

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

Aluminum series SIMOTICS GP 1LE10

Selection and ordering data

Special versions	Additional identification code -Z with order code and plain text if required	Frame size										Motor version			
		63	71	80	90	100	112	132	160	180	200				
						1LE1004					IEC	IE4	①		
			1LE1003									IE3	②		
				1LE1083								③			
		1LE1001										IE2	④		
		1LE1002										IE1	⑤		
			1LE1043								APAC Line	IE3	⑥		
			1LE1041									IE2	⑦		
			1LE1023								Eagle Line	NPE (NEMA)	⑧		
				1LE1021								NEE (NEMA)	⑨		
				1LE1011										Pole-changing	
				1LE1012											⑩
1LE10 -Z	Order code					1LE1012							⑪		

[illegible]

For legends and footnotes, see page 3/128.

Aluminum series SIMOTICS GP 1LE10

Special versions	Additional identification code-Z with order code and plain text if required	Frame size										Motor version		
		63	71	80	90	100	112	132	160	180	200			
						1LE1004					IEC	IE4	①	
			1LE1003									IE3	②	
					1LE1083								③	
		1LE1001											IE2	④
		1LE1002											IE1	⑤
			1LE1043							APAC Line	IE3	⑥		
			1LE1041								IE2	⑦		
			1LE1023							Eagle Line	NPE (NEMA)	⑧		
			1LE1021								NEE (NEMA)	⑨		
					1LE1011						Pole-changing		⑩	
					1LE1012							⑪		
1LE10 -Z	Order code					1LE1011								
						1LE1012								

Motor connection and terminal box (continued)

6 cables protruding, 3 m long ⁴⁾	R24		✓	✓	✓	✓	✓	✓	✓	✓	O. R.	O. R.	
Reduction piece for M cable gland in accordance with British Standard, mounted on both cable entries ²⁾	R30		–	–	–	–	✓	✓	✓	✓	–	–	
Larger terminal box	R50		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: ⑧, ⑨ < frame size 100
	–		–	–	□	□	□	□	□	□	□	□	Only for: ⑧, ⑨ < frame size 100
Auxiliary terminal box, aluminum	R60		–	–	–	–	–	–	–	–	✓	✓	
Motor connector Han-Drive 10e for 230 VΔ/400 VY ³⁰⁾	R70		✓	✓	✓	✓	✓	✓	✓	–	–	–	
Motor connector Han-Drive 10e EMC for 230 VΔ/400 VY ³⁰⁾	R71		✓	✓	✓	✓	✓	✓	✓	–	–	–	
Small motor connector CQ12 with EMC	R72		–	–	✓	✓	–	–	–	–	–	–	Not for: ③
Small motor connector CQ12 without EMC	R73		–	–	✓	✓	–	–	–	–	–	–	Not for: ③

Windings and insulation

Temperature class 155 (F), utilized acc. to 155 (F), with service factor	N01		–	–	–	–	✓	✓	✓	✓	✓	✓	Not for: ③
Temperature class 155 (F), utilized acc. to 155 (F), with increased power	N02		–	–	–	–	✓	✓	✓	✓	✓	✓	Not for: ③
Temperature class 155 (F), utilized acc. to 155 (F), with increased coolant temperature	N03		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: ③
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 %	N05		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 %	N06		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 %	N07		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N08		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 180 (H) ³¹⁾	N10		✓	✓	✓	✓	–	–	–	–	–	–	Not for: ①, ③, ⑥, ⑦, ⑨, ⑪
Temperature class 180 (H) at rated power and max. CT 60 °C ^{6) 31)}	N11		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: ①, ③
Increased air humidity/temperature with 30 to 60 g water per m ³ of air	N30		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Increased air humidity/temperature with 60 to 100 g water per m ³ of air	N31		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), with higher coolant temperature and/or installation altitude	Y50 • CT ... °C or IA m above sea level		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 155 (F), other requirements	Y52 • CT .. °C or IA m above sea level		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: ③
Temperature class 180 (H), utilized according to 155 (F)	Y75 • CT ... °C or IA m above sea level		–	–	–	–	O.R.	O.R.	O.R.	O.R.	–	–	Not for: ①, ③

