ 1LE1 5 03-0EB4	31	0.0049	16
2.2	2.55	100 L	1465	14.3	IE3	IE3	86.7	86.7	85.7	0.83	4.4	2.1	7.6	3.6	60	72	1LE1 03-1AB4	40	0.014	16
3	3.45	100 L	1460	19.6	IE3	IE3	87.7	87.7	86.7	0.83	5.9	2.3	7.3	3.7	60	72	1LE1 03-1AB5	40	0.014	16
4	4.55	112 M	1460	26	IE3	IE3	88.6	88.6	87.6	0.82	7.9	2.4	7.1	3.7	58	70	1LE1 03-1BB2	46	0.017	16
5.5	6.3	132 S	1470	35.7	IE3	IE3	89.6	89.6	88.6	0.84	10.5	2.1	7.2	3.4	64	76	1LE1 03-1CB0	74	0.046	16
7.5	8.6	132 M	1470	48.7	IE3	IE3	90.4	90.4	89.4	0.84	14.3	2.4	7.4	3.5	64	76	1LE1 03-1CB2	80	0.046	16
11	12.6	160 M	1475	71.0	IE3	IE3	91.4	91.4	90.4	0.82	21.0	2.2	6.9	3.2	65	77	1LE1 03-1DB2	109	0.083	16
15	17.3	160 L	1475	97	IE3	IE3	92.1	92.1	91.1	0.82	28.5	2.5	8.5	3.8	65	77	1LE1 03-1DB4	127	0.099	16
18.5	21.3	180 M	1470	120	IE3	IE3	92.6	93.2	93.2	0.82	35	2.5	6.9	3.3	66	73	1LE1 03-1EB2	165	0.13	16
22	25.3	180 L	1470	143	IE3	IE3	93.0	93.7	93.7	0.83	41	2.5	6.8	3.3	68	75	1LE1 03-1EB4	170	0.14	16
30	34.5	200 L	1470	195	IE3	IE3	93.6	94.3	94.4	0.84	55	2.6	6.9	3.1	65	72	1LE1 03-2AB5	240	0.22	16
37	42.5	225 S	1478	239	IE3	IE3	93.9	94.5	94.4	0.86	66	2.5	6.4	2.7	65	78	1LE1 03-2BB0	285	0.42	16
45	52	225 M	1478	291	IE3	IE3	94.2	94.9	95.1	0.86	80	2.6	6.4	2.7	65	78	1LE1 03-2BB2	320	0.47	16
55	63	250 M	1482	354	IE3	IE3	94.6	95.1	95.0	0.87	96	2.5	6.8	2.9	66	79	1LE1 03-2CB2	420	0.85	16
75	86	280 S	1485	482	IE3	IE3	95.0	95.3	95.0	0.86	133	2.5	6.9	3.0	69	83	1LE1 03-2DB0	570	1.4	16
90	104	280 M	1485	579	IE3	IE3	95.2	95.5	95.3	0.87	157	2.6	7.2	3.0	70	84	1LE1 03-2DB2	670	1.7	16
110	127	315 S	1488	706	IE3	IE3	95.4	95.8	95.5	0.87	191	2.6	6.8	2.9	70	84	1LE1 03-3AB0	760	2.2	16
132	152	315 M	1490	846	IE3	IE3	95.6	95.9	95.9	0.87	230	2.8	7.3	3.0	73	87	1LE1 03-3AB2	960	2.9	16
160	184	315 L	1490	1025	IE3	IE3	95.8	96.1	96.1	0.87	275	2.9	7.3	3.1	73	87	1LE1 03-3AB4	990	3.1	16
200	230	315 L	1488	1284	IE3	IE3	96.0	96.3	96.1	0.88	340	3.2	7.4	3.0	73	87	1LE1 03-3AB5	1190	3.7	16



Relubrication		Motor protection	Fan cover	Bearing size	Converted operation, motor mode	Liability for defects					Order code(s)	
Basic Line	Optional (standard from FS 280 upwards)	Optional	Plastic	62 (63 from FS 280 upwards)	Up to 500 V 12 months	12 months	5					
Performance Line	Standard from FS 160 (optional for FS 100 to 132)	Standard PTC	Steel	63	Up to 500 V 36 months	36 months	6					
Voltages ²⁾		No. of poles	Frame size	Motor type	Version					Order code(s)		
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	4	71 M ... 315 L	1LE1 03-0C ... -3A	Standard	2	2			
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	4	71 M ... 315 L	1LE1 03-0C ... -3A	Standard	3	4			
50 Hz	500 VY			4	71 M ... 315 L	1LE1 03-0C ... -3A	Without add. charge	2	7			
50 Hz	500 VΔ			4	71 M ... 315 L	1LE1 03-0C ... -3A	Without add. charge	4	0			
Further voltages ¹⁾		For price information, code numbers, order codes and descriptions, see from Page 2/40										
Types of construction		No. of poles	Frame size	Motor type	Version					Order code(s)		
Without flange	IM B3 ³⁾	4	71 M ... 315 L	1LE1 03-0C ... -3A	Standard					A		
With flange	IM B5 ³⁾	4	71 M ... 315 M	1LE1 03-0C ... -3A	With additional charge					F		
Further types of construction		For price information, code letters and descriptions, see from Page 2/45										
Motor protection		Line	No. of poles	Frame size	Motor type	Version					Order code(s)	
Without PTC thermistor with 3 temperature sensors	Only possible for Basic Line	Basic Line	4	71 M ... 315 L	1LE1503-0C ... -3A	Standard					A	
	Performance Line	Performance Line	4	71 M ... 315 L	1LE1603-0C ... -3A	Standard					B	
Further motor protection		For price information, code letters and descriptions, see from Page 2/50										
Terminal box position		No. of poles	Frame size	Motor type	Version					Order code(s)		
Terminal box at top		4	71 M ... 315 L	1LE1 03-0C ... -3A	Standard					4		
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/52										
Special versions		No. of poles	Frame size	Motor type					Order code(s)			
Options		For price information, order codes and descriptions, see from Page 2/58										

¹⁾ Operating values at rated output for 60 Hz are available on request.
²⁾ Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code **R52**) or a larger terminal box (Order code **R50**) can be used. Order codes **R52** and **R50** alter the motor dimensions.
³⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.

SIMOTICS SD 1LE1 Standard Motors

Motors with Premium Efficiency IE3

Self-ventilated motors
Cast-iron series 1LE1503/1LE1603 Basic/Performance Line



Selection and ordering data (continued)

Operating values at rated output															Cast-iron series		m _{IM B3} J	Torque class
P _{rated} , 50 Hz	P _{rated} , 60 Hz	Frame size	n _{rated} , 50 Hz	T _{rated} , 50 Hz	IE class	η _{rated} , 50 Hz	η _{rated} , 50 Hz	η _{rated} , 50 Hz	cos φ, rated	I _{rated} , 50 Hz	T _{LR} /I _{rated}	I _{LR} /I _{rated}	T _B /I _{rated}	L _p /A	L _{WA} , 50 Hz	1LE1503 – Basic Line		
1)			4/4	3/4	2/4	4/4	3/4	2/4	4/4	400 V	50 Hz	50 Hz	50 Hz			Article No.		

kW	kW	FS	rpm	Nm	50 Hz	60 Hz	%	%	%	A	dB(A)	dB(A)	▲ New	kg	kgm ²	CL				
0.18	0.25	71 M	885	1.9	IE3		63.9	64.6	60.8	0.69	0.59	2.3	2.8	2.3	39	50	▲ 1LE1 5 03-0CC2	12.5	0.0010	16
0.25	0.33	71 M	900	2.7	IE3		68.6	69.3	65.7	0.67	0.79	2.7	3.1	2.8	39	50	▲ 1LE1 5 03-0CC3	15.5	0.0015	16
0.37	0.5	80 M	940	3.8	IE3		74.8	74.3	70.5	0.66	1.08	2.3	4.2	2.7	42	53	▲ 1LE1 5 03-0DC2	18.5	0.0025	13
0.55	0.75	80 M	935	5.6	IE3		77.2	77.2	75.5	0.67	1.53	2.5	4.5	2.8	42	53	▲ 1LE1 5 03-0DC3	22.5	0.0031	13
0.75	1	90 S	945	7.6	IE3		78.9	80.0	78.5	0.70	1.96	2.2	4.6	2.6	43	55	▲ 1LE1 5 03-0EC0	26.5	0.0040	13
1.1	1.5	90 L	940	11.0	IE3		81.0	81.0	79.5	0.69	2.85	2.3	4.6	2.7	43	55	▲ 1LE1 5 03-0EC4	32	0.0048	13
1.5	1.75	100 L	970	15	IE3	IE2	82.5	82.5	81.5	0.76	3.45	1.9	6.9	3.0	59	71	1LE1 03-1AC4	34	0.014	13
2.2	2.55	112 M	970	22	IE3	IE2	84.3	84.3	83.3	0.80	4.7	2.3	6.8	3.4	59	71	1LE1 03-1BC2	47	0.014	13
3	3.45	132 S	970	29.4	IE3	IE2	85.6	85.6	84.6	0.77	6.6	1.7	5.2	2.6	63	75	1LE1 03-1CC0	68	0.029	13
4	4.55	132 M	970	39.3	IE3	IE2	86.8	86.8	85.8	0.77	8.6	1.9	5.7	2.9	63	75	1LE1 03-1CC2	68	0.037	13
5.5	6.3	132 M	970	54.0	IE3	IE2	88.0	88.0	87.0	0.78	11.6	1.9	5.9	2.9	63	75	1LE1 03-1CC3	81	0.037	13
7.5	8.6	160 M	980	73.0	IE3	IE2	89.1	89.9	89.3	0.76	16.0	1.9	4.9	2.3	67	79	1LE1 03-1DC2	120	0.098	13
11	12.6	160 L	975	108	IE3	IE2	90.3	91.1	90.7	0.77	23.0	1.9	5	2.3	67	79	1LE1 03-1DC4	149	0.122	13
15	18	180 L	975	147	IE3	IE2	91.2	92.4	92.6	0.80	29.5	2.3	5.9	2.8	61	68	1LE1 03-1EC4	180	0.19	16
18.5	22	200 L	978	181	IE3	IE2	91.7	92.5	92.5	0.79	37	2.5	5.6	2.6	64	71	1LE1 03-2AC4	215	0.28	16
22	26.5	200 L	978	215	IE3	IE2	92.2	93.1	93.3	0.79	43.5	2.5	5.6	2.6	61	68	1LE1 03-2AC5	230	0.32	16
30	36	225 M	982	292	IE3	IE2	92.9	93.6	93.5	0.83	56	2.6	6.6	3.0	64	77	1LE1 03-2BC2	325	0.67	16
37	44.5	250 M	985	359	IE3	IE2	93.3	94.0	94.0	0.85	67	2.7	7.0	2.9	62	75	1LE1 03-2CC2	405	1.0	16
45	54	280 S	988	435	IE3	IE2	93.7	94.3	94.2	0.85	82	3.0	6.8	2.8	60	74	1LE1 03-2DC0	510	1.4	16
55	66	280 M	988	532	IE3	IE2	94.1	94.5	94.2	0.85	99	3.2	7.2	3.0	60	74	1LE1 03-2DC2	560	1.6	16
75	90	315 S	990	723	IE3	IE3	94.6	94.7	94.1	0.84	136	2.6	7.5	3.1	63	78	1LE1 03-3AC0	750	2.6	16
90	108	315 M	991	867	IE3	IE2	94.9	95.1	94.7	0.85	161	2.5	6.7	2.8	63	78	1LE1 03-3AC2	890	3.1	16
110	132	315 L	991	1060	IE3	IE2	95.1	95.3	95.1	0.84	199	2.8	7.2	3.0	63	78	1LE1 03-3AC4	990	3.9	16
132	158	315 L	991	1272	IE3	IE2	95.4	95.3	94.5	0.84	240	2.7	7.2	3.0	67	82	1LE1 03-3AC5	1110	4.4	16
160	192	315 L	991	1542	IE3	IE2	95.6	95.8	95.4	0.83	290	3.3	7.7	3.5	67	82	1LE1 03-3AC6	1160	4.6	16

Relubrication		Motor protection	Fan cover	Bearing size	Converted operation, motor mode	Liability for defects							
Basic Line	Optional (standard from FS 280 upwards)	Optional	Plastic	62 (63 from FS 280 upwards)	Up to 500 V	12 months	5						
Performance Line	Standard from FS 160 (optional for FS 100 to 132)	Standard PTC	Steel	63	Up to 500 V	36 months	6						
Voltages ²⁾		No. of poles	Frame size	Motor type	Version				Order code(s)				
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	6	71 M ... 315 L	1LE1 03-0C ... -3A	Standard	2	2				
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	6	71 M ... 315 L	1LE1 03-0C ... -3A	Standard	3	4				
50 Hz	500 VY			6	71 M ... 315 L	1LE1 03-0C ... -3A	Without add. charge	2	7				
50 Hz	500 VΔ			6	71 M ... 315 L	1LE1 03-0C ... -3A	Without add. charge	4	0				
Further voltages ¹⁾		For price information, code numbers, order codes and descriptions, see from Page 2/40											
Types of construction		No. of poles	Frame size	Motor type	Version				Order code(s)				
Without flange	IM B3 ³⁾	6	71 M ... 315 L	1LE1 03-0C ... -3A	Standard								
With flange	IM B5 ³⁾	6	71 M ... 315 M	1LE1 03-0C ... -3A	With additional charge								
Further types of construction		For price information, code letters and descriptions, see from Page 2/45											
Motor protection		No. of poles	Frame size	Motor type	Version				Order code(s)				
Without PTC thermistor with 3 temperature sensors	Only possible for Basic Line	6	71 M ... 315 L	1LE1503-0C ... -3A	Standard								
	Basic Line	6	71 M ... 315 L	1LE1503-0C ... -3A	With additional charge								
	Performance Line	6	71 M ... 315 L	1LE1603-0C ... -3A	Standard								
Further motor protection		For price information, code letters and descriptions, see from Page 2/50											
Terminal box position		No. of poles	Frame size	Motor type	Version				Order code(s)				
Terminal box at top		6	71 M ... 315 L	1LE1 03-0C ... -3A	Standard								
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/52											
Special versions		No. of poles	Frame size	Motor type				Order code(s)					
Options		For price information, order codes and descriptions, see from Page 2/58											

1) Operating values at rated output for 60 Hz are available on request.

2) Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code **R52**) or a larger terminal box (Order code **R50**) can be used. Order codes **R52** and **R50** alter the motor dimensions.

3) Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.

SIMOTICS GP 1LE1 Standard Motors

Motors with Standard Efficiency IE1

Self-ventilated or forced-air cooled motors
Aluminum series 1LE1002



Selection and ordering data

Operating values at rated output														Aluminum series		m _{IM B3} J		Torque class	
P _{rated} , 50 Hz	P _{rated} , 60 Hz ¹⁾	Frame size	n _{rated} , 50 Hz	n _{rated} , 60 Hz	IE class	η _{rated} , 50 Hz, 4/4	η _{rated} , 50 Hz, 3/4	η _{rated} , 50 Hz, 2/4	COSφ _{rated} , 50 Hz, 4/4	I _r , 50 Hz, 400 V	T _{LR} /I _r , 50 Hz	I _{LR} /I _r , 50 Hz	T _B /I _r , 50 Hz	L _p fA, 50 Hz	L _{WA} , 50 Hz	Article No.	kg	kgm ²	CL
kW	kW	FS	rpm	Nm	%	%	%	%	A										
• Cooling: self-ventilated (IC 411) or with order code F90 forced-air cooled without external fan and fan cover (IC 416) • Efficiency: Standard Efficiency IE1, service factor (SF) 1.1 • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																			
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz ¹⁾																			
3	3.45	100 L	2835	10	IE1	81.5	82.8	82.1	0.87	6.1	3.2	6.2	2.9	67	79	1LE1002-1AA4	20	0.0034	16
4	4.55	112 M	2930	13	IE1	83.1	83.8	82.2	0.86	8.1	2.7	7.3	3.7	69	81	1LE1002-1BA2	25	0.0067	16
5.5	6.3	132 S	2905	18	IE1	84.7	85.7	85.0	0.89	10.5	1.9	5.6	2.5	68	80	1LE1002-1CA0	35	0.013	16
7.5	8.6	132 S	2925	24	IE1	86.0	86.9	85.8	0.87	14.5	2.1	6.3	3.2	68	80	1LE1002-1CA1	40	0.016	16
11	12.6	160 M	2925	36	IE1	87.6	87.6	86.1	0.85	21.5	2.0	5.8	2.6	70	82	1LE1002-1DA2	60	0.030	16
15	17.3	160 M	2930	49	IE1	88.7	89.0	88.0	0.84	29	2.5	6.1	3.1	70	82	1LE1002-1DA3	68	0.036	16
18.5	21.3	160 L	2935	60	IE1	89.3	90.0	89.7	0.86	35	2.5	7.0	3.2	70	82	1LE1002-1DA4	78	0.044	16
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz ¹⁾																			
2.2	2.55	100 L	1425	15	IE1	79.7	80.5	78.5	0.81	4.9	2.2	5.1	2.3	60	72	1LE1002-1AB4	18	0.0059	16
3	3.45	100 L	1425	20	IE1	81.5	83.0	82.3	0.85	6.3	2.4	5.4	2.6	60	72	1LE1002-1AB5	22	0.0078	16
4	4.55	112 M	1435	27	IE1	83.1	84.5	84.0	0.85	8.2	2.2	5.3	2.6	58	70	1LE1002-1BB2	27	0.010	16
5.5	6.3	132 S	1450	36	IE1	84.7	85.7	84.9	0.82	11.2	2.3	5.7	2.7	64	76	1LE1002-1CB0	38	0.019	16
7.5	8.6	132 M	1450	49	IE1	86.0	86.9	86.3	0.82	15.2	2.6	6.6	3.1	64	76	1LE1002-1CB2	44	0.024	16
11	12.6	160 M	1460	72	IE1	87.6	88.0	86.6	0.82	22	2.3	6.4	3.1	65	77	1LE1002-1DB2	62	0.044	16
15	17.3	160 L	1460	98	IE1	88.7	89.3	88.3	0.82	30	2.5	7.0	3.4	65	77	1LE1002-1DB4	73	0.056	16
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz ¹⁾																			
1.5	1.75	100 L	940	15	IE1	75.2	76.0	72.4	0.74	3.9	2.0	4.0	2.2	59	71	1LE1002-1AC4	19	0.0065	16
2.2	2.55	112 M	930	23	IE1	77.7	78.8	76.9	0.75	5.4	2.3	4.1	2.5	57	69	1LE1002-1BC2	25	0.0092	16
3	3.45	132 S	955	30	IE1	79.7	80.2	77.7	0.74	7.3	2.0	4.6	2.6	63	75	1LE1002-1CC0	34	0.017	16
4	4.55	132 M	950	40	IE1	81.4	82.9	82.1	0.76	9.3	2.1	4.7	2.5	63	75	1LE1002-1CC2	39	0.021	16
5.5	6.3	132 M	950	55	IE1	83.1	84.6	84.0	0.75	12.7	2.5	5.2	2.8	63	75	1LE1002-1CC3	48	0.027	16
7.5	8.6	160 M	970	74	IE1	84.7	85.4	85.0	0.73	17.5	2.1	5.5	2.9	67	79	1LE1002-1DC2	72	0.056	16
11	12.6	160 L	965	109	IE1	86.4	86.4	85.4	0.77	24	1.9	5.9	2.7	67	79	1LE1002-1DC4	92	0.078	16
8-pole: 750 rpm at 50 Hz, 900 rpm at 60 Hz ¹⁾																			
0.75	0.86	100 L	705	10	-	62.6	60.8	53.9	0.62	3.0	1.9	3.0	2.2	60	72	1LE1002-1AD4	17	0.0056	16
1.1	1.27	100 L	705	15	-	65.5	64.2	60.0	0.63	3.9	2.0	3.2	2.3	60	72	1LE1002-1AD5	22	0.0078	16
1.5	1.75	112 M	700	20	-	71.6	72.2	68.5	0.65	4.7	1.6	3.3	1.9	63	75	1LE1002-1BD2	29	0.0094	16
2.2	2.55	132 S	715	29	-	76.8	77.4	75.2	0.66	6.3	1.7	3.9	2.4	63	75	1LE1002-1CD0	37	0.019	16
3	3.45	132 M	715	40	-	76.6	77.8	75.8	0.66	8.6	1.8	3.9	2.2	63	75	1LE1002-1CD2	44	0.024	16
4	4.55	160 M	720	53	-	78.3	78.5	75.6	0.69	10.7	1.7	3.8	2.3	63	75	1LE1002-1DD2	60	0.044	16
5.5	6.3	160 M	720	73	-	81.7	82.5	81.4	0.70	13.9	1.6	4.0	2.2	63	75	1LE1002-1DD3	72	0.056	16
7.5	8.6	160 L	715	100	-	83.5	84.5	83.6	0.70	18.5	1.7	3.8	2.2	63	75	1LE1002-1DD4	91	0.077	16
Voltagess																			
50 Hz 230 VΔ/400 VY 60 Hz ¹⁾ 460 VY			No. of poles		Frame size		Motor type		Version								Order code(s)		
50 Hz 400 VΔ/690 VY 60 Hz ¹⁾ 460 VΔ			2, 4, 6, 8		100 L ... 160 L		1LE1002-1A ... -1D		Standard		2 2						-		
50 Hz 500 VY			2, 4, 6, 8		100 L ... 160 L		1LE1002-1A ... -1D		Standard		3 4						-		
50 Hz 500 VΔ			2, 4, 6, 8		100 L ... 160 L		1LE1002-1A ... -1D		Without add. charge		2 7						-		
Further voltages ¹⁾			2, 4, 6, 8		100 L ... 160 L		1LE1002-1A ... -1D		Without add. charge		4 0						-		
											9 0						...		
For price information, code numbers, order codes and descriptions, see from Page 2/38																			
Types of construction																			
Without flange			No. of poles		Frame size		Motor type		Version								Order code(s)		
With flange			2, 4, 6, 8		100 L ... 160 L		1LE1002-1A ... -1D		Standard		A						-		
With standard flange			2, 4, 6, 8		100 L ... 160 L		1LE1002-1A ... -1D		With additional charge		F						-		
			2, 4, 6, 8		100 L ... 160 L		1LE1002-1A ... -1D		With additional charge		K						-		
Further types of construction			For price information, code letters and descriptions, see from Page 2/41																
Motor protection																			
Without			No. of poles		Frame size		Motor type		Version								Order code(s)		
PTC thermistor with 3 temperature sensors			2, 4, 6, 8		100 L ... 160 L		1LE1002-1A ... -1D		Standard		A						-		
			2, 4, 6, 8		100 L ... 160 L		1LE1002-1A ... -1D		With additional charge		B						-		
Further motor protection			For price information, code letters and descriptions, see from Page 2/49																
Terminal box position																			
Terminal box at top			No. of poles		Frame size		Motor type		Version								Order code(s)		
Further terminal box positions			2, 4, 6, 8		100 L ... 160 L		1LE1002-1A ... -1D		Standard		4						-		
Further terminal box positions			For price information, code numbers and descriptions, see from Page 2/51																
Special versions																			
Forced-air cooled motors without ext. fan/fan cover (IC 416)			No. of poles		Frame size		Motor type										Order code(s)		
Options			100 L ... 160 L		1LE1002-1A ... -1D				1LE1002- ... -Z		F90 + . . . + . . .						...
									1LE1002- ... -Z		. . . + . . . + . . .						...
			For price information, order codes and descriptions, see from Page 2/53																

¹⁾ Operating values at rated output for 60 Hz are available on request.

²⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03)

and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.



SIMOTICS GP 1LE1 Standard Motors

Motors with Standard Efficiency IE1

Self-ventilated motors

Aluminum series 1LE1002 with increased output

IE1



Selection and ordering data

Operating values at rated output															Aluminum series		m _{IM B3 J}		Torque class
P _{rated} , 50 Hz	P _{rated} , 60 Hz ¹⁾	Frame size	n _{rated} , 50 Hz	T _{rated} , 50 Hz	IE class	η _{rated} , 50 Hz, 4/4	η _{rated} , 50 Hz, 3/4	η _{rated} , 50 Hz, 2/4	cosφ _{rated} , 50 Hz, 4/4	I _{rated} , 50 Hz, 400 V	T _{LR} /I _{rated} , 50 Hz	I _{FR} /I _{rated} , 50 Hz	T _B /I _{rated} , 50 Hz	L _{pFA} , 50 Hz	L _{WA} , 50 Hz	1LE1002 – IE1 version in accordance with IEC 60034-30 with increased output Article No.	kg	J	CL
kW	kW	FS	rpm	Nm	%	%	%	A									kg	kgm ²	CL
<ul style="list-style-type: none"> Cooling: self-ventilated (IC 411) Efficiency: Standard Efficiency IE1, (SF) 1.1 Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																			
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz ¹⁾																			
4	4.55	100 L	2850	13	IE1	83.1	84.8	84.5	0.85	8.2	4.5	7.0	4.1	67	79	1LE1002-1AA6	25	0.0044	16
5.5	6.3	112 M	2935	18	IE1	84.7	85.5	84.7	0.86	10.9	2.9	7.5	3.8	69	81	1LE1002-1BA6	31	0.0085	16
11	12.6	132 M	2920	36	IE1	87.6	89.0	88.8	0.90	20	2.8	7.5	3.7	68	80	1LE1002-1CA6	53	0.022	16
22	24.5	160 L	2935	72	IE1	89.9	90.6	90.3	0.90	39	2.8	7.5	3.2	70	82	1LE1002-1DA6	85	0.049	16
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz ¹⁾																			
4	4.55	100 L	1435	27	IE1	83.1	83.8	82.8	0.81	8.6	3.2	6.5	3.1	60	72	1LE1002-1AB6	27	0.010	16
5.5	6.3	112 M	1420	37	IE1	84.7	86.5	86.4	0.81	11.6	3.0	5.8	3.1	58	70	1LE1002-1BB6	33	0.012	16
11	12.6	132 M	1450	72	IE1	87.6	88.8	88.7	0.84	21.5	2.5	7.2	3.0	64	76	1LE1002-1CB6	58	0.033	16
18.5	21.3	160 L	1460	121	IE1	89.3	90.4	89.9	0.85	35	2.7	7.2	3.2	65	77	1LE1002-1DB6	85	0.068	16
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz ¹⁾																			
2.2	2.55	100 L	930	22	IE1	77.7	78.5	77.5	0.78	5.2	2.0	4.0	2.2	59	71	1LE1002-1AC6	24	0.0084	16
3	3.45	112 M	945	30	IE1	79.7	79.7	76.6	0.72	7.5	2.5	4.6	2.6	57	69	1LE1002-1BC6	32	0.013	16
7.5	8.6	132 M	950	75	IE1	84.7	84.2	82.6	0.74	17.3	2.8	5.3	3.0	63	75	1LE1002-1CC6	54	0.032	16
15	17.3	160 L	965	148	IE1	87.7	88.2	86.8	0.75	33	2.9	6.0	3.4	67	79	1LE1002-1DC6	109	0.094	16
Voltagess																			
50 Hz		230 VΔ/400 VY	60 Hz ¹⁾		460 VY	No. of poles		Frame size	Motor type		Version				Order code(s)				
50 Hz		400 VΔ/690 VY	60 Hz ¹⁾		460 VΔ	2, 4, 6		100 L ... 160 L	1LE1002-1A ... -1D		Standard		2 2		-				
50 Hz		500 VY				2, 4, 6		100 L ... 160 L	1LE1002-1A ... -1D		Without add. charge		2 7		-				
50 Hz		500 VΔ				2, 4, 6		100 L ... 160 L	1LE1002-1A ... -1D		Without add. charge		4 0		-				
Further voltages ¹⁾		For price information, code numbers, order codes and descriptions, see from Page 2/38																	
Types of construction																			
Without flange		IM B3 ²⁾		No. of poles		Frame size	Motor type		Version				Order code(s)						
With flange		IM B5 ²⁾		2, 4, 6		100 L ... 160 L	1LE1002-1A ... -1D		Standard		A		-						
With standard flange		IM B14 ²⁾		2, 4, 6		100 L ... 160 L	1LE1002-1A ... -1D		With additional charge		F		-						
With standard flange		IM B14 ²⁾		2, 4, 6		100 L ... 160 L	1LE1002-1A ... -1D		With additional charge		K		-						
Further types of construction		For price information, code letters and descriptions, see from Page 2/41																	
Motor protection																			
Without				No. of poles		Frame size	Motor type		Version				Order code(s)						
PTC thermistor with 3 temperature sensors				2, 4, 6		100 L ... 160 L	1LE1002-1A ... -1D		Standard		A		-						
Further motor protection		For price information, code letters and descriptions, see from Page 2/49																	
Terminal box position																			
Terminal box at top				No. of poles		Frame size	Motor type		Version				Order code(s)						
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/51																	
Special versions																			
Options		For price information, order codes and descriptions, see from Page 2/53														1LE1002- ... -Z		...+...+...+...	

¹⁾ Operating values at rated output for 60 Hz are available on request.

²⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03) and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.

SIMOTICS GP 1PC1 Standard Motors

Motors with Standard Efficiency IE1

Naturally cooled motors without external fan Aluminum series 1PC1002



IE1

Selection and ordering data

P _{rated} , 50 Hz	P _{rated} , 60 Hz	Frame size	Operating values at rated output						Aluminum series		m _{IM B3} J	Torque class							
			η _{rated} , 50 Hz	T _{rated} , 50 Hz	IE class	η _{rated} , 50 Hz	η _{rated} , 50 Hz	η _{rated} , 50 Hz	cos φ _{rated} , 50 Hz	I _{rated} , 50 Hz			T _{LR} / I _{rated} , 50 Hz	L _{pA} , 50 Hz	L _{WA} , 50 Hz	Article No.			
kW	kW	FS	rpm	Nm	%	%	%	A					kg	kgm ²	CL				
<ul style="list-style-type: none"> • Cooling: naturally cooled without external fan (IC 410) • Efficiency: Standard Efficiency IE1, service factor (SF) 1.1 • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																			
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz ¹⁾																			
1.2	-	100 L	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1AA4	20	0.0034	16
1.6	-	112 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1BA2	25	0.0067	13
2.2	-	132 S	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1CA0	35	0.013	10
3	-	132 S	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1CA1	40	0.016	13
4.4	-	160 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1DA2	60	0.030	13
6	-	160 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1DA3	68	0.036	16
7.4	-	160 L	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1DA4	78	0.044	16
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz ¹⁾																			
0.88	-	100 L	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1AB4	18	0.0059	13
1.2	-	100 L	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1AB5	22	0.0078	13
1.6	-	112 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1BB2	27	0.010	13
2.2	-	132 S	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1CB0	38	0.019	13
3	-	132 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1CB2	44	0.024	16
4.4	-	160 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1DB2	62	0.044	13
6	-	160 L	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1DB4	73	0.056	16
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz ¹⁾																			
0.6	-	100 L	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1AC4	19	0.0065	10
0.88	-	112 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1BC2	25	0.0092	13
1.2	-	132 S	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1CC0	34	0.017	10
1.6	-	132 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1CC2	39	0.021	13
2.2	-	132 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1CC3	48	0.027	13
3	-	160 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1DC2	72	0.056	13
4.4	-	160 L	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1DC4	92	0.078	13
8-pole: 750 rpm at 50 Hz, 900 rpm at 60 Hz ¹⁾																			
0.3	-	100 L	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1AD4	17	0.0056	10
0.44	-	100 L	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1AD5	22	0.0078	10
0.6	-	112 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1BD2	25	0.0094	10
0.88	-	132 S	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1CD0	37	0.019	10
1.2	-	132 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1CD2	44	0.024	10
1.6	-	160 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1DD2	60	0.044	10
2.2	-	160 M	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1DD3	72	0.056	10
3	-	160 L	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	1PC1002-1DD4	91	0.077	10
Voltagess			No. of poles	Frame size	Motor type	Version									Order code(s)				
50 Hz	230 VΔ/400 VY	60 Hz ¹⁾	460 VY	2, 4, 6, 8	100 L ... 160 L	1PC1002-1A ... -1D	Standard	2	2						-				
50 Hz	400 VΔ/690 VY	60 Hz ¹⁾	460 VΔ	2, 4, 6, 8	100 L ... 160 L	1PC1002-1A ... -1D	Standard	3	4						-				
50 Hz	500 VY			2, 4, 6, 8	100 L ... 160 L	1PC1002-1A ... -1D	Without add. charge	2	7						-				
50 Hz	500 VΔ			2, 4, 6, 8	100 L ... 160 L	1PC1002-1A ... -1D	Without add. charge	4	0						-				
Further voltages ¹⁾								9	0						...				
For price information, code numbers, order codes and descriptions, see from Page 2/38																			
Types of construction			No. of poles	Frame size	Motor type	Version									Order code(s)				
Without flange		IM B3 ²⁾		2, 4, 6, 8	100 L ... 160 L	1PC1002-1A ... -1D	Standard	A							-				
With flange		IM B5 ²⁾		2, 4, 6, 8	100 L ... 160 L	1PC1002-1A ... -1D	With additional charge	F							-				
With standard flange		IM B14 ²⁾		2, 4, 6, 8	100 L ... 160 L	1PC1002-1A ... -1D	With additional charge	K							-				
Further types of construction			For price information, code letters and descriptions, see from Page 2/41																
Motor protection			No. of poles	Frame size	Motor type	Version									Order code(s)				
Without				2, 4, 6, 8	100 L ... 160 L	1PC1002-1A ... -1D	Standard	A							-				
PTC thermistor with 3 temperature sensors				2, 4, 6, 8	100 L ... 160 L	1PC1002-1A ... -1D	With additional charge	B							-				
Further motor protection			For price information, code letters and descriptions, see from Page 2/49																
Terminal box position			No. of poles	Frame size	Motor type	Version									Order code(s)				
Terminal box at top				2, 4, 6, 8	100 L ... 160 L	1PC1002-1A ... -1D	Standard	4							-				
Further terminal box positions			For price information, code numbers and descriptions, see from Page 2/51																
Special versions			No. of poles	Frame size	Motor type	Version									Order code(s)				
Options			For price information, order codes and descriptions, see from Page 2/53																
							1PC1002-....	Z	...	...	...	...	...	...	...

Note: The rated outputs and weights may change slightly after they have been checked. Further electrical data can be calculated and supplied on receipt of order.

¹⁾ Operating values at rated output for 60 Hz are available on request.

²⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03)

and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.

2

SIMOTICS GP 1LE1 Standard Motors – Eagle Line

NEMA Energy Efficient MG1 motors, Table 12-11

Self-ventilated or forced-air cooled motors
Aluminum series 1LE1021



Selection and ordering data

Operating values at rated output														Aluminum series		Torque class			
P_{rated} , 50 Hz	P_{rated} , 60 Hz	Frame size	n_{rated} , 60 Hz	T_{rated} , 60 Hz	EISA CC No. CC032A	η_{rated} , 60 Hz, 4/4	η_{rated} , 60 Hz, 3/4	η_{rated} , 60 Hz, 2/4	$\cos\phi$ rated, 4/4	I_{rated} , 60 Hz, 460 V	I_{FL} / I_{rated} , 60 Hz	I_{FR} / I_{rated} , 60 Hz	T_B / I_{rated} , 60 Hz	L_{pFA} , 60 Hz	L_{WA} , 60 Hz	Article No.	$m_{IM\ B3}$ J	Torque class	
kW	hp	FS	rpm	Nm	%	%	%	%	A					dB(A)	dB(A)	kg	kgm ²	CL	
<ul style="list-style-type: none"> Cooling: self-ventilated (IC 411) or with order code F90 forced-air cooled without external fan and fan cover (IC 416) Efficiency: NEMA Energy Efficient, UL, CSA and service factor (SF) 1.15 – for operation in the USA and Canada, not admissible for exporting to Mexico Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																			
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz																			
0.75	1	80 M	3445	2.1	–	75.5	75.5	72.5	0.83	1.5	2.1	6.0	3.0	64	75	1LE1021-0DA2	9	0.0008	16
1.1	1.5	80 M	3465	3.0	–	82.5	82.5	81.5	0.82	2.05	3.1	7.2	3.8	64	75	1LE1021-0DA3	11	0.0011	16
1.5	2	90 S	3505	4.1	–	84.0	84.0	83.0	0.82	2.75	3.1	8.5	4.5	69	81	1LE1021-0EA0	13	0.0017	16
2.2	3	90 L	3510	6.0	–	85.5	85.5	84.5	0.83	3.9	3.0	8.7	4.6	69	81	1LE1021-0EA4	15	0.0021	16
3	4	100 L	3520	8.1	–	87.5	87.3	86.2	0.83	5.2	2.6	8.1	3.8	71	83	1LE1021-1AA4	21	0.0044	16
4	5	112 M	3565	9.9	✓	87.5	87.4	85.8	0.84	6.3	2.9	9.3	4.0	73	85	1LE1021-1BA2	27	0.0092	16
5.5	7.5	132 S	3555	15	✓	88.5	88.3	88.1	0.86	9.1	2.0	7.6	3.3	72	84	1LE1021-1CA0	39	0.020	16
7.5	10	132 S	3560	20	✓	89.5	89.6	89.6	0.87	12.1	2.3	8.2	3.6	72	84	1LE1021-1CA1	43	0.024	16
11	15	160 M	3560	30	✓	90.2	89.6	87.8	0.86	17.8	2.4	8.2	3.6	77	89	1LE1021-1DA2	67	0.045	16
15	20	160 M	3565	40	✓	90.2	89.9	88.0	0.87	24	2.8	8.4	3.9	77	89	1LE1021-1DA3	75	0.053	16
18.5	25	160 L	3565	50	✓	91.0	90.5	89.4	0.87	29.5	3.3	8.9	4.1	77	89	1LE1021-1DA4	84	0.061	16
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz																			
0.55	0.75	80 M	1750	3.0	–	80.0	80.0	79.0	0.74	1.17	2.4	5.7	3.3	55	66	1LE1021-0DB2	10	0.0017	16
0.75	1	80 M	1750	4.1	–	82.5	82.5	81.5	0.72	1.58	2.5	6.8	3.8	55	66	1LE1021-0DB3	11	0.0021	16
1.1	1.5	90 S	1740	6.0	–	84.0	84.0	83.0	0.74	2.2	2.7	7.0	3.6	58	70	1LE1021-0EB0	13	0.0028	16
1.5	2	90 L	1745	8.2	–	84.0	84.0	83.0	0.75	3.0	2.9	7.5	4.0	58	70	1LE1021-0EB4	16	0.0036	16
2.2	3	100 L	1760	12	–	87.5	87.5	86.5	0.78	4.05	2.5	8.1	3.9	62	74	1LE1021-1AB4	21	0.0086	16
3	4	100 L	1765	16	–	87.5	88.3	87.1	0.79	5.4	2.4	8.3	3.7	62	74	1LE1021-1AB5	25	0.011	16
4	5	112 M	1770	20	✓	87.5	87.0	86.0	0.77	6.9	3.0	8.7	4.0	62	74	1LE1021-1BB2	29	0.014	16
5.5	7.5	132 S	1770	30	✓	89.5	89.6	88.3	0.78	9.9	2.6	8.0	3.3	68	80	1LE1021-1CB0	42	0.027	16
7.5	10	132 M	1770	40	✓	89.5	90.3	89.5	0.82	12.8	2.7	8.0	3.4	68	80	1LE1021-1CB2	49	0.034	16
11	15	160 M	1775	59	✓	91.0	91.3	90.5	0.84	18.1	2.5	7.7	3.2	69	81	1LE1021-1DB2	71	0.065	16
15	20	160 L	1780	80	✓	91.0	90.7	89.9	0.84	24.5	2.6	8.5	3.4	69	81	1LE1021-1DB4	83	0.083	16
Voltages (≤ 600 V) ¹⁾																			
			No. of poles		Frame size		Motor type		Version								Order code(s)		
50 Hz 230 VΔ/400 VY			60 Hz 460 VY		2, 4		80 M ... 160 L		1LE1021-0D ... -1D		Standard		2 2				–		
50 Hz 400 VΔ			60 Hz 460 VΔ		2, 4		80 M ... 160 L		1LE1021-0D ... -1D		Standard		3 4				–		
50 Hz 500 VY					2, 4		80 M ... 160 L		1LE1021-0D ... -1D		Without add. charge		2 7				–		
50 Hz 500 VΔ					2, 4		80 M ... 160 L		1LE1021-0D ... -1D		Without add. charge		4 0				–		
Further voltages													9 0				...		
Types of construction ²⁾																			
			No. of poles		Frame size		Motor type		Version								Order code(s)		
With flange			IM B5 ³⁾		2, 4		80 M ... 160 L		1LE1021-0D ... -1D		With additional charge		F				–		
With standard flange			IM B14 ³⁾		2, 4		80 M ... 160 L		1LE1021-0D ... -1D		With additional charge		K				–		
Further types of construction																	...		
Motor protection																			
			No. of poles		Frame size		Motor type		Version								Order code(s)		
Without					2, 4		80 M ... 160 L		1LE1021-0D ... -1D		Standard		A				–		
PTC thermistor with 3 temperature sensors					2, 4		80 M ... 160 L		1LE1021-0D ... -1D		With additional charge		B				–		
Further motor protection																	...		
Terminal box position																			
			No. of poles		Frame size		Motor type		Version								Order code(s)		
Terminal box at top					2, 4		80 M ... 160 L		1LE1021-0D ... -1D		Standard		4				–		
Further terminal box positions																	...		
Special versions																			
			No. of poles		Frame size		Motor type		Version								Order code(s)		
Forced-air cooled motors without ext. fan/fan cover (IC 416)					2, 4		80 M ... 160 L		1LE1021-0D ... -1D		1LE1021- ... -Z		F90 + . . . . .				...
Options											1LE1021- ... -Z		. . . . .				...

– Not required
✓ available

¹⁾ Operating voltages only ≤ 600 V admissible in accordance with MG1 Table 12-11.
²⁾ Types of construction with feet are not possible for 2-pole, 4-pole and 6-pole motors ≤ 200 hp in accordance with MG1 Table 12-11.

³⁾ Types derived from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03) and stamping of the type on the rating plate. The basic type IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.