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						1LE1083							③
		1LE1001											IE2 ④
		1LE1002											IE1 ⑤
				1LE1043								APAC Line	IE3 ⑥
				1LE1041									IE2 ⑦
				1LE1023								Eagle Line	NPE (NEMA) ⑧
				1LE1021									NEE (NEMA) ⑨
						1LE1011						Pole-changing	⑩
						1LE1012							⑪
Colors and paint finish													
Standard paint finish C2 in RAL 7030 stone gray			□	□	□	□	□	□	□	□	□		
Unpainted (only cast-iron parts primed)	S00	○	○	○	○	○	○	○	○	○	○		
Unpainted, only primed	S01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special paint finish C3	S02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special paint finish sea air resistant C4	S03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Internal coating	S05	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Top coat polyurethane ³⁴⁾	S06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Paint finish in other standard RAL colors: RAL 1015, 3000, 5002, 5009, 5010, 5012, 5015, 6011, 7001, 7011, 7016, 7031, 7032, 7035, 7037, 8012, 9005, 9010 (see Catalog Section 1 "Introduction")	Y53 • and paint finish RAL....	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Paint finish in special RAL colors: For RAL colors, see "Special paint finish in special RAL colors" (see Catalog Section 1 "Introduction")	Y56 • and paint finish RAL....	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Non-standard colors Colors see "Paint finish in non-standard colors" (see Catalog Section 1 "Introduction")	Y66 • and paint finish	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Modular technology – Basic versions ⁷⁾													
Mounting of holding brake (standard assignment) ^{5) 28)}	F01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mounting of brake for higher switching frequency (operating brake)	F02	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.		
Mounting of PRECIMA-brake	F04	–	–	–	–	✓	✓	✓	✓	✓	✓		
Mounting of separately driven fan ²⁹⁾	F70	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mounting of Kübler Sendix 5020 HTL, 1024 I rotary pulse encoder	G11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mounting of Kübler Sendix 5020 TTL, 1024 I rotary pulse encoder	G12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Modular technology – Additional versions													
Brake supply voltage 24 V DC	F10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Brake supply voltage 230 V AC, 50/60 Hz	F11	✓	✓	✓	✓	○	○	○	○	○	○		
Brake supply voltage 400 V AC, 50/60 Hz	F12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Brake supply voltage 180 V DC	F17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: Motors in combination with order code F01	
Brake supply voltage 205 V DC	F18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: Motors in combination with order code F01	
Mechanical manual brake release with lever (no locking)	F50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special technology ⁷⁾													
Mounting of LL 861 900 220 rotary pulse encoder ⁹⁾	G04	–	–	–	–	✓	✓	✓	✓	✓	✓		
Mounting of HOG 9 DN 1024 I rotary pulse encoder ⁹⁾	G05	–	–	–	–	✓	✓	✓	✓	✓	✓		
Mounting of HOG 10 D 1024 I rotary pulse encoder ⁹⁾	G06	–	–	–	–	✓	✓	✓	✓	✓	✓		
Mounting of Kübler Sendix 5834FS2 1024, SIL-2 rotary pulse encoder	G21	–	–	–	–	✓	✓	✓	✓	✓	✓		
Mounting of Kübler Sendix 5834FS3 1024, SIL-3 rotary pulse encoder	G22	–	–	–	–	✓	✓	✓	✓	✓	✓		
Mounting of HOGS100S-B76.626.01024.1 rotary pulse encoder	G25	–	–	–	–	–	–	–	–	✓	✓	Only for: ③	
Mounting of LL FSI 862-184560-1024, SIL-2 rotary pulse encoder	G27	–	–	–	–	–	–	–	–	✓	✓	Only for: ③	

For legends and footnotes, see page 3/128.

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				1LE1003									IE3	②
						1LE1083								③
		1LE1001											IE2	④
		1LE1002											IE1	⑤
				1LE1043								APAC Line	IE3	⑥
				1LE1041									IE2	⑦
				1LE1023								Eagle Line	NPE (NEMA)	⑧
				1LE1021									NEE (NEMA)	⑨
						1LE1011						Pole-changing		⑩
						1LE1012								⑪
1LE10 -Z	Order code													

Special technology (continued) ⁷⁾														
Mounting of rotary pulse encoder XSI 850 Overspeed	G93		-	-	-	-	-	-	-	-	✓	✓		
Mounting of rotary pulse encoder XHI 861 Overspeed	G94		-	-	-	-	-	-	-	-	✓	✓		
Mechanical version and degrees of protection														
Low-noise version for 2-pole motors with clockwise direction of rotation	F77		-	-	-	-	-	✓	✓	✓	✓			
Low-noise version for 2-pole motors with counterclockwise direction of rotation	F78		-	-	-	-	-	✓	✓	✓	✓			
Prepared for mountings, centering hole only ¹⁰⁾	G40		-	-	✓	✓	✓	✓	✓	✓	□	□		
Prepared for mountings with shaft D12 ¹⁵⁾	G41		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Prepared for mountings with shaft D16 ¹⁵⁾	G42		-	-	O. R.	O. R.	✓	✓	✓	✓	✓	✓		
Mechanical protection for encoder	G43		O. R.	O. R.	✓	✓	✓	✓	✓	✓	✓	✓		
Protective cover ^{9) 11)}	H00		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Screwed-on (instead of cast) feet	H01		-	-	✓	✓	✓	✓	✓	✓	□	□		
Vibration-proof version; vibration resistance to Class 3M4 according to IEC 60721-3-3:1994 ³⁹⁾	H02		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Condensation drainage holes ¹⁴⁾	H03		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rust-resistant screws (externally)	H07		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Housing with screw mounting ³²⁾	H10		-	-	✓	✓	-	-	-	-	✓	✓	Only for: ②, ④, ⑥, ⑦ (frame sizes 80, 90), ⑧, ⑨	
Degree of protection IP66	H19		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Degree of protection IP65 ¹³⁾	H20		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Degree of protection IP56 ¹²⁾	H22		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Drive-end seal for flange-mounting motors, oil-tight to 0.1 bar ¹⁶⁾	H23		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Coolant temperature and installation altitude														
Coolant temperature -40 to +40 °C ^{16) 28)}	D03		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Coolant temperature -30 to +40 °C ^{16) 28)}	D04		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Versions in accordance with standards and specifications														
VIK version	C02		-	-	✓	✓	✓	✓	✓	✓	-	-	Only for: ②	
CCC China Compulsory Certification ¹⁷⁾	D01		✓	✓	✓	✓	-	-	-	-	-	-	Only for: Voltage code 21st or 22nd	
Motor without CE marking for export outside EEA (see EU Directive 640/2009)	D22		-	○	○	○	○	○	○	○	○	○	Only for: ④	
Motor exclusively according to the Energy-related Products Law, Article 1 dated 27.2.2008, motor to be used in means of transport for persons and goods	D23		-	○	○	○	○	○	○	○	○	○	Only for: ④, ⑤, ⑦, ⑨, ⑩, ⑪	
Electrical according to NEMA MG1-12 ¹⁸⁾	D30		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: ⑧, ⑨	
	-		-	-	□	□	□	□	□	□	□	□	Only for: ⑧, ⑨	
Design according to UL with "Recognition Mark" ¹⁹⁾	D31		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: ⑧, ⑨	
	-		-	-	□	□	□	□	□	□	□	□	Only for: ⑧, ⑨	
KEMCO Korea Energy Efficiency Label	D33		-	-	✓	✓	✓	✓	✓	✓	✓	✓	Only for: ⑥, ⑦	
	-		-	-	-	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	Only for: ③ (2-pole to 6-pole)	
China Energy Efficiency Label ³⁸⁾	D34		-	-	○	○	○	○	○	○	○	○	Not for: ④, ⑤, ⑦, ⑩, ⑪	
	-		-	-	-	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	Only for: ③	
Canadian regulations (CSA) ^{33) 37)}	D40		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: ⑤, ⑥, ⑨, ⑩, ⑪	
	-		-	-	□	□	□	□	□	□	□	□	Only for: ⑧, ⑨	
NEMA Premium Efficient, North America version acc. to NEMA MG1, Table 12-11, incl. UL and CSA	D41		-	-	-	-	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	Only for: ③	
TR CU product safety certificate EAC for Eurasian Customs Union ³⁵⁾	D47		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
MEPS Australia	D70		-	-	-	-	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	Only for: ③	