SIMOTICS GP 1LE1 Standard Motors – Eagle Line

NEMA Energy Efficient MG1 motors, Table 12-11



Self-ventilated or forced-air cooled motors
Aluminum series 1LE1021

Selection and ordering data (continued)

Operating values at rated output														Aluminum series				
P_{rated} , 50 Hz	P_{rated} , 60 Hz	Frame size	n_{rated} , 60 Hz	T_{rated} , 60 Hz	EISA CC No. CC032A	η_{rated} , 60 Hz, 4/4	η_{rated} , 60 Hz, 3/4	η_{rated} , 60 Hz, 2/4	$\cos\phi$ rated, 4/4	I_{rated} , 60 Hz, 460 V	$T_{LR}/$ T_{rated} , 60 Hz	$I_{LR}/$ I_{rated} , 60 Hz	$T_p/$ T_{rated} , 60 Hz	L_{pFA} , 60 Hz	L_{WA} , 60 Hz	Article No.	$m_{IM B3}$ J	Torque class
kW	hp	FS	rpm	Nm	%	%	%		A					dB(A)	dB(A)	kg	kgm ²	CL
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz																		
0.37	0.5	80 M	1140	3.1	–	75.3	74.1	69.5	0.63	0.98	2.3	4.6	2.9	45	56	1LE1021-0DC2	9	0.0017 16
0.55	0.75	80 M	1135	4.6	–	77.0	77.5	74.0	0.61	1.47	2.9	5.2	3.6	45	56	1LE1021-0DC3	12	0.0025 16
0.75	1	90 S	1155	6.2	–	80.0	80.0	79.0	0.69	1.98	2.2	5.3	3.0	46	58	1LE1021-0EC0	16	0.0040 16
1.1	1.5	100 L	1175	12.0	–	85.5	85.5	84.5	0.73	2.8	2.3	6.8	3.3	62	74	1LE1021-1AC3	25	0.011 16
1.5	2	100 L	1175	12	–	86.5	86.0	84.4	0.69	3.15	2.3	7.0	3.4	62	74	1LE1021-1AC4	25	0.011 16
2.2	3	112 M	1170	18	✓	87.5	87.4	85.9	0.73	4.3	2.3	7.3	3.4	60	72	1LE1021-1BC2	29	0.014 16
3	4	132 S	1175	24	–	87.5	87.6	85.9	0.70	6.1	1.8	6.5	3.0	67	79	1LE1021-1CC0	38	0.024 13
4	5	132 M	1180	30	✓	87.5	88.3	87.0	0.73	7.3	2.1	6.6	3.2	67	79	1LE1021-1CC2	43	0.029 13
5.5	7.5	132 M	1175	45	✓	89.5	89.7	88.7	0.74	10.4	2.0	7.1	3.2	67	79	1LE1021-1CC3	52	0.037 16
7.5	10	160 M	1180	61	✓	89.5	89.6	88.4	0.73	14.4	2.1	5.4	2.5	70	82	1LE1021-1DC2	77	0.075 16
11	15	160 L	1180	89	✓	90.2	90.5	89.5	0.74	20.5	2.2	5.5	2.5	70	82	1LE1021-1DC4	93	0.098 16
Volts (≤ 600 V) ¹⁾																		
			No. of poles		Frame size	Motor type	Version									Order code(s)		
50 Hz	230 VΔ/400 VY	60 Hz	460 VY	6	80 M ... 160 L	1LE1021-0D ... -1D	Standard	2	2									–
50 Hz	400 VΔ	60 Hz	460 VΔ	6	80 M ... 160 L	1LE1021-0D ... -1D	Standard	3	4									–
50 Hz	500 VY			6	80 M ... 160 L	1LE1021-0D ... -1D	Without add. charge	2	7									–
50 Hz	500 VΔ			6	80 M ... 160 L	1LE1021-0D ... -1D	Without add. charge	4	0									–
Further voltages			For price information, code numbers, order codes and descriptions, see from Page 2/38															
Types of construction ²⁾																		
			No. of poles		Frame size	Motor type	Version									Order code(s)		
With flange			IM B5 ³⁾		80 M ... 160 L	1LE1021-0D ... -1D	With additional charge									F	–	
With standard flange			IM B14 ³⁾		80 M ... 160 L	1LE1021-0D ... -1D	With additional charge									K	–	
Further types of construction			For price information, code letters and descriptions, see from Page 2/41															
Motor protection																		
			No. of poles		Frame size	Motor type	Version									Order code(s)		
Without					80 M ... 160 L	1LE1021-0D ... -1D	Standard									A	–	
PTC thermistor with 3 temperature sensors					80 M ... 160 L	1LE1021-0D ... -1D	With additional charge									B	–	
Further motor protection			For price information, code letters and descriptions, see from Page 2/49															
Terminal box position																		
			No. of poles		Frame size	Motor type	Version									Order code(s)		
Terminal box at top					80 M ... 160 L	1LE1021-0D ... -1D	Standard									4	–	
Further terminal box positions			For price information, code numbers and descriptions, see from Page 2/51															
Special versions																		
			No. of poles		Frame size	Motor type	Version									Order code(s)		
Forced-air cooled motors without ext. fan/fan cover (IC 416)			6		100 L ... 160 L	1LE1021-0D ... -1D	1LE1021- ... -Z	F90 + . . . + . . . + . . .										
Options			For price information, order codes and descriptions, see from Page 2/53															
							1LE1021- ... -Z	. . . + . . . + . . . + . . .										

- Not required
- ✓ available

1) Operating voltages only ≤ 600 V admissible in accordance with MG1 Table 12-11.
2) Types of construction with feet are not possible for 2-pole, 4-pole and 6-pole motors ≤ 200 hp in accordance with MG1 Table 12-11.

3) Types derived from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03) and stamping of the type on the rating plate. The basic type IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.



SIMOTICS SD 1LE1 Standard Motors – Eagle Line

NEMA Energy Efficient MG1 motors, Table 12-11

Self-ventilated motors
Cast-iron series 1LE1521/1LE1621 Basic/Performance Line



Selection and ordering data

Operating values at rated output														Cast-iron series		m _M B3 J	Torque class		
P _{rated} , 50 Hz	P _{rated} , 60 Hz	Frame size	n _{rated} , 60 Hz	T _{rated} , 60 Hz	EISA CC No. CC032A	η _{rated} , 60 Hz, 4/4	η _{rated} , 60 Hz, 3/4	η _{rated} , 60 Hz, 2/4	cos φ, rated, 4/4	I _{rated} , 60 Hz, 460 V	T _{LR} /I _{rated} , 60 Hz	I _{LR} /I _{rated} , 60 Hz	T _B /I _{rated} , 60 Hz	L _{pfA} , 60 Hz	L _{WA} , 60 Hz			Article No.	kg	kgm^{2}	CL
kW	hp	FS	rpm	Nm	%	%	%	%	A	dB(A)	dB(A)	▲ New							
0.37	0.5	71 M	3410	1.0	-	72.0	71.2	67.6	0.77	0.84	2.9	5.1	3.0	57	68	▲ 1LE1 5 21-0CA2	11.5	0.00035	16
0.55	0.75	71 M	3420	1.5	-	74.0	73.3	69.2	0.76	1.23	3.4	5.4	3.4	57	68	▲ 1LE1 5 21-0CA3	13	0.00045	16
0.75	1	80 M	3445	2.1	✓	75.5	75.5	72.5	0.83	1.5	2.1	6.0	3.0	64	75	▲ 1LE1 5 21-0DA2	16	0.0008	16
1.1	1.5	80 M	3465	3.0	✓	82.5	82.5	81.5	0.82	2.05	3.1	7.2	3.8	64	75	▲ 1LE1 5 21-0DA3	18	0.0011	16
1.5	2	90 S	3505	4.1	✓	84.0	84.0	83.0	0.82	2.75	3.1	8.5	4.5	69	81	▲ 1LE1 5 21-0EA0	23	0.0017	16
2.2	3	90 L	3510	6.0	✓	85.5	85.5	84.5	0.83	3.9	3.0	8.7	4.6	69	81	▲ 1LE1 5 21-0EA4	25.5	0.0021	16
3	4	100 L	3520	8.1	-	87.5	87.3	86.2	0.83	5.2	2.6	8.1	3.8	71	83	1LE1 21-1AA4	32	0.0044	16
4	5	112 M	3565	9.9	✓	87.5	87.4	85.8	0.84	6.3	2.9	9.3	4.0	73	85	1LE1 21-1BA2	39	0.0092	16
5.5	7.5	132 S	3555	15	✓	88.5	88.3	88.1	0.86	9.1	2.0	7.6	3.3	72	84	1LE1 21-1CA0	57	0.020	16
7.5	10	132 S	3560	20	✓	89.5	89.6	89.6	0.87	12.1	2.3	8.2	3.6	72	84	1LE1 21-1CA1	61	0.024	16
11	15	160 M	3560	30	✓	90.2	89.6	87.8	0.86	17.8	2.4	8.2	3.6	77	89	1LE1 21-1DA2	96	0.045	16
15	20	160 M	3565	40	✓	90.2	89.9	88.0	0.87	24	2.8	8.4	3.9	77	89	1LE1 21-1DA3	104	0.053	16
18.5	25	160 L	3555	50	✓	91.0	90.5	89.4	0.87	29.5	3.3	8.9	4.1	77	89	1LE1 21-1DA4	113	0.061	16
22	30	180 M	3550	60	✓	91.0	91.0	89.6	0.86	36	3.0	8.4	4.1	74	88	1LE1 21-1EA2	145	0.069	16
30	40	200 L	3565	80	✓	91.7	91.2	89.6	0.86	44.5	2.9	7.7	3.8	76	89	1LE1 21-2AA4	200	0.13	16
37	50	200 L	3565	100	✓	92.4	92.1	91.0	0.87	58	3.3	8.1	3.8	78	91	1LE1 21-2AA5	225	0.15	16
45	60	225 M	3570	120	✓	93.0	92.7	91.3	0.88	69	3.1	8.7	3.8	77	90	1LE1 21-2BA2	295	0.23	16
55	75	250 M	3575	149	-	93.0	92.5	91.0	0.89	85	2.4	7.4	3.5	80	94	1LE1 21-2CA2	360	0.40	13
75	100	280 S	3580	199	-	93.6	92.9	91.1	0.87	115	2.8	7.7	3.5	81	95	1LE1 21-2DA0	490	0.71	13
90	125	280 M	3578	249	✓	94.5	94.2	93.1	0.88	141	2.7	7.9	3.4	81	95	1LE1 21-2DA2	530	0.83	13
110	150	315 S	3585	298	✓	94.5	94.0	92.5	0.90	165	2.6	7.9	3.3	82	96	1LE1 21-3AA0	720	1.3	13
132	175	315 M	3585	348	-	95.0	94.7	93.6	0.91	190	2.7	8.1	3.4	82	96	1LE1 21-3AA2	880	1.6	13
150	200	315 L	3585	397	✓	95.0	94.6	93.3	0.92	215	2.9	8.3	3.5	84	99	1LE1 21-3AA4	930	1.8	13
185	250	315 L	3585	497	✓	95.4	95.2	94.2	0.92	265	3.5	8.9	3.5	84	99	1LE1 21-3AA5	1130	2.2	13

Relubrication	Motor protection	Fan cover	Bearing size	Converter-fed operation, motor mode	Liability for defects	Order code(s)			
Optional (standard from FS 280 upwards)	Optional	Plastic	62 (63 from FS 280 upwards)	Up to 500 V 12 months	5				
Standard from FS 160 (optional for FS 100 to 132)	Standard PTC	Steel	63	Up to 500 V 36 months	6				
Voltages (≤ 600 V) ¹⁾		No. of poles	Frame size	Motor type	Version	Order code(s)			
50 Hz	230 VA/400 VY	60 Hz	460 VY	2	71 M ... 315 L	1LE1 21-0C ... -3A	Standard	2 2	-
50 Hz	400 VA	60 Hz	460 VA	2	71 M ... 315 L	1LE1 21-0C ... -3A	Standard	3 4	-
50 Hz	500 VY			2	71 M ... 315 L	1LE1 21-0C ... -3A	Without add. charge	2 7	-
50 Hz	500 VA			2	71 M ... 315 L	1LE1 21-0C ... -3A	Without add. charge	4 0	-
Further voltages	For price information, code numbers, order codes and descriptions, see from Page 2/40					9 0	...		
Types of construction ²⁾		No. of poles	Frame size	Motor type	Version	Order code(s)			
Without flange	IM B3 ³⁾	2	315 L > 200 hp	1LE1 21-3AA5	Standard	A	-		
With flange	IM B5 ³⁾	2	71 M ... 315 M	1LE1 21-0C ... -3A	With additional charge	F	-		
With standard flange	IM B14 ³⁾	2	71 M ... 160 L	1LE1 21-0C ... -1D	With additional charge	K	-		
Further types of construction	For price information, code letters and descriptions, see from Page 2/45						...		
Motor protection		No. of poles	Frame size	Motor type	Version	Order code(s)			
Without PTC thermistor with 3 temperature sensors	Only possible for Basic Line	2	71 M ... 315 L	1LE1521-0C ... -3A	Standard	A	-		
Further motor protection	Basic Line	2	71 M ... 315 L	1LE1521-0C ... -3A	With additional charge	B	-		
	Performance Line	2	71 M ... 315 L	1LE1621-0C ... -3A	Standard	B	-		
Further motor protection	For price information, code letters and descriptions, see from Page 2/50						...		
Terminal box position		No. of poles	Frame size	Motor type	Version	Order code(s)			
Terminal box at top		2	71 M ... 315 L	1LE1 21-0C ... -3A	Standard	4	-		
Further terminal box positions	For price information, code numbers and descriptions, see from Page 2/52								
Special versions		No. of poles	Frame size	Motor type	Version	Order code(s)			
Options	For price information, order codes and descriptions, see from Page 2/58					1LE1 21- ... -Z	...+...+...+...		

- Not required
 ✓ available

1) Operating voltages only ≤ 600 V admissible in accordance with MG1 Table 12-11. Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code **R52**) or a larger terminal box (Order code **R50**) can be used. Order codes **R52** and **R50** alter the motor dimensions.

3) Types derived from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.

2) Types of construction with feet are not possible for 2-pole, 4-pole and 6-pole motors ≤ 200 hp in accordance with MG1 Table 12-11.

SIMOTICS SD 1LE1 Standard Motors – Eagle Line

NEMA Energy Efficient MG1 motors, Table 12-11



Self-ventilated motors
Cast-iron series 1LE1521/1LE1621 Basic/Performance Line

Selection and ordering data (continued)

Operating values at rated output														Cast-iron series		m _{IM B3} J	Torque class		
P _{rated} , 50 Hz	P _{rated} , 60 Hz	Frame size	n _{rated} , 60 Hz	T _{rated} , 60 Hz	EISA CC No. CC032A	η _{rated} , 60 Hz, 4/4	η _{rated} , 60 Hz, 3/4	η _{rated} , 60 Hz, 2/4	cos φ, rated, 4/4	I _r , 60 Hz, 460 V	T _{LR} , 60 Hz	I _{LR} , 60 Hz	T _B , 60 Hz	L _{ptA} , 60 Hz	L _{WA} , 60 Hz			Article No.	kg	kgm^{2}	CL
kW	hp	FS	rpm	Nm	%	%	%	%	A	dB(A)	dB(A)	▲ New							
• Cooling: self-ventilated (IC 411) • Efficiency: NEMA Energy Efficient, UL, CSA and service factor (SF) 1.15 – for operation in the USA and Canada, not admissible for exporting to Mexico • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																			
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz																			
0.25	0.33	71 M	1715	1.4	-	70.0	68.5	63.5	0.64	0.7	2.8	4.4	3.1	47	58	▲ 1LE1 5 21-0CB2	12	0.00076	16
0.37	0.5	71 M	1705	2.1	-	72.0	71.5	67.5	0.67	0.96	2.8	4.4	2.8	47	58	▲ 1LE1 5 21-0CB3	13	0.00095	16
0.55	0.75	80 M	1750	3.0	-	80.0	80.0	79.0	0.74	1.17	2.4	5.7	3.3	55	66	▲ 1LE1 5 21-0DB2	17	0.0017	16
0.75	1	80 M	1750	4.1	-	82.5	82.5	81.5	0.72	1.58	2.5	6.8	3.8	55	66	▲ 1LE1 5 21-0DB3	18.5	0.0021	16
1.1	1.5	90 S	1740	6.0	-	84.0	84.0	83.0	0.74	2.2	2.7	7.0	3.6	58	70	▲ 1LE1 5 21-0EB0	23	0.0028	16
1.5	2	90 L	1745	8.2	-	84.0	84.0	83.0	0.75	3.0	2.9	7.5	4.0	58	70	▲ 1LE1 5 21-0EB4	25	0.0036	16
2.2	3	100 L	1760	12	-	87.5	87.5	86.5	0.78	4.05	2.5	8.1	3.9	62	74	1LE1 21-1AB4	32	0.0086	16
3	4	100 L	1765	16	-	87.5	88.3	87.1	0.79	5.4	2.4	8.3	3.7	62	74	1LE1 21-1AB5	37	0.011	16
4	5	112 M	1770	20	✓	87.5	87.0	86.0	0.77	6.9	3.0	8.7	4.0	62	74	1LE1 21-1BB2	46	0.014	16
5.5	7.5	132 S	1770	30	✓	89.5	89.6	88.3	0.78	9.9	2.6	8.0	3.3	68	80	1LE1 21-1CB0	61	0.027	16
7.5	10	132 M	1770	40	✓	89.5	90.3	89.5	0.82	12.8	2.7	8.0	3.4	68	80	1LE1 21-1CB2	75	0.034	16
11	15	160 M	1775	59	✓	91.0	91.3	90.5	0.84	18.1	2.5	7.7	3.2	69	81	1LE1 21-1DB2	96	0.065	16
15	20	160 L	1780	80	✓	91.0	90.7	89.9	0.84	24.5	2.6	8.5	3.4	69	81	1LE1 21-1DB4	104	0.083	16
18.5	25	180 M	1770	101	✓	92.4	92.6	91.8	0.83	31	2.8	7.7	3.9	64	77	1LE1 21-1EB2	160	0.12	16
22	30	180 L	1770	121	✓	92.4	92.5	91.8	0.83	36.5	3.0	8.4	3.9	63	76	1LE1 21-1EB4	170	0.13	16
30	40	200 L	1778	160	✓	93.0	92.9	92.2	0.84	48	3.2	8.2	3.7	66	79	1LE1 21-2AB5	230	0.20	16
37	50	225 S	1778	200	-	93.0	93.2	92.5	0.87	58	2.7	7.2	3.3	69	82	1LE1 21-2BB0	280	0.42	16
45	60	225 M	1778	240	✓	93.6	93.8	93.1	0.86	70	3.0	7.6	3.5	69	83	1LE1 21-2BB2	305	0.46	16
55	75	250 M	1785	299	-	94.1	94.1	93.3	0.84	89	3.1	7.3	3.3	69	83	1LE1 21-2CB2	385	0.75	16
75	100	280 S	1788	398	-	94.5	94.3	93.2	0.87	114	2.7	7.6	3.2	79	92	1LE1 21-2DB0	550	1.3	16
90	125	280 M	1788	498	✓	94.5	94.3	93.3	0.87	142	2.9	8.1	3.4	78	92	1LE1 21-2DB2	570	1.4	16
110	150	315 S	1790	597	✓	95.0	94.8	93.8	0.86	172	3.1	8.0	3.3	79	93	1LE1 21-3AB0	740	2.0	16
132	175	315 M	1790	696	-	95.0	94.8	94.0	0.86	200	3.1	7.8	3.2	79	93	1LE1 21-3AB2	870	2.3	16
150	200	315 L	1790	796	✓	95.0	94.7	93.5	0.87	225	3.5	8.6	3.6	80	95	1LE1 21-3AB4	940	2.8	16
185	250	315 L	1792	994	✓	95.0	94.7	93.6	0.86	285	4.3	9.3	3.9	84	98	1LE1 21-3AB5	1140	3.5	16

Relubrication	Motor protection	Fan cover	Bearing size	Converter-fed operation, motor mode	Liability for defects	Version	Order code(s)
Optional (standard from FS 280 upwards)	Optional	Plastic	62 (63 from FS 280 upwards)	Up to 500 V 12 months	5		
Standard from FS 160 (optional for FS 100 to 132)	Standard PTC	Steel	63	Up to 500 V 36 months	6		
Voltages (≤ 600 V) ¹⁾							
50 Hz	230 VΔ/400 VY	60 Hz	460 VY	4	71 M ... 315 L	1LE1 21-0C ... -3A	Standard 2 2
50 Hz	400 VΔ	60 Hz	460 VΔ	4	71 M ... 315 L	1LE1 21-0C ... -3A	Standard 3 4
50 Hz	500 VY			4	71 M ... 315 L	1LE1 21-0C ... -3A	Without add. charge 2 7
50 Hz	500 VΔ			4	71 M ... 315 L	1LE1 21-0C ... -3A	Without add. charge 4 0
Further voltages	For price information, code numbers, order codes and descriptions, see from Page 2/40					9 0	...
Types of construction ²⁾							
Without flange	IM B3 ³⁾			No. of poles 4	Frame size 315 L > 200 hp	Motor type 1LE1 21-3AB5	Standard A
With flange	IM B5 ³⁾			No. of poles 4	Frame size 71 M ... 315 M	Motor type 1LE1 21-0C ... -3A	With additional charge F
With standard flange	IM B14 ³⁾			No. of poles 4	Frame size 71 M ... 160 L	Motor type 1LE1 21-0C ... -1D	With additional charge K
Further types of construction	For price information, code letters and descriptions, see from Page 2/45					Z	...
Motor protection							
Without PTC thermistor with 3 temperature sensors	Only possible for Basic Line			No. of poles 4	Frame size 71 M ... 315 L	Motor type 1LE1521-0C ... -3A	Standard A
Further motor protection	Basic Line			No. of poles 4	Frame size 71 M ... 315 L	Motor type 1LE1521-0C ... -3A	With additional charge B
Terminal box position	Performance Line			No. of poles 4	Frame size 71 M ... 315 L	Motor type 1LE1621-0C ... -3A	Standard B
Further terminal box positions	For price information, code letters and descriptions, see from Page 2/50					Z	...
Special versions							
Options	For price information, order codes and descriptions, see from Page 2/58					1LE1 21- ... -Z	...+...+...+...

- Not required
✓ available

1) Operating voltages only ≤ 600 V admissible in accordance with MG1 Table 12-11. Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code R52) or a larger terminal box (Order code R50) can be used. Order codes R52 and R50 alter the motor dimensions.

2) Types of construction with feet are not possible for 2-pole, 4-pole and 6-pole motors ≤ 200 hp in accordance with MG1 Table 12-11.

3) Types derived from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.



SIMOTICS SD 1LE1 Standard Motors – Eagle Line

NEMA Energy Efficient MG1 motors, Table 12-11

Self-ventilated motors
Cast-iron series 1LE1521/1LE1621 Basic/Performance Line



Selection and ordering data (continued)

Operating values at rated output														Cast-iron series		m _{IM B3} J	Torque class		
P _{rated} 50 Hz	P _{rated} 60 Hz	Frame size	n _{rated} 60 Hz	T _{rated} 60 Hz	EISA CC No. CC032A	η _{rated} 60 Hz, 4/4	η _{rated} 60 Hz, 3/4	η _{rated} 60 Hz, 2/4	cos φ _{rated} 60 Hz, 4/4	I _{rated} 60 Hz, 460 V	T _{LR} /I _{rated} 60 Hz	I _{LR} /I _{rated} 60 Hz	T _B /I _{rated} 60 Hz	L _{ptA} 60 Hz	L _{WA} 60 Hz			Article No.	kg	kgm^{2}	CL
kW	hp	FS	rpm	Nm	%	%	%	%	A	dB(A)	dB(A)	▲ New							
• Cooling: self-ventilated (IC 411) • Efficiency: NEMA Energy Efficient, UL, CSA and service factor (SF) 1.15 – for operation in the USA and Canada, not admissible for exporting to Mexico • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																			
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz																			
0.18	0.25	71 M	1105	1.6	–	55.0	54.0	49.0	0.61	0.67	2.9	2.7	2.9	42	53	▲ 1LE1 5 21-0CC2	11.5	0.00080	16
0.25	0.33	71 M	1100	2.2	–	59.5	59.0	55.1	0.64	0.82	2.7	3.0	2.7	42	53	▲ 1LE1 5 21-0CC3	12.5	0.00100	16
0.37	0.5	80 M	1140	3.1	–	75.3	74.1	69.5	0.63	0.98	2.3	4.6	2.9	45	56	▲ 1LE1 5 21-0DC2	16.5	0.0017	16
0.55	0.75	80 M	1135	4.6	–	77.0	77.5	74.0	0.61	1.47	2.9	5.2	3.6	45	56	▲ 1LE1 5 21-0DC3	18.5	0.0025	16
0.75	1	90 S	1155	6.2	–	80.0	80.5	78.0	0.68	1.98	2.2	5.3	3.0	46	58	▲ 1LE1 5 21-0EC0	26	0.0040	16
1.1	1.5	90 L	1175	12	–	85.5	85.5	84.5	0.73	2.8	2.3	6.8	3.3	62	74	▲ 1LE1 5 21-0EC4	32	0.011	16
1.5	2	100 L	1175	12	–	86.5	86.0	84.4	0.69	3.15	2.3	7.0	3.4	62	74	1LE1 21-1AC4	36	0.011	16
2.2	3	112 M	1170	18	✓	87.5	87.4	85.9	0.73	4.3	2.3	7.3	3.4	60	72	1LE1 21-1BC2	41	0.014	16
3	4	132 S	1175	24	–	87.5	87.6	85.9	0.70	6.1	1.8	6.5	3.0	67	79	1LE1 21-1CC0	56	0.024	13
4	5	132 M	1180	30	✓	87.5	88.3	87.0	0.73	7.3	2.1	6.6	3.2	67	79	1LE1 21-1CC2	61	0.029	13
5.5	7.5	132 M	1175	45	✓	89.5	89.7	88.7	0.74	10.4	2.0	7.1	3.2	67	79	1LE1 21-1CC3	70	0.037	16
7.5	10	160 M	1180	61	✓	89.5	89.6	88.4	0.73	14.4	2.1	5.4	2.5	70	82	1LE1 21-1DC2	106	0.075	16
11	15	160 L	1180	89	✓	90.2	90.5	89.5	0.74	20.5	2.2	5.5	2.5	70	82	1LE1 21-1DC4	122	0.098	16
15	20	180 L	1178	121	✓	90.2	90.2	89.0	0.77	27	2.8	6.9	3.4	59	72	1LE1 21-1EC4	155	0.17	16
18.5	25	200 L	1182	151	✓	91.7	92.1	91.5	0.81	31.5	2.6	6.7	3.0	58	71	1LE1 21-2AC4	200	0.25	16
22	30	200 L	1182	181	✓	91.7	92.1	91.5	0.81	38	3.0	7.4	3.0	62	76	1LE1 21-2AC5	220	0.30	16
30	40	225 M	1182	241	✓	93.0	93.3	92.6	0.83	48.5	2.9	7.0	3.1	66	79	1LE1 21-2BC2	300	0.58	16
37	50	250 M	1185	301	–	93.0	93.3	92.6	0.83	61	3.3	7.3	2.8	66	79	1LE1 21-2CC2	370	0.86	16
45	60	280 S	1188	360	–	93.6	93.8	93.1	0.84	71	3.1	7.4	3.0	67	81	1LE1 21-2DC0	460	1.1	16
55	75	280 M	1188	450	–	93.6	93.9	93.4	0.85	88	3.1	7.2	2.9	67	81	1LE1 21-2DC2	510	1.4	16
75	100	315 S	1190	599	✓	94.1	94.1	93.2	0.83	120	2.7	7.5	3.0	67	82	1LE1 21-3AC0	670	2.1	16
90	125	315 M	1190	748	✓	94.1	94.4	93.5	0.84	148	2.9	7.6	3.1	68	83	1LE1 21-3AC2	730	2.5	16
110	150	315 L	1190	898	✓	95.0	95.0	94.6	0.85	174	3.3	8.1	3.2	69	84	1LE1 21-3AC4	940	3.6	16
132	175	315 L	1190	1048	–	95.0	95.0	94.4	0.85	205	3.7	9.2	3.6	69	84	1LE1 21-3AC5	990	4.0	16
150	200	315 L	1192	1195	✓	95.0	94.9	94.2	0.85	230	4.3	9.6	3.8	72	87	1LE1 21-3AC6	1160	4.7	16

Relubrication	Motor protection	Fan cover	Bearing size	Converter-fed operation, motor mode	Liability for defects	Order code(s)			
Optional (standard from FS 280 upwards)	Optional	Plastic	62 (63 from FS 280 upwards)	Up to 500 V 12 months	5				
Standard from FS 160 (optional for FS 100 to 132)	Standard PTC	Steel	63	Up to 500 V 36 months	6				
Voltages (≤ 600 V) ¹⁾									
No. of poles	Frame size	Motor type	Version	Order code(s)					
50 Hz	230 VA/400 VY	60 Hz	460 VY	6	71 M ... 315 L	1LE1 21-0C ... -3A	Standard	2 2	–
50 Hz	400 VA	60 Hz	460 VA	6	71 M ... 315 L	1LE1 21-0C ... -3A	Standard	3 4	–
50 Hz	500 VY			6	71 M ... 315 L	1LE1 21-0C ... -3A	Without add. charge	2 7	–
50 Hz	500 VA			6	71 M ... 315 L	1LE1 21-0C ... -3A	Without add. charge	4 0	–
Further voltages For price information, code numbers, order codes and descriptions, see from Page 2/40									
9 0									
Types of construction ²⁾									
No. of poles	Frame size	Motor type	Version	Order code(s)					
6	71 M ... 315 M	1LE1 21-0C ... -3A	With additional charge	F	–				
6	71 M ... 160 L	1LE1 21-0C ... -1D	With additional charge	K	–				
Further types of construction For price information, code letters and descriptions, see from Page 2/45									
Z	...								
Motor protection									
No. of poles	Frame size	Motor type	Version	Order code(s)					
6	71 M ... 315 L	1LE1521-0C ... -3A	Standard	A	–				
6	71 M ... 315 L	1LE1521-0C ... -3A	With additional charge	B	–				
6	71 M ... 315 L	1LE1621-0C ... -3A	Standard	B	–				
6	71 M ... 315 L	1LE1621-0C ... -3A	With additional charge	Z	–				
Further motor protection For price information, code letters and descriptions, see from Page 2/50									
Z	...								
Terminal box position									
No. of poles	Frame size	Motor type	Version	Order code(s)					
6	71 M ... 315 L	1LE1 21-0C ... -3A	Standard	4	–				
Further terminal box positions For price information, code numbers and descriptions, see from Page 2/52									
Special versions									
No. of poles	Frame size	Motor type	Version	Order code(s)					
Options For price information, order codes and descriptions, see from Page 2/58 1LE1 21- ... -Z ...+...+...+...									

– Not required
 ✓ available

1) Operating voltages only ≤ 600 V admissible in accordance with MG1 Table 12-11. Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code R52) or a larger terminal box (Order code R50) can be used. Order codes R52 and R50 alter the motor dimensions.

3) Types derived from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.

2) Types of construction with feet are not possible for 2-pole, 4-pole and 6-pole motors ≤ 200 hp in accordance with MG1 Table 12-11.

SIMOTICS SD 1LE1 Standard Motors – Eagle Line

NEMA Energy Efficient MG1 motors, Table 12-11



Self-ventilated motors
Cast-iron series 1LE1521/1LE1621 Basic/Performance Line

Selection and ordering data (continued)

Operating values at rated output															Cast-iron series			m _{IM B3} J		Torque class																																																																	
P _{rated} , 50 Hz	P _{rated} , 60 Hz	Frame size	n _{rated} , 60 Hz	T _{rated} , 60 Hz	EISA CC No. CC032A	η _{rated} , 60 Hz, 4/4	η _{rated} , 60 Hz, 3/4	η _{rated} , 60 Hz, 2/4	COS φ	I _{rated} , 60 Hz, 460 V	T _{LR} , 60 Hz	I _{LR} , 60 Hz	T _p , 60 Hz	L _{pFA} , 60 Hz	L _{WA} , 60 Hz	1LE1521 – Basic Line	1LE1621 – Performance Line	NEMA Energy Efficient version	Article No.	kg	kgm ²	CL																																																															
kW	hp	FS	rpm	Nm	%	%	%	A																																																																													
<ul style="list-style-type: none"> Cooling: self-ventilated (IC 411) Efficiency: NEMA Energy Efficient, UL, CSA and service factor (SF) 1.15 – for operation in the USA and Canada, not admissible for exporting to Mexico Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																																																																																					
8-pole: 750 rpm at 50 Hz, 900 rpm at 60 Hz																																																																																					
11	15	180 L	875	122	✓	88.5	88.8	87.7	0.69	23	2.6	5.6	2.9	66	79	1LE1	21-1ED4	-	155	0.20	13																																																																
15	20	200 L	875	163	✓	89.5	90.7	90.9	0.74	28	2.8	6.3	3.3	59	72	1LE1	21-2AD5	-	220	0.34	13																																																																
18.5	25	225 S	885	201	✓	89.5	89.7	88.6	0.75	35	2.5	6.3	3.1	60	73	1LE1	21-2BD0	-	250	0.43	13																																																																
22	30	225 M	885	241	✓	91.0	91.3	90.4	0.78	39.5	2.5	6.4	3.0	61	74	1LE1	21-2BD2	-	270	0.50	13																																																																
30	40	250 M	885	322	✓	91.0	91.3	90.5	0.79	52	2.7	6.4	3.0	61	75	1LE1	21-2CD2	-	370	0.86	13																																																																
37	50	280 S	890	400	-	91.7	91.8	90.9	0.77	66	2.5	6.1	2.6	64	78	1LE1	21-2DD0	-	460	1.10	16																																																																
45	60	280 M	890	480	-	91.7	91.7	90.8	0.78	79	2.7	6.5	2.7	64	78	1LE1	21-2DD2	-	510	1.40	16																																																																
55	75	315 S	890	600	-	93.0	93.0	92.1	0.79	96	2.4	6.6	2.9	70	84	1LE1	21-3AD0	-	640	2.00	13																																																																
75	100	315 M	890	800	✓	93.0	93.3	92.9	0.80	126	2.5	6.7	3.0	73	87	1LE1	21-3AD2	-	710	2.50	16																																																																
90	125	315 L	890	1001	✓	93.6	93.9	93.6	0.81	154	2.4	6.5	2.8	74	88	1LE1	21-3AD4	-	860	3.10	13																																																																
110	150	315 L	891	1199	✓	93.6	93.9	93.6	0.81	185	2.8	7.2	3.2	72	86	1LE1	21-3AD5	-	980	3.90	16																																																																
132	175	315 L	892	1398	-	94.1	94.2	93.7	0.80	220	3.2	7.9	3.7	78	93	1LE1	21-3AD6	-	1060	4.50	16																																																																
<table border="1"> <thead> <tr> <th>Basic Line</th> <th>Performance Line</th> <th>Volts (≤ 600 V)¹⁾</th> <th>Types of construction²⁾</th> <th>Motor protection</th> <th>Terminal box position</th> <th>Special versions</th> </tr> </thead> <tbody> <tr> <td>Optional (standard from FS 280 upwards)</td> <td>Standard from FS 160 (optional for FS 100 to 132)</td> <td>50 Hz 230 VΔ/400 VY 60 Hz 400 VΔ 60 Hz 500 VY 50 Hz 500 VΔ</td> <td>With flange IM B5³⁾ With standard flange IM B14³⁾</td> <td>Without PTC thermistor with 3 temperature sensors</td> <td>Terminal box at top</td> <td>Options</td> </tr> <tr> <td>Optional (standard from FS 280 upwards)</td> <td>Standard from FS 160 (optional for FS 100 to 132)</td> <td>Further voltages</td> <td>Further types of construction</td> <td>Further motor protection</td> <td>Further terminal box positions</td> <td></td> </tr> <tr> <td>Motor protection: Plastic</td> <td>Standard PTC</td> <td>Further voltages: For price information, code numbers, order codes and descriptions, see from Page 2/40</td> <td>Further types of construction: For price information, code letters and descriptions, see from Page 2/45</td> <td>Further motor protection: For price information, code letters and descriptions, see from Page 2/50</td> <td>Further terminal box positions: For price information, code numbers and descriptions, see from Page 2/52</td> <td>Options: For price information, order codes and descriptions, see from Page 2/58</td> </tr> <tr> <td>Fan cover</td> <td>Steel</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Bearing size: 62 (63 from FS 280 upwards)</td> <td>63</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Converter-fed operation, motor mode: Up to 500 V 12 months</td> <td>Up to 500 V 36 months</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Liability for defects: 5</td> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Order code(s):</td> <td>Order code(s):</td> <td>Order code(s):</td> <td>Order code(s):</td> <td>Order code(s):</td> <td>Order code(s):</td> <td>Order code(s):</td> </tr> </tbody> </table>																							Basic Line	Performance Line	Volts (≤ 600 V) ¹⁾	Types of construction ²⁾	Motor protection	Terminal box position	Special versions	Optional (standard from FS 280 upwards)	Standard from FS 160 (optional for FS 100 to 132)	50 Hz 230 VΔ/400 VY 60 Hz 400 VΔ 60 Hz 500 VY 50 Hz 500 VΔ	With flange IM B5 ³⁾ With standard flange IM B14 ³⁾	Without PTC thermistor with 3 temperature sensors	Terminal box at top	Options	Optional (standard from FS 280 upwards)	Standard from FS 160 (optional for FS 100 to 132)	Further voltages	Further types of construction	Further motor protection	Further terminal box positions		Motor protection: Plastic	Standard PTC	Further voltages: For price information, code numbers, order codes and descriptions, see from Page 2/40	Further types of construction: For price information, code letters and descriptions, see from Page 2/45	Further motor protection: For price information, code letters and descriptions, see from Page 2/50	Further terminal box positions: For price information, code numbers and descriptions, see from Page 2/52	Options: For price information, order codes and descriptions, see from Page 2/58	Fan cover	Steel						Bearing size: 62 (63 from FS 280 upwards)	63						Converter-fed operation, motor mode: Up to 500 V 12 months	Up to 500 V 36 months						Liability for defects: 5	6						Order code(s):	Order code(s):	Order code(s):	Order code(s):	Order code(s):	Order code(s):	Order code(s):
Basic Line	Performance Line	Volts (≤ 600 V) ¹⁾	Types of construction ²⁾	Motor protection	Terminal box position	Special versions																																																																															
Optional (standard from FS 280 upwards)	Standard from FS 160 (optional for FS 100 to 132)	50 Hz 230 VΔ/400 VY 60 Hz 400 VΔ 60 Hz 500 VY 50 Hz 500 VΔ	With flange IM B5 ³⁾ With standard flange IM B14 ³⁾	Without PTC thermistor with 3 temperature sensors	Terminal box at top	Options																																																																															
Optional (standard from FS 280 upwards)	Standard from FS 160 (optional for FS 100 to 132)	Further voltages	Further types of construction	Further motor protection	Further terminal box positions																																																																																
Motor protection: Plastic	Standard PTC	Further voltages: For price information, code numbers, order codes and descriptions, see from Page 2/40	Further types of construction: For price information, code letters and descriptions, see from Page 2/45	Further motor protection: For price information, code letters and descriptions, see from Page 2/50	Further terminal box positions: For price information, code numbers and descriptions, see from Page 2/52	Options: For price information, order codes and descriptions, see from Page 2/58																																																																															
Fan cover	Steel																																																																																				
Bearing size: 62 (63 from FS 280 upwards)	63																																																																																				
Converter-fed operation, motor mode: Up to 500 V 12 months	Up to 500 V 36 months																																																																																				
Liability for defects: 5	6																																																																																				
Order code(s):	Order code(s):	Order code(s):	Order code(s):	Order code(s):	Order code(s):	Order code(s):																																																																															

- Not required
✓ available

1) Operating voltages only ≤ 600 V admissible in accordance with MG1 Table 12-11. Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code **R52**) or a larger terminal box (Order code **R50**) can be used. Order codes **R52** and **R50** alter the motor dimensions.

2) Types of construction with feet are not possible for 2-pole, 4-pole and 6-pole motors ≤ 200 hp in accordance with MG1 Table 12-11.

3) Types derived from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.