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			1LE1011										Pole-changing		⑩
			1LE1012												⑪
1LE10	-Z	Order code													

[illegible]

Regreasing device with M10 x 1 grease nipple according to DIN 71412-A ²⁰⁾	L19		–	–	–	–	–	–	–	–	✓	✓	
Located bearing DE	L20		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Located bearing NDE	L21		✓	✓	✓	✓	✓	✓	✓	□	□	□	
Bearing design for increased cantilever forces ³⁶⁾	L22		–	–	✓	✓	✓	✓	✓	✓	✓	✓	Not for: Motors of frame sizes 80 and 90 in combination with order code F01
Regreasing device ²⁰⁾	L23		–	–	–	–	✓	✓	✓	✓	✓	✓	
Bearings reinforced at both ends for DE and NDE, bearing size 63	L25		–	–	✓	✓	✓	✓	✓	✓	✓	✓	Not for: Motors of frame sizes 80 and 90 in combination with order code F01
Bearing insulation NDE	L51		–	–	–	–	✓	✓	✓	✓	✓	✓	
Measuring nipple for SPM shock pulse measurement for bearing inspection ²⁰⁾	Q01		–	–	–	–	✓	✓	✓	✓	✓	✓	

Vibration severity grade A			□	□	□	□	□	□	□	□	□	
Vibration severity grade B	L00		✓	✓	✓	✓	✓	✓	✓	✓	✓	
Half-key balancing (standard)			□	□	□	□	□	□	□	□	□	
Balancing without feather key	L01		✓	✓	✓	✓	✓	✓	✓	✓	✓	
Full-key balancing	L02		–	–	✓	✓	✓	✓	✓	✓	✓	

[illegible][illegible]

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						1LE1003							IE3	②	
						1LE1083								③	
		1LE1001											IE2	④	
		1LE1002											IE1	⑤	
						1LE1043						APAC Line	IE3	⑥	
						1LE1041							IE2	⑦	
						1LE1023						Eagle Line	NPE (NEMA)	⑧	
						1LE1021							NEE (NEMA)	⑨	
						1LE1011						Pole-changing		⑩	
						1LE1012								⑪	
1LE10 . - . - . - . - -Z		Order code													
Rating plate and additional rating plates															
Additional rating plate for voltage tolerance ²⁴⁾	B07		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: ⑩, ⑪, 8-pole motors		
Second rating plate, loose ²⁵⁾	M10		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Rating plate, stainless steel	M11		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Additional rating plate with deviating rating plate data	Y80 • and customer specifications		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Additional rating plate with customer specifications	Y82 • and customer specifications		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Additional information on rating plate and on package label (max. 20 characters)	Y84 • and customer specifications		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Adhesive label, supplied loose (printed with: Article No., Serial No.; 2 lines of text)	Y85 • and customer specifications		–	–	–	–	✓	✓	✓	✓	✓	✓			
Packaging, safety notes, documentation and test certificates															
A printed version of the safety notes in German/English and safety notes in the language of the country of use is supplied in each wire-lattice pallet ²⁷⁾	B01		○	○	○	○	○	○	○	○	○	○			
Inspection certificate 3.1 according to EN 10204 ²⁶⁾	B02		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Document - Electrical datasheet	B60		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Document - Order dimensional drawing	B61		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Type test with heat run for horizontal motors, with acceptance	B83		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
"Basic" documentation package	B90		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
"Advanced" documentation package	B91		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
"Projects" documentation package	B92		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Wire-lattice pallet packaging	B99		○	○	○	○	○	○	○	○	○	○			
Connected in star for dispatch	M01		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Connected in delta for dispatch	M02		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