SIMOTICS GP 1LE1 Standard Motors – Eagle Line

NEMA Premium Efficient MG1 motors, Table 12-12



Self-ventilated or forced-air cooled motors
Aluminum series 1LE1023



Selection and ordering data

P _{rated} , 50 Hz		P _{rated} , 60 Hz		Frame size	Operating values at rated output		EISA CC No. CC032A			η _{rated}			COS φ _{rated}	I _{rated}		T _{L/R}		T _B	L _{pFA}	L _{WA}	Aluminum series		m _{IM B3} J	Torque class
kW	hp	FS	rpm		Nm	%	%	%	A	dB(A)	dB(A)	▲ New		kg	kgm ²	CL								
• Cooling: self-ventilated (IC 411) or with order code F90 forced-air cooled without external fan and fan cover (IC 416) • Efficiency: NEMA Premium Efficient, UL, CSA and service factor (SF) 1.15 – for operation in the USA, Canada and Mexico • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																								
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz																								
0.75	1	80 M	3480	2.1	✓	77.0	78.0	76.0	0.84	1.46	3.0	7.1	3.6	64	75	1LE1023-0DA2	11	0,0011	16					
1.1	1.5	80 M	3500	3	✓	84.0	84.0	83.0	0.83	1.98	3.3	8.4	4.5	64	75	1LE1023-0DA3	12	0,0013	16					
1.5	2	90 S	3525	4.1	✓	85.5	85.0	82.5	0.84	2.60	3.1	9.8	4.9	69	81	1LE1023-0EA0	15	0,0021	16					
2.2	3	90 L	3530	6	✓	86.5	86.3	84.5	0.87	3.65	3.0	9.6	4.9	69	81	1LE1023-0EA4	19	0,0031	16					
3	4	100 L	3525	8.1	–	88.5	88.5	87.5	0.87	4.90	3.8	9.7	5.5	71	83	1LE1023-1AA4	26	0,0054	16					
4	5	112 M	3565	9.9	✓	88.5	88.5	87.5	0.87	6.0	3.8	10.0	5.6	73	85	1LE1023-1BA2	34	0,012	16					
5.5	7.5	132 S	3555	15	✓	89.5	89.5	88.5	0.90	8.6	2.1	8.6	4.4	72	84	1LE1023-1CA0	43	0,024	16					
7.5	10	132 S	3555	20	✓	90.2	90.2	89.2	0.91	11.5	2.4	9.5	4.7	72	84	1LE1023-1CA1	57	0,031	16					
11	15	160 M	3560	30	✓	91.0	91.0	90.0	0.88	17.2	2.8	8.5	4.3	77	89	1LE1023-1DA2	75	0,053	16					
15	20	160 M	3565	40	✓	91.0	91.0	90.0	0.86	24	3.1	9.7	4.8	77	89	1LE1023-1DA3	84	0,061	16					
18.5	25	160 L	3560	50	✓	91.7	91.7	90.7	0.90	28	3.1	9.4	4.4	77	89	1LE1023-1DA4	94	0,068	16					
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz																								
0.55	0.75	80 M	1750	3	–	82.5	82.2	79.4	0.74	1.15	2.7	6.9	3.8	55	66	1LE1023-0DB2	11	0,0021	16					
0.75	1	80 M	1760	4.1	✓	85.5	84.5	81.0	0.71	1.53	3.1	8.3	4.7	55	66	1LE1023-0DB3	14	0,0029	16					
1.1	1.5	90 S	1750	6	✓	86.5	86.3	84.1	0.75	2.10	3.4	8.2	4.4	58	70	1LE1023-0EB0	16	0,0036	16					
1.5	2	90 L	1755	8.2	✓	86.5	87.0	85.0	0.77	2.85	3.0	8.4	4.3	58	70	1LE1023-0EB4	19	0,0049	16					
2.2	3	100 L	1770	12	–	89.5	89.5	88.5	0.81	3.80	3.5	9.6	5.1	62	74	1LE1023-1AB4	30	0,014	16					
3	4	100 L	1760	16	–	89.5	89.5	88.5	0.82	5.1	3.1	9.5	4.6	62	74	1LE1023-1AB5	30	0,014	16					
4	5	112 M	1770	20	✓	89.5	89.5	88.5	0.80	6.5	2.9	8.2	4.3	62	74	1LE1023-1BB2	34	0,017	16					
5.5	7.5	132 S	1780	30	✓	91.7	91.7	90.7	0.83	9.1	2.9	9.5	4.4	68	80	1LE1023-1CB0	64	0,046	16					
7.5	10	132 M	1770	40	✓	91.7	91.7	90.7	0.83	12.4	2.7	9.6	4.2	68	80	1LE1023-1CB2	64	0,046	16					
11	15	160 M	1775	59	✓	92.4	92.4	91.4	0.83	18	3.0	8.9	3.8	69	81	1LE1023-1DB2	83	0,083	16					
15	20	160 L	1780	80	✓	93.0	93.0	91.5	0.81	25	2.9	9.5	4.3	69	81	1LE1023-1DB4	100	0,099	16					
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz																								
0.37	0.5	80 M	1150	3.1	–	78.5	77.5	73.0	0.61	0.97	2.7	5.0	3.3	45	56	1LE1023-0DC2	12	0,0025	13					
0.55	0.75	80 M	1145	4.6	–	81.7	81.3	78.0	0.63	1.34	2.8	5.3	3.4	45	56	1LE1023-0DC3	14	0,0031	13					
0.75	1	90 S	1155	6.2	✓	82.5	82.3	79.5	0.65	1.76	2.4	5.3	3.1	46	58	1LE1023-0EC0	16	0,0040	13					
1.1	1.5	100 L	1175	8.9	–	87.5	87.5	86.5	0.71	2.2	2.4	7.0	3.8	62	74	1LE1023-1AC3	25	0,014	13					
3	4	132 S	1175	24	✓	89.5	89.5	88.5	0.76	5.5	1.9	7.6	3.4	67	79	1LE1023-1CC0	52	0,037	13					
4	5	132 M	1175	30	✓	89.5	89.5	88.5	0.76	6.8	2.2	7.9	3.7	67	79	1LE1023-1CC2	52	0,037	13					
5.5	7.5	132 M	1175	45	✓	91.0	91.0	90.0	0.76	10	2.2	7.5	3.5	67	79	1LE1023-1CC3	52	0,037	13					
7.5	10	160 M	1180	61	✓	91.0	91.0	89.8	0.75	13.8	2.4	5.9	2.6	70	82	1LE1023-1DC2	93	0,098	13					
11	15	160 L	1180	89	✓	91.7	91.9	91.0	0.75	20.0	2.3	5.8	2.6	70	82	1LE1023-1DC4	115	0,12	13					
Voltagess (≤ 600 V)¹⁾ 50 Hz 230 VΔ/400 VY 60 Hz 460 VY 2, 4, 6 80 M ... 160 L 1LE1023-0D ... -1D Standard 2 2 50 Hz 400 VΔ 60 Hz 460 VΔ 2, 4, 6 80 M ... 160 L 1LE1023-0D ... -1D Standard 3 4 50 Hz 500 VY 2, 4, 6 80 M ... 160 L 1LE1023-0D ... -1D Without add. charge 2 7 50 Hz 500 VΔ 2, 4, 6 80 M ... 160 L 1LE1023-0D ... -1D Without add. charge 4 0 Further voltagess For price information, code numbers, order codes and descriptions, see from Page 2/38 9 0																								
Types of construction Without flange IM B3 ²⁾ 2, 4, 6 80 M ... 160 L 1LE1023-0D ... -1D Standard A With flange IM B5 ²⁾ 2, 4, 6 80 M ... 160 L 1LE1023-0D ... -1D With additional charge F With standard flange IM B14 ²⁾ 2, 4, 6 80 M ... 160 L 1LE1023-0D ... -1D With additional charge K Further types of construction For price information, code letters and descriptions, see from Page 2/41 ...																								
Motor protection Without 2, 4, 6 80 M ... 160 L 1LE1023-0D ... -1D Standard A PTC thermistor with 3 temperature sensors 2, 4, 6 80 M ... 160 L 1LE1023-0D ... -1D With additional charge B																								
Terminal box position Terminal box at top 2, 4, 6 80 M ... 160 L 1LE1023-0D ... -1D Standard 4 Further terminal box positions For price information, code numbers and descriptions, see from Page 2/51 ...																								
Special versions Forced-air cooled motors without ext. fan/fan cover (IC 416) 2, 4, 6 80 M ... 160 L 1LE1023-0D ... -1D 1LE1023-... -Z F90 +... +... +... Options For price information, order codes and descriptions, see from Page 2/53 1LE1023-... -Z ... +... +... +...																								

– Not required
✓ available

1) Operating voltages only ≤ 600 V admissible in accordance with MG1 Table 12-12.
2) Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible,

provided that no requirements exist for condensation drainage holes (H03) and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.



SIMOTICS SD 1LE1 Standard Motors – Eagle Line

NEMA Premium Efficient MG1 motors, Table 12-12

Self-ventilated motors Cast-iron series 1LE1523/1LE1623 Basic/Performance Line

Selection and ordering data

P _{rated} 50 Hz	P _{rated} 60 Hz	Frame size	Operating values at rated output										Cast-iron series	m _{IM B3} J	Torque class				
			n _{rated} 60 Hz	T _{rated} 60 Hz	EISA CC No. CC032A	η _{rated} 60 Hz, 4/4	η _{rated} 60 Hz, 3/4	η _{rated} 60 Hz, 2/4	cos φ _{rated} 4/4	I _{rated} 60 Hz, 460 V	T _{LR} 60 Hz	I _{LR} 60 Hz				T _B 60 Hz	L _{pA} 60 Hz	L _{WA} 60 Hz	Article No.
kW	hp	FS	rpm	Nm	%	%	%	A								kg	kgm ²	CL	
<ul style="list-style-type: none"> • Cooling: self-ventilated (IC 411) • Efficiency: NEMA Premium Efficient, UL, CSA and service factor (SF) 1.15 – for operation in the USA, Canada and Mexico • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																			
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz																			
0.37	0.5	71 M	3470	1.0	-	73.4	71.7	67.1	0.73	0.83	4.2	6.8	4.2	57	68	▲ 1LE1 5 23-0CA2	13	0.00045	16
0.55	0.75	71 M	3480	1.5	-	81.1	79.6	75.2	0.73	1.17	4.2	7.1	4.2	57	68	▲ 1LE1 5 23-0CA3	14.5	0.00056	16
0.75	1	80 M	3480	2.1	✓	77.0	78.0	76.0	0.84	1.46	3.0	7.1	3.6	64	75	▲ 1LE1 5 23-0DA2	18	0.0011	16
1.1	1.5	80 M	3500	3	✓	84.0	84.0	83.0	0.83	1.98	3.3	8.4	4.5	64	75	▲ 1LE1 5 23-0DA3	21	0.0013	16
1.5	2	90 S	3525	4.1	✓	85.5	85.0	82.5	0.84	2.60	3.1	9.8	4.9	69	81	▲ 1LE1 5 23-0EA0	25.5	0.0021	16
2.2	3	90 L	3530	6	✓	86.5	86.3	84.5	0.87	3.65	3.0	9.6	4.9	69	81	▲ 1LE1 5 23-0EA4	32	0.0031	16
3	4	100 L	3525	8.1	-	88.5	88.5	87.5	0.87	4.90	3.8	9.7	5.5	71	83	▲ 1LE1 5 23-1AA4	36	0.0054	16
4	5	112 M	3565	9.9	✓	88.5	88.5	87.5	0.87	6.0	3.8	10.0	5.6	73	85	▲ 1LE1 5 23-1BA2	45	0.012	16
5.5	7.5	132 S	3555	15	✓	89.5	89.5	88.5	0.90	8.6	2.1	8.6	4.4	72	84	▲ 1LE1 5 23-1CA0	58	0.024	16
7.5	10	132 S	3555	20	✓	90.2	90.2	89.2	0.91	11.5	2.4	9.5	4.7	72	84	▲ 1LE1 5 23-1CA1	73	0.031	16
11	15	160 M	3560	30	✓	91.0	91.0	90.0	0.88	17.2	2.8	8.5	4.3	77	89	▲ 1LE1 5 23-1DA2	100	0.053	16
15	20	160 M	3565	40	✓	91.0	91.0	90.0	0.86	24	3.1	9.7	4.8	77	89	▲ 1LE1 5 23-1DA3	110	0.061	16
18.5	25	160 L	3560	50	✓	91.7	91.7	90.7	0.90	28	3.1	9.4	4.4	77	89	▲ 1LE1 5 23-1DA4	127	0.068	16
22	30	180 M	3560	60	✓	91.7	91.4	90.0	0.89	34.5	2.8	8.3	3.9	78	85	▲ 1LE1 5 23-1EA2	160	0.080	16
30	40	200 L	3560	80	✓	92.4	92.2	91.4	0.87	46.5	2.9	7.6	3.6	78	86	▲ 1LE1 5 23-2AA4	225	0.13	16
37	50	200 L	3560	100	✓	93.0	92.8	91.6	0.88	57	2.8	7.5	3.6	79	86	▲ 1LE1 5 23-2AA5	250	0.16	16
45	60	225 M	3570	120	✓	93.6	93.7	93.1	0.88	68	2.7	7.6	3.5	75	89	▲ 1LE1 5 23-2BA2	315	0.26	16
55	75	250 M	3578	149	-	93.6	93.4	92.3	0.89	84	2.5	7.3	3.3	76	90	▲ 1LE1 5 23-2CA2	385	0.46	13
75	100	280 S	3578	199	-	94.1	93.9	92.7	0.89	112	2.7	7.6	3.2	78	92	▲ 1LE1 5 23-2DA0	510	0.77	13
90	125	280 M	3578	249	✓	95.0	94.8	93.8	0.90	137	2.7	8.1	3.3	78	92	▲ 1LE1 5 23-2DA2	590	0.94	13
110	150	315 S	3585	298	✓	95.0	94.8	93.8	0.91	162	2.6	8.0	3.3	79	93	▲ 1LE1 5 23-3AA0	750	1.4	13
132	175	315 M	3585	348	-	95.4	95.1	94.0	0.91	189	2.8	8.0	3.4	79	93	▲ 1LE1 5 23-3AA2	880	1.6	13
150	200	315 L	3588	397	✓	95.4	95.1	93.9	0.91	215	3.3	9.1	3.7	82	96	▲ 1LE1 5 23-3AA4	980	1.9	13
185	250	315 L	3586	497	-	95.8	95.7	94.8	0.92	265	3.5	8.5	3.5	82	96	▲ 1LE1 5 23-3AA5	1150	2.3	13

	Relubrication	Motor protection	Fan cover	Bearing size	Converter-fed operation, motor mode	Liability for defects						
Basic Line	Optional (standard from FS 280 upwards)	Optional	Plastic	62 (63 from FS 280 upwards)	up to 500 V 12 months	5						
Performance Line	Standard from FS 160 (optional for FS 100 to 132)	Standard PTC	Steel	63	Up to 500 V 36 months	6						

Voltages (≤ 600 V) ¹⁾		No. of poles	Frame size	Motor type	Version	Order code(s)
50 Hz	230 VΔ/400 VY	2	71 M ... 315 L	1LE1 23-0C ... -3A	Standard	2 2
50 Hz	400 VΔ	2	71 M ... 315 L	1LE1 23-0C ... -3A	Standard	3 4
50 Hz	500 VY	2	71 M ... 315 L	1LE1 23-0C ... -3A	Without add. charge	2 7
50 Hz	500 VΔ	2	71 M ... 315 L	1LE1 23-0C ... -3A	Without add. charge	4 0
Further voltages						9 0

For price information, code numbers, order codes and descriptions, see from Page 2/40

Types of construction		No. of poles	Frame size	Motor type	Version	Order code(s)
Without flange	IM B3 ²⁾	2	71 M ... 315 L	1LE1 23-0C ... -3A	Standard	A
With flange	IM B5 ²⁾	2	71 M ... 315 M	1LE1 23-0C ... -3A	With additional charge	F
With standard flange	IM B14 ²⁾	2	71 M ... 160 L	1LE1 23-0C ... -1D	With additional charge	K
Further types of construction						...

For price information, code letters and descriptions, see from Page 2/45

Motor protection		No. of poles	Frame size	Motor type	Version	Order code(s)
Without PTC thermistor with 3 temperature sensors	Only possible for Basic Line	2	71 M ... 315 L	1LE1523-0C ... -3A	Standard	A
Further motor protection	Basic Line	2	71 M ... 315 L	1LE1523-0C ... -3A	With additional charge	B
	Performance Line	2	71 M ... 315 L	1LE1623-0C ... -3A	Standard	B
Further motor protection						...

For price information, code letters and descriptions, see from Page 2/50

Terminal box position		No. of poles	Frame size	Motor type	Version	Order code(s)
Terminal box at top		2	71 M ... 315 L	1LE1 23-0C ... -3A	Standard	4
Further terminal box positions						...

For price information, code numbers and descriptions, see from Page 2/52

Special versions		No. of poles	Frame size	Motor type	Version	Order code(s)
Options					1LE1 23- ... -Z	...+...+...+...

For price information, order codes and descriptions, see from Page 2/58

- Not required
✓ available

1) Operating voltages only ≤ 600 V admissible in accordance with MG1 Table 12-12. Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code **R52**) or a larger terminal box (Order code **R50**) can be used. Order codes **R52** and **R50** alter the motor dimensions.

2) Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.



SIMOTICS SD 1LE1 Standard Motors – Eagle Line

NEMA Premium Efficient MG1 motors, Table 12-12



Self-ventilated motors
Cast-iron series 1LE1523/1LE1623 Basic/Performance Line



Selection and ordering data (continued)

Operating values at rated output														Cast-iron series		m _{IM B3} J	Torque class					
P _{rated} 50 Hz	P _{rated} 60 Hz	Frame size	n _{rated} 60 Hz	T _{rated} 60 Hz	EISA CC No. CC032A	η _{rated} 60 Hz, 4/4	η _{rated} 60 Hz, 3/4	η _{rated} 60 Hz, 2/4	cos φ _{rated} 60 Hz, 4/4	I _{rated} 60 Hz, 460 V	T _{LR} /I _{rated} 60 Hz	I _{LR} /I _{rated} 60 Hz	T _B /I _{rated} 60 Hz	L _{ptA} 60 Hz	L _{WA} 60 Hz			1LE1523 – Basic Line	1LE1623 – Performance Line	Article No.	kg	kgm ²	CL
kW	hp	FS	rpm	Nm	%	%	%	%	A													
• Cooling: self-ventilated (IC 411) • Efficiency: NEMA Premium Efficient, UL, CSA and service factor (SF) 1.15 – for operation in the USA, Canada and Mexico • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																						
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz																						
0.25	0.33	71 M	1715	1.4	–	73.4	72.3	68.2	0.68	0.65	2.9	4.9	3.1	47	58	▲	1LE1 5 23-0CB2	–	13	0.00095	16	
0.37	0.5	71 M	1725	2	–	78.2	76.6	71.9	0.65	0.90	2.9	5.4	3.3	47	58	▲	1LE1 5 23-0CB3	–	16	0.0014	16	
0.55	0.75	80 M	1750	3	–	82.5	82.2	79.4	0.74	1.13	2.7	6.9	3.8	55	66	▲	1LE1 5 23-0DB2	–	18.5	0.0021	16	
0.75	1	80 M	1760	4.1	✓	85.5	84.5	81.0	0.71	1.55	3.1	8.3	4.7	55	66	▲	1LE1 5 23-0DB3	–	22.5	0.0029	16	
1.1	1.5	90 S	1750	6	✓	86.5	86.3	84.1	0.75	2.15	3.4	8.2	4.4	58	70	▲	1LE1 5 23-0EB0	–	25	0.0036	16	
1.5	2	90 L	1755	8.2	✓	86.5	87.0	85.0	0.77	2.85	3.0	8.4	4.3	58	70	▲	1LE1 5 23-0EB4	–	31	0.0049	16	
2.2	3	100 L	1770	12	–	89.5	89.5	88.5	0.81	3.80	3.5	9.6	5.1	62	74	▲	1LE1 23-1AB4	–	40	0.014	16	
3	4	100 L	1760	16	–	89.5	89.5	88.5	0.82	5.1	3.1	9.5	4.6	62	74	▲	1LE1 23-1AB5	–	40	0.014	16	
4	5	112 M	1770	20	✓	89.5	89.5	88.5	0.80	6.5	2.9	8.2	4.3	62	74	▲	1LE1 23-1BB2	–	46	0.017	16	
5.5	7.5	132 S	1780	30	✓	91.7	91.7	90.7	0.83	9.1	2.9	9.5	4.4	68	80	▲	1LE1 23-1CB0	–	80	0.046	16	
7.5	10	132 M	1770	40	✓	91.7	91.7	90.7	0.83	12.4	2.7	9.6	4.2	68	80	▲	1LE1 23-1CB2	–	80	0.046	16	
11	15	160 M	1775	59	✓	92.4	92.4	91.4	0.83	18	3.0	8.9	3.8	69	81	▲	1LE1 23-1DB2	–	109	0.083	16	
15	20	160 L	1780	80	✓	93.0	93.0	91.5	0.81	25	2.9	9.5	4.3	69	81	▲	1LE1 23-1DB4	–	127	0.099	16	
18.5	25	180 M	1775	100	✓	93.6	93.7	93.1	0.81	31	2.7	7.8	3.6	68	75	▲	1LE1 23-1EB2	–	165	0.13	16	
22	30	180 L	1775	120	✓	93.6	93.8	93.3	0.81	37	2.8	7.7	3.7	70	77	▲	1LE1 23-1EB4	–	170	0.14	16	
30	40	200 L	1778	160	✓	94.1	94.3	93.8	0.83	48	3.0	8.1	3.5	67	74	▲	1LE1 23-2AB5	–	240	0.22	16	
37	50	225 S	1782	200	–	94.5	94.7	94.2	0.85	58	2.8	7.5	3.0	66	80	▲	1LE1 23-2BB0	–	285	0.42	16	
45	60	225 M	1782	240	✓	95.0	95.3	94.9	0.84	70	2.9	7.2	3.0	67	81	▲	1LE1 23-2BB2	–	320	0.47	16	
55	75	250 M	1786	299	–	95.4	95.6	95.1	0.86	86	2.8	7.6	3.2	67	81	▲	1LE1 23-2CB2	–	420	0.85	16	
75	100	280 S	1788	398	–	95.4	95.3	94.5	0.85	115	2.8	7.7	3.3	77	91	▲	1LE1 23-2DB0	–	570	1.4	16	
90	125	280 M	1788	498	✓	95.4	95.5	94.9	0.87	141	2.9	8.0	3.3	79	93	▲	1LE1 23-2DB2	–	670	1.7	16	
110	150	315 S	1790	597	✓	95.8	95.9	95.4	0.86	170	3.0	7.5	3.1	73	87	▲	1LE1 23-3AB0	–	760	2.2	16	
132	175	315 M	1790	696	–	96.2	96.3	95.8	0.87	196	3.1	8.2	3.2	76	90	▲	1LE1 23-3AB2	–	960	2.9	16	
150	200	315 L	1791	796	✓	96.2	96.2	95.7	0.87	225	3.5	8.8	3.6	76	90	▲	1LE1 23-3AB4	–	990	3.1	16	
185	250	315 L	1791	994	–	96.2	96.2	95.5	0.87	280	3.9	9.0	3.6	78	93	▲	1LE1 23-3AB5	–	1190	3.7	16	

Relubrication		Motor protection	Fan cover	Bearing size	Converter-fed operation, motor mode	Liability for defects					Order code(s)
Basic Line	Optional (standard from FS 280 upwards)	Optional	Plastic	62 (63 from FS 280 upwards)	Up to 500 V 12 months	5					
Performance Line	Standard from FS 160 (optional for FS 100 to 132)	Standard PTC	Steel	63	Up to 500 V 36 months	6					
Voltages (≤ 600 V) ¹⁾		No. of poles	Frame size	Motor type	Version					Order code(s)	
50 Hz	230 VΔ/400 VY	60 Hz	460 VY	4	71 M ... 315 L	1LE1 23-0C ... -3A	Standard	2	2	–	
50 Hz	400 VΔ	60 Hz	460 VΔ	4	71 M ... 315 L	1LE1 23-0C ... -3A	Standard	3	4	–	
50 Hz	500 VY			4	71 M ... 315 L	1LE1 23-0C ... -3A	Without add. charge	2	7	–	
50 Hz	500 VΔ			4	71 M ... 315 L	1LE1 23-0C ... -3A	Without add. charge	4	0	–	
Further voltages		For price information, code numbers, order codes and descriptions, see from Page 2/40									...
Types of construction		No. of poles	Frame size	Motor type	Version					Order code(s)	
Without flange		IM B3 ²⁾	4	71 M ... 315 L	1LE1 23-0C ... -3A	Standard	A				–
With flange		IM B5 ²⁾	4	71 M ... 315 M	1LE1 23-0C ... -3A	With additional charge	F				–
With standard flange		IM B14 ²⁾	4	71 M ... 160 L	1LE1 23-0C ... -1D	With additional charge	K				–
Further types of construction		For price information, code letters and descriptions, see from Page 2/45									...
Motor protection		Line	No. of poles	Frame size	Motor type	Version					Order code(s)
Without PTC thermistor with 3 temperature sensors		Only possible for Basic Line	4	71 M ... 315 L	1LE1523-0C ... -3A	Standard	A				–
Further motor protection		Basic Line	4	71 M ... 315 L	1LE1523-0C ... -3A	With additional charge	B				–
Terminal box position		Performance Line	4	71 M ... 315 L	1LE1623-0C ... -3A	Standard	B				–
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/52									...
Special versions		No. of poles	Frame size	Motor type	Version					Order code(s)	
Options		For price information, order codes and descriptions, see from Page 2/58									1LE1 23- ... -Z ...+...+...+...

– Not required
✓ available

1) Operating voltages only ≤ 600 V admissible in accordance with MG1 Table 12-12. Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code R52) or a larger terminal box (Order code R50) can be used. Order codes R52 and R50 alter the motor dimensions.

2) Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.



SIMOTICS SD 1LE1 Standard Motors – Eagle Line

NEMA Premium Efficient MG1 motors, Table 12-12



Self-ventilated motors Cast-iron series 1LE1523/1LE1623 Basic/Performance Line

Selection and ordering data (continued)

Operating values at rated output														Cast-iron series		m _{IM B3} J	Torque class				
P _{rated} , 50 Hz	P _{rated} , 60 Hz	Frame size	n _{rated} , 60 Hz	T _{rated} , 60 Hz	EISA CC No. CC032A	η _{rated} , 60 Hz, 4/4	η _{rated} , 60 Hz, 3/4	η _{rated} , 60 Hz, 2/4	cos φ, rated, 4/4	I _r , 60 Hz, 460 V	T _{LR} , 60 Hz	I _{LR} , 60 Hz	T _B , 60 Hz	L _{ptA} , 60 Hz	L _{WA} , 60 Hz			1LE1523 – Basic Line	1LE1623 – Performance Line	Article No.	kg	kgm^{2}	CL
kW	hp	FS	rpm	Nm	%	%	%	%	A	A	A	A	A	A	A			New			
• Cooling: self-ventilated (IC 411) • Efficiency: NEMA Premium Efficient, UL, CSA and service factor (SF) 1.15 – for operation in the USA, Canada and Mexico • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																					
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz																					
0.18	0.25	71 M	1110	1.5	–	67.5	66.3	61.0	0.63	0.53	2.8	3.5	2.9	42	53	▲	1LE1 5 23-0CC2	–	12.5	0.001	16
0.25	0.33	71 M	1120	2.1	–	71.4	70.2	65.6	0.62	0.71	3.1	3.8	3.3	42	53	▲	1LE1 5 23-0CC3	–	15.5	0.015	16
0.37	0.5	80 M	1150	3.1	–	78.5	77.5	73.0	0.61	0.97	2.7	5.0	3.3	45	56	▲	1LE1 5 23-0DC2	–	18.5	0.0025	13
0.55	0.75	80 M	1145	4.6	–	81.7	81.3	78.0	0.63	1.34	2.8	5.3	3.4	45	56	▲	1LE1 5 23-0DC3	–	22.5	0.0031	13
0.75	1	90 S	1155	6.2	✓	82.5	82.3	79.5	0.65	1.76	2.4	5.3	3.1	46	58	▲	1LE1 5 23-0EC0	–	26.5	0.0040	13
1.1	1.5	90 L	1175	8.9	✓	87.5	87.5	86.5	0.71	2.2	2.4	7.0	3.8	62	74	▲	1LE1 5 23-0EC4	–	30	0.014	13
3	4	132 S	1175	24	✓	89.5	89.5	88.5	0.76	5.5	1.9	7.6	3.4	67	79	▲	1LE1 23-1CC0	–	31	0.037	13
4	5	132 M	1175	30	✓	89.5	89.5	88.5	0.76	6.8	2.2	7.9	3.7	67	79	▲	1LE1 23-1CC2	–	68	0.037	13
5.5	7.5	132 M	1175	45	✓	91.0	91.0	90.0	0.76	10	2.2	7.5	3.5	67	79	▲	1LE1 23-1CC3	–	81	0.037	13
7.5	10	160 M	1180	61	✓	91.0	91.0	89.8	0.75	13.8	2.4	5.9	2.6	70	82	▲	1LE1 23-1DC2	–	128	0.098	13
11	15	160 L	1180	89	✓	91.7	91.9	91.0	0.75	20.0	2.3	5.8	2.6	70	82	▲	1LE1 23-1DC4	–	149	0.12	13
15	20	180 L	1178	121	✓	91.7	92.0	91.5	0.79	26	2.5	6.8	3.0	61	68	▲	1LE1 23-1EC4	–	180	0.19	16
18.5	25	200 L	1180	151	✓	93.0	93.2	92.6	0.78	32.5	2.8	6.5	3.0	64	71	▲	1LE1 23-2AC4	–	215	0.28	16
22	30	200 L	1180	181	✓	93.0	93.6	93.5	0.79	38	2.6	6.3	2.8	63	70	▲	1LE1 23-2AC5	–	230	0.32	16
30	40	225 M	1185	240	✓	94.1	94.4	94.1	0.82	48.5	2.9	7.6	3.3	66	79	▲	1LE1 23-2BC2	–	325	0.67	16
37	50	250 M	1188	300	–	94.1	94.4	93.9	0.83	60	3.1	8.0	3.1	63	76	▲	1LE1 23-2CC2	–	405	1.0	16
45	60	280 S	1190	359	–	94.5	94.6	94.1	0.83	72	3.3	7.7	3.1	66	80	▲	1LE1 23-2DC0	–	510	1.4	16
55	75	280 M	1190	449	–	94.5	94.6	94.0	0.83	90	3.6	7.9	3.3	66	80	▲	1LE1 23-2DC2	–	560	1.6	16
75	100	315 S	1192	598	✓	95.0	94.9	94.1	0.82	120	3.1	8.4	3.3	64	79	▲	1LE1 23-3AC0	–	750	2.6	16
90	125	315 M	1192	747	✓	95.0	95.1	94.4	0.84	147	2.7	7.7	3.0	64	79	▲	1LE1 23-3AC2	–	890	3.1	16
110	150	315 L	1192	896	✓	95.8	96.0	95.5	0.83	177	3.2	8.2	3.4	64	79	▲	1LE1 23-3AC4	–	990	3.9	16
132	175	315 L	1192	1046	–	95.8	96.0	95.6	0.84	205	3.1	8.4	3.3	65	80	▲	1LE1 23-3AC5	–	1110	4.4	16
150	200	315 L	1192	1195	✓	95.8	95.7	95.0	0.81	240	3.6	9.6	4.1	69	83	▲	1LE1 23-3AC6	–	1160	4.6	16



Relubrication	Motor protection	Fan cover	Bearing size	Converter- Liability for fed operation, motor mode	Version	Order code(s)			
Optional (standard from FS 280 upwards)	Optional	Plastic	62 (63 from FS 280 upwards)	Up to 500 V 12 months	5	–			
Standard from FS 160 (optional for FS 100 to 132)	Standard PTC	Steel	63	Up to 500 V 36 months	6	–			
Voltages (≤ 600 V) ¹⁾		No. of poles	Frame size	Motor type	Version	Order code(s)			
50 Hz	230 VΔ/400 VY	60 Hz	460 VY	6	71 M ... 315 L	1LE1 23-0C ... -3A	Standard	2 2	–
50 Hz	400 VΔ	60 Hz	460 VΔ	6	71 M ... 315 L	1LE1 23-0C ... -3A	Standard	3 4	–
50 Hz	500 VY			6	71 M ... 315 L	1LE1 23-0C ... -3A	Without add. charge	2 7	–
50 Hz	500 VΔ			6	71 M ... 315 L	1LE1 23-0C ... -3A	Without add. charge	4 0	–
Further voltages	For price information, code numbers, order codes and descriptions, see from Page 2/40				9 0	...			
Types of construction		No. of poles	Frame size	Motor type	Version	Order code(s)			
Without flange	IM B3 ²⁾	6	71 M ... 315 L	1LE1 23-0C ... -3A	Standard	A	–		
With flange	IM B5 ²⁾	6	71 M ... 315 M	1LE1 23-0C ... -3A	With additional charge	F	–		
With standard flange	IM B14 ²⁾	6	71 M ... 160 L	1LE1 23-0C ... -1D	With additional charge	K	–		
Further types of construction		For price information, code letters and descriptions, see from Page 2/45				...			
Motor protection		Line	No. of poles	Frame size	Motor type	Version	Order code(s)		
Without PTC thermistor with 3 temperature sensors	Only possible for Basic Line	Basic Line	6	71 M ... 315 L	1LE1523-0C ... -3A	Standard	A	–	
Further motor protection		Performance Line	6	71 M ... 315 L	1LE1623-0C ... -3A	Standard	B	–	
Further motor protection		For price information, code letters and descriptions, see from Page 2/50				...			
Terminal box position		No. of poles	Frame size	Motor type	Version	Order code(s)			
Terminal box at top		6	71 M ... 315 L	1LE1 23-0C ... -3A	Standard	4	–		
Further terminal box positions		For price information, code numbers and descriptions, see from Page 2/52				...			
Special versions		No. of poles	Frame size	Motor type	Version	Order code(s)			
Options		For price information, order codes and descriptions, see from Page 2/58				1LE1 23- ... -Z ...+...+...+...			

– Not required
✓ available

¹⁾ Operating voltages only ≤ 600 V admissible in accordance with MG1 Table 12-12. Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code R52) or a larger terminal box (Order code R50) can be used. Order codes R52 and R50 alter the motor dimensions.

²⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirement exists for stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.

SIMOTICS GP 1LE1 Standard Motors

Pole-changing motors

Self-ventilated motors

Aluminum series 1LE1011 for constant load torque

Selection and ordering data

P		Frame size	Operating values at rated output for N1										Operating values at rated output for N2										Aluminum series 1LE1011 – One winding pole-changing for constant load torque Article No.	m	J	Torque class
rated1	rated2		n_{rated1}	T_{rated1}	η_{rated1}	$\cos\phi$	I_{rated1}	I_{FR1}	I_{LR1}	I_{TR1}	n_{rated2}	T_{rated2}	η_{rated2}	$\cos\phi$	I_{rated2}	I_{FR2}	I_{LR2}	I_{TR2}								
50 Hz	50 Hz		50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz								
kW	kW	FS	rpm	Nm	%	A				rpm	Nm	%	A													
<ul style="list-style-type: none"> Cooling: self-ventilated (IC 411) Line operation: Double pole-changing for constant load torque Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																										
4/2-pole: 1500/3000 rpm at 50 Hz with one winding connected in Dahlander circuit																										
1500 rpm	3000 rpm		1500 rpm							3000 rpm																
1.9	2.4	100 L	1390	13	72.0	0.87	4.40	1.7	4.1	1.8	2800	8.2	70.0	0.88	5.6	1.8	4.2	1.8	1LE1011-1AJ4	18	0.0059	13				
2.5	3.1	100 L	1400	17	76.3	0.87	5.4	1.9	5.2	2.8	2840	10.0	77.3	0.90	6.4	2.1	5.2	2.9	1LE1011-1AJ5	22	0.0078	13				
3.7	4.4	112 M	1420	25	79.4	0.86	7.8	1.8	4.9	2.3	2885	15.0	80.8	0.92	8.5	2.1	6.4	2.6	1LE1011-1BJ2	27	0.010	13				
4.7	5.9	132 S	1440	31	82.0	0.84	9.8	1.6	5.6	2.7	2875	20.0	80.0	0.89	12.0	1.8	5.6	2.8	1LE1011-1CJ0	38	0.019	13				
6.5	8.0	132 M	1435	43	82.0	0.86	13.3	1.7	5.4	2.6	2880	27.0	82.0	0.92	15.3	1.8	6.3	2.8	1LE1011-1CJ2	44	0.024	13				
9.3	11.5	160 M	1440	62	84.5	0.87	18.3	1.7	5.7	2.8	2870	38.0	82.0	0.92	22.0	1.8	6.0	2.9	1LE1011-1DJ2	62	0.044	13				
13.0	16	160 L	1450	86	87.0	0.85	25.5	1.6	6.0	2.3	2920	52.0	86.0	0.94	28.5	1.9	7.1	2.8	1LE1011-1DJ6	85	0.068	13				
8/4-pole: 750/1500 rpm at 50 Hz with one winding connected in Dahlander circuit																										
750 rpm	1500 rpm		750 rpm							1500 rpm																
0.55	1.1	100 L	715	7.3	57.0	0.53	2.65	2.0	3.0	2.7	1425	7.4	77.7	0.87	2.35	1.7	4.6	2.1	1LE1011-1AL4	18	0.0059	10				
0.9	1.5	100 L	700	12	64.2	0.64	3.15	1.5	2.9	2.0	1415	10.0	77.7	0.89	3.15	1.5	4.5	1.9	1LE1011-1AL5	22	0.0078	10				
1.1	1.9	112 M	715	15	66.5	0.60	4.00	1.6	3.2	2.3	1440	13.0	80.9	0.87	3.90	1.6	5.4	2.3	1LE1011-1BL2	27	0.010	10				
1.6	3.2	132 S	730	21	61.5	0.53	7.1	1.6	3.3	2.6	1450	21.0	82.3	0.87	6.5	1.4	5.0	2.1	1LE1011-1CL0	38	0.019	10				
2.2	4.4	132 M	730	29	68.0	0.52	9.0	2.0	3.8	3.0	1450	29.0	84.5	0.88	8.5	1.5	5.5	2.3	1LE1011-1CL2	44	0.024	10				
3.5	7	160 M	730	46	77.5	0.57	11.4	2.0	4.2	2.8	1450	46.0	84.0	0.90	13.4	1.6	5.2	2.2	1LE1011-1DL2	62	0.044	10				
5.6	11	160 L	725	74	80.2	0.60	16.8	1.9	4.0	2.7	1445	73.0	84.4	0.90	21.0	1.5	5.1	2.2	1LE1011-1DL4	73	0.056	10				
Voltages				No. of poles	Frame size	Motor type	Version													Order code(s)						
50 Hz	230 V			4/2, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Standard													2 2	-					
50 Hz	400 V			4/2, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Standard													3 4	-					
50 Hz	500 V			4/2, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Without add. charge													4 0	-					
50 Hz	690 V			4/2, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Without add. charge													4 7	-					
Further voltages ¹⁾																				9 0	...					
Types of construction				No. of poles	Frame size	Motor type	Version														Order code(s)					
Without flange	IM B3 ²⁾			4/2, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Standard													A	-					
With flange	IM B5 ²⁾			4/2, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	With additional charge													F	-					
With standard flange	IM B14 ²⁾			4/2, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	With additional charge													K	-					
Further types of construction																						...				
Motor protection				No. of poles	Frame size	Motor type	Version														Order code(s)					
Without				4/2, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Standard														A	-				
PTC thermistor with 3 temperature sensors				4/2, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	With additional charge														B	-				
Further motor protection																						...				
Terminal box position				No. of poles	Frame size	Motor type	Version														Order code(s)					
Terminal box at top				4/2, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Standard														4	-				
Further terminal box positions																						For price information, code numbers and descriptions, see from Page 2/51				
Special versions																					Order code(s)					
Options																					1LE1011-....-Z	...+...+...+...				

¹⁾ Operating values at rated output for 60 Hz are available on request.
²⁾ Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (H03) and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (H03), the type must be specified.



SIMOTICS GP 1LE1 Standard Motors

Pole-changing motors

Self-ventilated motors – Aluminum series 1LE1011/1LE1012 for square-law load torque

Selection and ordering data

			Operating values at rated output for N1							Operating values at rated output for N2							Aluminum series		m	J	Torque class		
P	P	Frame size	n_{rated1}	i_{rated1}	η_{rated1}	$\cos\phi$	I_{LR}	I_{FR}	I_{LR}	n_{rated2}	i_{rated2}	η_{rated2}	$\cos\phi$	I_{LR}	I_{FR}	I_{LR}	1LE1011 – One winding	1LE1012 – Two windings pole-changing for square-law load torque	Article No.	IM B3			
rated1, 50 Hz	rated2, 50 Hz		50 Hz	50 Hz	50 Hz, 4/4	rated1, 50 Hz, 4/4	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz, 4/4	50 Hz, 4/4	50 Hz, 4/4	50 Hz	50 Hz	50 Hz							
kW	kW	FS	rpm	Nm	%	A	rpm	Nm	%	A	rpm	Nm	%	A	rpm	Nm	%	A		kg	kgm ²	CL	
• Cooling: self-ventilated (IC 411) • Line operation: double pole-changing for square-law load torque, e.g. for driving fans • Insulation: thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																							
4/2-pole: 1500/3000 rpm at 50 Hz with one winding connected in Dahlander circuit																							
			1500 rpm	3000 rpm																			
0.65	2.4	100 L	1415	4.4	75.0	0.86	1.45	1.6	4.1	1.8	2800	8.2	70.0	0.88	5.6	1.8	4.2	1.8	1LE1011-1AP4	18	0.0059	13	
0.8	3.1	100 L	1435	5.3	79.0	0.85	1.72	1.9	5.2	2.8	2840	10.0	77.3	0.90	6.4	2.1	5.2	2.9	1LE1011-1AP5	22	0.0078	13	
1.1	4.4	112 M	1455	7.2	83.4	0.85	2.25	2.2	6.1	2.5	2885	15.0	80.8	0.92	8.5	2.1	6.4	2.6	1LE1011-1BP2	27	0.010	13	
1.45	5.9	132 S	1460	9.5	84.0	0.84	2.95	1.6	5.8	2.8	2875	20.0	80.0	0.89	12.0	1.8	5.6	2.8	1LE1011-1CP0	38	0.019	13	
2.0	8.0	132 M	1455	13	85.0	0.85	4.00	1.8	5.6	2.8	2880	27.0	82.0	0.92	15.3	1.8	6.3	2.8	1LE1011-1CP2	44	0.024	13	
2.9	11.5	160 M	1465	19	86.5	0.86	5.6	1.8	5.9	2.9	2870	38.0	82.0	0.92	22.0	1.8	6.0	2.9	1LE1011-1DP2	62	0.044	13	
4.3	16	160 L	1455	28	87.0	0.85	8.4	1.6	6.0	2.3	2920	52.0	86.0	0.94	28.5	1.9	7.1	2.8	1LE1011-1DP6	85	0.068	13	
6/4-pole: 1000/1500 rpm at 50 Hz with two windings																							
			1000 rpm	1500 rpm																			
0.6	1.7	100 L	970	5.9	55.5	0.62	2.50	1.7	3.4	2.7	1435	11.0	76.2	0.83	3.90	1.8	4.6	2.2	1LE1012-1AQ4	18	0.0059	10	
0.8	2.1	100 L	955	8	64.2	0.77	2.35	1.2	3.4	2.0	1435	14.0	78.4	0.84	4.60	2.0	5.4	2.3	1LE1012-1AQ5	22	0.0078	10	
0.9	3.0	112 M	975	8.8	64.7	0.66	3.05	1.6	3.9	2.5	1455	20.0	81.4	0.78	6.8	2.1	6.1	3.0	1LE1012-1BQ2	27	0.010	13	
1.2	3.9	132 S	980	12	72.3	0.70	3.40	1.4	4.6	2.5	1455	26.0	83.1	0.83	8.2	1.5	5.7	2.4	1LE1012-1CQ0	38	0.019	10	
1.7	5.4	132 M	980	17	74.1	0.71	4.65	1.7	5.0	2.5	1465	35.0	85.9	0.82	11.1	2.0	6.9	2.8	1LE1012-1CQ2	44	0.024	10	
2.5	7.2	160 M	985	24	77.7	0.71	6.5	1.5	4.7	2.6	1470	47.0	86.9	0.85	14.1	1.8	6.3	2.7	1LE1012-1DQ2	62	0.044	10	
3.7	12.0	160 L	985	36	82.4	0.69	9.4	2.3	6.2	3.5	1475	78.0	87.9	0.8	24.5	2.1	7.5	3.5	1LE1012-1DQ4	73	0.059	10	
8/4-pole: 750/1500 rpm at 50 Hz with one winding connected in Dahlander circuit																							
			750 rpm	1500 rpm																			
0.5	2.0	100 L	720	6.6	52.0	0.50	2.80	1.3	3.3	3.4	1440	13.0	82.0	0.79	4.45	3.0	7.5	4.0	1LE1011-1AR4	22	0.0078	7	
0.65	2.5	100 L	715	8.7	56.0	0.58	2.90	1.0	3.2	2.6	1425	17.0	81.0	0.84	5.3	2.3	6.3	3.2	1LE1011-1AR5	22	0.0078	7	
0.9	3.6	112 M	715	12	56.0	0.57	4.05	1.0	2.8	2.1	1430	24.0	82.0	0.84	7.5	1.9	5.6	2.4	1LE1011-1BR2	27	0.010	7	
1.1	4.7	132 S	730	14	62.0	0.54	4.75	1.0	3.2	2.2	1430	31.0	82.0	0.86	9.6	1.7	5.2	2.2	1LE1011-1CR0	38	0.019	7	
1.4	6.4	132 M	730	18	67.5	0.52	5.8	1.1	3.5	2.3	1440	42.0	84.5	0.87	12.6	1.9	5.7	2.3	1LE1011-1CR2	44	0.024	7	
2.2	9.5	160 M	730	29	80.6	0.63	6.3	1.5	4.0	2.5	1465	62.0	86.1	0.84	19.0	2.0	6.3	2.7	1LE1011-1DR2	62	0.044	10	
3.3	14	160 L	735	43	81.4	0.56	10.4	2.5	4.8	3.3	1475	91.0	85.8	0.73	32.5	2.5	7.2	3.8	1LE1011-1DR4	73	0.056	16	

Voltagess	No. of poles	Frame size	Motor type	Version	Order code(s)
50 Hz 230 V	4/2, 6/4, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Standard	2 2
50 Hz 400 V	4/2, 6/4, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Standard	3 4
50 Hz 500 V	4/2, 6/4, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Without add. charge	4 0
50 Hz 690 V	4/2, 6/4, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Without add. charge	4 7
Further voltages ¹⁾					9 0
For price information, code numbers, order codes and descriptions, see from Page 2/39					
Types of construction	No. of poles	Frame size	Motor type	Version	Order code(s)
Without flange	4/2, 6/4, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Standard	A
With flange	4/2, 6/4, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	With additional charge	F
With standard flange	4/2, 6/4, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	With additional charge	K
Further types of construction For price information, code letters and descriptions, see from Page 2/41					
Motor protection	No. of poles	Frame size	Motor type	Version	Order code(s)
Without	4/2, 6/4, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Standard	A
PTC thermistor with 3 temperature sensors	4/2, 6/4, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	With additional charge	B
Further motor protection For price information, code letters and descriptions, see from Page 2/49					
Terminal box position	No. of poles	Frame size	Motor type	Version	Order code(s)
Terminal box at top	4/2, 6/4, 8/4	100 L ... 160 L	1LE1011-1A ... -1D	Standard	4
Further terminal box positions For price information, code numbers and descriptions, see from Page 2/51					
Special versions					Order code(s)
Options	For price information, order codes and descriptions, see from Page 2/53				1LE1011-...-Z

1) Operating values at rated output for 60 Hz are available on request.
 2) Types derived from IM B3 (IM B6/7/8, IM V6 and IM V5), from IM B5 (IM V3 and IM V1) and from IM B14 (IM V19 and IM V18) are possible, provided that no requirements exist for condensation drainage holes (HO3) and stamping of the type on the rating plate. The basic type IM B3, IM B5 or IM B14 is stamped as standard on the rating plate. When ordering with condensation drainage holes (HO3), the type must be specified.



SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Voltages

Aluminum series 1LE10, 1PC10

Selection and ordering data

Voltages	Voltage code 12th and 13th position of the Article No.	Additional identification code with order code and plain text if required	Motor category							
			Motor version	Motor type (alum.)	Motor type – Frame size					
					80	90	100	112	132	160
1LE10 ■ - ■ 1PC10 ■ - ■ Order code			High Efficiency IE2	1LE1001 1PC1001	1LE1001 ①					
			IE3 Premium Efficiency	1LE1003	1LE1003 ③					
			IE1 Standard Efficiency	1LE1002 1PC1002	1LE1002 ④					
			NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line ⑥					
			NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line ⑦					
			Motor version	Motor type	Frame size	80	90	100	112	132	160
Voltage at 50 Hz or 60 Hz										
50 Hz 230 VΔ/400 VY, 60 Hz 460 VY	2	2	–	All	All	□	□	□	□	□
50 Hz 400 VΔ/690 VY, 60 Hz 460 VΔ ¹⁾	3	4	–	All except ⑥ and ⑦		□	□	□	□	□
50 Hz 400 VΔ, 60 Hz 460 VΔ ¹⁾				Only applicable for ⑥ and ⑦		□	□	□	□	□
50 Hz 400 VY, 60 Hz 460 VY ^{2) 3)}	0	2		All	All	□	□	–	–	–
50 Hz 500 VY ²⁾ 60 Hz 575 VΔ	2	7	–	All	All	○	○	○	○	○
50 Hz 500 VΔ 60 Hz 575 VΔ	4	0	–	All	All	–	–	○	○	○
50 Hz 220 VΔ/380 VY 60 Hz 440 VY	2	1	–	All	All	✓	✓	✓	✓	✓
50 Hz 380 VΔ/660 VY ¹⁾ , 60 Hz 440 VΔ	3	3	–	All except ⑥ and ⑦		✓	✓	✓	✓	✓
50 Hz 380 VΔ ¹⁾				Only applicable for ⑥ and ⑦		–	–	✓	✓	✓
50 Hz 240 VΔ/415 VY, 60 Hz 480 VY	2	3	–	All	All	✓	✓	✓	✓	✓
50 Hz 415 VΔ, 60 Hz 480 VΔ	3	5	–	All	All	✓	✓	✓	✓	✓
Voltage at 60 Hz and required output at 60 Hz										
220 VΔ/380 VY; 50 Hz output	9	0	M2A	All	All	✓	✓	✓	✓	✓
220 VΔ/380 VY; 60 Hz output ⁴⁾	9	0	M1A	All except ⑥ and ⑦		✓	✓	✓	✓	✓
380 VΔ/660 VY; 50 Hz output ¹⁾	9	0	M2B	All except ⑥ and ⑦		✓	✓	✓	✓	✓
380 VΔ; 50 Hz output ¹⁾				Only applicable for ⑥ and ⑦		–	–	✓	✓	✓
380 VΔ/660 VY; 60 Hz output ^{1) 4)}	9	0	M1B	All except ⑥ and ⑦		✓	✓	✓	✓	✓
440 VY; 50 Hz output	9	0	M2C	All	All	✓	✓	✓	✓	✓
440 VY; 60 Hz output ⁴⁾	9	0	M1C	All except ⑥ and ⑦		✓	✓	✓	✓	✓
440 VΔ; 50 Hz output	9	0	M2D	All	All	✓	✓	✓	✓	✓
440 VΔ; 60 Hz output ⁴⁾	9	0	M1D	All except ⑥ and ⑦		✓	✓	✓	✓	✓
460 VY; 50 Hz output	9	0	M2E	All	All	✓	✓	✓	✓	✓
460 VY; 60 Hz output ⁴⁾	9	0	M1E	All except ⑥ and ⑦		○	○	○	○	○
460 VΔ; 50 Hz output	9	0	M2F	All	All	✓	✓	✓	✓	✓
460 VΔ; 60 Hz output ⁴⁾	9	0	M1F	All except ⑥ and ⑦		○	○	○	○	○
575 VY; 50 Hz output	9	0	M2G	All	All	✓	✓	✓	✓	✓
575 VY; 60 Hz output ⁴⁾	9	0	M1G	All except ⑥ and ⑦		✓	✓	✓	✓	✓
575 VΔ; 50 Hz output	9	0	M2H	All	All	✓	✓	✓	✓	✓
575 VΔ; 60 Hz output ⁴⁾	9	0	M1H	All except ⑥ and ⑦		✓	✓	✓	✓	✓
Voltage at 87 Hz and 87 Hz output										
400 VΔ ⁵⁾	9	0	M3A	All	All	✓	✓	✓	✓	✓
Non-standard voltage and/or frequencies										
Non-standard winding ⁶⁾	9	0	M1Y • and identification code	All	All	✓	✓	✓	✓	✓

- Standard version
- Without additional charge
- This order code only determines the price of the version – Additional plain text is required.

- ✓ With additional charge
- Not possible

1) For North America export versions Eagle Line 1LE1021 NEMA Energy Efficient and 1LE1023 NEMA Premium Efficient, voltages above 600 V will not be stamped.

2) Frame sizes 80 and 90 with voltage code 02 can only be supplied without motor protection (motor protection code A).

3) Delta connection is not possible.

4) Not admissible for North America export versions Eagle Line 1LE1021 NEMA Energy Efficient and 1LE1023 NEMA Premium Efficient.

5) Only possible for 4-pole, 6-pole and 8-pole motors. The operating data for converter-fed operation is also provided in a table on the rating plate.

6) Plain text must be specified in the order: Voltage between 200 and 690 V (voltages outside this range are available on request), frequency, circuit, for 60 Hz additionally required rated output in kW.

SIMOTICS GP 1LE1 Standard Motors

Supplements to article numbers and special versions

Voltages
Aluminum series 1LE1011, 1LE1012 – pole-changing

Selection and ordering data

Voltages	Voltage code 12th and 13th posi- tion of the Article No.	Additional identifica- tion code with order code and plain text if required	Motor category					
			Motor version	Motor type (alum.)	Motor type – Frame size			
					100	112	132	160
			Pole-changing	1LE1011 1LE1012	1LE1011 1LE1012			
			Motor version	Motor type	Frame size			
					100	112	132	160
1LE1...-...-...-...-... Order code								
Voltage at 50 Hz and 50 Hz output								
230 V	2 2	–	All	All	□	□	□	□
400 V	3 4	–	All	All	□	□	□	□
500 V	4 0	–	All	All	○	○	○	○
690 V	4 7	–	All	All	○	○	○	○
Voltage at 60 Hz and required output								
220 V; 50 Hz output	9 0	M5K	All	All	✓	✓	✓	✓
220 V; 60 Hz output	9 0	M5C	All	All	✓	✓	✓	✓
380 V; 50 Hz output	9 0	M5L	All	All	✓	✓	✓	✓
380 V; 60 Hz output	9 0	M5D	All	All	✓	✓	✓	✓
440 V; 50 Hz output	9 0	M5M	All	All	✓	✓	✓	✓
440 V; 60 Hz output	9 0	M5E	All	All	✓	✓	✓	✓
460 V; 50 Hz output	9 0	M5N	All	All	✓	✓	✓	✓
460 V; 60 Hz output	9 0	M5F	All	All	✓	✓	✓	✓
575 V; 50 Hz output	9 0	M5P	All	All	✓	✓	✓	✓
575 V; 60 Hz output	9 0	M5G	All	All	✓	✓	✓	✓
Non-standard voltage and/or frequencies								
Non-standard winding ¹⁾	9 0	M1Y • and identifica- tion code	All	All	✓	✓	✓	✓

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

2

¹⁾ Plain text must be specified in the order: Voltage between 200 and 690 V (voltages outside this range are available on request), frequency, circuit, for 60 Hz additionally required rated output in kW.

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Voltages Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Selection and ordering data

Voltages	Voltage code 12th and 13th position of the Article No.	Additional identification code with order code and plain text if required	Motor category														
			Motor version	Motor type (cast-iron)	Motor type – Frame size												
					71	80	90	100	112	132	160	180	200	225	250	280	315
			High Efficiency IE2	1LE1501 1LE1601	1LE1501 Basic Line ① 1LE1601 Performance Line ②												
			IE3 Premium Efficiency	1LE1503 1LE1603	1LE1503 Basic Line ③ 1LE1603 Performance Line ④												
			NEMA Energy Efficient	1LE1521 1LE1621	1LE1521 Eagle Line Basic ⑤ 1LE1621 Eagle Line Performance ⑥												
			NEMA Premium Efficient	1LE1523 1LE1623	1LE1523 Eagle Line Basic ⑦ 1LE1623 Eagle Line Performance ⑧												
			Motor version	Motor type	Frame size												
					71	80	90	100	112	132	160	180	200	225	250	280	315
1LE1...-...-...-... Order code																	
Voltage at 50 Hz or 60 Hz																	
50 Hz 230 VΔ/400 VY, 60 Hz 460 VY ¹⁾	2	2	–	All	All	□	□	□	□	□	□	□	□	□	□	□	□
50 Hz 400 VΔ/690 VY, 60 Hz 460 VΔ ²⁾	3	4	–	All except ⑤, ⑥, ⑦ and ⑧		□	□	□	□	□	□	□	□	□	□	□	□
50 Hz 400 VΔ, 60 Hz 460 VΔ ²⁾				Only applicable for ⑤, ⑥, ⑦ and ⑧		□	□	□	□	□	□	□	□	□	□	□	□
50 Hz 500 VY	2	7	–	All	All	□	□	□	○	○	○	○	○	○	○	○	○
50 Hz 500 VΔ	4	0	–	All	All	–	–	–	○	○	○	○	○	○	○	○	○
50 Hz 220 VΔ/380 VY, 60 Hz 440 VY ¹⁾	2	1	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
50 Hz 380 VΔ/660 VY, 60 Hz 440 VΔ ²⁾	3	3	–	All except ⑤, ⑥, ⑦ and ⑧		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
50 Hz 380 VΔ ²⁾				Only applicable for ⑤, ⑥, ⑦ and ⑧		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
50 Hz 240 VΔ/415 VY, 60 Hz 480 VY ¹⁾	2	3	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
50 Hz 415 VΔ, 60 Hz 480 VΔ	3	5	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Voltage at 60 Hz and required output																	
220 VΔ/380 VY; 50 Hz output ⁵⁾	9	0	M2A	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
220 VΔ/380 VY; 60 Hz output ^{1) 3)}	9	0	M1A	All except ⑤, ⑥, ⑦ and ⑧		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
380 VΔ/660 VY; 50 Hz output ²⁾	9	0	M2B	All except ⑤, ⑥, ⑦ and ⑧		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
380 VΔ; 50 Hz output ²⁾				Only applicable for ⑤, ⑥, ⑦ and ⑧		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
380 VΔ/660 VY; 60 Hz output ^{2) 3)}	9	0	M1B	All except ⑤, ⑥, ⑦ and ⑧		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
440 VY; 50 Hz output	9	0	M2C	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
440 VY; 60 Hz output ³⁾	9	0	M1C	All except ⑤, ⑥, ⑦ and ⑧		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
440 VΔ; 50 Hz output	9	0	M2D	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
440 VΔ; 60 Hz output ³⁾	9	0	M1D	All except ⑤, ⑥, ⑦ and ⑧		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
460 VY; 50 Hz output	9	0	M2E	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
460 VY; 60 Hz output ³⁾	9	0	M1E	All except ⑤, ⑥, ⑦ and ⑧		–	–	–	○	○	○	○	○	○	○	○	○
460 VΔ; 50 Hz output	9	0	M2F	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
460 VΔ; 60 Hz output ³⁾	9	0	M1F	All except ⑤, ⑥, ⑦ and ⑧		–	–	–	○	○	○	○	○	○	○	○	○
575 VY; 50 Hz output	9	0	M2G	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
575 VY; 60 Hz output ³⁾	9	0	M1G	All except ⑤, ⑥, ⑦ and ⑧		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
575 VΔ; 50 Hz output	9	0	M2H	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
575 VΔ; 60 Hz output ³⁾	9	0	M1H	All except ⑤, ⑥, ⑦ and ⑧		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
Voltage at 87 Hz and 87 Hz output																	
400 VΔ ⁴⁾	9	0	M3A	All	All	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓
Non-standard voltage and/or frequencies																	
Non-standard winding ⁵⁾	9	0	M1Y • and identification code	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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

1) Parallel supply lines are required in the case of connection to ≤ 240 V. For frame size 315 with connection to ≤ 240 V, due to the high current, a drilled, removable entry plate (Order code **R52**) or a larger terminal box (Order code **R50**) can be used. Order codes **R52** and **R50** alter the motor dimensions.

2) For North America export versions Eagle Line 1LE1521/1LE1621 NEMA Energy Efficient and 1LE1523/1LE1623 NEMA Premium Efficient, voltages above 600 V will not be stamped.

3) Not admissible for North America export versions Eagle Line 1LE1521/1LE1621 NEMA Energy Efficient and 1LE1523/1LE1623 NEMA Premium Efficient.

4) Only possible for 4-pole, 6-pole and 8-pole motors. The operating data for converter-fed operation is also provided in a table on the rating plate.

5) Plain text must be specified in the order: Voltage between 200 and 690 V (voltages outside this range are available on request), frequency, circuit, for 60 Hz additionally required rated output in kW.













SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Types of construction
Aluminum series 1LE10, 1PC10

2

Selection and ordering data

Types of construction	Type of construction letter 14th position of the Article No.	For types of construction with order code(s) Article No. with additional identification code -Z	Motor category							
			Motor version	Motor type (alum.)	Motor type – Frame size					
					80	90	100	112	132	160
			High Efficiency IE2	1LE1001	1LE1001 ①					
				1PC1001	1PC1001 ②					
			IE3 Premium Efficiency	1LE1003	1LE1003 ③					
			IE1 Standard Efficiency	1LE1002	1LE1002 ④					
				1PC1002	1PC1002 ⑤					
			NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line ⑥					
			NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line ⑦					
			Pole-changing	1LE1011	1LE1011 ⑧					
				1LE1012	1LE1012 ⑨					
			Motor version	Motor type	Frame size					
					80	90	100	112	132	160
Without flange										
IM B3 1) 2) 3)		A	–	All except ⑥	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IM B6 2) 3)		T	–	All except ⑥	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IM B7 2) 3)		U	–	All except ⑥	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IM B8 2) 3)		V	–	All except ⑥	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IM V6 2) 3)		D	–	All except ⑥	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IM V5 without protective cover 2) 3)		C	–	All except ⑥	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IM V5 with protective cover 2) 3) 4) 5) 6)		C	H00	All except ②, ⑤, ⑥ and in combination with order code F90	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
With flange					FF165 A 200	FF165 A 200	FF215 A 250	FF215 A 250	FF265 A 300	FF300 A 350
IM B5 2) 7)		F	–	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IM V1 without protective cover 2)		G	–	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IM V1 with protective cover 2) 4) 5) 6)		G	H00	All except ②, ⑤ and in combination with order code F90	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IM V3 4)		H	–	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IM B35 3)		J	–	All except ⑥	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

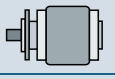
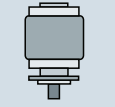
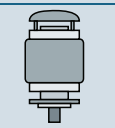

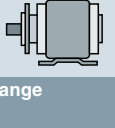
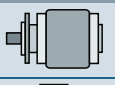
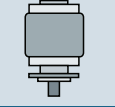
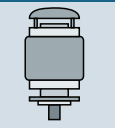
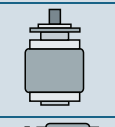
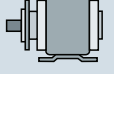
For legends and footnotes, see Page 2/44.

SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Types of construction Aluminum series 1LE10, 1PC10

2











Types of construction	Type of construction letter 14th position of the Article No.	For types of construction with order code(s) Article No. with additional identification code -Z	Motor category								
			Motor version	Motor type (alum.)	Motor type – Frame size						
					80	90	100	112	132	160	
			High Efficiency IE2	1LE1001	1LE1001 ①						
				1PC1001	1PC1001 ②						
			IE3 Premium Efficiency	1LE1003	1LE1003 ③						
			IE1 Standard Efficiency	1LE1002	1LE1002 ④						
				1PC1002	1PC1002 ⑤						
			NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line ⑥						
			NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line ⑦						
			Pole-changing	1LE1011	1LE1011 ⑧						
				1LE1012	1LE1012 ⑨						
			Motor version	Motor type	Frame size						
					80	90	100	112	132	160	
1LE10 -Z											
1PC10 -Z											
Order code											
With special flange next larger			acc. to DIN EN 50347		–	–	FF265	FF265	FF300	–	
			acc. to DIN 42948		–	–	A 300	A 300	A 350	–	
IM B5 ^{2) 7)}		F	P01	All	All	–	–	✓	✓	✓	–
IM V1 without protective cover ²⁾		G	P01	All	All	–	–	✓	✓	✓	–
IM V1 with protective cover ^{2) 4) 5) 6)}		G	P01+H00	All except ②, ⑥ and in combination with order code F90	All	–	–	✓	✓	✓	–
IM V3 ⁴⁾		H	P01	All	All	–	–	✓	✓	✓	–
IM B35 ³⁾		J	P01	All except ⑥	All	–	–	✓	✓	✓	–
With special flange next smaller			acc. to DIN EN 50347		–	–	FF165	FF165	FF215	FF265	
			acc. to DIN 42948		–	–	A 200	A 200	A 250	A 300	
IM B5 ^{2) 7)}		F	P02	All	All	–	–	✓	✓	✓	✓
IM V1 without protective cover ²⁾		G	P02	All	All	–	–	✓	✓	✓	✓
IM V1 with protective cover ^{2) 4) 5) 6)}		G	P02+H00	All except ②, ⑥ and in combination with order code F90	All	–	–	✓	✓	✓	✓
IM V3 ⁴⁾		H	P02	All	All	–	–	✓	✓	✓	✓
IM B35 ³⁾		J	P02	All except ⑥	All	–	–	✓	✓	✓	✓

For legends and footnotes, see Page 2/44.

SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Types of construction Aluminum series 1LE10, 1PC10

Types of construction	Type of construction letter 14th position of the Article No.	For types of construction with order code(s) Article No. with additional identification code -Z	Motor category								
			Motor version	Motor type (alum.)	Motor type – Frame size						
			80	90	100	112	132	160			
			High Efficiency IE2	1LE1001	1LE1001 ①						
				1PC1001	1PC1001 ②						
			IE3 Premium Efficiency	1LE1003	1LE1003 ③						
			IE1 Standard Efficiency	1LE1002	1LE1002 ④						
				1PC1002	1PC1002 ⑤						
			NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line ⑥						
			NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line ⑦						
			Pole-changing	1LE1011	1LE1011 ⑧						
				1LE1012	1LE1012 ⑨						
			Motor version	Motor type	Frame size						
					80	90	100	112	132	160	
					FT100	FT115	FT130	FT130	FT165	FT215	
					C 120	C 140	C 160	C 160	C 200	C 250	
With standard flange			acc. to DIN EN 50347 acc. to DIN 42948								
IM B14 ^{2) 8)}		K	–	All	All	✓	✓	✓	✓	✓	
IM V19 ²⁾		L	–	All	All	✓	✓	✓	✓	✓	
IM V18 without protective cover ²⁾		M	–	All	All	✓	✓	✓	✓	✓	
IM V18 with protective cover ^{2) 4) 5) 6)}		M	H00	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	
IM B34 ³⁾		N	–	All except ⑥		✓	✓	✓	✓	✓	
With special flange next larger			acc. to DIN EN 50347 acc. to DIN 42948			FT130	FT130	FT165	FT165	FT215	–
					C 160	C 160	C 200	C 200	C 250	–	
IM B14 ^{2) 8)}		K	P01	All	All	✓	✓	✓	✓	–	
IM V19 ²⁾		L	P01	All	All	✓	✓	✓	✓	–	
IM V18 without protective cover ²⁾		M	P01	All	All	✓	✓	✓	✓	–	
IM V18 with protective cover ^{2) 4) 5) 6)}		M	P01+H00	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	–	
IM B34 ³⁾		N	P01	All except ⑥		✓	✓	✓	✓	–	

For legends and footnotes, see Page 2/44.

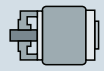
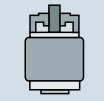
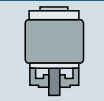
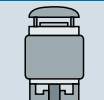
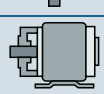


SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Types of construction

Aluminum series 1LE10, 1PC10

Types of construction	Type of construction letter 14th position of the Article No.	For types of construction with order code(s) Article No. with additional identification code -Z	Motor category								
			Motor version	Motor type (alum.)	Motor type – Frame size						
					80	90	100	112	132	160	
			High Efficiency IE2	1LE1001	1LE1001 ①						
				1PC1001	1PC1001 ②						
			IE3 Premium Efficiency	1LE1003	1LE1003 ③						
			IE1 Standard Efficiency	1LE1002	1LE1002 ④						
				1PC1002	1PC1002 ⑤						
			NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line ⑥						
			NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line ⑦						
			Pole-changing	1LE1011	1LE1011 ⑧						
	1LE1012	1LE1012 ⑨									
1LE10 (-Z) 1PC10 (-Z)			Motor version	Motor type	Frame size						
Order code					80	90	100	112	132	160	
With special flange next smaller			acc. to DIN EN 50347			–	–	FT115	FT115	FT130	FT165
			acc. to DIN 42948			–	–	C 140	C 140	C 160	C 200
IM B14 ^{2) 8)}		K	P02	All	All	–	–	O. R.	O. R.	O. R.	O. R.
IM V19 ²⁾		L	P02	All	All	–	–	O. R.	O. R.	O. R.	O. R.
IM V18 without protective cover ²⁾		M	P02	All	All	–	–	O. R.	O. R.	O. R.	O. R.
IM V18 with protective cover ^{2) 4) 5) 6)}		M	P02+H00	All except ②, ⑤ and in combination with order code F90		–	–	O. R.	O. R.	O. R.	O. R.
IM B34 ³⁾		N	P02	All except ⑥		–	–	O. R.	O. R.	O. R.	O. R.

- Standard version
- ✓ With additional charge
- Not possible
- O. R. Possible on request

- 1) The types of construction IM B6/7/8, IM V6 and IM V5 with/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. 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.
- 2) The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code **H03**), if mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.
- 3) For North America export version Eagle Line 1LE1021 NEMA Energy Efficient, types of construction with feet are not possible for 2-pole, 4-pole and 6-pole motors ≤ 200 hp in accordance with NEMA MG1 Table 12-11.
- 4) The "Second shaft extension" option (order code **L05**) is 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 version (without additional charge).

- 6) Not possible for 1PC1 naturally cooled motors and 1LE1 forced-air cooled motors with order code **F90** without external fan and fan cover.
- 7) The types of construction IM V3 and IM V1 with/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. 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.
- 8) The types of construction IM V19 and IM V18 with/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. 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.













SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Types of construction Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

2

Selection and ordering data

Types of construction	Type of construc- code 14th pos. of Article No.	For types of construc- tion with order code(s) Article No. with addi- tional identi- fication code -Z	Motor category																						
			Motor version	Motor type (cast- iron)	Motor type – Frame size															315 S/M	315 L 2- pole	315 L 4-, 6-, 8- pole			
					71	80	90	100	112	132	160	180	200	225	250	280	315	315 L	315 L						
			High Efficiency IE2	1LE1501	1LE1501 Basic Line ①																				
				1LE1601	1LE1601 Performance Line ②																				
			IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ③																				
				1LE1603	1LE1603 Performance Line ④																				
			NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑤																				
				1LE1621	1LE1621 Eagle Line Performance ⑥																				
			NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑦																				
				1LE1623	1LE1623 Eagle Line Performance ⑧																				
			Order code	1LE1.....-Z																					
			Motor version	Motor type	Frame size																				
					71	80	90	100	112	132	160	180	200	225	250	280	315	315 L	315 L						
																S/M	2-pole	4-pole, 6-pole, 8-pole							
Without flange																									
IM B3 1) 2) 3)		A	-	All except ⑤, ⑥ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
IM B6 2) 3)		T	-	All except ⑤, ⑥ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
IM B7 2) 3)		U	-	All except ⑤, ⑥ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
IM B8 2) 3)		V	-	All except ⑤, ⑥ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
IM V6 2) 3)		D	-	All except ⑤, ⑥ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
IM V5 without protective cover 2) 3)		C	-	All except ⑤, ⑥ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
IM V5 with protective cover 2) 3) 4) 5)		C	H00	All except ⑤, ⑥ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
With flange					acc. to DIN EN 50347					FF130	FF165	FF165	FF215	FF215	FF265	FF300	FF300	FF350	FF400	FF500	FF500	FF600	FF600	FF600	
					acc. to DIN 42948					A 160	A 200	A 200	A 250	A 250	A 300	A 350	A 350	A 400	A 450	A 550	A 550	A 660	A 660	A 660	A 660
IM B5 2) 6)		F	-	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
IM V1 without protective cover 2)		G	-	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
IM V1 with protective cover 2) 4) 5)		G	H00	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
IM V3 5)		H	-	All	All	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
IM B35 3)		J	-	All except ⑤, ⑥ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

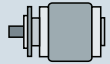

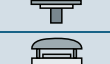




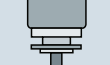


For legends, see Page 2/47; for footnotes, see Page 2/48.

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Types of construction Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

2

Types of construction	Type of construc. code 14th pos. of Article No.	For types of construction with order code(s) Article No. with additional identification code -Z	Motor category																
			Motor version	Motor type (cast-iron)	Motor type – Frame size												315 S/M	315 L 2-pole	315 L 4-, 6-, 8-pole
			High Efficiency IE2	1LE1501 1LE1601	1LE1501 Basic Line ①												1LE1601 Performance Line ②		
			IE3 Premium Efficiency	1LE1503 1LE1603	1LE1503 Basic Line ③												1LE1603 Performance Line ④		
			NEMA Energy Efficient	1LE1521 1LE1621	1LE1521 Eagle Line Basic ⑤												1LE1621 Eagle Line Performance ⑥		
			NEMA Premium Efficient	1LE1523 1LE1623	1LE1523 Eagle Line Basic ⑦												1LE1623 Eagle Line Performance ⑧		
			Motor version	Motor type	Frame size												315 S/M	315 L 2-pole	315 L 4-pole, 6-pole, 8-pole
			1LE1.....-...-...(-Z)	Order code	71	80	90	100	112	132	160	180	200	225	250	280	315 S/M	315 L 2-pole	315 L 4-pole, 6-pole, 8-pole
With special flange next larger			acc. to DIN EN 50347 acc. to DIN 42948		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IM B5 2) 6)		F	P01	All	All	-	-	-	✓	✓	✓	-	-	-	-	-	-	-	-
IM V1 without protective cover 2)		G	P01	All	All	-	-	-	✓	✓	✓	-	-	-	-	-	-	-	-
IM V1 with protective cover 2) 4) 5)		G	P01+H00	All	All	-	-	-	✓	✓	✓	-	-	-	-	-	-	-	-
IM V3 5)		H	P01	All	All	-	-	-	✓	✓	✓	-	-	-	-	-	-	-	-
IM B35 3)		J	P01	All except ⑥, ⑧ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp	All	-	-	-	✓	✓	✓	-	-	-	-	-	-	-	-
With special flange next smaller			acc. to DIN EN 50347 acc. to DIN 42948		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IM B5 2) 6)		F	P02	All	All	-	-	-	O. R.	O. R.	O. R.	O. R.	-	-	-	-	-	-	-
IM V1 without protective cover 2)		G	-Z P02	All	All	-	-	-	O. R.	O. R.	O. R.	O. R.	-	-	-	-	-	-	-
IM V1 with protective cover 2) 4) 5)		G	P02+H00	All	All	-	-	-	O. R.	O. R.	O. R.	O. R.	-	-	-	-	-	-	-
IM V3 5)		H	P02	All	All	-	-	-	O. R.	O. R.	O. R.	O. R.	-	-	-	-	-	-	-
IM B35 3)		J	P02	All except ⑥, ⑧ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp	All	-	-	-	O. R.	O. R.	O. R.	O. R.	-	-	-	-	-	-	-











For legends, see Page 2/47; for footnotes, see Page 2/48.

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Types of construction
Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

2

Types of construction	Type of construc. code 14th pos. of Article No.	For types of construction with order code(s) Article No. with additional identification code -Z	Motor category																	
			Motor version	Motor type (cast-iron)	Motor type – Frame size													315 S/M	315 L 2-pole	315 L 4-, 6-, 8-pole
			High Efficiency IE2	1LE1501 1LE1601	1LE1501 Basic Line ①													1LE1601 Performance Line ②		
			IE3 Premium Efficiency	1LE1503 1LE1603	1LE1503 Basic Line ③													1LE1603 Performance Line ④		
			NEMA Energy Efficient	1LE1521 1LE1621	1LE1521 Eagle Line Basic ⑤													1LE1621 Eagle Line Performance ⑥		
			NEMA Premium Efficient	1LE1523 1LE1623	1LE1523 Eagle Line Basic ⑦													1LE1623 Eagle Line Performance ⑧		
			Motor version	Motor type	Frame size													315 S/M	315 L 2-pole	315 L 4-pole, 6-pole, 8-pole
					71	80	90	100	112	132	160	180	200	225	250	280				
			1LE1.....-Z	Order code																
With flange		acc. to DIN EN 50347 acc. to DIN 42948						FT130	FT130	FT165	FT215									
IM B14 ^{2) 7)}		K	-	All	All			✓	✓	✓	✓									
IM V19 ²⁾		L	-	All	All			✓	✓	✓	✓									
IM V18 without protective cover ²⁾		M	-	All	All			✓	✓	✓	✓									
IM V18 with protective cover ^{2) 4) 5)}		M	H00	All	All			✓	✓	✓	✓									
IM B34 ³⁾		N	-	All except ⑤, ⑥ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp				✓	✓	✓	✓									
With special flange next larger		acc. to DIN EN 50347 acc. to DIN 42948						FT165	FT165	FT215										
IM B14 ^{2) 7)}		K	P01	All	All			✓	✓	✓										
IM V19 ²⁾		L	P01	All	All			✓	✓	✓										
IM V18 without protective cover ²⁾		M	P01	All	All			✓	✓	✓										
IM V18 with protective cover ^{2) 4) 5)}		M	P01+H00	All	All			✓	✓	✓										
IM B34 ³⁾		N	P01	All except ⑤, ⑥ 2, 4, 6-pole ≤ 200 hp and ⑦, ⑧ 8-pole ≤ 200 hp				✓	✓	✓										

- Standard version
- ✓ With additional charge
- Not possible
- O. R. Possible on request

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Types of construction

Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

2

- 1) The types of construction IM B6/7/8, IM V6 and IM V5 with/without protective cover are also possible as long as no stamping of these types of construction on the rating plate is 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.
- 2) The type of construction is stamped on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.
- 3) For North America export version Eagle Line 1LE1521/1LE1621 NEMA Energy Efficient, types of construction with feet are not possible for 2-pole, 4-pole and 6-pole motors ≤ 200 hp in accordance with NEMA MG1 Table 12-11.
- 4) 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 extra price).
- 5) The "Second shaft extension" option (order code **L05**) is not possible.
- 6) The types of construction IM V3 and IM V1 with/without protective cover are also possible as long as no stamping of these types of construction on the rating plate is 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 with/without protective cover are also possible as long as no stamping of these types of construction on the rating plate is 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.

SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Motor protection Aluminum series 1LE10, 1PC10

Selection and ordering data

Motor protection	Motor protection code 15th position in Article No.	Additional identification code with order code and plain text if required	Motor category							
			Motor version	Motor type (alum.)	Motor type – Frame size					
					80	90	100	112	132	160
			High Efficiency IE2	1LE1001	1LE1001					
				1PC1001			1PC1001			
			IE3 Premium Efficiency	1LE1003	1LE1003					
			IE1 Standard Efficiency	1LE1002			1LE1002			
				1PC1002			1PC1002			
			NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line					
			NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line					
			Pole-changing	1LE1011			1LE1011			
				1LE1012			1LE1012			
			Motor version	Motor type	Frame size					
					80	90	100	112	132	160
Motor protection (winding protection)										
Without motor protection ¹⁾	A	–	All	All	☐	☐	☐	☐	☐	☐
Motor protection with PTC thermistors with 1 or 3 embedded temperature sensors for tripping ²⁾	B	–	All	All	✓	✓	✓	✓	✓	✓
Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ²⁾	C	–	All	All	✓	✓	✓	✓	✓	✓
Motor temperature detection with embedded temperature sensor KTY 84-130 ²⁾	F	–	All	All	✓	✓	✓	✓	✓	✓
Motor temperature detection with embedded temperature sensor 2 × KTY 84-130 ²⁾	G	–	All	All	✓	✓	✓	✓	✓	✓
Installation of 3 Pt100 resistance thermometers ²⁾	H	–	All	All	–	–	✓	✓	✓	✓
NTC thermistors for tripping	Z	Q2A	All	All	–	–	✓	✓	✓	✓
Temperature detectors for tripping ²⁾	Z	Q3A	All	All	✓	✓	✓	✓	✓	✓

- ☐ Standard version
- ✓ With additional charge
- Not possible

2

¹⁾ Frame sizes 80 and 90 with voltage code 02 can only be supplied without motor protection (motor protection code A).

²⁾ Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended. For pole-changing motors, double the number of temperature sensors or temperature detectors is required. This also results in a double additional charge.

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Motor protection Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Selection and ordering data

Motor protection	Motor protection code with order No.	Additional identification code with order code and plain text if required	Motor category														
			Motor version	Motor type (cast-iron)	Motor type – Frame size												
					71	80	90	100	112	132	160	180	200	225	250	280	315
Motor protection			High Efficiency IE2	1LE1501	1LE1501 Basic Line ①												
				1LE1601	1LE1601 Performance Line ②												
			IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ③												
				1LE1603	1LE1603 Performance Line ④												
			NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑤												
				1LE1621	1LE1621 Eagle Line Performance ⑥												
			NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑦												
				1LE1623	1LE1623 Eagle Line Performance ⑧												
1LE1..... Order code			Motor version	Motor type	Frame size												
					71	80	90	100	112	132	160	180	200	225	250	280	315
Motor protection (winding protection)																	
Without motor protection ¹⁾	A	–	All except ②, ④, ⑥ and ⑧	All	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Motor protection with PTC thermistor with 3 embedded temperature sensors for tripping ^{1) 2)}	B	–	Standard version for Performance Line ②, ④, ⑥ and ⑧	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping ²⁾	C	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor temperature detection with embedded temperature sensor KTY 84-130 ²⁾	F	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor temperature detection with embedded temperature sensor 2 x KTY 84-130 ²⁾	G	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 3 Pt100 resistance thermometers	H	–	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 6 Pt100 resistance thermometers	J	–	All	All	–	–	–	–	–	–	–	–	–	–	–	–	–
NTC thermistors for tripping	Z	Q2A	All	All	✓	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–
Temperature detectors for tripping ²⁾	Z	Q3A	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

- ☐ Standard version
- ✓ With additional charge
- Not possible

Note:

Options are available specifically for bearing protection –
For order codes and descriptions, see from Page 2/58.

¹⁾ For the Performance Line, motor protection by means of PTC thermistors with 3 built-in temperature sensors for tripping (motor protection code B) is already included in the basic price. For the Performance Line, the option "without motor protection" (motor protection code A) is not possible.

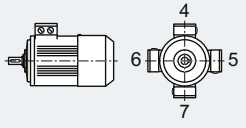
²⁾ Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended.

SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Terminal box position Aluminum series 1LE10, 1PC10

Selection and ordering data

Terminal box position		Terminal box position code 16th position of the Article No.	Additional identification code with order code and plain text if required	Motor category							
				Motor version	Motor type (alum.)	Motor type – Frame size					
						80	90	100	112	132	160
1LE10				High Efficiency IE2	1LE1001	1LE1001					
1PC10					1PC1001	1PC1001					
				IE3 Premium Efficiency	1LE1003	1LE1003					
				IE1 Standard Efficiency	1LE1002	1LE1002					
					1PC1002	1PC1002					
				NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line					
				NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line					
				Pole-changing	1LE1011	1LE1011					
					1LE1012	1LE1012					
			Order code	Motor version	Motor type	Frame size					
						80	90	100	112	132	160
Terminal box position											
Terminal box top ¹⁾	4	–		All	All	☐	☐	☐	☐	☐	☐
Terminal box on RHS ²⁾	5	–		All	All	✓	✓	✓	✓	✓	✓
Terminal box on LHS ²⁾	6	–		All	All	✓	✓	✓	✓	✓	✓
Terminal box at bottom ^{2) 3)}	7	–		All	All	–	–	✓	✓	✓	✓

- ☐ Standard version
- ✓ With additional charge
- Not possible

2

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

²⁾ For types of construction with feet and flange-mounted with feet, screwed-on feet are standard.
For types of construction with feet and flange-mounted with feet, cast feet are standard. Screwed-on feet are available with order code **H01**.

³⁾ Not generally possible for motors with feet.

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Terminal box position

Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Selection and ordering data

Terminal box position	Terminal box position code 16th position of the Article No.	Additional identification code with order code and plain text if required	Motor category														
			Motor version	Motor type (cast-iron)	Motor type – Frame size												
					71	80	90	100	112	132	160	180	200	225	250	280	315
			High Efficiency IE2	1LE1501	1LE1501 Basic Line ①												
				1LE1601	1LE1601 Performance Line ②												
			IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ③												
				1LE1603	1LE1603 Performance Line ④												
			NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑤												
				1LE1621	1LE1621 Eagle Line Performance ⑥												
			NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑦												
				1LE1623	1LE1623 Eagle Line Performance ⑧												
1LE1.....			Order code	Motor version	Motor type	Frame size											
					71	80	90	100	112	132	160	180	200	225	250	280	315
Terminal box position																	
Terminal box top ¹⁾	4	–	All	All	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Terminal box on RHS ²⁾	5	–	All	All	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminal box on LHS ²⁾	6	–	All	All	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminal box at bottom ³⁾	7	–	All	All	–	–	–	✓	✓	✓	✓	–	–	–	–	–	–

- ☐ Standard version
- ✓ With additional charge
- Not possible

2

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

²⁾ For types of construction with feet and flange-mounted with feet, screwed-on feet are standard. Except for frame sizes 225, 250, 280 and 315: in which case for types of construction with feet and flange-mounted with feet, cast feet are standard. Screwed-on feet are available with order code **H01**.

³⁾ Not generally possible for motors with feet.

SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Options Aluminum series 1LE10, 1PC10

Selection and ordering data

Special versions	Additional identification code -Z with order code and plain text if required	Motor category								
		Motor version	Motor type (alum.)	Motor type – Frame size						
				80	90	100	112	132	160	
		High Efficiency IE2	1LE1001 1PC1001	1LE1001 ①						1PC1001 ②
		IE3 Premium Efficiency	1LE1003	1LE1003 ③						
		IE1 Standard Efficiency	1LE1002	1LE1002 ④						
			1PC1002	1PC1002 ⑤						
		NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line ⑥						
		NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line ⑦						
		Pole-changing	1LE1011	1LE1011 ⑧						
			1LE1012	1LE1012 ⑨						
1LE10 -Z 1PC10 -Z	Order code	Motor version	Motor type	Frame size						
				80	90	100	112	132	160	
Motor connection and terminal box										
External grounding	H04	All	All	✓	✓	✓	✓	✓	✓	
Terminal box on NDE ³⁾	H08	All	All	✓	✓	✓	✓	✓	✓	
Rotation of the terminal box through 90°, entry from DE ¹⁾	R10	All	All	○	○	○	○	○	○	
Rotation of the terminal box through 90°, entry from NDE	R11	All	All	○	○	○	○	○	○	
Rotation of the terminal box through 180°	R12	All	All	○	○	○	○	○	○	
One metal cable gland	R15	All	All	✓	✓	✓	✓	✓	✓	
3 cables protruding, 0.5 m long ⁴⁾⁵⁾	R20	All except ⑧ and ⑨		✓	✓	✓	✓	✓	✓	
3 cables protruding, 1.5 m long ⁴⁾⁵⁾	R21	All except ⑧ and ⑨		✓	✓	✓	✓	✓	✓	
6 cables protruding, 0.5 m long ⁴⁾	R22	All	All	✓	✓	✓	✓	✓	✓	
6 cables protruding, 1.5 m long ⁴⁾	R23	All	All	✓	✓	✓	✓	✓	✓	
6 cables protruding, 3 m long ⁴⁾	R24	All	All	✓	✓	✓	✓	✓	✓	
Reduction piece for M cable gland in accordance with British Standard, both cable entries mounted ²⁾	R30	All	All	–	–	✓	✓	✓	✓	
Larger terminal box	R50	All, standard version for Eagle Line ⑥ and ⑦ < frame size 100		✓	✓	✓	✓	✓	✓	
Motor connector Han-Drive 10e for 230 VΔ/400 VY ³⁰⁾	R70	All	All	✓	✓	✓	✓	✓	–	
Motor connector Han-Drive 10e EMC for 230 VΔ/400 VY ³⁰⁾	R71	All	All	✓	✓	✓	✓	✓	–	
Small motor connector CQ12 with EMC	R72	All	All	✓	✓	–	–	–	–	
Small motor connector CQ12 without EMC	R73	All	All	✓	✓	–	–	–	–	
Windings and insulation										
Temperature class 155 (F), utilized acc. to 155 (F), with service factor (SF)	N01	All	All	–	–	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 155 (F), with increased output	N02	All	All	–	–	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 155 (F), with increased coolant temperature	N03	All	All	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 %	N05	All	All	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 %	N06	All	All	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 %	N07	All	All	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N08	All	All	✓	✓	✓	✓	✓	✓	
Temperature class H	N10 <i>New!</i>	All	All	✓	✓	–	–	–	–	
Temperature class 180 (H) at rated output and max. CT 60 °C ⁶⁾	N11	All	All	✓	✓	✓	✓	✓	✓	
Increased air humidity/temperature with 30 to 60 g water per m ³ of air	N20	All	All	✓	✓	✓	✓	✓	✓	
Increased air humidity/temperature with 60 to 100 g water per m ³ of air	N21	All	All	✓	✓	✓	✓	✓	✓	

For legends and footnotes, see Page 2/57.

SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Options

Aluminum series 1LE10, 1PC10

2

Special versions	Additional identification code -Z with order code and plain text if required	Motor category							
		Motor version	Motor type (alum.)	Motor type – Frame size					
				80	90	100	112	132	160
		High Efficiency IE2	1LE1001	1LE1001 ①					
			1PC1001			1PC1001 ②			
		IE3 Premium Efficiency	1LE1003	1LE1003 ③					
		IE1 Standard Efficiency	1LE1002			1LE1002 ④			
			1PC1002			1PC1002 ⑤			
		NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line ⑥					
		NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line ⑦					
		Pole-changing	1LE1011			1LE1011 ⑧			
			1LE1012			1LE1012 ⑨			
		1LE10 ... -Z							
		1PC10 ... -Z							
	Order code	Motor version	Motor type	Frame size					
				80	90	100	112	132	160
Windings and insulation (continued)									
Temperature class 155 (F), utilized acc. to 130 (B), with higher coolant temperature and/or site altitude	Y50 • and specified output, CT ... °C or SA ... m above sea level	All	All	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), utilized according to 155 (F), other requirements	Y52 • and identification code	All	All	✓	✓	✓	✓	✓	✓
Colors and paint finish									
Special finish in RAL 7030 stone gray		All	All	□	□	□	□	□	□
Unpainted (only cast-iron parts primed)	S00	All	All	○	○	○	○	○	○
Unpainted, only primed	S01	All	All	✓	✓	✓	✓	✓	✓
Special finish sea air resistant	S03	All	All	–	–	✓	✓	✓	✓
Special finish in special RAL colors: For RAL colors, see "Special finish in special RAL colors" (see Catalog Section 1 "Introduction")	Y51 • and special finish RAL....	All	All	✓	✓	✓	✓	✓	✓
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 (see Catalog Section 1 "Introduction")	Y54 • and special finish RAL....	All	All	✓	✓	✓	✓	✓	✓
Modular technology – Basic versions 7)									
Mounting of holding brake (standard assignment) 8) 28)	F01	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓
Mounting of brake for higher switching frequency (operating brake)	F02	All	All	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Mounting of separately driven fan 29)	F70	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓
Mounting of 1XP8012-10 (HTL) rotary pulse encoder 9) 10)	G01	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓
Mounting of 1XP8012-20 (TTL) rotary pulse encoder 9) 10)	G02	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓
Modular technology – Additional versions									
Brake supply voltage 24 V DC	F10	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓
Brake supply voltage 230 V AC, 50/60 Hz	F11	All except ②, ⑤ and in combination with order code F90		✓	✓	○	○	○	○
Brake supply voltage 400 V AC, 50/60 Hz	F12	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓
Mechanical manual brake release with lever (no locking)	F50	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓
Special technology 6)									
Mounting of LL 861 900 220 rotary pulse encoder 9)	G04	All except ②, ⑤ and in combination with order code F90		–	–	✓	✓	✓	✓
Mounting of HOG 9 D 1024 I rotary pulse encoder 9)	G05	All except ②, ⑤ and in combination with order code F90		–	–	✓	✓	✓	✓
Mounting of HOG 10 D 1024 I rotary pulse encoder 9)	G06	All except ②, ⑤ and in combination with order code F90		–	–	✓	✓	✓	✓
Mechanical design and degrees of protection									
Low-noise version for 2-pole motors with clockwise direction of rotation	F77	All except ②, ⑤ and in combination with order code F90		–	–	–	–	✓	✓
Low-noise version for 2-pole motors with counter-clockwise direction of rotation	F78	All except ②, ⑤ and in combination with order code F90		–	–	–	–	✓	✓
Prepared for mountings, center hole only 10)	G40	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓

For legends and footnotes, see Page 2/57.

SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Options Aluminum series 1LE10, 1PC10

2

Special versions	Additional identification code -Z with order code and plain text if required	Motor category								
		Motor version	Motor type (alum.)	Motor type – Frame size						
				80	90	100	112	132	160	
		High Efficiency IE2	1LE1001	1LE1001 ①						
			1PC1001			1PC1001 ②				
		IE3 Premium Efficiency	1LE1003	1LE1003 ③						
		IE1 Standard Efficiency	1LE1002			1LE1002 ④				
			1PC1002			1PC1002 ⑤				
		NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line ⑥						
		NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line ⑦						
		Pole-changing	1LE1011			1LE1011 ⑧				
			1LE1012			1LE1012 ⑨				
		1LE10 -Z								
		1PC10 -Z								
	Order code	Motor version	Motor type	Frame size						
				80	90	100	112	132	160	
Mechanical design and degrees of protection (continued)										
Prepared for mountings with D12 shaft ¹⁵⁾	G41	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓	
Prepared for mountings with D16 shaft ¹⁵⁾	G42	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓	
Protective cover for encoder (supplied loose – only for mountings with order codes G40, G41 and G4 ²⁾)	G43	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓	
Protective cover ^{9) 11)}	H00	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓	
Screwed-on (instead of cast) feet	H01	All	All	✓	✓	✓	✓	✓	✓	
Vibration-proof version	H02	All	All	–	–	✓	✓	✓	✓	
Condensation drainage holes ¹⁴⁾	H03	All	All	✓	✓	✓	✓	✓	✓	
Rust-resistant screws (externally)	H07	All	All	–	–	✓	✓	✓	✓	
Housing with screw mounting	H10	Only possible for ③, ⑥ and ⑦		✓	✓	–	–	–	–	
IP65 degree of protection ¹³⁾	H20	All	All	✓	✓	✓	✓	✓	✓	
IP56 degree of protection ¹²⁾	H22	All	All	✓	✓	✓	✓	✓	✓	
Drive-end seal for flange-mounting motors, oil-tight to 0.1 bar ¹¹⁾	H23	All	All	✓	✓	✓	✓	✓	✓	
Next larger standard flange	P01	All	All	–	–	✓	✓	✓	–	
Next smaller standard flange	P02	All	All	–	–	O. R.	O. R.	O. R.	O. R.	
Coolant temperature and site altitude										
Coolant temperature –40 to +40 °C ^{16) 28)}	D03	All	All	✓	✓	✓	✓	✓	✓	
Coolant temperature –30 to +40 °C ^{16) 28)}	D04	All	All	✓	✓	✓	✓	✓	✓	
Designs in accordance with standards and specifications										
VIK version	C02	Only possible for ① and ③		–	–	✓	✓	✓	✓	
IE1 motor without CE marking for export outside EEA (see EU Directive 640/200 ⁹⁾)	D22	Only possible for ④ and ⑤		–	–	○	○	○	○	
Electrical according to NEMA MG1-12 ¹⁸⁾	D30	All, standard version for ⑥ and ⑦		✓	✓	✓	✓	✓	✓	
Design according to UL with "Recognition Mark" ¹⁹⁾	D31	All, standard version for ⑥ and ⑦		✓	✓	✓	✓	✓	✓	
China Energy Efficiency Label	D34	Only possible for ① and ②		–	–	○	○	○	○	
Canadian regulations (CSA) ¹⁷⁾	D40	All, standard version for ⑥ and ⑦		✓	✓	✓	✓	✓	✓	
Train-compatible version	L82	All except ② and ⑤		✓	✓	✓	✓	✓	✓	
Bearings and lubrication										
Located bearing DE	L20	All	All	✓	✓	✓	✓	✓	✓	
Located bearing NDE	L21	All	All	✓	✓	✓	✓	✓	□	
Bearing design for increased cantilever forces	L22	All	All	–	–	✓	✓	✓	✓	
Regreasing device ²⁰⁾	L23	All	All	–	–	✓	✓	✓	✓	
Special bearing for DE and NDE, bearing size 63	L25	All	All	–	–	✓	✓	✓	✓	
Measuring nipple for SPM shock pulse measurement for bearing inspection ²⁰⁾	Q01	All	All	–	–	✓	✓	✓	✓	
Balance and vibration quantity										
Vibration severity grade A		All	All	□	□	□	□	□	□	
Vibration quantity level B	L00	All	All	✓	✓	✓	✓	✓	✓	
Half-key balancing (standard)		All	All	□	□	□	□	□	□	
Balancing without key	L01	All	All	✓	✓	✓	✓	✓	✓	
Full-key balancing	L02	All	All	✓	✓	✓	✓	✓	✓	

SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Options Aluminum series 1LE10, 1PC10

2

Special versions	Additional identification code -Z with order code and plain text if required	Motor category							
		Motor version	Motor type (alum.)	Motor type – Frame size					
				80	90	100	112	132	160
		High Efficiency IE2	1LE1001	1LE1001 ①					
			1PC1001			1PC1001 ②			
		IE3 Premium Efficiency	1LE1003	1LE1003 ③					
		IE1 Standard Efficiency	1LE1002			1LE1002 ④			
			1PC1002			1PC1002 ⑤			
		NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line ⑥					
		NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line ⑦					
		Pole-changing	1LE1011			1LE1011 ⑧			
			1LE1012			1LE1012 ⑨			
	1LE10 .....-Z 1PC10 .....-Z	Motor version	Motor type	Frame size					
				80	90	100	112	132	160
Shaft and rotor									
Shaft extension with standard dimensions, without feather keyway	L04	All	All	–	–	✓	✓	✓	✓
Second standard shaft extension	L05	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓
Standard shaft made of stainless steel	L06	All	All	✓	✓	✓	✓	✓	✓
Concentricity of shaft extension in accordance with DIN 42955 Tolerance R	L07	All	All	✓	✓	✓	✓	✓	✓
Concentricity of shaft extension, coaxiality and linear movement in accordance with DIN 42955 Tolerance R for flange-mounting motors	L08	All	All	✓	✓	✓	✓	✓	✓
Non-standard shaft extension, DE ²¹⁾	Y58 • and identification code	All	All	✓	✓	✓	✓	✓	✓
Non-standard shaft extension, NDE ²¹⁾	Y59 • and identification code	All	All	✓	✓	✓	✓	✓	✓
Heating and ventilation									
Sheet metal fan cover	F74	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓
Fan cover for textile industry ²²⁾	F75	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓
Metal external fan ^{23) 29)}	F76	All except ②, ⑤ and in combination with order code F90		✓	✓	✓	✓	✓	✓
Without external fan and without fan cover	F90	All except ②, ⑤, ⑧ and ⑨		✓	✓	✓	✓	✓	✓
Anti-condensation heating for 230 V	Q02	All	All	✓	✓	✓	✓	✓	✓
Anti-condensation heating for 115 V	Q03	All	All	–	–	✓	✓	✓	✓
Rating plate and extra rating plates									
Extra rating plate for voltage tolerance ²⁴⁾	B07	All except ②, ⑤, ⑧, ⑨ and 8-pole motors		✓	✓	✓	✓	✓	✓
Second rating plate, loose ²⁵⁾	M10	All	All	✓	✓	✓	✓	✓	✓
Rating plate, stainless steel	M11	All	All	✓	✓	✓	✓	✓	✓
Extra rating plate or rating plate with deviating rating plate data	Y80 • and identification code	All	All	✓	✓	✓	✓	✓	✓
Extra rating plate with identification codes	Y82 • and identification code	All	All	✓	✓	✓	✓	✓	✓
Additional information on rating plate and on package label (max. 20 characters)	Y84 • and identification code	All	All	✓	✓	✓	✓	✓	✓
Adhesive label, supplied loose (Printed with: Article No., Serial No.: 2 lines of text)	Y85 • and identification code	All	All	–	–	✓	✓	✓	✓
Packaging, safety notes, documentation and test certificates									
Printed German/English Operating Instructions (Compact) enclosed ²⁷⁾		All	All	□	□	□	□	□	□
Printed German/English Operating Instructions (Compact) enclosed in each wire-lattice pallet ²⁷⁾	B01	All	All	○	○	○	○	○	○
Acceptance test certificate 3.1 according to EN 10204 ²⁶⁾	B02	All	All	✓	✓	✓	✓	✓	✓
Printed German/English operating instructions enclosed	B04	All	All	✓	✓	✓	✓	✓	✓
Document - Electrical data sheet	B60	All	All	✓	✓	✓	✓	✓	✓

For legends and footnotes, see Page 2/57.

SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Options
Aluminum series 1LE10, 1PC10

2

Special versions	Additional identification code -Z with order code and plain text if required	Motor category								
		Motor version	Motor type (alum.)	Motor type – Frame size						
				80	90	100	112	132	160	
		High Efficiency IE2	1LE1001	1LE1001 ①						
			1PC1001			1PC1001 ②				
		IE3 Premium Efficiency	1LE1003	1LE1003 ③						
		IE1 Standard Efficiency	1LE1002			1LE1002 ④				
			1PC1002			1PC1002 ⑤				
		NEMA Energy Efficient	1LE1021	1LE1021 Eagle Line ⑥						
		NEMA Premium Efficient	1LE1023	1LE1023 Eagle Line ⑦						
		Pole-changing	1LE1011			1LE1011 ⑧				
			1LE1012			1LE1012 ⑨				
		Motor version	Motor type	Frame size						
				80	90	100	112	132	160	
1LE10 -Z										
1PC10 -Z Order code										
Packaging, safety notes, documentation and test certificates (continued)										
Document - Order dimensional drawing	B61	All	All	✓	✓	✓	✓	✓	✓	
Type test with heat run for horizontal motors, with acceptance	B83	All	All	✓	✓	✓	✓	✓	✓	
Wire-lattice pallet packaging	B99	All	All	○	○	○	○	○	○	
Connected in star for dispatch	M01	All	All	–	–	✓	✓	✓	✓	
Connected in delta for dispatch	M02	All	All	–	–	✓	✓	✓	✓	

- Standard version
- Without additional charge
- This order code only determines the price of the version – Additional plain text is required.
- ✓ With additional charge
- R. Possible on request
- Not possible

1) With IM B5 flange, only possible in combination with **H08**.

2) Not possible in combination with order code **R15** "One metal cable gland".

3) With **H08**, feet dimensions C and CA differ from EN 50347! Further information is available in DT Configurator (see Appendix, "Tools and Configuring").

4) In combination with motor protection (15th position of the Article No.) or anti-condensation heating option, please inquire before ordering.

5) Not possible in combination with voltage code **22** or **34**.

6) Cannot be used for motors in UL version (order code **D31**). The grease lifetime specified in Catalog Section 1 "Introduction" refers to CT 40 °C. When the coolant temperature rises by 10 K, the grease service lifetime or relubrication interval is halved.

7) A second shaft extension is not possible. Please inquire for mounted brakes.

8) For order codes **F10**, **F11** and **F12**, the brake supply voltage must be specified or ordered.

9) All encoders are supplied with a protective cover as standard. The protective cover is omitted at the factory when a rotary pulse encoder is combined with a separately driven fan, because in this case the rotary pulse encoder is installed under the fan cover. In combination with a separately driven fan (order code **F70**) the 1XP8032-10 rotary pulse encoder is used instead of 1XP8012-10 or 1XP8032-20 is used instead of 1XP8012-20.

10) Motors that are prepared for additional mountings (order codes **G40**, **G41**, **G42**) are supplied without a protective cover as standard. If a protective cover is requested as a cover or mechanical protection for mountings provided by the customer, this can be ordered with order code **G43**. Not possible in combination with order code **L00** vibration quantity level B. In combination with a separately driven fan (order code **F70**) the 1XP8032-10 rotary pulse encoder is used instead of 1XP8012-10 or 1XP8032-20 is used instead of 1XP8012-20.

11) Order code **H00** provides mechanical protection for encoders.

12) Not possible in combination with brake 2LM8 – order code **F01**.

13) Not possible in combination with HOG 9 D 10241 rotary pulse encoder (order code **G05**) and/or brake 2LM8 (order code **F01**).

14) Supplied with the condensation drainage holes sealed at the drive end DE and non-drive end NDE (IP55, IP56, IP65). If the condensation drainage holes are required for motors of the IM B6, IM B7 or IM B8 type of construction (feet on side or top), the motors must be ordered in the respective type of construction and with order code **H03**, so that the condensation drainage holes will be placed in the correct position.

15) Motors that are prepared for additional mountings (order codes **G40**, **G41**, **G42**) are supplied without a protective cover as standard. If a protective cover is requested as a cover or mechanical protection for mountings provided by the customer, this can be ordered with order code **G43**. Not possible in combination with order code **L00** vibration quantity level B.

16) Not possible for type of construction IM V3.

17) CCC certification is required for
– 2-pole motors ≤2.2 kW
– 4-pole motors ≤1.1 kW
– 6-pole motors ≤0.75 kW
– 8-pole motors ≤0.55 kW

18) Possible up to 600 V max. The rated voltage is indicated on the rating plate without voltage range. Order codes **D30** and **D31** do not authorize importing into USA and Mexico. The North America export versions Eagle Line 1LE1021 NEMA Energy Efficient and 1LE1023 NEMA Premium Efficient are available for this purpose.

19) In connection with mountings, the respective technical specifications must be observed, please inquire before ordering.

20) Not possible when brake is mounted.

21) When motors are ordered that have a longer or shorter shaft extension than normal, the required position and length of the feather keyway must be specified in a sketch. It must be ensured that only feather keys in accordance with DIN 6885, Form A are permitted to be used. The feather keyway 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 feather keys are supplied in every case. For order codes **Y58**, **Y59** and **L05**:

– Dimensions D and DA ≤ Inner diameter of roller bearing (see tables under "Dimensions")
– Dimensions E and EA ≤ 2 × length E (normal) of the shaft extension.

22) The special requirements of the textile industry regarding the sheet metal cover open up the possibility that a finger may be inserted between the cover and enclosure. The customer must implement appropriate measures to ensure that the installed system is "finger-safe".

23) Converter-fed operation is permitted for 1LE1 motors with metal external fans. The metal external fan is not possible in combination with the low-noise version – order code **F77** or **F78**.

24) Can be ordered for 230 VΔ/400 VY or 400 VΔ/690 VY (voltage code **"22"** or **"34"**). Not possible in combination with order code **D34**.

25) As adhesive label for frame sizes 80 and 90.

26) The delivery time for the factory test certificate may differ from the delivery time for the motor and it will be dispatched by email.

27) The Operating Instructions (compact) are available in PDF format for all official EU languages at <http://support.automation.siemens.com/WWW/view/en/40761976>.

28) Not possible in combination with order code **N05**, **N06**, **N07**, **N08** and **N11**.

29) Order codes **F70** and **F76** cannot be combined.

30) When ordering with order code **R70** and **R71**, order code **R50** is included.

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Options

Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

Selection and ordering data

Special versions	Additional identification code -Z with order code and plain text if required	Motor category														
		Motor version	Motor type (cast-iron)	Motor type – Frame size												
				71	80	90	100	112	132	160	180	200	225	250	280	315
		High Efficiency IE2	1LE1501	1LE1501 Basic Line ①												
			1LE1601	1LE1601 Performance Line ②												
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ③												
			1LE1603	1LE1603 Performance Line ④												
		NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑤												
			1LE1621	1LE1621 Eagle Line Performance ⑥												
		NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑦												
			1LE1623	1LE1623 Eagle Line Performance ⑧												
1LE1...-.....-Z Order code		Motor version	Motor type	Frame size												
				71	80	90	100	112	132	160	180	200	225	250	280	315
Motor protection (bearing protection)																
Prepared for mounting a SIPLUS CMS 1000 vibration sensor	Q05	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2 x 3 temperature detectors for alarm and tripping	Q32	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 1 Pt100 resistance thermometer in stator winding, two-wire circuit	Q62	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 3 Pt100 resistance thermometers in stator winding, three-wire circuit ³⁰⁾	Q63	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 6 Pt100 resistance thermometers in stator winding, three-wire circuit ³⁰⁾	Q64	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 2 Pt100 screw-in resistance thermometers in basic circuit for rolling-contact bearings ²⁾	Q72	All	All	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
Installation of 2 Pt100 screw-in resistance thermometers in 3-wire circuit for rolling-contact bearings	Q78	All	All	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
Installation of 2 Pt100 double screw-in resistance thermometers in 3-wire circuit for rolling-contact bearings	Q79	All	All	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
Motor connection and terminal box																
External grounding	H04	All	All	✓	✓	✓	✓	✓	✓	✓	□	□	□	□	□	□
Terminal box on NDE ²⁷⁾	H08	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second external grounding	H70	All	All	-	-	-	O.R.	O.R.	O.R.	O.R.	✓	✓	✓	✓	✓	✓
Rotation of the terminal box through 90°, entry from DE	R10	All	All	○	○	○	○	○	○	○	✓	✓	✓	✓	✓	✓
Rotation of the terminal box through 90°, entry from NDE	R11	All	All	○	○	○	○	○	○	○	✓	✓	✓	✓	✓	✓
Rotation of the terminal box through 180°	R12	All	All	○	○	○	○	○	○	○	✓	✓	✓	✓	✓	✓
One EMC cable gland	R14	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
One metal cable gland	R15	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EMC cable gland, maximum configuration	R16	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stud terminal for cable connection, accessories pack (3 items)	R17	All	All	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓
Cable gland, maximum configuration	R18	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Saddle terminal for connection without cable lug, accessories pack	R19	All	All	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓
3 cables protruding, 0.5 m long	R20	<i>New!</i> All	All	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
3 cables protruding, 1.5 m long	R21	All	All	✓	✓	✓	✓	✓	✓	✓	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.
6 cables protruding, 0.5 m long	R22	<i>New!</i> All	All	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
6 cables protruding, 1.5 m long	R23	All	All	✓	✓	✓	✓	✓	✓	✓	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.
6 cables protruding, 3 m long	R24	All	All	✓	✓	✓	✓	✓	✓	✓	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.
Reduction piece for M cable gland in accordance with British Standard, mounted on both cable entry openings	R30	<i>New!</i> All	All	-	-	-	✓	✓	✓	✓	-	-	-	-	-	-
Larger terminal box	R50	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminal box without cable entry opening	R51	All	All	-	-	-	○	○	○	○	○	○	○	○	○	○
Drilled removable entry plate	R52	All	All	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓

For legends, see Page 2/63; for footnotes, see Page 2/64.

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Options

Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line



Special versions	Additional identification code -Z with order code and plain text if required	Motor category																	
		Motor version	Motor type (cast-iron)	Motor type – Frame size															
				71	80	90	100	112	132	160	180	200	225	250	280	315			
		High Efficiency IE2	1LE1501	1LE1501 Basic Line ①															
			1LE1601										1LE1601 Performance Line ②						
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ③															
			1LE1603										1LE1603 Performance Line ④						
		NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑤															
			1LE1621										1LE1621 Eagle Line Performance ⑥						
		NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑦															
			1LE1623										1LE1623 Eagle Line Performance ⑧						
	1LE1. - Z	Order code	Motor version	Motor type	Frame size														
					71	80	90	100	112	132	160	180	200	225	250	280	315		
Motor connection and terminal boxes (continued)																			
Undrilled removable entry plate	R53	All	All	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓		
Cast-iron auxiliary terminal box (small 27)	R62	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Silicon-free version	R74	All	All	-	-	-	□	□	□	□	□	□	□	□	□	□	□		
Non-standard threaded through hole (NPT or G thread)	Y61 • and identification code	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Windings and insulation																			
Temperature class 155 (F), utilized acc. to 155 (F), with service factor	N01	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 155 (F), with increased output	N02	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 155 (F), with increased coolant temperature	N03	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 %	N05	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 %	N06	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 %	N07	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N08	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 180 (H)	N10 <i>New!</i>	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 180 (H) at rated output and max. CT 60 °C ^{4) 5)}	N11	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Increased air humidity/temperature with 30 to 60 g water per m ³ of air	N20	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Increased air humidity/temperature with 60 to 100 g water per m ³ of air	N21	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), with higher coolant temperature and/or site altitude	Y50 • and specified output, CT ... °C or SA ... m above sea level	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 155 (F), other requirements ⁵⁾	Y52 • and identification code	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 180 (H), utilized according to 155 (F)	Y75 • and specified output, CT ... °C or SA ... m above sea level	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Colors and paint finish																			
Standard finish in RAL 7030 stone gray			Only possible for Basic Line ①, ③, ⑤, and ⑦	□	□	□	□	□	□	□	□	□	□	□	□	□	□		
Unpainted (only cast-iron parts primed)	S00	All	All	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Unpainted, only primed	S01	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special finish sea air resistant	S03	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special paint for use offshore	S04	All	All	✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Internal coating	S05	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special finish in RAL 7030 stone gray	S10	All	All, standard version for Performance Line ②, ④, ⑥ and ⑧	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special finish in special RAL colors: For RAL colors, see "Special finish in special RAL colors" (see Catalog Section 1 "Introduction")	Y51 • and special finish RAL....	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

For legends, see Page 2/63; for footnotes, see Page 2/64.

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Options Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

2

Special versions	Additional identification code -Z with order code and plain text if required	Motor category															
		Motor version	Motor type (cast-iron)	Motor type – Frame size													
					71	80	90	100	112	132	160	180	200	225	250	280	315
		High Efficiency IE2	1LE1501	1LE1501 Basic Line ①													
			1LE1601	1LE1601 Performance Line ②													
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ③													
			1LE1603	1LE1603 Performance Line ④													
		NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑤													
			1LE1621	1LE1621 Eagle Line Performance ⑥													
		NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑦													
			1LE1623	1LE1623 Eagle Line Performance ⑧													
1LE1. -Z Order code			Motor version	Motor type	Frame size												
					71	80	90	100	112	132	160	180	200	225	250	280	315
Colors and paint finish (continued)																	
Standard finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005 (see Catalog Section 1 "Introduction")	Y53 • and standard finish RAL....	Only possible for Basic Line ①, ③, ⑤ and ⑦			✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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 (see Catalog Section 1 "Introduction")	Y54 • and special finish RAL....	All	All		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Modular technology – Basic versions ⑥)																	
Mounting of holding brake (standard assignment) 31) 32)	F01	All	All		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Backstop, counter-clockwise motion blocked, clockwise direction of rotation	F40	All	All		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Backstop, clockwise motion blocked, counter-clockwise direction of rotation	F41	All	All		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mounting of separately driven fan 28)	F70	All	All		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mounting of 1XP8012-10 (HTL) rotary pulse encoder 8) 9)	G01	All	All		✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mounting of 1XP8012-20 (TTL) rotary pulse encoder 8) 9)	G02	All	All		✓ ^{*)}	✓ ^{*)}	✓ ^{*)}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Modular technology – Additional versions																	
Brake supply voltage 24 V DC	F10	All	All		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brake supply voltage 230 V AC, 50/60 Hz	F11	All	All		-	-	-	○	○	○	○	○	○	○	○	○	○
Brake supply voltage 400 V AC, 50/60 Hz 32)	F12	All	All		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mechanical manual brake release with lever (no locking)	F50	All	All		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Special technology ⑤)																	
Mounting of LL 861 900 220 rotary pulse encoder 10)	G04	All	All		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mounting of HOG 9 D 1024 I rotary pulse encoder 10)	G05	All	All		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mounting of HOG 10 D 1024 I rotary pulse encoder 10)	G06	All	All		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mounting of POG10D rotary pulse encoder (only in combination with separately driven fan or brake) 1)	G07	All	All		-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
Mounting of POG9 rotary pulse encoder (only in combination with separately driven fan or brake) 11)	G08	All	All		-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
Mounting of rotary pulse encoder HOG 10 DN 1024 I, terminal box moisture protection	G15 <i>New!</i>	All except in combination with order code F90			-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mounting of rotary pulse encoder HOG 10 DN 1024 I, terminal box dust protection	G16 <i>New!</i>	All except in combination with order code F90			-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mounting of a special type of rotary pulse encoder	Y70 • and identification code	All	All		-	-	-	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Mounting of rotary pulse encoder HOG 10 DN 1024 I + FSL, (speed ... rpm), terminal box moisture protection	Y74 • and requ. speed rpm	All except in combination with order code F90			-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓

For legends, see Page 2/63; for footnotes, see Page 2/64.

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Options

Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

2

Special versions	Additional identification code -Z with order code and plain text if required	Motor category														
		Motor version	Motor type (cast-iron)	Motor type – Frame size												
				71	80	90	100	112	132	160	180	200	225	250	280	315
		High Efficiency IE2	1LE1501	1LE1501 Basic Line ①												
			1LE1601	1LE1601 Performance Line ②												
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ③												
			1LE1603	1LE1603 Performance Line ④												
		NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑤												
			1LE1621	1LE1621 Eagle Line Performance ⑥												
		NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑦												
			1LE1623	1LE1623 Eagle Line Performance ⑧												
1LE1. -Z Order code		Motor version	Motor type	Frame size												
				71	80	90	100	112	132	160	180	200	225	250	280	315
Special technology ⁵⁾ (continued)																
Mounting of rotary pulse encoder HOG 10 DN 1024 I + FSL, (speed ... rpm), terminal box dust protection	Y76 • and requ. speed rpm	All except in combination with order code F90		-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
Mounting of rotary pulse encoder HOG 10 DN 1024 I + ESL 93, (speed rpm), terminal box dust protection	Y79 • and requ. speed (max 3) rpm	All except in combination with order code F90		-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
Mechanical design and degrees of protection																
Low-noise version for 2-pole motors with clockwise direction of rotation	F77	All	All	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓
Low-noise version for 2-pole motors with counter-clockwise direction of rotation	F78	All	All	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
Prepared for mountings, center hole only	G40	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	✓	✓	✓	✓	□	□	□	□	□	□
Prepared for mountings with D12 shaft	G41	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Prepared for mountings with D16 shaft	G42	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Protective cover for encoder (supplied loose – only for mountings with order codes G40, G41 and G4 ²⁾)	G43	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Protective cover ^{8) 10) 12)}	H00	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Screwed-on (instead of cast) feet	H01	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Vibration resistant version (continuous vibration resistance Class 3M4 acc. to IEC721-3-3:199 ⁴⁾)	H02	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	✓	✓	✓	✓	✓	✓	✓	✓	□	□
Condensation drainage holes	H03	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	□	□	□	□	□	□	□	□	□	□
Rust-resistant screws (externally)	H07	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IP65 degree of protection ¹⁴⁾	H20	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IP54 degree of protection	H21	All	All	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
IP56 degree of protection ¹⁵⁾	H22	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive-end seal for flange-mounting motors, oil-tight to 0.1 bar ^{13) 29)}	H23	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Grounding brush for converter-fed operation	L52	All	All	-	-	-	-	-	-	-	-	-	-	-	✓	✓
Next larger standard flange	P01	All	All	-	-	-	✓	✓	✓	-	-	-	-	-	-	-
Coolant temperature and site altitude																
Coolant temperature -50 to +40 °C	D02	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Coolant temperature -40 to +40 °C ¹⁶⁾	D03	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Coolant temperature -30 to +40 °C ¹⁷⁾	D04	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Designs in accordance with standards and specifications																
VIK version	C02	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Electrical according to NEMA MG1-12 ¹⁸⁾	D30	All, standard version for Eagle Line ⑤, ⑥, ⑦ and ⑧		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Design according to UL with "Recognition Mark" ¹⁸⁾	D31	All, standard version for Eagle Line ⑤, ⑥, ⑦ and ⑧		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
China Energy Efficiency Label	D34	All	All	-	-	-	○	○	○	○	○	○	○	○	○	○
Canadian regulations (CSA) ⁷⁾	D40	All, standard version for Eagle Line ⑤, ⑥, ⑦ and ⑧		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bearings and lubrication																
Regreasing device with M10X1 grease nipple according to DIN 71412-A	L19 <i>New!</i>	All, for Performance Line ②, ④, ⑥ and ⑧ without add. charge		-	-	-	-	-	-	-	✓	✓	✓	✓	○	○
Located bearing DE	L20	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Located bearing NDE	L21	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	✓	✓	✓	□	□	□	□	□	□	□
Bearing design for increased cantilever forces	L22	All	All	✓ ³⁾	✓ ³⁾	✓ ³⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

For legends, see Page 2/63; for footnotes, see Page 2/64.

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Options

Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

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Special versions	Additional identification code -Z with order code and plain text if required	Motor category															
		Motor version	Motor type (cast-iron)	Motor type – Frame size													
				71	80	90	100	112	132	160	180	200	225	250	280	315	
		High Efficiency IE2	1LE1501	1LE1501 Basic Line ①													
			1LE1601	1LE1601 Performance Line ②													
		IE3 Premium Efficiency	1LE1503	1LE1503 Basic Line ③													
			1LE1603	1LE1603 Performance Line ④													
		NEMA Energy Efficient	1LE1521	1LE1521 Eagle Line Basic ⑤													
			1LE1621	1LE1621 Eagle Line Performance ⑥													
		NEMA Premium Efficient	1LE1523	1LE1523 Eagle Line Basic ⑦													
			1LE1623	1LE1623 Eagle Line Performance ⑧													
1LE1. -Z Order code		Motor version	Motor type	Frame size													
				71	80	90	100	112	132	160	180	200	225	250	280	315	
Bearings and lubrication (continued)																	
Regreasing device ¹⁾	L23	All, standard version for Performance Line FS 160 and above ②, ④, ⑥ and ⑧		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Hot bearing grease	L24	All	All	-	-	-	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	
Special bearing for DE and NDE, bearing size 63 ¹⁹⁾	L25	All, standard version for Performance Line ②, ④, ⑥ and ⑧		✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Reinforced bearings at both DE and NDE, DE bearing for increased cantilever forces	L28	All	All	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	
Increased max. speed	L37 <i>New!</i>	All	All	-	-	-	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	
Bearing insulation DE	L50	All	All	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	
Bearing insulation NDE	L51	All	All	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	
Measuring nipple for SPM shock pulse measurement for bearing inspection ¹⁾	Q01	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Balance and vibration quantity																	
Vibration severity grade A		All	All	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Vibration quantity level B ²⁰⁾	L00	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Half-key balancing (standard)		All	All	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Balancing without feather key, feather key is supplied	L01	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Full-key balancing	L02	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Shaft and rotor																	
Shaft extension with standard dimensions, without feather keyway	L04	All	All	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second standard shaft extension	L05	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Standard shaft made of stainless steel	L06	All	All	✓ ¹⁾	✓ ¹⁾	✓ ¹⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Concentricity of shaft extension in accordance with DIN 42955 Tolerance R	L07	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Concentricity of shaft extension, coaxiality and linear movement in accordance with DIN 42955 Tolerance R for flange-mounting motors	L08	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Non-standard shaft extension, DE ²¹⁾	Y58 • and identification code	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Non-standard shaft extension, NDE ²¹⁾	Y59 • and identification code	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Special shaft steel	Y60 • and identification code	All	All	-	-	-	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.
Heating and ventilation																	
Sheet metal fan cover	F74	All, standard version for Performance Line ②, ④, ⑥ and ⑧		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Metal external fan ²²⁾ / ²⁸⁾	F76	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Without external fan and without fan cover	F90 <i>New!</i>	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anti-condensation heating for 230 V	Q02	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anti-condensation heating for 115 V	Q03	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Separately driven fan with non-standard voltage and/or frequency	Y81 • and identification code	All	All	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
Rating plate and extra rating plates																	
Extra rating plate for voltage tolerance ²³⁾	B07	All, with the exception of 8-pole motors		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second rating plate, loose	M10	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rating plate, stainless steel	M11	All, for Performance Line ②, ④, ⑥ and ⑧ without add. charge		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Extra rating plate or rating plate with deviating rating plate data	Y80 • and identification code	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

For legends, see Page 2/63; for footnotes, see Page 2/64.

SIMOTICS SD 1LE1 Standard Motors

Supplements to article numbers and special versions

Options

Cast-iron series 1LE15 Basic Line, 1LE16 Performance Line

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- ^{*)} Start of delivery ex stock planned for end of 2014.
- 1) Up to frame size 160 not possible when brake is mounted.
 - 2) Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended.
 - 3) Parallel Whitworth threaded pipe DIN ISO 228 (DIN 259) BSPP (British Standard Pipe Parallel) Threaded pipe for connections not sealed in the thread (cylindrical), external = G.
 - 4) Cannot be used for motors in UL version (order code **D31**). The grease lifetime specified in Catalog Section 1 "Introduction" refers to CT 40 °C. When the coolant temperature rises by 10 K, the grease service lifetime or relubrication interval is halved.
 - 5) Not possible for 1LE15 and 1LE16 motors with increased output.
 - 6) A second shaft extension is not possible. Please inquire for mounted brakes.
 - 7) For order codes **F10**, **F11** and **F12**, the brake supply voltage must be specified or ordered.
 - 8) The 1XP8 rotary pulse encoders are fitted with a protective cover as standard. The protective cover is omitted at the factory when a rotary pulse encoder is combined with a separately driven fan, because in this case the rotary pulse encoder is installed under the fan cover.
 - 9) In combination with a separately driven fan (order code **F70**) the 1XP803210 rotary pulse encoder is used instead of 1XP8012-10 or 1XP8032-20 is used instead of 1XP8012-20.
 - 10) LL and HOG rotary pulse encoders up to frame size 160 are fitted with a protective cover as standard. The protective cover is omitted at the factory when a rotary pulse encoder is combined with a separately driven fan, because in this case the rotary pulse encoder is installed under the fan cover.
 - 11) Option (encoder mounting) is only possible for motors with a mounted separately driven fan or for naturally cooled motors (without a separately driven fan). This option can be used in combination with brakes of type KFB. This option cannot be used in combination with brakes of type 2LM8.
 - 12) Order code **H00** provides mechanical protection for encoders.
 - 13) Not possible for type of construction IM V3.
 - 14) Not possible in combination with HOG 9 D 1024l rotary pulse encoder (order code **G05**) and/or brake 2LM8 (order code **F01**).
 - 15) Not possible in combination with brake 2LM8 – order code **F01**.
 - 16) In connection with mountings, the respective technical specifications must be observed, please inquire before ordering.
 - 17) The rated voltage is indicated on the rating plate without voltage range. Order code **D40** does not authorize importing into Canada. The North America export versions Eagle Line 1LE1521/1LE1621 NEMA Energy Efficient and 1LE1523/1LE1623 NEMA Premium Efficient are available for this purpose.
 - 18) Possible up to 600 V max. The rated voltage is indicated on the rating plate without voltage range. Order codes **D30** and **D31** do not authorize importing into USA and Mexico. The North America export versions Eagle Line 1LE1521/1LE1621 NEMA Energy Efficient and 1LE1523/1LE1623 NEMA Premium Efficient are available for this purpose.
 - 19) For Performance Line motors (all frame sizes) and Basic Line motors (from frame size 280) in the standard version.
 - 20) On request for 2-pole motors (concerns frame sizes 225 to 315).
 - 21) When motors are ordered that have a longer or shorter shaft extension than normal, the required position and length of the feather keyway must be specified in a sketch. It must be ensured that only feather keys in accordance with DIN 6885, Form A are permitted to be used. The feather keyway 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 feather keys are supplied in every case. For order codes **Y58**, **Y59** and **L05**:
 - Dimensions D and DA ≤ Inner diameter of roller bearing (see tables under "Dimensions")
 - Dimensions E and EA ≤ 2 × length E (normal) of the shaft extension.
 - 22) Converter-fed operation is permitted for 1LE1 motors with metal external fans.
 - 23) Can be ordered for 230 VΔ/400 VY or 400 VΔ/690 VY (voltage code "**22**" or "**34**"). Not possible for 8-pole motors and in combination with order code **D34**.
 - 24) Wear parts (bearings) are excluded from the warranty extension.
 - 25) The delivery time for the factory test certificate may differ from the delivery time for the motor.
 - 26) The Operating Instructions (compact) are available in PDF format for all official EU languages at <http://support.automation.siemens.com/WWW/view/en/10803948/133300>.
 - 27) With **H08**, feet dimensions C and CA differ from EN 50347! Further information is available in DT Configurator (see Appendix, "Tools and Configuring").
 - 28) Order codes **F70** and **F76** cannot be combined.
 - 29) Not possible in combination with order codes **Q72** and **Q78**.
 - 30) For frame sizes 100 to 132 only possible in combination with order code **R50**.
 - 31) Not possible in combination with order codes **N05**, **N06**, **N07**, **N08** and **N11**.
 - 32) For frame size 315, when combining order codes **F01** and **F12**, the rectifier for the brake will be supplied separately as a single part.

SIMOTICS GP/SD 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Accessories

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Overview

Slide rails with fixing bolts and tensioning screws according to DIN 42923

Slide rails are used to tension the belt of a machine easily and conveniently when a belt tightener is not available. They are fixed to the base using stone bolts or foundation blocks.

The assignment of slide rails to motor size can be found in DIN 42923. For motors of frame sizes 355 to 450, there are no standardized slide rails (please inquire).

Available from:

Lütgert & Co. GmbH
Postfach 42 51
33276 Gütersloh, Germany
Tel. +49 (5241) 7407-0
Fax +49 (5241) 7407-90

www.luetgert-antriebe.de
E-mail: info@luetgert-antriebe.de

Foundation block acc. to DIN 799

The foundation blocks are inserted into the stone foundation and embedded in concrete. They are used for fixing machines of medium size, slide rails, pedestal bearings, baseframes, etc. After the fixing bolts have been unscrewed, the machine can be dragged without it having to be lifted.

When the machine is initially installed, the foundation block that is bolted to the machine (without washers) and fitted with taper pins is not embedded with concrete until the machine has been fully aligned. In this case, the machine is positioned 2 to 3 mm lower. The difference in shaft height is compensated by inserting shims on final installation. The taper pins safeguard the exact position of the machine when it is repeatedly removed and replaced without the need for realignment.

Available from:

Lütgert & Co. GmbH
Postfach 42 51
33276 Gütersloh, Germany
Tel. +49 (5241) 7407-0
Fax +49 (5241) 7407-90

www.luetgert-antriebe.de
E-mail: info@luetgert-antriebe.de

Taper pins to DIN 258 with threaded ends and constant taper lengths

Taper pins are used for components that are repeatedly removed. The drilled hole is ground conical using a conical reamer until the pin can be pushed in by hand until the cone shoulder lies approx. 3 to 4 mm above the rim of the hole.

It can then be driven in using a hammer until it is correctly seated. The pin is removed from the drilled hole by screwing on the nut and tightening it.

Standardized taper pins are available from general engineering suppliers.

Available from:

Otto Roth GmbH & Co. KG
Rutesheimer Straße 22
70499 Stuttgart, Germany
Tel. +49 (711) 1388-0
Fax. +49 (711) 1388-233

www.ottoroth.de
E-mail: info@ottoroth.de

Couplings

The motor from Siemens is connected to the machine or gear unit through a coupling. Siemens is an important coupling manufacturer with a wide range of products.

For standard applications, Siemens recommends that elastic couplings of types N-EUPEX and RUPEX or torsionally rigid couplings of types ARPEX and ZAPEX are used. For special applications, FLUDEX and ELPEX-S couplings are recommended.

Available from:

Siemens contact partner - ordering from catalog
Siemens MD 10.1 "FLENDER Standard Couplings"

or

SIEMENS AG
Kupplungswerk Mussum
Industriepark Bocholt
Schlavenhorst 100
46395 Bocholt, Germany
Tel. +49 (2871) 922185
Fax +49 (2871) 922579

www.siemens.com
E-mail: flendercouplings@siemens.com

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).
 - Spare parts will be available for up to five years.
 - Within the time period of up to five years, Siemens will provide information about spare parts and will supply documents when required.
 - Replacement motors delivered after the active production of the machine series are also identified with "Spare motor" on the rating plate. Spare parts are offered only on request for these motors.

- When repair parts are ordered, the following details must be provided:
 - Designation and part number
 - Article No. and factory number of the motor.

Example for ordering a fan cover 1LE1002, frame size 112 M, 4-pole:

Fan cover No. 7.40, 1LE1002-1BB23-4AA4-Z, factory No. E1001/5236197_01_001

- For bearing types, see Catalog section 1 "Introduction".
- Repair parts for 1MJ6, 1MJ7, 1MJ8, 1MJ1, 1ME8, 1ML8 are available on request.
- For standard components, a supply commitment does not apply.
- Support – Hotline
In Germany
Tel.: +49 (180) 5050448

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

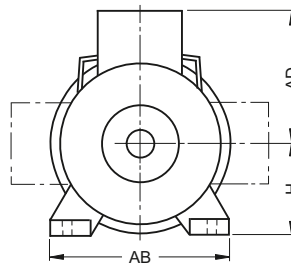
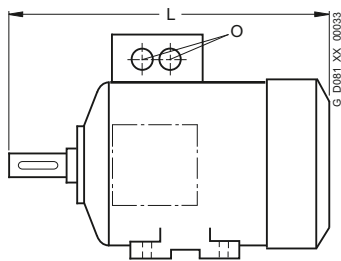
www.siemens.com/automation/service&support

SIMOTICS GP/SD 1LE1/1PC1 Standard Motors

Dimensions

Overall dimensions

Overview



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Frame size	Type	Dimension				
		L	AD	H	AB	O
71 M	Cast-iron series, self-ventilated 1LE1501, 1LE1521, 1LE1503-, 1LE1523- OCA2, OCB2, OCC2	240	148	71	132	2 × M25 × 1.5
	1LE1503-, 1LE1523- OCA3, OCB3, OCC3	280	148	71	132	2 × M25 × 1.5
80 M	Aluminum series, self-ventilated 1LE1001	292	121	80	150	1 × M25 × 1.5
	Aluminum series, forced-air cooled or naturally cooled 1LE1001	253	121	80	150	1 × M25 × 1.5
	Cast-iron series, self-ventilated 1LE1501, 1LE1521, 1LE1503-, 1LE1523- OCA2, OCB2, OCC2	292	158	80	150	2 × M25 × 1.5
	1LE1503-, 1LE1523- OCA3, OCB3, OCC3	327	158	80	150	2 × M25 × 1.5
	Aluminum series, self-ventilated 1LE1001	347	126	90	165	1 × M25 × 1.5
	Aluminum series, forced-air cooled or naturally cooled 1LE1001	295	126	90	165	1 × M25 × 1.5
90 S/ 90 L	Cast-iron series, self-ventilated 1LE1501, 1LE1521, 1LE1503-, 1LE1523- OCA2; OCB2, OCC2	347	163	90	165	2 × M25 × 1.5
	1LE1503-, 1LE1523- OCA3, OCB3, OCC3	387	163	90	165	2 × M25 × 1.5
	Aluminum series, self-ventilated 1LE1001, 1LE1002, 1LE1011, 1LE1012, 1LE1021	396 ¹⁾	166	100	196	2 × M32 × 1.5
	Aluminum series, self-ventilated with increased output 1LE1001, 1LE1002	431 ¹⁾	166	100	196	2 × M32 × 1.5
	Aluminum series, forced-air cooled or naturally cooled 1LE1001, 1PC1001, 1LE1002, 1PC1002, 1LE1021	322	166	100	196	2 × M32 × 1.5
	Aluminum series, self-ventilated 1LE1003, 1LE1023	431	166	100	196	2 × M32 × 1.5
100 L	Aluminum series, forced-air cooled 1LE1023	357	166	100	196	2 × M32 × 1.5
	Cast-iron series, self-ventilated 1LE1501, 1LE1503, 1LE1521, 1LE1601, 1LE1603, 1LE1621	389	193	100	196	2 × M32 × 1.5
	1LE1523-, 1LE1623-	425	193	100	196	2 × M32 × 1.5
	Aluminum series, self-ventilated 1LE1003-, 1LE1023-					
	1CA0, 1CC0, 1CC2	465	202	132	256	2 × M32 × 1.5
	1CA1, 1CB0, 1CB2, 1CC3	515	202	132	256	2 × M32 × 1.5
	Aluminum series, forced-air cooled 1LE1023-					
	1CA0, 1CC0, 1CC2	381	202	132	256	2 × M32 × 1.5
	1CA1, 1CB0, 1CB2, 1CC3	431	202	132	256	2 × M32 × 1.5
	Cast-iron series, self-ventilated 1LE1501, 1LE1503, 1LE1521, 1LE1601, 1LE1603, 1LE1621	457	215	132	256	2 × M32 × 1.5
1LE1523-, 1LE1623-	458	215	132	256	2 × M32 × 1.5	
1CA0, 1CC0, 1CC2	458	215	132	256	2 × M32 × 1.5	
1CA1, 1CB0, 1CB2, 1CC3	508	215	132	256	2 × M32 × 1.5	

Frame size	Type	Dimension				
		L	AD	H	AB	O
112 M	Aluminum series, self-ventilated 1LE1001, 1LE1002, 1LE1011, 1LE1012, 1LE1021	389 ¹⁾	177	112	226	2 × M32 × 1.5
	Aluminum series, self-ventilated with increased output 1LE1001, 1LE1002	414 ¹⁾	177	112	226	2 × M32 × 1.5
	Aluminum series, forced-air cooled or naturally cooled 1LE1001, 1PC1001, 1LE1002, 1PC1002, 1LE1021	311	177	112	226	2 × M32 × 1.5
	Aluminum series, self-ventilated 1LE1003, 1LE1023	414	177	112	226	2 × M32 × 1.5
	Aluminum series, forced-air cooled 1LE1023	336	177	112	226	2 × M32 × 1.5
	Cast-iron series, self-ventilated 1LE1501, 1LE1503, 1LE1521, 1LE1601, 1LE1603, 1LE1621	382	195	112	226	2 × M32 × 1.5
	1LE1523-, 1LE1623-	409	195	112	226	2 × M32 × 1.5
	Aluminum series, self-ventilated 1LE1001, 1LE1002, 1LE1011, 1LE1012, 1LE1021	465 ¹⁾	202	132	256	2 × M32 × 1.5
	Aluminum series, self-ventilated with increased output 1LE1001, 1LE1002	515 ¹⁾	202	132	256	2 × M32 × 1.5
	Aluminum series, forced-air cooled or naturally cooled 1LE1001, 1PC1001, 1LE1002, 1PC1002, 1LE1021	381	202	132	256	2 × M32 × 1.5
132 S/M	Aluminum series, self-ventilated 1LE1003-, 1LE1023-					
	1CA0, 1CC0, 1CC2	465	202	132	256	2 × M32 × 1.5
	1CA1, 1CB0, 1CB2, 1CC3	515	202	132	256	2 × M32 × 1.5
	Aluminum series, forced-air cooled 1LE1023-					
	1CA0, 1CC0, 1CC2	381	202	132	256	2 × M32 × 1.5
	1CA1, 1CB0, 1CB2, 1CC3	431	202	132	256	2 × M32 × 1.5
	Cast-iron series, self-ventilated 1LE1501, 1LE1503, 1LE1521, 1LE1601, 1LE1603, 1LE1621	457	215	132	256	2 × M32 × 1.5
	1LE1523-, 1LE1623-	458	215	132	256	2 × M32 × 1.5
	1CA0, 1CC0, 1CC2	458	215	132	256	2 × M32 × 1.5
	1CA1, 1CB0, 1CB2, 1CC3	508	215	132	256	2 × M32 × 1.5

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

²⁾ Only for pole-changing types 1LE1011-1DP6 and 1LE1012-1DQ6 the dimension L is 664 mm.

Overview (continued)

Frame size	Type	Dimension				
		L	AD	H	AB	O
160 M/L	Aluminum series, self-ventilated 1LE1001, 1LE1002, 1LE1011, 1LE1012, 1LE1021	604 ^{1) 2)}	237	160	300	2 × M40 × 1.5
	Aluminum series, self-ventilated with increased output 1LE1001, 1LE1002	664 ¹⁾	237	160	300	2 × M40 × 1.5
	Aluminum series, forced-air cooled or naturally cooled 1LE1001, 1PC1001, 1LE1002, 1PC1002, 1LE1021	510	237	160	300	2 × M40 × 1.5
	Cast-iron series, self-ventilated 1LE1501, 1LE1503, 1LE1521, 1LE1601, 1LE1603, 1LE1621	594	265	160	300	2 × M40 × 1.5
160 M	Aluminum series, self-ventilated 1LE1003, 1LE1023	604	237	160	300	2 × M40 × 1.5
	Aluminum series, forced-air cooled 1LE1023	510	237	160	300	2 × M40 × 1.5
	Cast-iron series, self-ventilated 1LE1523, 1LE1623	596	261	160	300	2 × M40 × 1.5
	Aluminum series, self-ventilated 1LE1003, 1LE1023	664	237	160	300	2 × M40 × 1.5
160 L	Aluminum series, self-ventilated 1LE1003, 1LE1023	664	237	160	300	2 × M40 × 1.5
	Aluminum series, forced-air cooled 1LE1023	570	237	160	300	2 × M40 × 1.5
	Cast-iron series, self-ventilated 1LE1523, 1LE1623	656	261	160	300	2 × M40 × 1.5
	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 1EA2, 1EB2 1EA6 1LE15.3-, 1LE16.3- 1EB2 1EA2	668 698 668 698	286	180	339	2 × M40 × 1.5
180 M	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 1EA2, 1EB2 1EA6 1LE15.3-, 1LE16.3- 1EB2 1EA2	668 698 668 698	286	180	339	2 × M40 × 1.5
	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 1EC4, 1EC6 1EB6 1LE15.3-, 1LE16.3- 1EC4 1EB4	668 698 668 698	286	180	339	2 × M40 × 1.5
	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 2AA4, 2AA5, 2AB5, 2AC4, 2AC5 2AA6 1LE15.3-, 1LE16.3- 2AA4, 2AC4 2AA5, 2AB5, 2AC5	721 746 721 746	315	200	378	2 × M50 × 1.5
	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 2BB0, 2BD0 1LE15.3-, 1LE16.3- 2BB0	788 788	338	225	436	2 × M50 × 1.5

Frame size	Type	Dimension				
		L	AD	H	AB	O
225 M	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 2BA2, 2BA6 2BB2, 2BB6, 2BC2, 2BC6, 2BD6 1LE15.3-, 1LE16.3- 2BA2 2BB2, 2BC2	818 848 818 848	338	225	436	2 × M50 × 1.5
	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 2CA2, 2CA6, 2CB2, 2CC2, 2CC6, 2CD2, 2CD6 2CB6 1LE15.3-, 1LE16.3- 2CA2, 2CB2, 2CC2	887 957 887	410	250	490	2 × M63 × 1.5
	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 2DA0, 2DB0, 2DC0, 2DD0 1LE15.3, 1LE16.3 2DA0, 2DB0, 2DC0	960 960	433	280	540	2 × M63 × 1.5
	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 2DA2, 2DB2, 2DC2, 2DC6, 2DD2, 2DD6 2DA6, 2DB6 1LE15.3-, 1LE16.3- 2DC2 2DA2, 2DB2	960 1070 960 1070	433	280	540	2 × M63 × 1.5
280 S	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 3AA0 3AB0, 3AC0, 3AD0 1LE15.3-, 1LE16.3- 3AA0 3AB0, 3AC0	1052 1082 1052 1082	515	315	610	2 × M63 × 1.5
	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 3AC2, 3AD2 3AA2 3AB2 1LE15.3-, 1LE16.3- 3AA2 3AB2, 3AC2	1217 1217 1247 1217 1247	515	315	610	2 × M63 × 1.5
	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 3AA4 3AB4, 3AC4, 3AC5, 3AD4, 3AD5, 3AD6 3AA5, 3AA6 3AB5, 3AB6, 3AC6 1LE15.3-, 1LE16.3- 3AA4 3AB4, 3AC4 3AA5 3AB5, 3AC5, 3AC6	1217 1247 1372 1402 1217 1247 1372 1402	515	315	610	2 × M63 × 1.5
	Cast-iron series, self-ventilated 1LE15.1-, 1LE16.1- 3AA4 3AB4, 3AC4, 3AC5, 3AD4, 3AD5, 3AD6 3AA5, 3AA6 3AB5, 3AB6, 3AC6 1LE15.3-, 1LE16.3- 3AA4 3AB4, 3AC4 3AA5 3AB5, 3AC5, 3AC6	1217 1247 1372 1402 1217 1247 1372 1402	515	315	610	2 × M63 × 1.5

SIMOTICS GP/SD 1LE1/1PC1 Standard Motors

Dimensions

Notes on the dimensions

Overview (continued)

- Dimensional 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	to 30	j6
	over 30 to 50	k6
	over 50	m6
N	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:

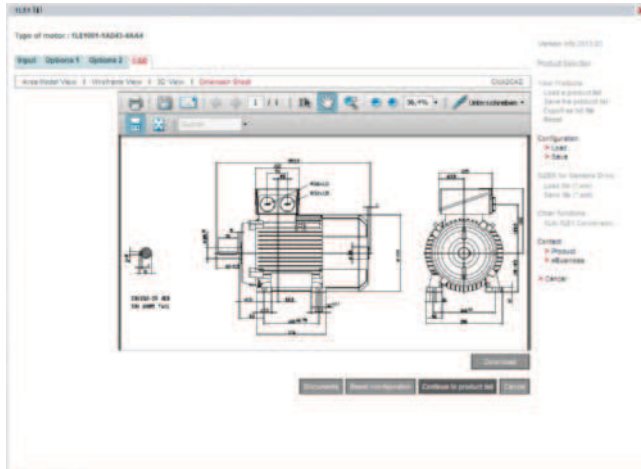
Dimension designation	Dimension	Admissible deviation
H	to 250	- 0.5
	over 250	- 1.0
E, EA		- 0.5

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.

Overview (continued)

A dimensional drawing can be created in the DT Configurator for every configurable motor. A dimensional drawing can be requested for every other motor.



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

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

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

Online access in the Siemens Industry Mall

The DT Configurator is integrated into the Siemens Industry Mall and can be used on the Internet without installation.

German: www.siemens.de/dt-konfigurator

English: www.siemens.com/dt-configurator

Offline access in the Interactive Catalog CA 01

The DT Configurator is also part of the Interactive Catalog CA 01 on DVD – the offline version of Siemens Industry Mall. CA 01 can be ordered from the relevant Siemens sales office or via the Internet: www.siemens.com/automation/CA01

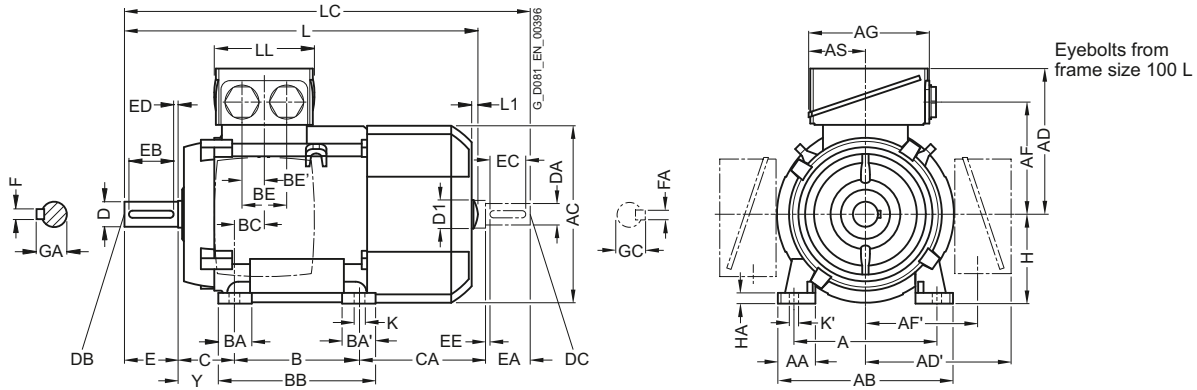
SIMOTICS GP 1LE1 Standard Motors

Dimensions

Aluminum series 1LE1001, 1LE1002, 1LE1011, 1LE1012, 1LE1021
Self-ventilated, frame sizes 100 L (80 M) to 160 L

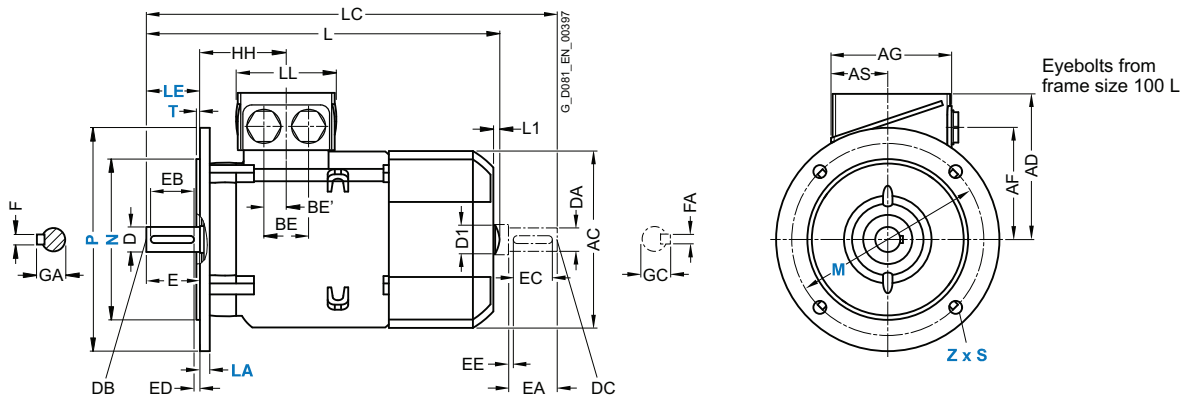
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC																						
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*	H	HA	Y
80 M	1LE1001, 1LE1011, 1LE1021	2, 4, 6	125	30.5	150	159	121	-	96.5	-	93	43	100	32	-	118	23	-	18 ¹⁾	50	-	80	8	41
90 S	1LE1001	2, 4, 6	140	30.5	165	178	126	-	101.5	-	93	43	100	33	-	143	22.5	-	18 ¹⁾	56	-	90	10	47
90 L		2, 4, 6	140	30.5	165	178	126	-	101.5	-	93	43	125	33	-	143	22.5	-	18 ¹⁾	56	-	90	10	47
100 L	All	2, 4, 6, 8	160	42	196	198	166	166	125.5	125.5	135	63.5	140	37.5	-	176	33.5	50	25	63	141	100	12	45
112 M	All	2, 4, 6, 8	190	46	226	222	177	177	136.5	136.5	135	63.5	140	35.4	-	176	26	50	25	70	129.7	112	12	52
132 S	All	2, 4, 6, 8	216	53	256	262	202	202	159.5	159.5	155	70.5	140	38	76	218	26.5	48	24	89	128.5	132	15	69
132 M	All	2, 4, 6, 8	216	53	256	262	202	202	159.5	159.5	155	70.5	178	38	76	218	26.5	48	24	89	128.5	132	15	69
160 M	All	2, 4, 6, 8	254	60	300	314	236.5	236.5	190	190	175	77.5	210	44	89	300	47	57	28.5	108	148	160	18	85
160 L	All	2, 4, 6, 8	254	60	300	314	236.5	236.5	190	190	175	77.5	254	44	89	300	47	57	28.5	108	148 ²⁾	160	18	85

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

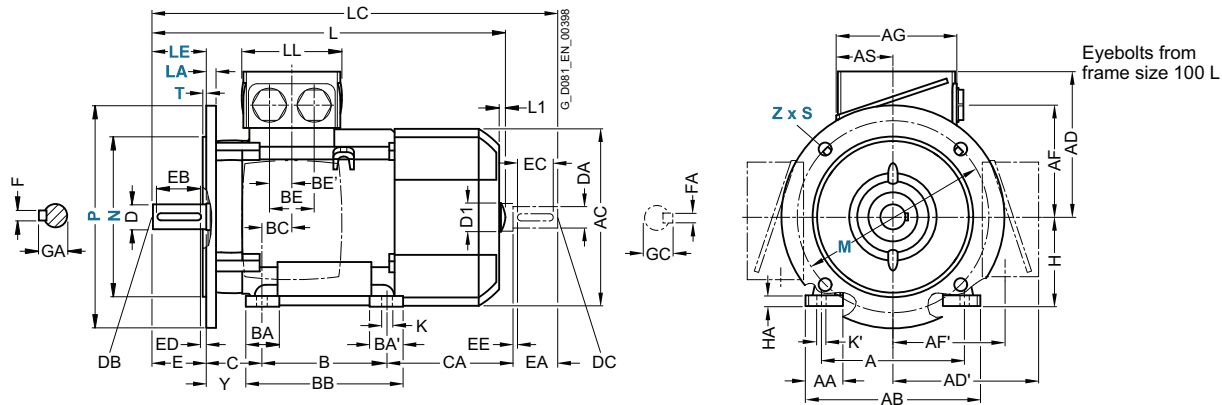
1) Connecting hole for terminal box is on the side at the rear of the terminal box.

2) Only for pole-changing types 1LE1011-1DP6 and 1LE1012-1DQ6 the dimension CA* is 208 mm.

Dimensional drawings (continued)

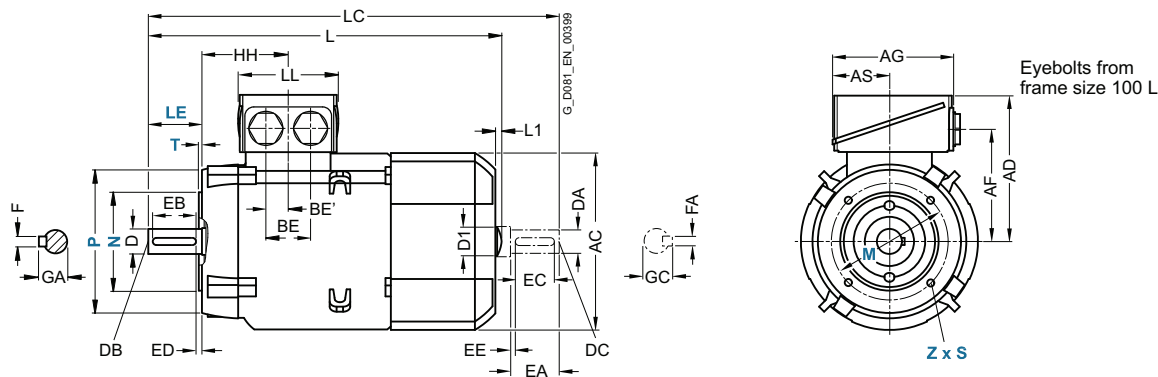
Type of construction IM B35

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



For motor Frame size	Motor type 1LE100. 1LE101. 1LE1021	No. of poles	Dimension designation acc. to IEC							DE shaft extension					NDE shaft extension									
			HH	K	K'	L	L1	D1	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
80 M		2, 4, 6	73	9.5	13.5	292	-	-	-	79	19	M6	40	32	4	6	21.5	19	M6	40	32	4	6	21.5
90 S	1LE1001	2, 4, 6	78.5	10	14	347	-	-	-	79	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5
90 L		2, 4, 6	78.5	10	14	347	-	-	-	79	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5
100 L	All	2, 4, 6, 8	96.5	12	16	395.5 ¹⁾	7	32	454	112	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
112 M	All	2, 4, 6, 8	96	12	16	389 ¹⁾	7	32	450	112	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
132 S	All	2, 4, 6, 8	115.5	12	16	465 ¹⁾	8.5	39	535.5	130	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
132 M	All	2, 4, 6, 8	115.5	12	16	465 ¹⁾	8.5	39	535.5	130	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
160 M	All	2, 4, 6, 8	155	15	19	604 ¹⁾	10	45	730	145	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45
160 L	All	2, 4, 6, 8	155	15	19	604 ¹⁾²⁾	10	45	730 ³⁾	145	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.

2) Only for pole-changing types 1LE1011-1DP6 and 1LE1012-1DQ6 the dimension L is 664 mm.

3) Only for pole-changing types 1LE1011-1DP6 and 1LE1012-1DQ6 the dimension LC is 790 mm.

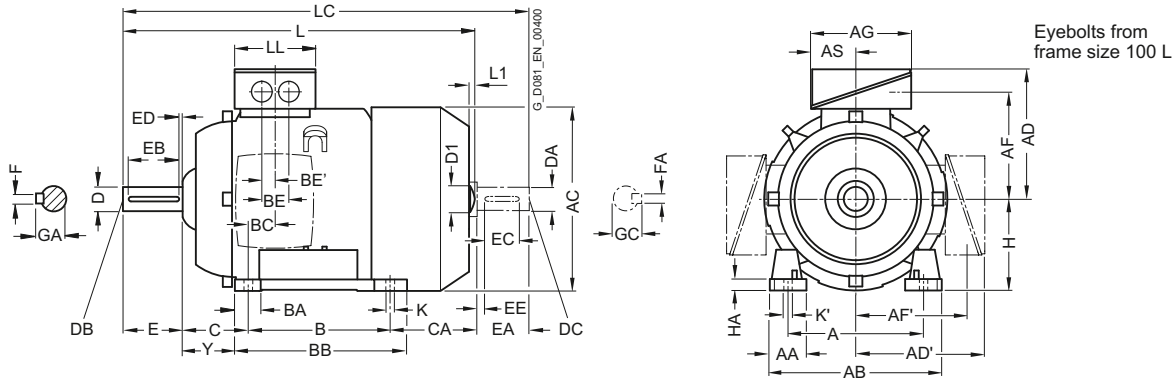
SIMOTICS GP 1LE1 Standard Motors

Dimensions

Aluminum series 1LE1001, 1LE1002
Self-ventilated, with increased output, frame sizes 100 L to 160 L

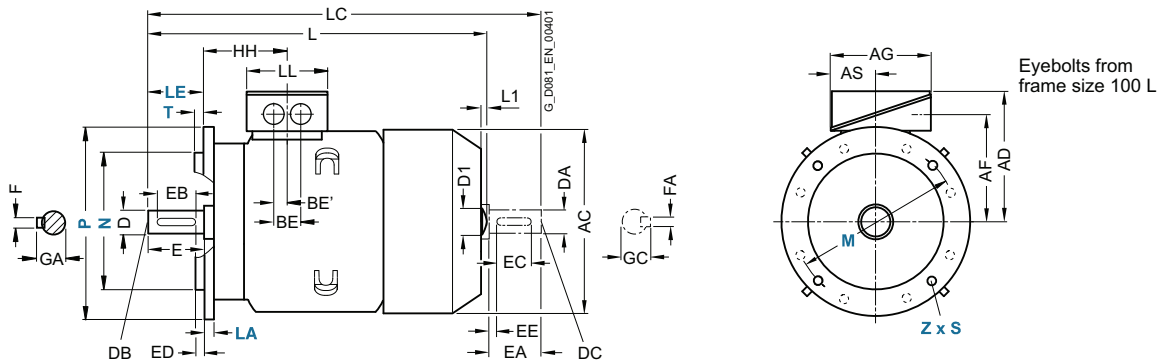
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

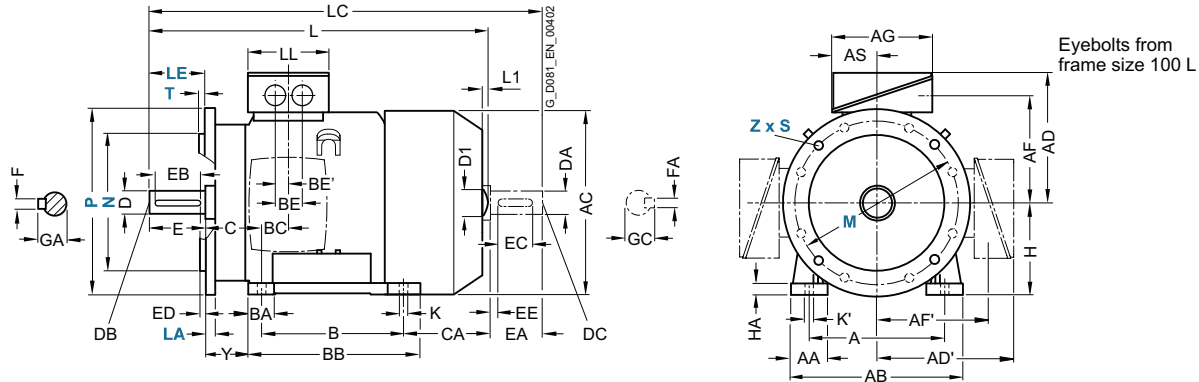
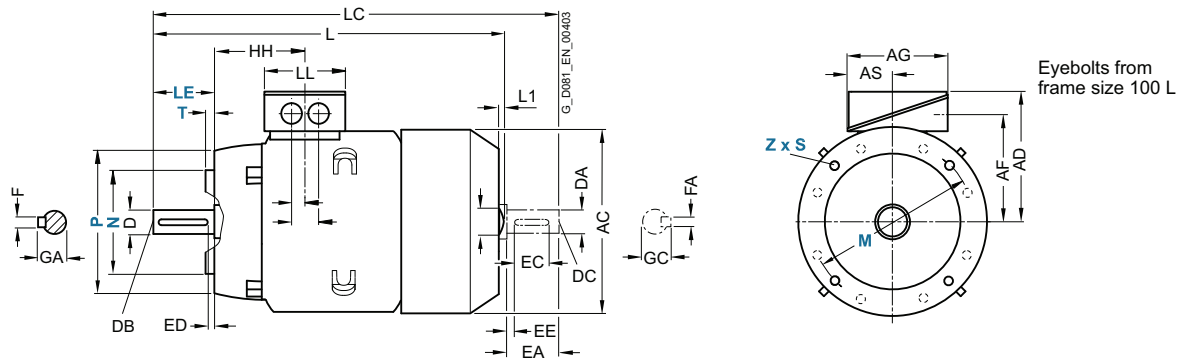
For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



For motor			Dimension designation acc. to IEC																					
Frame size	Motor type 1LE1001 1LE1002	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*	H	HA	Y
100 L	All	2, 4, 6, 8	160	42	196	198	166	166	125.5	125.5	135	63.5	140	37.5	-	176	33.5	50	25	63	176	100	12	45
112 M	All	2, 4, 6, 8	190	46	226	222	177	177	136.5	136.5	135	63.5	140	35.4	-	176	26	50	25	70	155	112	12	52
132 M	All	2, 4, 6, 8	216	53	256	262	202	202	159.5	159.5	155	70.5	178	38	-	218	26.5	48	24	89	178.5	132	15	69
160 L	All	2, 4, 6, 8	254	60	300	314	236.5	236.5	190	190	175	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.

Dimensional drawings (continued)

Type of construction IM B35For flange dimensions, see Page 2/94 (**Z** = the number of retaining holes)**Type of construction IM B14**For flange dimensions, see Page 2/94 (**Z** = the number of retaining holes)

For motor			Dimension designation acc. to IEC							DE shaft extension					NDE shaft extension									
Frame size	Motor type 1LE1001 1LE1002	No. of poles	HH	K	K'	L ¹⁾	L1	D1	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
100 L	All	2, 4, 6, 8	96.5	12	16	430.5	7	32	489	112	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
112 M	All	2, 4, 6, 8	96	12	16	414	7	32	475	112	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
132 M	All	2, 4, 6, 8	115.5	12	16	515	8.5	39	585.5	130	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
160 L	All	2, 4, 6, 8	155	15	19	664	10	45	790	145	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.

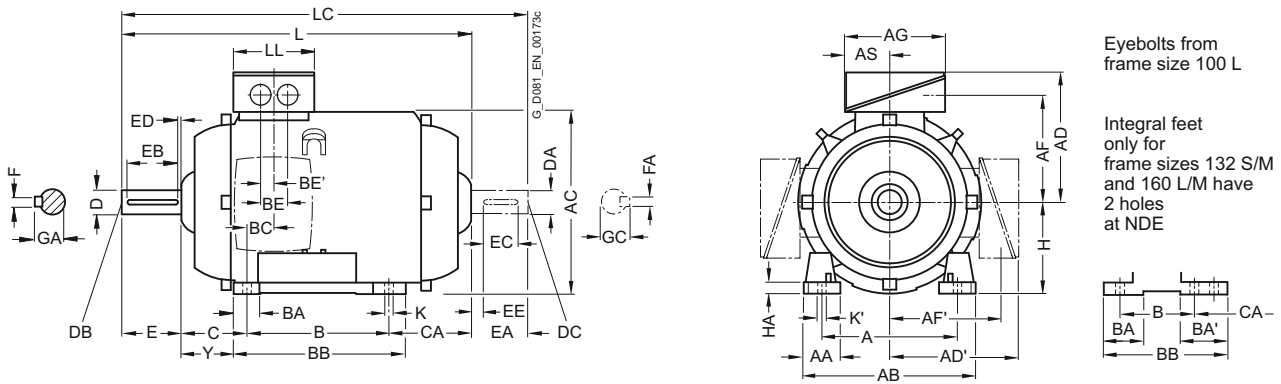
SIMOTICS GP 1LE1/1PC1 Standard Motors

Dimensions

Aluminum series 1LE1001, 1PC1001, 1LE1002, 1PC1002, 1LE1021
Forced-air cooled or naturally cooled, frame sizes 80 M to 160 L

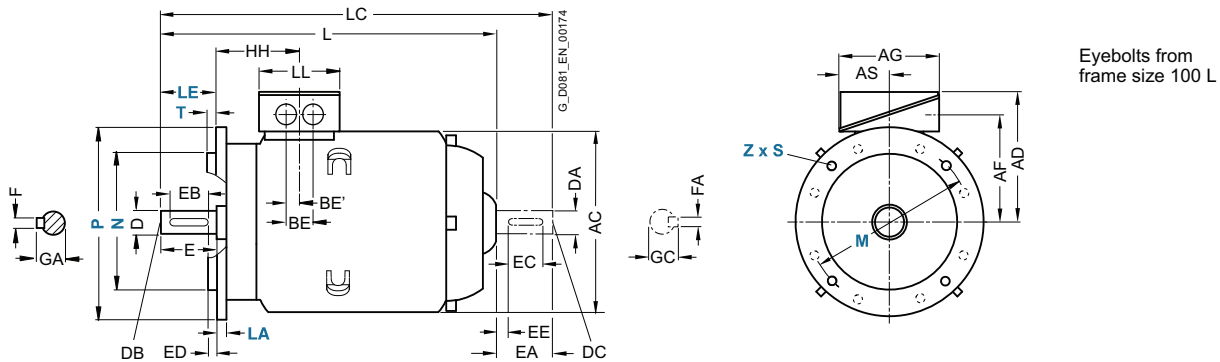
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



For motor			Dimension designation acc. to IEC																					
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*	H	HA	Y
80 M	1LE1001	2, 4, 6	125	30.5	150	159	121	-	96.5	-	93	43	100	32	-	118	23	-	18	50	-	80	8	41
	1LE1021	2, 4, 6					149		112		119.5	61.5												
90 S	1LE1001	2, 4, 6	140	30.5	165	178	126	-	101.5	-	93	43	100	33	-	143	22.5	-	18	56	-	90	10	47
	1LE1021	2, 4, 6					154		117		119.5	61.5												
90 L	1LE1001	2, 4, 6	140	30.5	165	178	126	-	101.5	-	93	43	125	33	-	143	22.5	-	18	56	-	90	10	47
	1LE1021	2, 4, 6					154		117		119.5	61.5												
100 L	All	2, 4, 6, 8	160	42	196	197	166	166	125.5	125.5	135	63.5	140	37.5	-	176	33.5	50	25	63	-	100	12	45
112 M	All	2, 4, 6, 8	190	46	226	221	177	177	136.5	136.5	135	63.5	140	35.4	-	176	26	50	25	70	-	112	12	52
132 S	All	2, 4, 6, 8	216	53	256	261	202	202	159.5	159.5	155	70.5	140	38	76 ¹⁾	218 ²⁾	26.5	48	24	89	-	132	15	69
132 M	All	2, 4, 6, 8	216	53	256	261	202	202	159.5	159.5	155	70.5	178	38	76	218	26.5	48	24	89	-	132	15	69
160 M	All	2, 4, 6, 8	254	60	300	314	236.5	236.5	190	190	175	77.5	210	44	89 ³⁾	300 ⁴⁾	47	57	28.5	108	-	160	18	85
160 L	All	2, 4, 6, 8	254	60	300	314	236.5	236.5	190	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) With screwed-on feet, dimension BA' is 38 mm.

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

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

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

SIMOTICS GP 1LE1/1PC1 Standard Motors

Dimensions

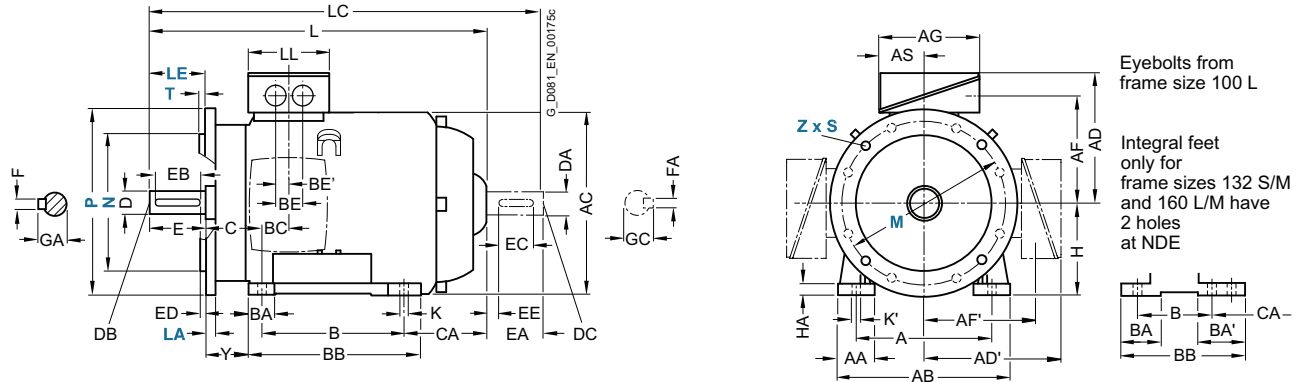
Aluminum series 1LE1001, 1PC1001, 1LE1002, 1PC1002, 1LE1021
Forced-air cooled or naturally cooled, frame sizes 80 M to 160 L

2

Dimensional drawings (continued)

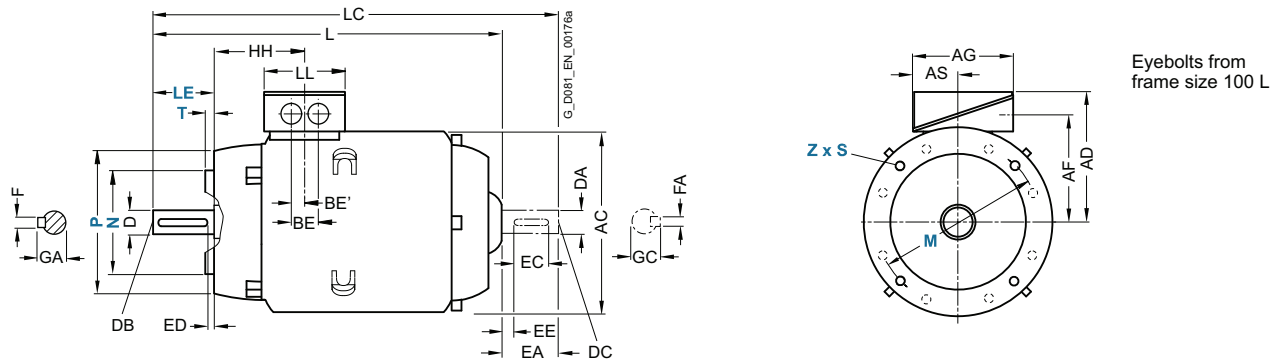
Type of construction IM B35

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



For motor	Frame size	Motor type	No. of poles	Dimension designation acc. to IEC					DE shaft extension					NDE shaft extension								
				HH	K	K'	L	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
80 M	1LE1001	2, 4, 6	73	9.5	13.5	253	-	79	19	M6	40	32	4	6	21.5	-	-	-	-	-	-	-
	1LE1021	2, 4, 6						123														
90 S	1LE1021	2, 4, 6	78.5	10	14	295	-	79	24	M8	50	40	5	8	27	-	-	-	-	-	-	-
	1LE1021	2, 4, 6						123														
90 L	1LE1021	2, 4, 6	78.5	10	14	295	-	123	24	M8	50	40	5	8	27	-	-	-	-	-	-	-
	1LE1021	2, 4, 6						123														
100 L	All	2, 4, 6, 8	96.5	12	16	321.5	-	112	28	M10	60	50	5	8	31	-	-	-	-	-	-	-
112 M	All	2, 4, 6, 8	96	12	16	311	-	112	28	M10	60	50	5	8	31	-	-	-	-	-	-	-
132 S	All	2, 4, 6, 8	115.5	12	16	380.5	-	130	38	M12	80	70	5	10	41	-	-	-	-	-	-	-
132 M	All	2, 4, 6, 8	115.5	12	16	380.5	-	130	38	M12	80	70	5	10	41	-	-	-	-	-	-	-
160 M	All	2, 4, 6, 8	155	15	19	510	-	145	42	M16	110	90	10	12	45	-	-	-	-	-	-	-
160 L	All	2, 4, 6, 8	155	15	19	510	-	145	42	M16	110	90	10	12	45	-	-	-	-	-	-	-

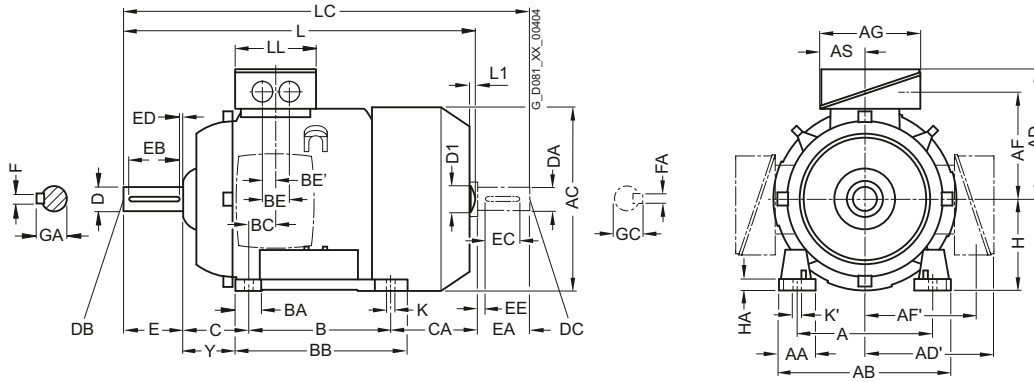
SIMOTICS GP 1LE1 Standard Motors

Dimensions

Aluminum series 1LE1003, 1LE1023
Self-ventilated, frame sizes 80 M to 90 L

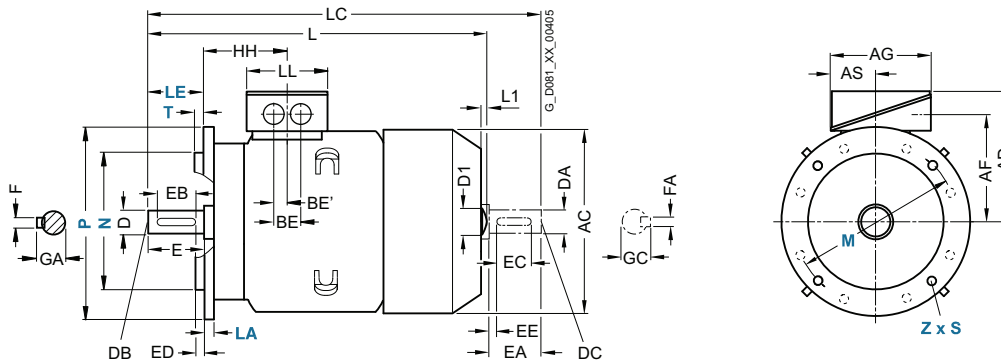
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



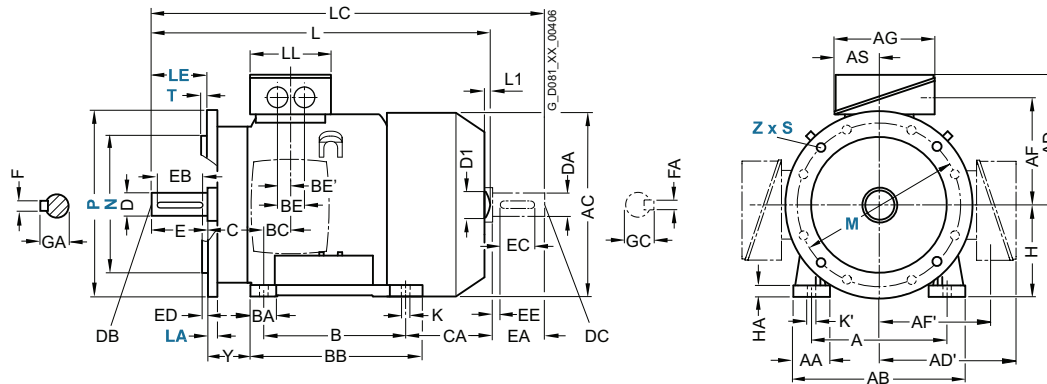
For motor		Dimension designation acc. to IEC																					
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B*	BA	BB	BC	BE	BE'	C	CA*	H	HA	Y
80 M	1LE1003-0DA2, -0DB2, -0DC2	2, 4, 6	125	30.5	150	159	121	-	96.5	-	93	43	100	32	118	23	-	18	50	-	80	8	41
	1LE1023-0DA2, -0DB2, -0DC2	2, 4, 6					149		112		119.5	61.5											
	1LE1003-0EA0, -0EB0, -0EC0	2, 4, 6	140	30.5	165	178	126	-	101.5	-	93	43	100	33	143	22.5	-	18	56	-	90	10	47
	1LE1023-0EA0, -0EB0, -0EC0	2, 4, 6					154		117		119.5	61.5											
90 L	1LE1003-0EA4, -0EB4, -0EC4	2, 4, 6	140	30.5	165	178	126	-	101.5	-	93	43	100	33	143	22.5	-	18	56	-	90	10	47
	1LE1023-0EA4, -0EB4, -0EC4	2, 4, 6					154		117		119.5	61.5											

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

Dimensional drawings (continued)

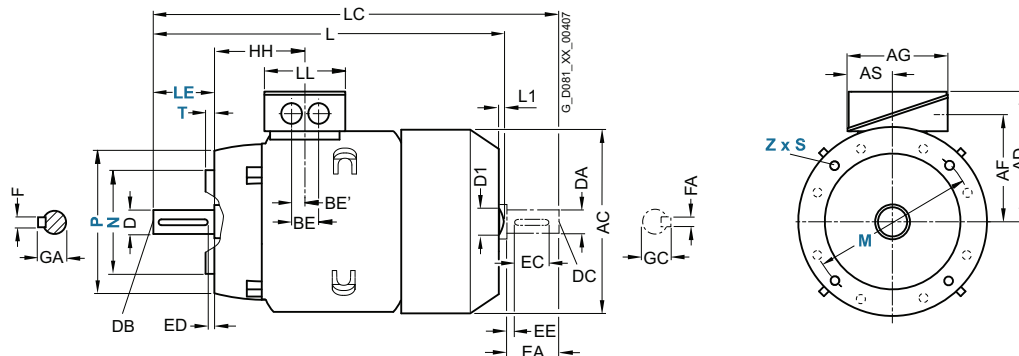
Type of construction IM B35

For flange dimensions, see Page 2/94 (**Z** = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see Page 2/94 (**Z** = the number of retaining holes)



For motor		Dimension designation acc. to IEC																																													
Frame size	Motor type	No. of poles	HH	K	K'	L ¹⁾	L1	D1	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC																							
80 M	1LE1003-0DA2, -0DB2, -0DC2,	2, 4, 6	73	9.5	13.5	292	-	-	-	79	19	M6	40	32	4	6	21.5	19	M6	40	32	4	6	21.5																							
	-0DA3, -0DB3, -0DC3																																														
	1LE1023-0DA2, -0DB2, -0DC2,	2, 4, 6																																													
	-0DA3, -0DB3, -0DC3																																														
90 S	1LE1003-0EA0, -0EB0, -0EC0	2, 4, 6	78.5	10	14	347	-	-	-	79	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5																							
	1LE1023-0EA0, -0EB0, -0EC0	2, 4, 6																																													
90 L	1LE1003-0EA4, -0EB4, -0EC4	2, 4, 6	78.5	10	14	387	-	-	-	79	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5																							
	1LE1023-0EA4, -0EB4, -0EC4	2, 4, 6																																													

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

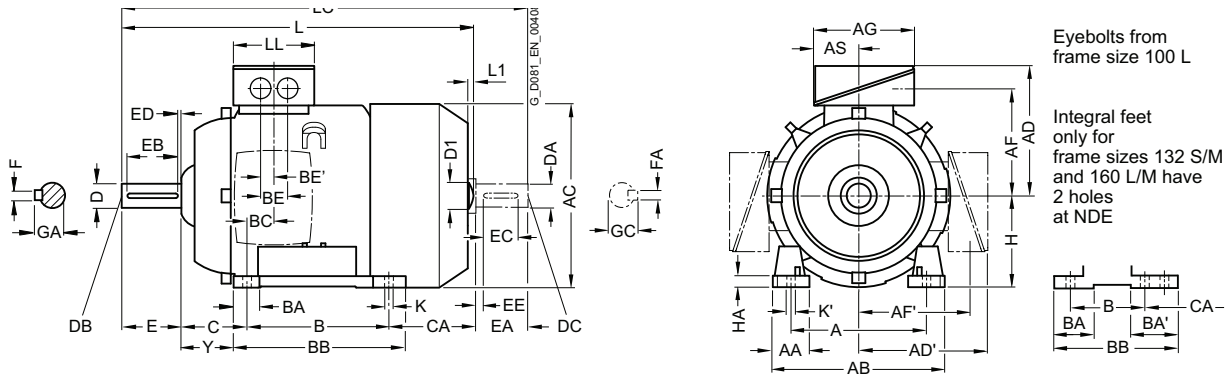
SIMOTICS GP 1LE1 Standard Motors

Dimensions

Aluminum series 1LE1003, 1LE1023
Self-ventilated, frame sizes 100 L to 160 L

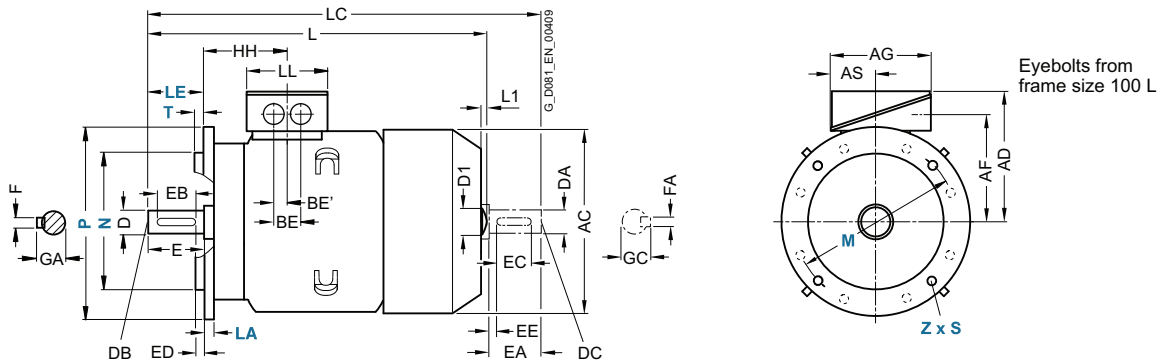
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



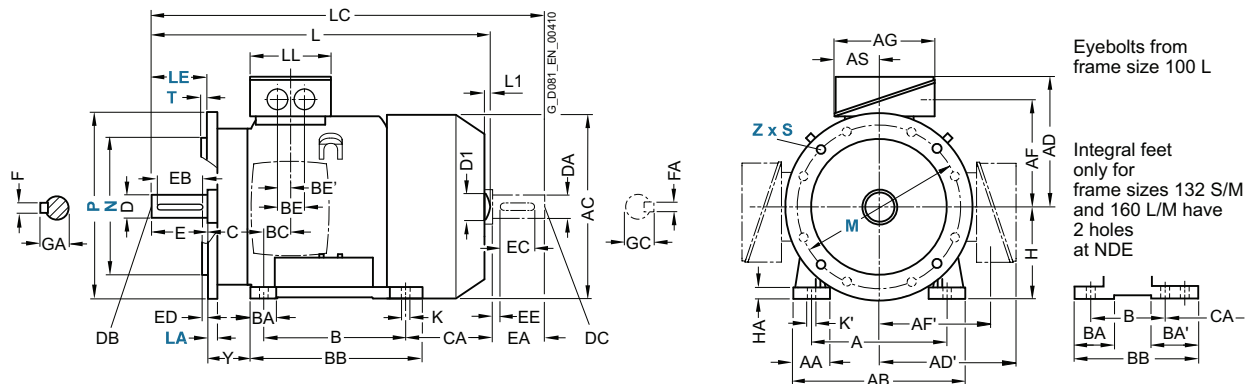
For motor			Dimension designation acc. to IEC																					
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*	H	HA	Y
100 L	1AA4, 1AB4, 1AB5	2, 4, 6	160	42	196	198	166	166	125.5	125.5	135	63.5	140	37.5	-	176	33.5	50	25	63	176	100	12	45
112 M	1BA2, 1BB2	2, 4, 6	190	46	226	222	177	177	136.5	136.5	135	63.5	140	35.4	-	176	26	50	25	70	155	112	12	52
132 S	1CA0, 1CC0	2, 6	216	53	256	262	202	202	159.5	159.5	155	70.5	140	38	76 ¹⁾	218 ²⁾	26.5	48	24	89	128.5 ³⁾	132	15	69
	1CA1, 1CB0	2, 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	178.5	-	-	-	
132 M	1CC2	6	216	53	256	262	202	202	159.5	159.5	155	70.5	178	38	76	218	26.5	48	24	89	128.5 ³⁾	132	15	69
	1CB2, 1CC3	4, 6, 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	178.5	-	-	-	
	1DA2, 1DA3, 1DB2, 1DC2	2, 4, 6	254	60	300	314	236.5	236.5	190	190	175	77.5	210	44	89 ⁴⁾	300 ⁵⁾	47	57	28.5	108	148 ⁶⁾	160	18	85
160 L	1DA4, 1DB4, 1DC4	2, 4, 6	254	60	300	314	236.5	236.5	190	190	175	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) With screwed-on feet, dimension BA' is 38 mm.
 2) With screwed-on feet, dimension BB is 180 mm.
 3) With screwed-on feet, dimension CA is 166.5 mm.

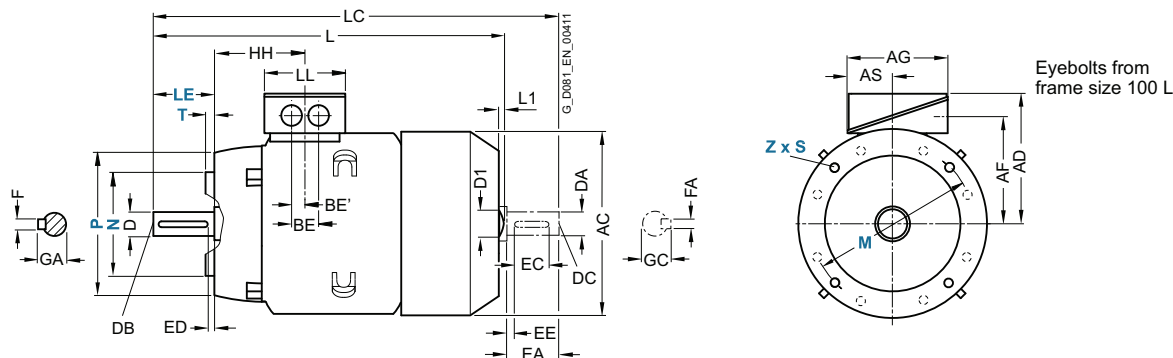
4) With screwed-on feet, dimension BA' is 44 mm.
 5) With screwed-on feet, dimension BB is 256 mm.
 6) With screwed-on feet, dimension CA is 192 mm.

Dimensional drawings (continued)

Type of construction IM B35

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)

Type of construction IM B14

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)

For motor			Dimension designation acc. to IEC							DE shaft extension							NDE shaft extension							
Frame size	Motor type	No. of poles	HH	K	K'	L ¹⁾	L1	D1	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
100 L	1AA4, 1AB4, 1AB5	2, 4, 6	96.5	12	16	430.5	7	32	489	112	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
112 M	1BA2, 1BB2	2, 4, 6	96	12	16	414	7	32	475	112	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
132 S	1CA0, 1CC0	2, 6	115.5	12	16	465	8.5	39	535.5	130	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
	1CA1, 1CB0	2, 4																							515	585.5
132 M	1CC2	6	115.5	12	16	465	8.5	39	535.5	130	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
	1CB2, 1CC3	4, 6																							515	585.5
160 M	1DA2, 1DA3, 1DB2, 1DC2	2, 4, 6	155	15	19	604	10	45	730	145	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45
	1DA4, 1DB4, 1DC4	2, 4, 6																							664	790

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

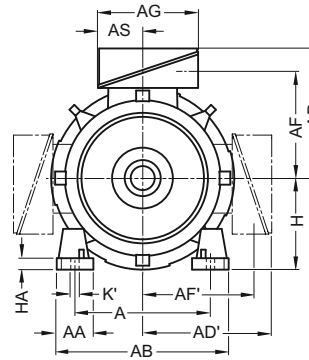
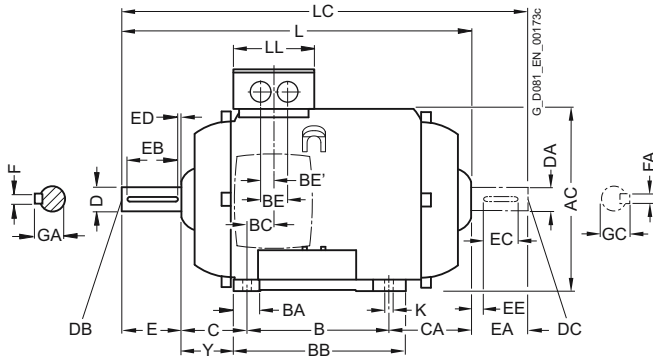
SIMOTICS GP 1LE1 Standard Motors

Dimensions

Aluminum series 1LE1023
Forced-air cooled, frame sizes 80 M to 90 L

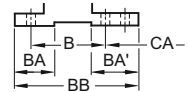
Dimensional drawings

Type of construction IM B3



Eyebolts from frame size 100 L

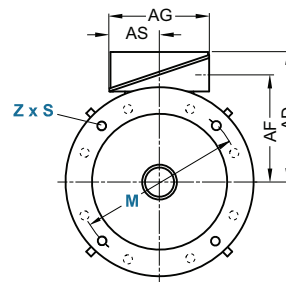
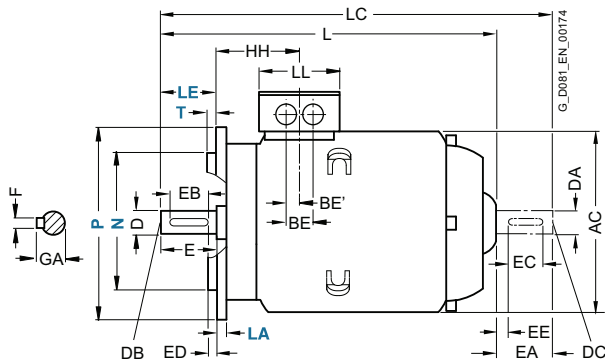
Integral feet only for frame sizes 132 S/M and 160 L/M have 2 holes at NDE



2

Types of construction IM B5 and IM V1

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



Eyebolts from frame size 100 L

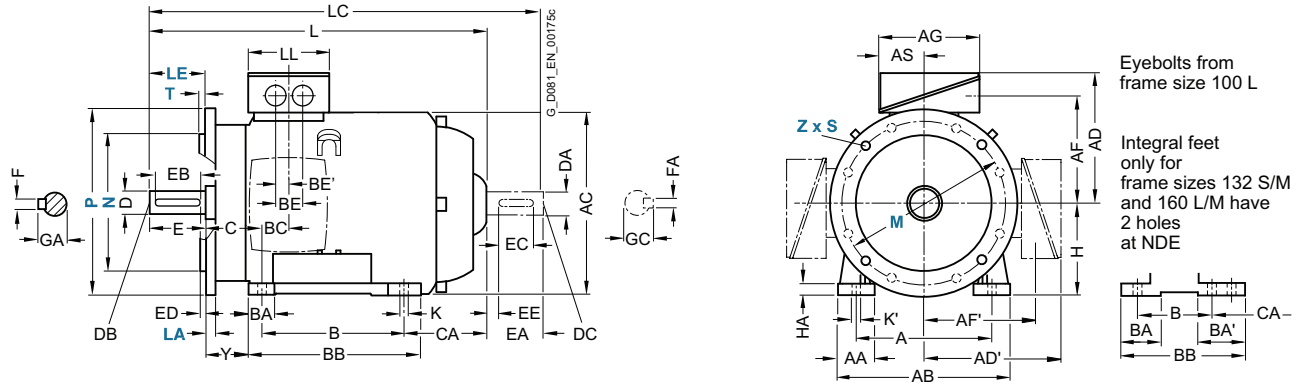
For motor			Dimension designation acc. to IEC																					
Frame size	Motor type 1LE1023-	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*	H	HA	Y
80 M	ODA2, ODB2, ODC2	2, 4, 6	125	30.5	150	159	121	-	96.5	-	93	43	100	32	-	118	23	-	18	50	-	80	8	41
	ODA3, ODB3, ODC3	2, 4, 6																						
90 S	0EA0, 0EB0, 0EC0	2, 4, 6	140	30.5	165	178	126	-	101.5	-	93	43	100	33	-	143	22.5	-	18	56	-	90	10	47
90 L	0EA4, 0EB4, 0EC4	2, 4, 6	140	30.5	165	178	126	-	101.5	-	93	43	100	33	-	143	22.5	-	18	56	-	90	10	47

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

Dimensional drawings (continued)

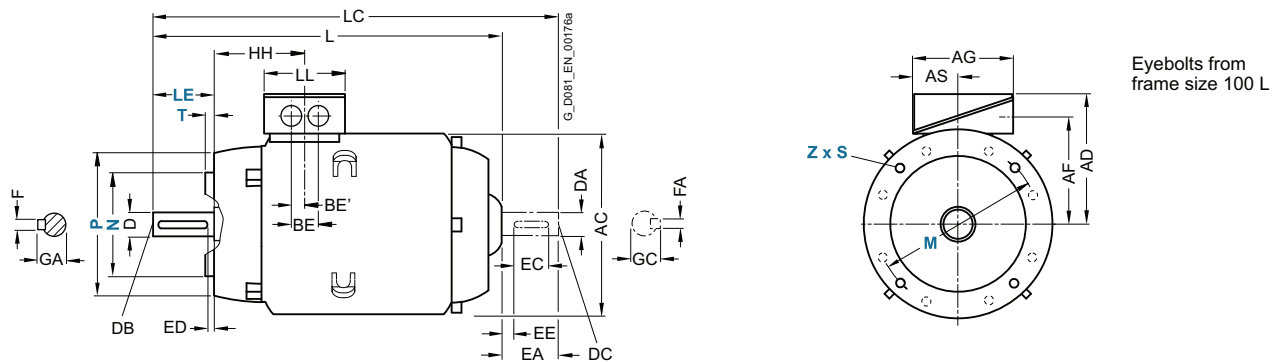
Type of construction IM B35

For flange dimensions, see Page 2/94 (**Z** = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see Page 2/94 (**Z** = the number of retaining holes)



For motor			Dimension designation acc. to IEC					DE shaft extension					NDE shaft extension									
Frame size	Motor type 1LE1023-	No. of poles	HH	K	K'	L ¹⁾	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
80 M	ODA2, ODB2, ODC2	2, 4, 6	73	9.5	13.5	292	-	79	19	M6	40	32	-	-	-	-	-	-	-	-	-	-
	ODA3, ODB3, ODC3	2, 4, 6				327																
90 S	OEA0, OEB0, OEC0	2, 4, 6	78.5	10	14	347	-	79	19	M6	40	32	-	-	-	-	-	-	-	-	-	-
90 L	OEA4, OEB4, OEC4	2, 4, 6	78.5	10	14	387	-	79	19	M6	40	32	-	-	-	-	-	-	-	-	-	-

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

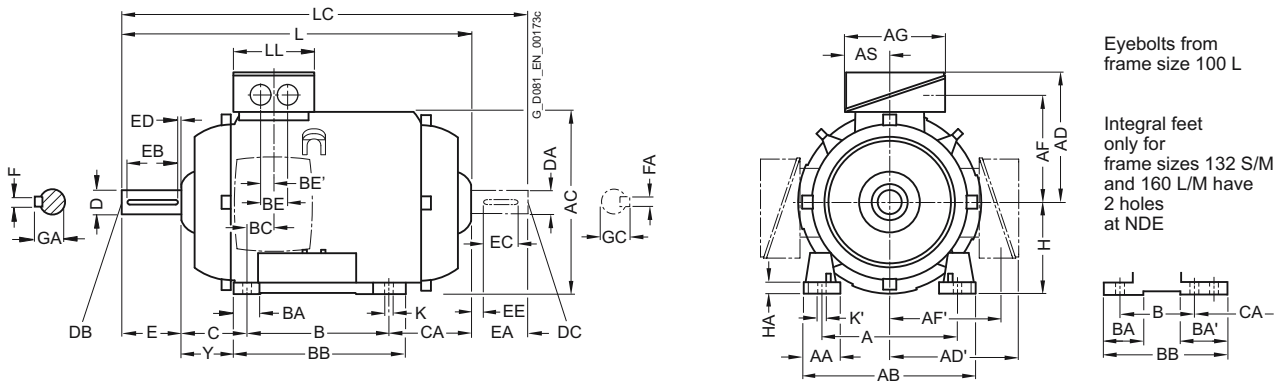
SIMOTICS GP 1LE1 Standard Motors

Dimensions

Aluminum series 1LE1023
Forced-air cooled, frame sizes 100 L to 160 L

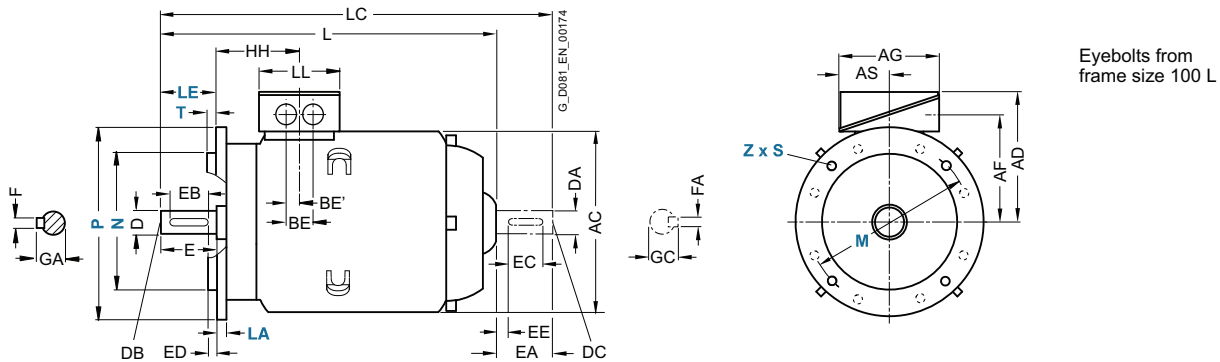
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



For motor			Dimension designation acc. to IEC																						
Frame size	Motor type	No. 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
100 L	1AA4, 1AB4, 1AB5	2, 4	160	42	196	198	166	166	125.5	125.5	135	195	63.5	140	37.5	-	176	33.5	50	25	63	-	100	12	45
112 M	1BA2, 1BB2	2, 4	190	46	226	222	177	177	136.5	136.5	135	195	63.5	140	35.4	-	176	26	50	25	70	-	112	12	52
132 S	1CA0, 1CC0	2, 6	216	53	256	262	202	202	159.5	159.5	155	260	70.5	140	38	76 ¹⁾	218 ²⁾	26.5	48	24	89	-	132	15	69
132 M	1CC2	6	216	53	256	262	202	202	159.5	159.5	155	260	70.5	178	38	76	218	26.5	48	24	89	-	132	15	69
	1CB2, 1CC3	4, 6, 8														-									
160 M	1DA2, 1DA3, 1DB2, 1DC2	2, 4, 6	254	60	300	314	236.5	236.5	190	190	175	260	77.5	210	44	89 ³⁾	300 ⁴⁾	47	57	28.5	108	-	160	18	85
160 L	1DA4, 1DB4, 1DC4	2, 4, 6	254	60	300	314	236.5	236.5	190	190	175	260	77.5	254	44	-	300	47	57	28.5	108	-	160	18	85

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

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

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

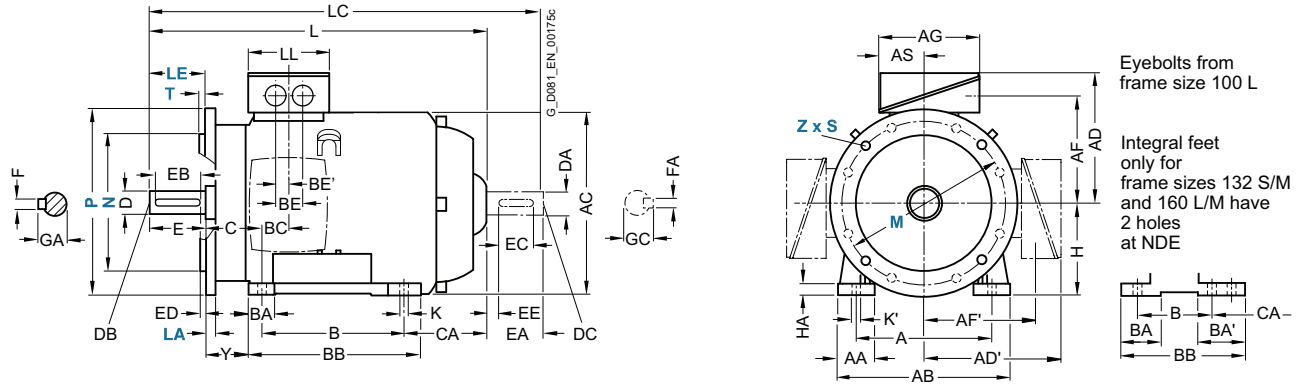
3) With screwed-on feet, dimension BA' is 44 mm.

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

Dimensional drawings (continued)

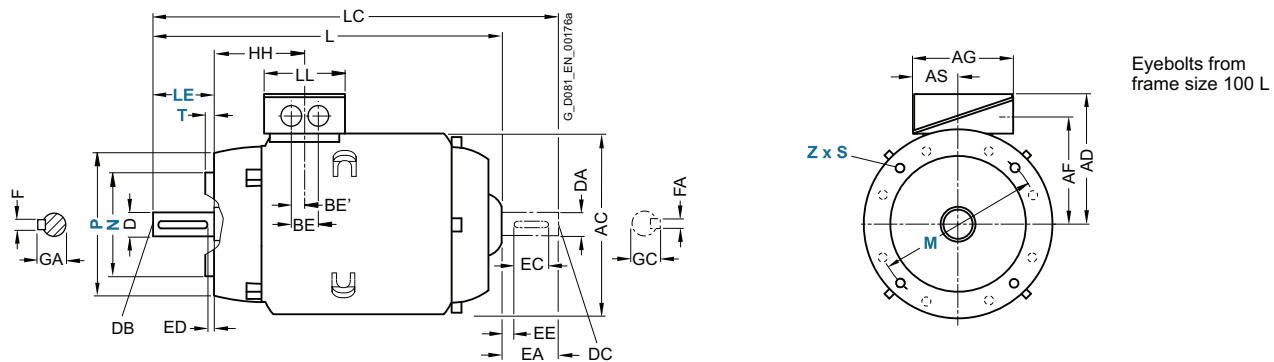
Type of construction IM B35

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



For motor			Dimension designation acc. to IEC					DE shaft extension					NDE shaft extension									
Frame size	Motor type	No. of poles	HH	K	K'	L ¹⁾	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
100 L	1AA4, 1AB4, 1AB5	2, 4	96.5	12	16	356.5	-	112	28	M10	60	50	5	8	31	-	-	-	-	-	-	-
112 M	1BA2, 1BB2	2, 4	96	12	16	336	-	112	28	M10	60	50	5	8	31	-	-	-	-	-	-	-
132 S	1CA0, 1CC0	2, 6	115.5	12	16	380.5	-	130	38	M12	80	70	5	10	41	-	-	-	-	-	-	-
	1CA1, 1CB0	2, 4				430.5	-															
132 M	1CC2	6	115.5	12	16	380.5	-	130	38	M12	80	70	5	10	41	-	-	-	-	-	-	-
	1CB2, 1CC3	4, 6				430.5	-															
160 M	1DA2, 1DA3, 1DB2, 1DC2	2, 4, 6	155	15	19	510	-	145	42	M16	110	90	10	12	45	-	-	-	-	-	-	-
160 L	1DA4, 1DB4, 1DC4	2, 4, 6	155	15	19	570	-	145	42	M16	110	90	10	12	45	-	-	-	-	-	-	-

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

SIMOTICS SD 1LE1 Standard Motors

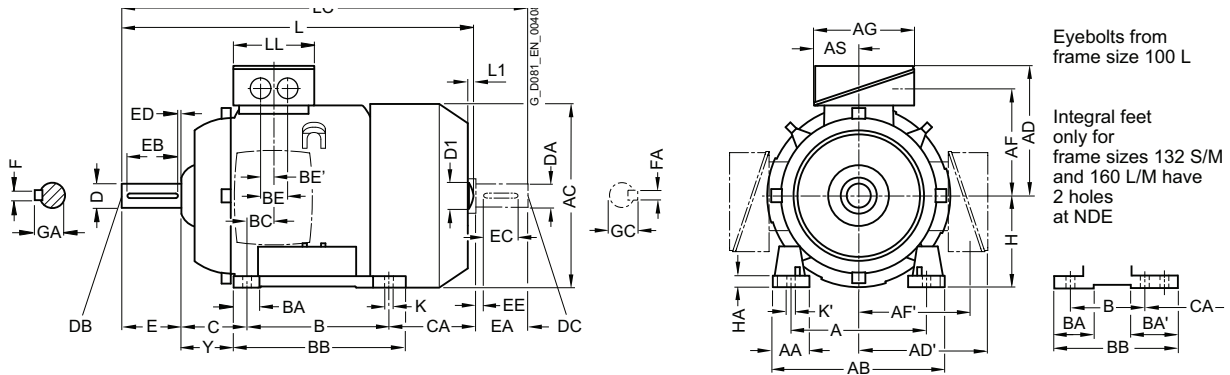
Dimensions

Cast-iron series 1LE1501, 1LE1521, 1LE1601, 1LE1621
Self-ventilated, frame sizes 71 M to 160 L

2

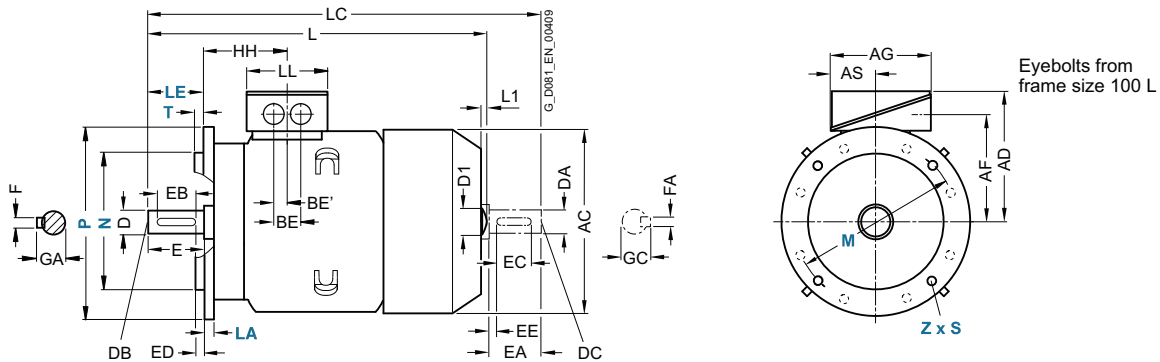
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



For motor			Dimension designation acc. to IEC																					
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*	H	HA	Y
71 M	1LE15.1, 1LE16.1	2, 4, 6	112	27	132	138.5	148	148	112	112	126	62	90	-	-	106	20.5	36	18	45	-	71	7	37
80 M	1LE15.1	2, 4, 6	125	27	150	156	158	158	122	122	129	62	100	-	-	118	21.5	36	18	50	-	80	8.5	41
90 S	1LE15.1	2, 4, 6	140	30.5	165	173.5	163	163	127	127	129	62	100	-	-	143	23.5	36	18	56	-	90	11	47
90 L	1LE15.1	2, 4, 6	140	30.5	165	173.5	163	163	127	127	129	62	125	-	-	143	23.5	36	18	56	-	90	11	47
100 L	All	2, 4, 6, 8	160	42	196	198	193	193	147	147	163	80.5	140	40	-	176	37.5	48	24	63	141	100	12	45
112 M	All	2, 4, 6, 8	190	46	226	222	195	195	150	150	163	80.5	140	40	-	176	30	48	24	70	129.7	112	12	52
132 S	All	2, 4, 6, 8	216	53	256	262	214.5	214.5	169	169	163	80.5	140	44	81 ¹⁾	218 ³⁾	26.5	48	24	89	-	132	15	69
132 M	All	2, 4, 6, 8	216	53	256	262	214.5	214.5	169	169	163	80.5	178	44	81 ¹⁾	218	26.5	48	24	89	-	132	15	69
160 M	All	2, 4, 6, 8	254	60	300	314	265	265	213	213	190	92	210	51	95 ²⁾	300 ⁴⁾	37	60	30	108	-	160	18	85
160 L	All	2, 4, 6, 8	254	60	300	314	265	265	213	213	190	92	254	51	95 ²⁾	300	37	60	30	108	-	160	18	85

* This dimension is assigned in DIN EN 50347 to the frame size listed.
1) With screwed-on feet, dimension BA' is 43 mm.
2) With screwed-on feet, dimension BA' is 51 mm.

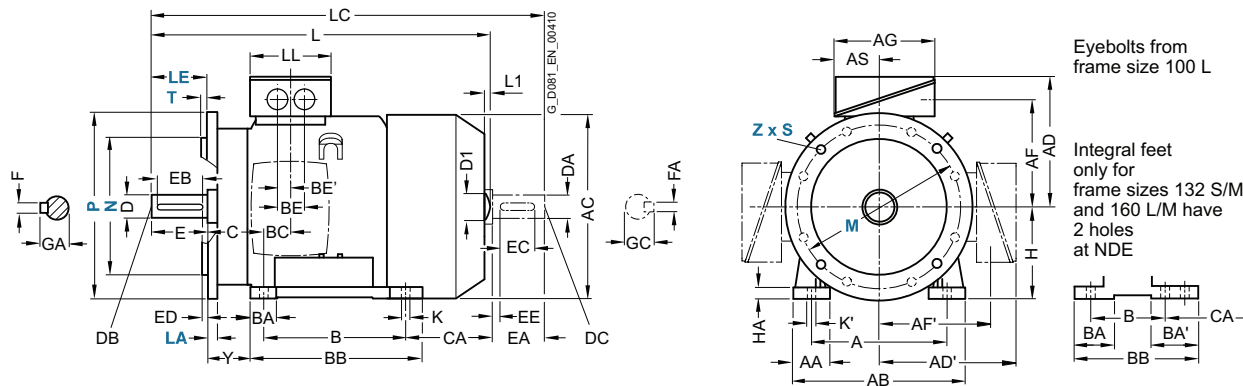
3) With screwed-on feet, dimension BB is 180 mm.
4) With screwed-on feet, dimension BB is 256 mm.

Cast-iron series 1LE1501, 1LE1521, 1LE1601, 1LE1621
Self-ventilated, frame sizes 71 M to 160 L

Dimensional drawings (continued)

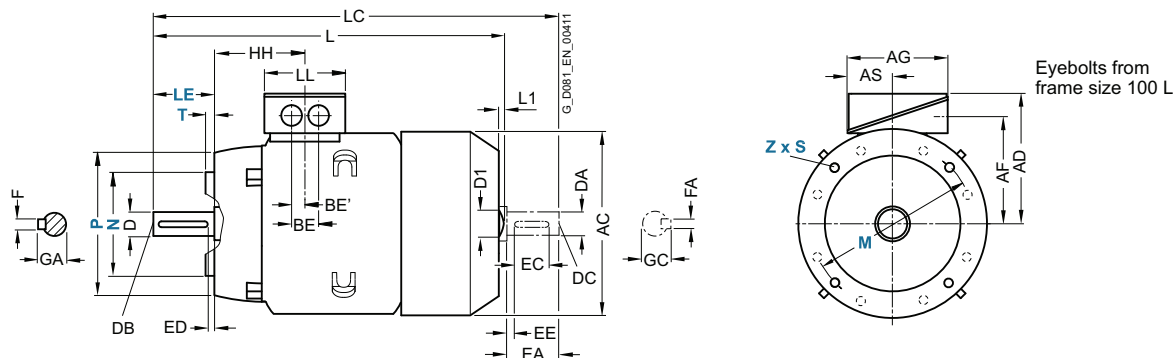
Type of construction IM B35

For flange dimensions, see Page 2/94 (**Z** = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see Page 2/94 (**Z** = the number of retaining holes)



For motor			Dimension designation acc. to IEC							DE shaft extension							NDE shaft extension							
Frame size	Motor type	No. of poles	HH	K	K'	L ¹⁾	L ²⁾	D1	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
71 M	1LE15.1	2, 4, 6	64.5	7	7	240	-	-	278	102	14	M5	30	22	4	5	16	14	M5	30	16	4	5	16
80 M	1LE15.1	2, 4, 6	71.5	10	10	292	-	-	343	102	19	M6	40	32	4	6	21.5	19	M6	40	22	4	6	21.5
90 S	1LE15.1	2, 4, 6	79.5	10	10	347	-	-	405	102	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5
90 L	1LE15.1	2, 4, 6	79.5	10	10	347	-	-	405	102	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5
100 L	All	2, 4, 6, 8	100.5	12	16	388.5	7	32	454	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
112 M	All	2, 4, 6, 8	100.5	12	16	382	7	32	450	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
132 S	All	2, 4, 6, 8	115.5	12	16	456.5	8.5	39	535.5	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
132 M	All	2, 4, 6, 8	115.5	12	16	456.5	8.5	39	535.5	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
160 M	All	2, 4, 6, 8	145	15	19	594	10	45	730	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45
160 L	All	2, 4, 6, 8	145	15	19	594	10	45	730	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45

1) For 1LE15 motors, plus dimension L1.

2) Only for 1LE15 motors.

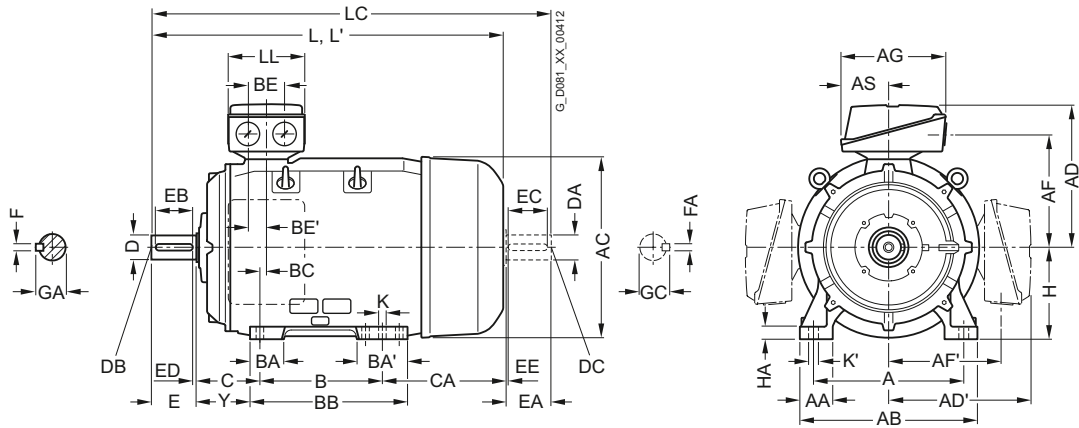
SIMOTICS SD 1LE1 Standard Motors

Dimensions

Cast-iron series 1LE1501, 1LE1521, 1LE1601, 1LE1621
Self-ventilated, frame sizes 180 M to 250 M

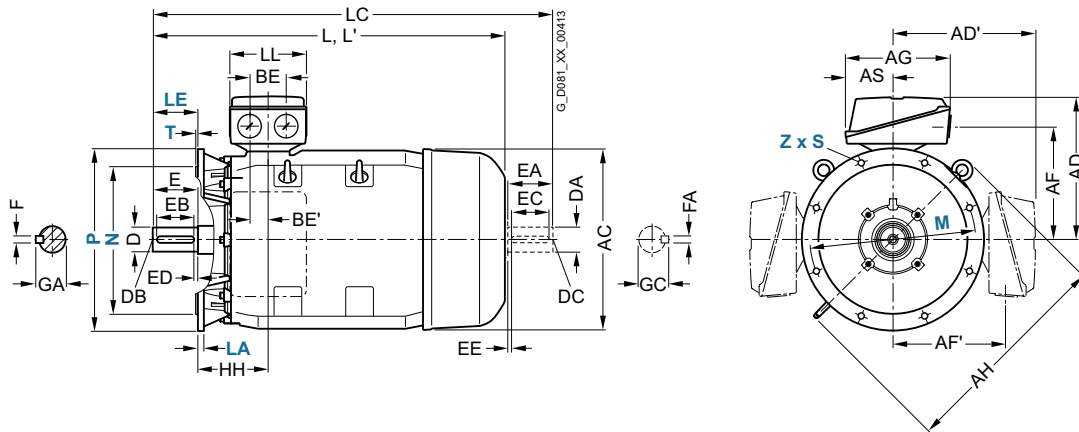
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



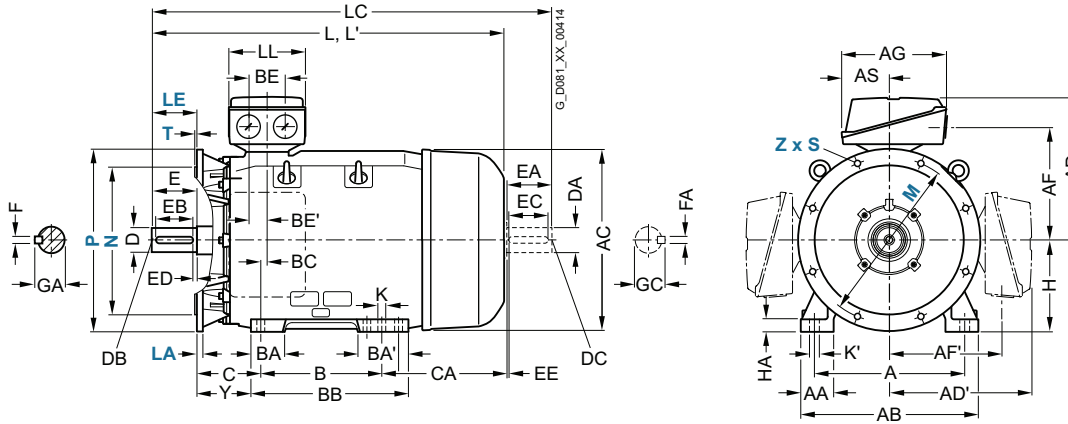
For motor			Dimension designation acc. to IEC																			
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AH	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*
180 M/ 180 L	1EA2, 1EB2, 1EC6	2, 4, 6	279	65	339	356	286	286	234	234	190	468	92	241	85	120	328	34	60	30	121	202
	1EB4, 1EC4, 1EA6, 1EB6	2, 4, 6												279								
200 L	2AA4, 2AA5, 2AB5, 2AC4, 2AC5	2, 4, 6	318	70	378	396	315	315	259	259	266	533	112	305	104	104	355	31	85	42.5	133	177
	2AA6, 2AB6, 2AC6	2, 4, 6																				
225 S/ 225 M	2BB0, 2BD0,	4, 8	356	80	436	449	338	338	282	282	266	556	112	311	92	117	361	15	85	42.5	149	253
	2BB2, 2BC2, 2BD2, 2BB6, 2BC6, 2BD6	4, 6, 8																				
	2BA2, 2BA6	2																				
250 M	2CA2, 2CA6	2	406	100	490	497	410	410	322	322	319	620	145	349	102	102	409	24	110	55	168	230
	2CB2, 2CC2, 2CD2, 2CC6, 2CD6,	4, 6, 8																				
	2CB6	4																				

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

Dimensional drawings (continued)

Type of construction IM B35

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



Motor type 1LE1501-, 1LE1521- 1LE1601-, 1LE1621-	DE shaft extension										NDE shaft extension													
	H	HA	Y	HH	K	K'	L	L' ¹⁾	LC ²⁾	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
1EA2, 1EB2, 1EC6	180	20	95	155	15	19	668	668	784	165	48	M16	110	100	5	14	52	48	M16	110	100	5	14	51.5
1EB4, 1EC4, 1EA6, 1EB6							698	698	814															
2AA4, 2AA5, 2AB5, 2AC4, 2AC5	200	25	108	164	19	25	721	755	835	197	55	M20	110	100	5	16	59	55	M20	110	100	5	16	59
2AA6, 2AB6, 2AC6							746	780	860															
2BB0, 2BD0	225	34	124	164	19	25	788	-	903	197	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59
2BB2, 2BC2, 2BD2, 2BB6, 2BC6, 2BD6							848		963															
2BA2, 2BA6							818	852	933	55			110	100	5	16	59	48	M16				14	51.5
2CA2, 2CA6	250	40	138	192	24	30	887	924	1002	233	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59
2CB2, 2CC2, 2CD2, 2CC6, 2CD6							-	-	1032	65							69	60		140	125	10	18	64
2CB6							957		1072															

1) For version with low-noise fan for 2-pole motors.

2) In the low-noise version, a second shaft extension and/or mounted encoder is not possible.

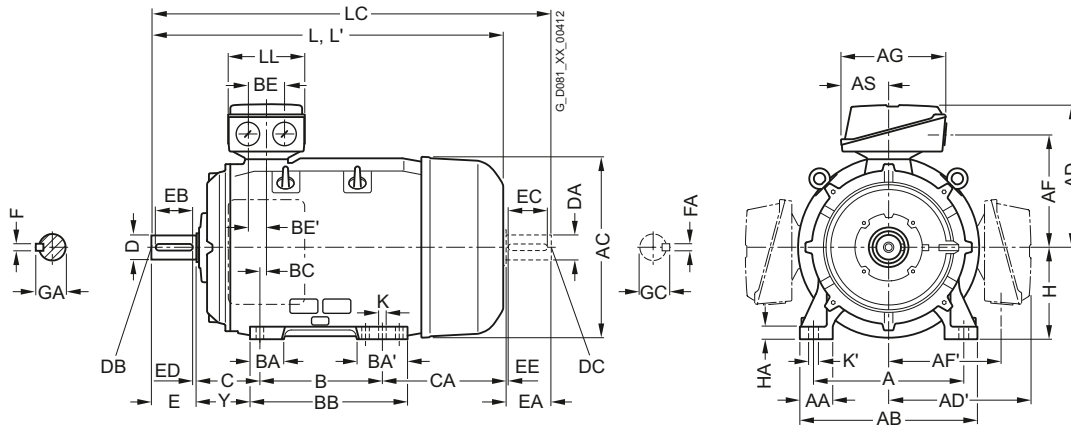
SIMOTICS SD 1LE1 Standard Motors

Dimensions

Cast-iron series 1LE1501, 1LE1521, 1LE1601, 1LE1621
Self-ventilated, frame sizes 280 S to 315 L

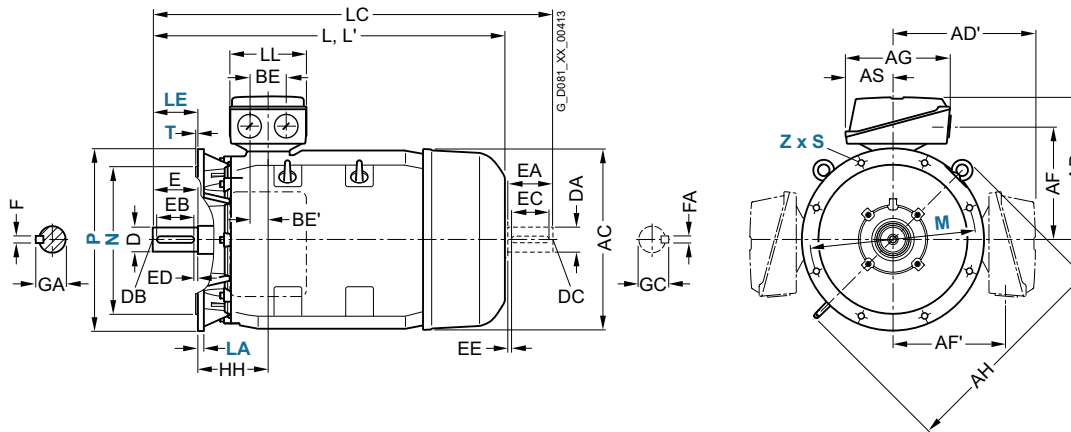
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



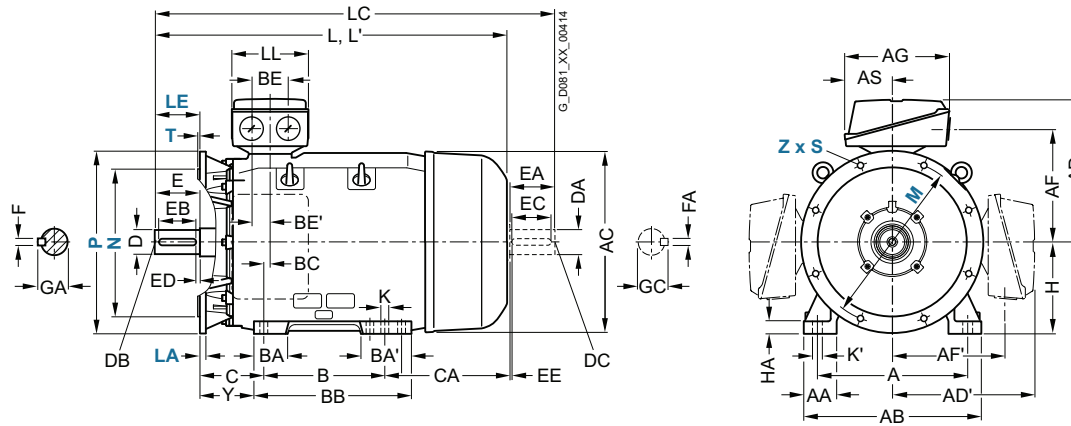
For motor			Dimension designation acc. to IEC																				
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AH	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*	
280 S	2DA0	2	457	100	540	551	433	433	345	345	319	672	145	368	101	152	479	20	110	55	190	267	
	2DB0, 2DC0, 2DD0	4, 6, 8												368								267	
														419									326
280 M	2DA6	2																				326	
	2DA2																						216
	2DB2, 2DC2, 2DD2, 2DC6, 2DD6	4, 6, 8																					
	2DB6	4																					326
315 S	3AA0	2	508	120	610	616	515	515	404	404	374	780	164	406	113	170	527	22	110	55	216	295	
	3AB0, 3AC0, 3AD0	4, 6, 8																					
315 M	3AA2 ¹⁾	2												457			578						409
	3AB2 ¹⁾	4																					
	3AC2, 3AD2	6, 8												406			527						244
315 L ¹⁾	3AA4	2												508			578						358
	3AB4, 3AC4, 3AD4, 3AC5, 3AD5, 3AD6	4, 6, 8																					
	3AA5, 3AA6	2												508	176	227	648						513
	3AB5, 3AB6, 3AC6	4, 6																					

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

¹⁾ With terminal box position right, terminal box left, and with order code **H01** only screwed-on feet with 3 drilled holes with dimension "B" (406, 457 and 508 mm). The dimension "BB" will then be 666 mm.

Dimensional drawings (continued)

Type of construction IM B35

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)

2

Motor type 1LE1501-, 1LE1521- 1LE1601-, 1LE1621-	DE shaft extension											NDE shaft extension												
	H	HA	Y	HH	K	K'	L	L' ¹⁾	LC ²⁾	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
2DA0	280	40	160	210	24	30	960	998	1105	233	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64
2DB0, 2DC0, 2DD0											75					20	79.5	65						69
2DA6							1070	1108	1215		65					18	69	60						64
2DA2							960	998	1105															
2DB2, 2DC2, 2DD2, 2DC6, 2DD6											75					20	79.5	65						69
2DB6							1070		1215															
3AA0	315	50	181	238	28	35	1052	1122	1197	299	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64
3AB0, 3AC0, 3AD0							1082		1227		80		170	140	25	22	85	70						20 74.5
3AA2							1217	1287	1362		65		140	125	10	18	69	60						18 64
3AB2							1247		1392		80		170	140	25	22	85	70						20 74.5
3AC2, 3AD2							1082		1227															
3AA4							1217	1287	1362		65		140	125	10	18	69	60						18 64
3AB4, 3AC4, 3AD4, 3AC5, 3AD5, 3AD6							1247		1392		80		170	140	25	22	85	70						20 74.5
3AA5, 3AA6			146				1372	1442	1517		65		140	125	10	18	69	60						18 64
3AB5, 3AB6, 3AC6							1402		1547		80		170	140	25	22	85	70						20 74.5

1) For version with low-noise fan for 2-pole motors.

2) In the low-noise version, a second shaft extension and/or mounted encoder is not possible.

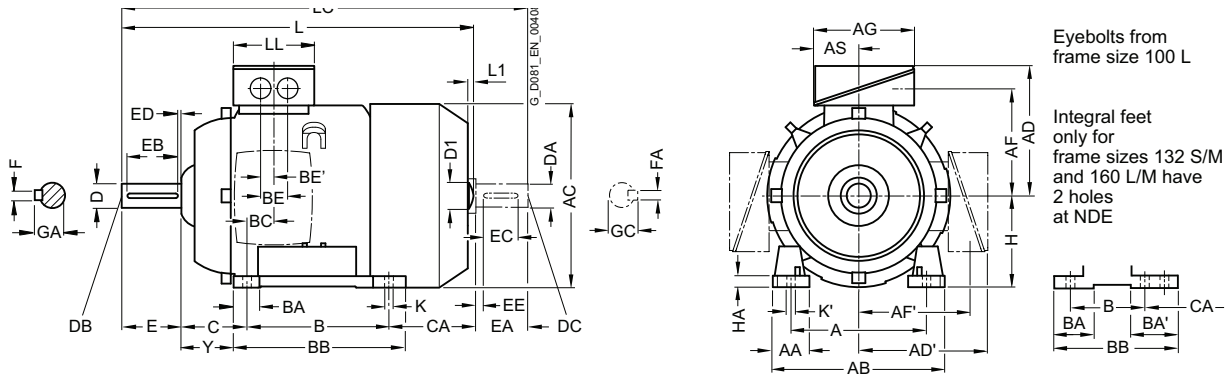
SIMOTICS SD 1LE1 Standard Motors

Dimensions

Cast-iron series 1LE1503, 1LE1523, 1LE1603, 1LE1623
Self-ventilated, frame sizes 71 M to 160 L

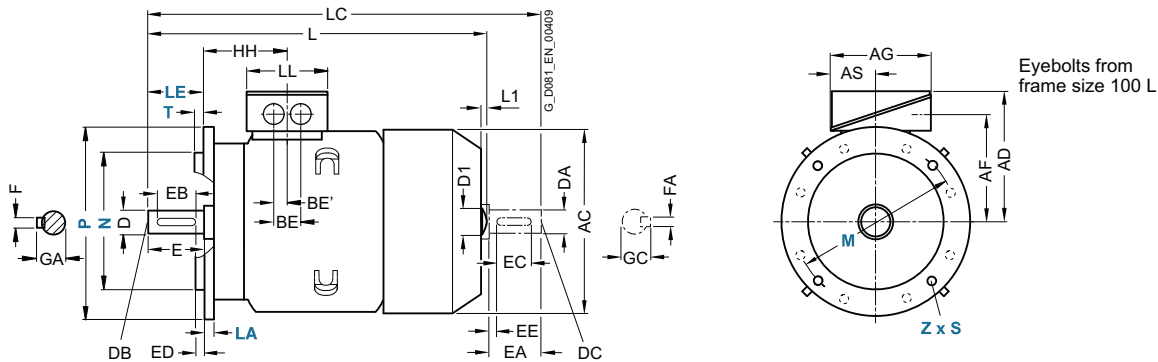
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



For motor			Dimension designation acc. to IEC																					
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*	H	HA	Y
71 M	1LE15.3-0.0, 0.2 0.3, 0.4	2, 4, 6	112	27	132	138.5	148	148	112	112	126	62	90	-	-	106	20.5	36	18	45	-	71	7	37
80 M	1LE15.3-0.0, 0.2 0.3, 0.4	2, 4, 6	125	27	150	156	158	158	122	122	129	62	100	-	-	118	21.5	36	18	50	-	80	8.5	41
90 S	1LE15.3-0.0, 0.2 0.3, 0.4	2, 4, 6	140	30.5	165	173.5	163	163	127	127	129	62	100	-	-	143	23.5	36	18	56	-	90	11	47
90 L	1LE15.3	2, 4, 6	140	30.5	165	173.5	163	163	127	127	129	62	125	-	-	143	23.5	36	18	56	-	90	11	47
100 L	All	2, 4, 6	160	42	196	198	193	193	147	147	163	80.5	140	40	-	176	37.5	48	24	63	176	100	12	45
112 M	All	2, 4, 6	190	46	226	222	195	195	150	150	163	80.5	140	40	-	176	30	48	24	70	155	112	12	52
132 S	1CA0, 1CC0	2, 6	216	53	256	262	214.5	214.5	169	169	163	80.5	140	44	81 ¹⁾	218 ²⁾	26.5	48	24	89	128.5	132	15	69
	1CA1, 1CB0	2, 4													-						178.5			
132 M	1CC2, 1CB2, 1CC3	6, 4, 6, 8	216	53	256	262	214.5	214.5	169	169	163	80.5	178	44	81 ¹⁾	218	26.5	48	24	89	128.5	132	15	69
															-						178.5			
160 M	All	2, 4, 6	254	60	300	314	261	261	213	213	190	92	210	51	95 ³⁾	300 ⁴⁾	37	60	30	108	148	160	18	85
160 L	All	2, 4, 6	254	60	300	314	261	261	213	213	190	92	254	51	95 ³⁾	300	37	60	30	108	208	160	18	85

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

1) With screwed-on feet, dimension BA' is 43 mm.

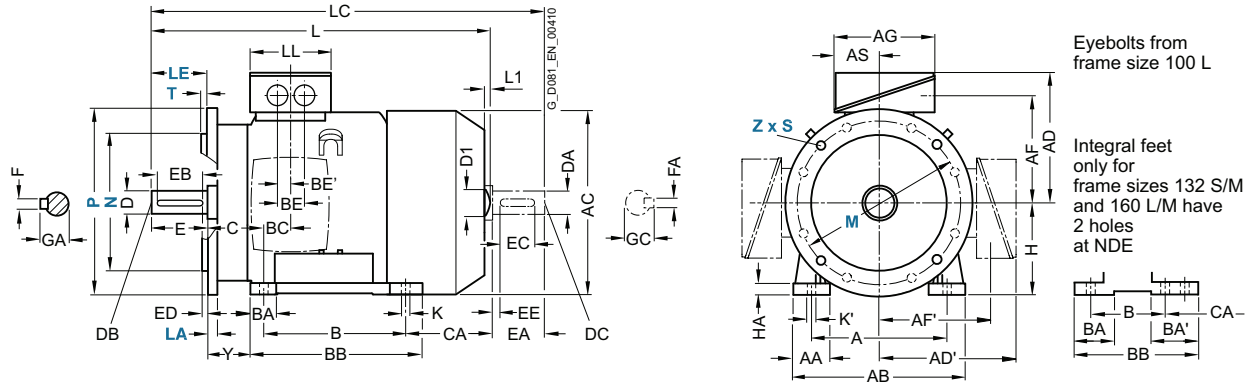
2) With screwed-on feet, dimension BB is 180 mm.

3) With screwed-on feet, dimension BA' is 51 mm.

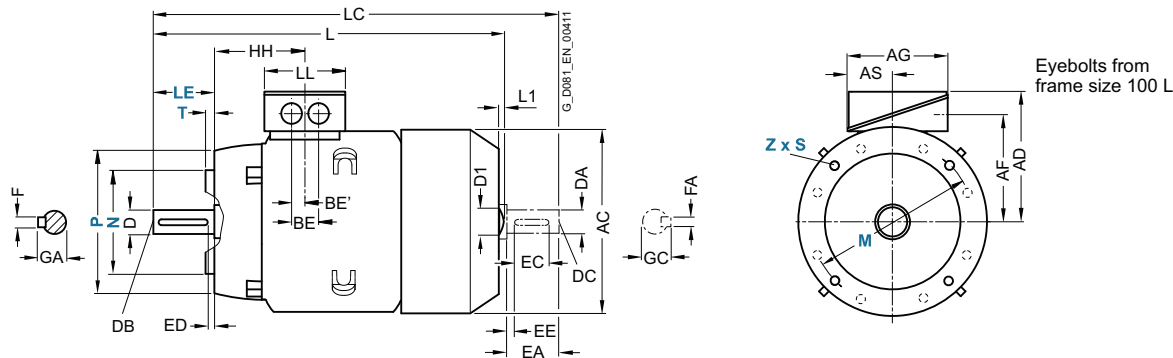
4) With screwed-on feet, dimension BB is 256 mm.

Dimensional drawings (continued)

Type of construction IM B35

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)

Type of construction IM B14

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)

For motor			Dimension designation acc. to IEC					DE shaft extension					NDE shaft extension											
Frame size	Motor type	No. of poles	HH	K	K'	L ¹⁾	L ²⁾	D1	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
71 M	1LE15.3-0.0, 0.2 1LE16.3-0.3, 0.4	2, 4, 6	64.5	7	7	240 280	-	-	278 318	102	14	M5	30	22	4	5	16	14	M5	30	16	4	5	16
80 M	1LE15.3-0.0, 0.2 0.3, 0.4	2, 4, 6	71.5	10	10	292 327	-	-	343 378	102	19	M6	40	32	4	6	21.5	19	M6	40	16	4	6	21.5
90 S	1LE15.3-0.0, 0.2 0.3, 0.4	2, 4, 6	79.5	10	10	347 387	-	-	405 445	102	24	M8	50	40	5	8	27	19	M6	40	27	4	6	21.5
90 L	1LE15.3	2, 4, 6	79.5	10	10	387	-	-	445	102	24	M8	50	40	5	8	27	19	M6	40	27	4	6	21.5
100 L	All	2, 4, 6	100.5	12	16	425	7	32	489	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
112 M	All	2, 4, 6	100.5	12	16	408.5	7	32	475	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
132 S	1CA0, 1CC0	2, 6	115.5	12	16	458	8.5	39	535.5	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
	1CA1, 1CB0	2, 4				508			585.5															
132 M	1CC2	6	115.5	12	16	458	8.5	39	535.5	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
	1CB2, 1CC3	4, 6				508			585.5															
160 M	All	2, 4, 6	145	15	19	596	10	45	730	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45
160 L	All	2, 4, 6	145	15	19	656	10	45	790	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45

1) For 1LE15 motors, plus dimension L1.

2) Only for 1LE15 motors.

SIMOTICS SD 1LE1 Standard Motors

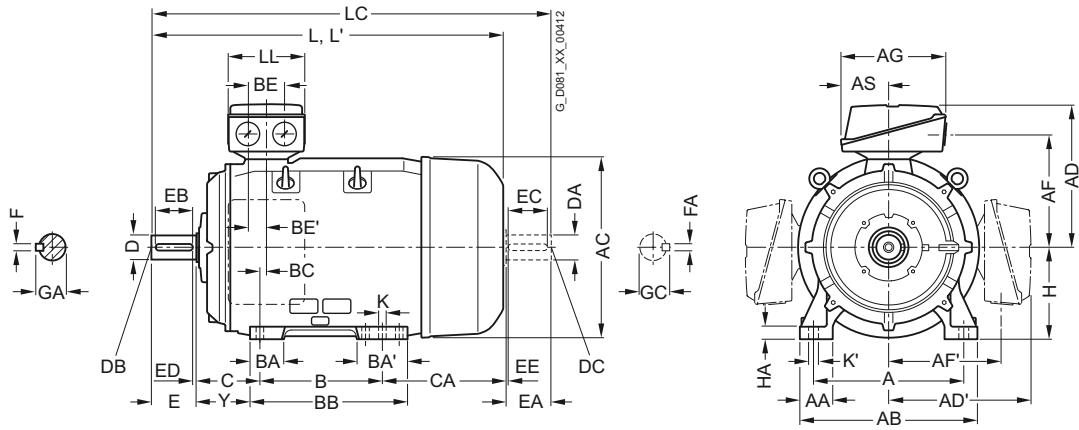
Dimensions

Cast-iron series 1LE1503, 1LE1523, 1LE1603, 1LE1623
Self-ventilated, frame sizes 180 M to 315 L

2

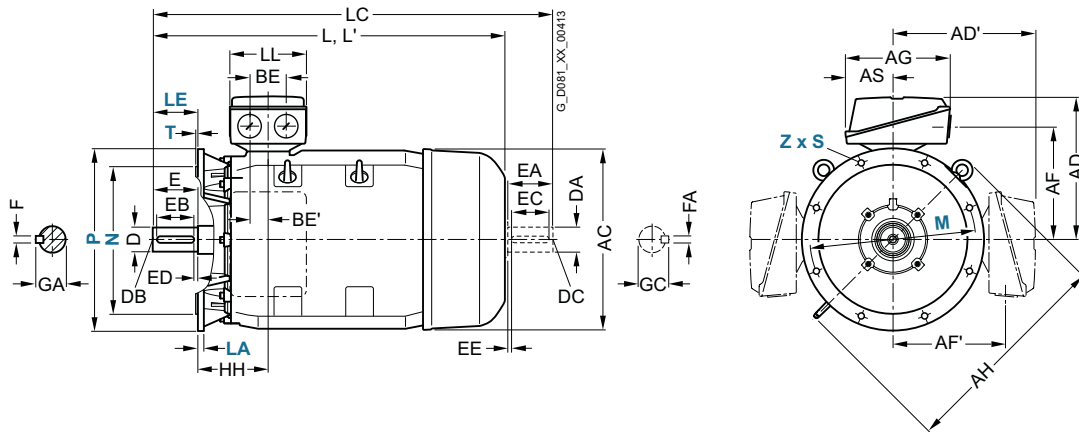
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



For motor Frame size	Motor type 1LE1503-, 1LE1523-, 1LE1603-, 1LE1623-	No. of poles	Dimension designation acc. to IEC																			
			A	AA	AB	AC	AD	AD'	AF	AF'	AG	AH	AS	B*	BA	BA'	BB	BC	BE	BE'	C	CA*
180 M/ 180 L	1EB2, 1EC4 1EA2, 1EB4	4, 6 2, 4	279	65	339	356	286	286	234	234	190	468	92	241	85	120	328	34	60	30	121	202
200 L	2AA4, 2AC4 2AA5, 2AB5, 2AC5	2, 6 2, 4, 6	318	70	378	396	315	315	259	259	266	533	112	305	104	104	355	31	85	42.5	133	177
225 S 225 M	2BB0 2BA2 2BB2, 2BC2	4 2 4, 6	356	80	436	449	338	338	282	282	266	556	112	286	92	117	361	15	85	42.5	149	218 253
250 M	2CA2 2CB2, 2CC2	2 4, 6	406	100	490	497	410	410	322	322	319	620	145	349	102	102	409	24	110	55	168	230
280 S 280 M	2DA0 2DB0, 2DC0 2DC2 2DA2 2DB2	2 4, 6 6 2 4	457	100	540	551	433	433	345	345	319	672	145	368	101	152	479	20	110	55	190	267 216 326
315 S 315 M ¹⁾ 315 L ¹⁾	3AA0 3AB0, 3AC0 3AA2 3AB2, 3AC2 3AA4 3AB4, 3AC4 3AA5 3AB5, 3AC5, 3AC6	2 4, 6 2 4, 6 2 4, 6 2 2 4, 6	508	120	610	616	515	515	404	404	374	780	164	406	113	170	527	22	110	55	216	295 409 358
															176	227	648					513

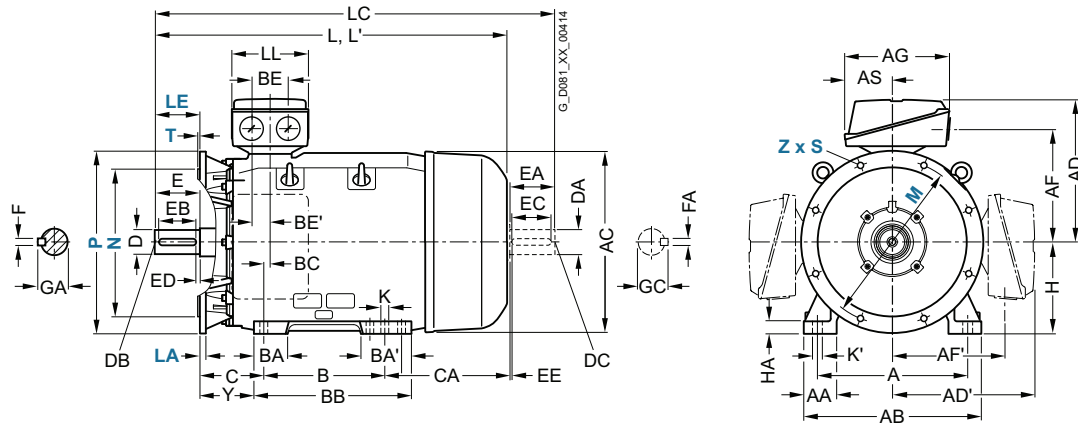
* This dimension is assigned in DIN EN 50347 to the frame size listed.

¹⁾ With order codes for terminal box positions (K05, K06, H01) only screwed-on feet with 3 drilled holes with dimension "B" (406, 457 and 506 mm). The dimension "BB" will then be 666 mm.

Dimensional drawings (continued)

Type of construction IM B35

For flange dimensions, see Page 2/94 (Z = the number of retaining holes)



2

Motor type 1LE1503-, 1LE1523- 1LE1603-, 1LE1623-	DE shaft extension											NDE shaft extension													
	H	HA	Y	HH	K	K'	L	L' 1)	LC ²⁾	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC	
1EB2, 1EC4 1EA2, 1EB4	180	20	95	155	15	19	668	668	784	165	48	M16	110	100	5	14	52	48	M16	110	100	5	14	51.5	
2AA4, 2AC4 2AA5, 2AB5, 2AC5	200	25	108	164	19	25	721	755	835	197	55	M20	110	100	5	16	59	55	M20	110	100	5	16	59	
2BB0	225	34	124	164	19	25	788	-	903	197	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59	
2BA2	225	34	124	164	19	25	818	852	933	197	55	M20	110	100	5	16	59	48	M16	110	100	5	14	51.5	
2BB2, 2BC2							848	-	963		60		140	125	10	18	64	55	M20				16	59	
2CA2	250	40	138	192	24	30	887	924	1002	233	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59	
2CB2, 2CC2								-	1032		65						69	60		140	125	10	18	64	
2DA0	280	40	160	210	24	30	960	998	1105	233	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
2DB0, 2DC0											75					20	79.5	65						69	
2DC2	280	40	160	210	24	30	960	-	1105	233	75	M20	140	125	10	20	79.5	65	M20	140	125	10	18	69	
2DA2							1070	1108	1215		65					18	69	60						64	
2DB2											75					20	79.5	65						69	
3AA0	315	50	181	238	28	35	1052	1122	1197	299	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
3AB0, 3AC0							1082	-	1227		80		170	140	25	22	85	70						20	74.5
3AA2	315	50	181	238	28	35	1217	1287	1362	299	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
3AB2, 3AC2							1247	-	1392		80		170	140	25	22	85	70						20	74.5
3AA4	315	50	181	238	28	35	1217	1287	1362	299	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
3AB4, 3AC4							1247	-	1392		80		170	140	25	22	85	70						20	74.5
3AA5			146				1372	1442	1517		65		140	125	10	18	69	60						18	64
3AB5, 3AC5, 3AC6							1402	-	1547		80		170	140	25	22	85	70						20	74.5

1) For version with low-noise fan for 2-pole motors.

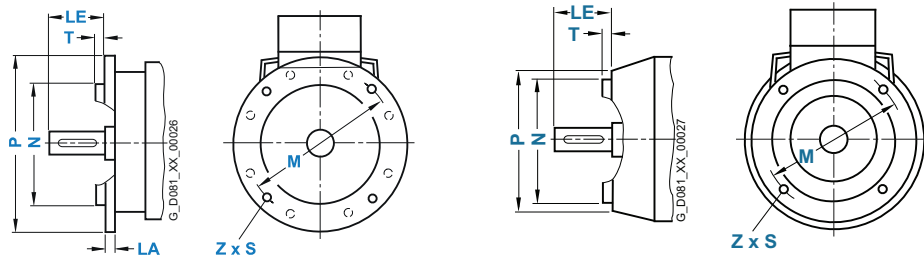
2) In the low-noise version, a second shaft extension and/or mounted encoder is not possible.

SIMOTICS GP/SD 1LE1/1PC1 Standard Motors

Dimensions

Flange dimensions

Dimensional drawings



In DIN EN 50347, the frame sizes are allocated flange FF with through holes and flange FT with tapped holes.

The designation of flange A and C according to DIN 42948 (invalid since September 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 through holes (FF/A) tapped holes (FT/C) acc. to DIN EN 50347	acc. to DIN 42948	Dimension designation acc. to IEC							
					LA	LE	M	N	P	S	T	Z
71 M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF 130	A 160	9	30	130	110	160	10	3.5	4
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT 85	C 105	–	30	85	70	105	M6	2.5	4
80 M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF 165	A 200	10	40	165	130	200	12	3.5	4
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT 100	C 120	–	40	100	80	120	M6	3	4
90 S, 90 L	IM B5, IM B35, IM V1, IM V3	Standard flange	FF 165	A 200	10	50	165	130	200	12	3.5	4
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT 115	C 140	–	50	115	95	140	M8	3	4
100 L	IM B5, IM B35, IM V1, IM V3	Standard flange	FF 215	A 250	11	60	215	180	250	14.5	4	4
	IM B5, IM B35, IM V1, IM V3	Next larger standard flange – Order code P01	FF 265	A 300	12	60	265	230	300	14.5	4	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF 165	A 200	11	60	165	130	200	12	3.5	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	Next larger standard flange – Order code P01	FT 165	C 200	–	60	165	130	200	M10	3.5	4
	IM B14, IM B34, IM V18, IM V19	Next smaller standard flange – Order code P02	FT 130	C 160	–	60	130	110	160	M8	3.5	4
112 M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF 215	A 250	11	60	215	180	250	14.5	4	4
	IM B5, IM B35, IM V1, IM V3	Next larger standard flange – Order code P01	FF 265	A 300	12	60	265	230	300	14.5	4	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF 165	A 200	11	60	165	130	200	12	3.5	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	Next larger standard flange – Order code P01	FT 165	C 200	–	60	165	130	200	M10	3.5	4
	IM B14, IM B34, IM V18, IM V19	Next smaller standard flange – Order code P02	FT 130	C 160	–	60	130	110	160	M8	3.5	4
132 S, 132 M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF 265	A 300	12	80	265	230	300	14.5	4	4
	IM B5, IM B35, IM V1, IM V3	Next larger standard flange – Order code P01	FF 300	A 350	13	80	300	250	350	18.5	5	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF 215	A 250	11	80	215	180	250	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	Next larger standard flange – Order code P01	FT 215	C 250	–	80	215	180	250	M12	4	4
	IM B14, IM B34, IM V18, IM V19	Next smaller standard flange – Order code P02	FT 165	C 200	–	80	165	130	200	M10	3.5	4
160 M, 160 L	IM B5, IM B35, IM V1, IM V3	Standard flange	FF 300	A 350	13	110	300	250	350	18.5	5	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF 265	A 300	12	110	265	230	300	14.5	4	4
	IM B14, IM B34, IM V18, IM V19	Standard flange	FT 215	C 250	–	110	215	180	250	M12	4	4
180 M, 180 L	IM B5, IM B35, IM V1, IM V3	Standard flange	FF300	A350	13	110	300	250	350	18.5	5	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF 265	A 300	12	110	265	230	300	14.5	4	4
200 L	IM B5, IM B35, IM V1, IM V3	Standard flange	FF350	A400	15	110	350	300	400	18.5	5	4
	IM B5, IM B35, IM V1, IM V3	Next smaller standard flange – Order code P02	FF300	A350	13	110	300	250	350	18.5	5	4
225 S, 225 M 2-pole 4-pole to 8-pole	IM B5, IM B35, IM V1, IM V3	Standard flange	FF400	A450	16	110 140	400	350	450	18.5	5	8
250 M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF500	A550	18	140	500	450	550	18.5	5	8
280 S, 280 M	IM B5, IM B35, IM V1, IM V3	Standard flange	FF500	A550	18	140	500	450	550	18.5	5	8
315 S, 315 M, 315 L 2-pole 4-pole to 8-pole	IM B5, IM B35, IM V1, IM V3	Standard flange	FF600	A660	22	140 170	600	550	660	24	6	8