Aluminum series SIMOTICS GP 1LE10

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

3

- 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 the DT Configurator (see Appendix, "Tools and engineering").
- 4) In conjunction 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. If the coolant temperature is increased by 10 K, the grease lifetime and regreasing interval are halved.
- 7) A second shaft extension is not possible. Please inquire for mounted brakes.
- 8) For order codes **F10**, **F11**, **F12**, **F17**, and **F18**, 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) As standard, motors that are prepared for additional mountings (order codes **G40**, **G41**, **G42**) are shipped without protective cover. 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 severity grade 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 BFK458 – order code **F01**.
- 13) Not possible in combination with HOG 9 DN 1024 I rotary pulse encoder (order code **G05**) and/or brake BFK458 (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) As standard, motors that are prepared for additional mountings (order codes **G40**, **G41**, **G42**) are shipped without protective cover. 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 severity grade B.
- 16) In connection with mountings, the respective technical specifications must be observed, please inquire before ordering.
- 17) CCC mandatory certification, see Chapter 1 Page 1/19.
- 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 EN 50347, Form A are used. The feather keyway is positioned centrally on the shaft extension. The length is defined by the manufacturer in accordance with the appropriate standard. 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** the following applies:
 - Dimensions D and DA ≤ ball bearing inner diameter (see dimension tables for "Dimensions")
 - Dimensions E and EA ≤ 2 × length E (standard) 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 housing. The customer must implement appropriate measures to ensure that the installed system is "finger-safe".
- 23) Converter 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 manufacturer's test certificate may differ from the delivery time for the motor and will be dispatched by e-mail.
- 27) The manual "Low-Voltage motors SIMOTICS GP, SD, DP Safety instructions SH 63 ... 355" is available in the Internet as PDF in all official languages of the EU: <https://support.industry.siemens.com/cs/ww/en/view/109756537>
- 28) Not possible in combination with order codes **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.
- 31) Not possible for 2-pole and 4-pole motors with increased power (11th position of the Article No.: 6) in frame sizes 80 and 90.
- 32) Possible with frame sizes 180 and 200 with screw-mounted fan cover.
- 33) For frame sizes 180 and 200, constructed with metric entry thread.
- 34) Order code **S06** cannot be combined with order code **S00** and **S01**. It can be combined with **Y53** and **Y56** on request.
- 35) Please note the additional use of order code **D22** "Motor without CE marking for export outside EEA (see EU Directive 640/2009)".
- 36) A minimum cantilever force F_{\min} of $0.5 \cdot F_{\max}$ is required for NU bearings (cylindrical roller bearings) in contrast to ball bearings. Cylindrical roller bearings are not suitable for coupling output or for brief periods of no-load operation without cantilever force.
- 37) 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 1LE1021 NEMA Energy Efficient and 1LE1023 NEMA Premium Efficient are available for this purpose.
- 38) Not possible in combination with voltage code (12th or 13th position of the Article No.): 17, 18, 30, 31, 60, 61, 62, 63 and 90 with the additional order codes **M1A**; **M2A**; **M2B**; **M1B**; **M1C**; **M2C**; **M1D**; **M2D**; **M1E**; **M2E**; **M1F**; **M2F**; **M1G**; **M2G**; **M1H**; **M2H**; **1K**; **M2K**; **M1J**; **M2J**; **M1L**; **M2L**; **M1M**; **M2M** and **M3A**.
- 39) Not possible in combination with order code **R50**.
- 40) Only possible in combination with order codes **R70**, **R71**, **R72**, and **R73**.
- 41) When ordering with order code **L90**, **L91** and **L92**, order code **B02** is included.

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

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

Selection and ordering data

Special versions	Additional identification code -Z with order code and plain text if required	Frame size												Motor version	
		71	80	90	100	112	132	160	180	200	225	250	280	315	
					1LE1504 Basic Line										IEC IE4 ①
					1LE1604 Performance Line										②
					1LE1503 Basic Line										IE3 ③
					1LE1603 Performance Line										④
					1LE1583										⑤
					1LE1501 Basic Line										IE2 ⑥
					1LE1601 Performance Line										⑦
					1LE1502 Basic Line										IE1 ⑧
					1LE1543 Basic Line										APAC Line IE3 ⑨
					1LE1643 Performance Line										⑩
															IE2 ⑪
					1LE1523 Basic Line										Eagle Line NPE (NEMA) ⑫
					1LE1623 Performance Line										⑬
					1LE1521 Basic Line										NEE (NEMA) ⑭
Motor protection															
1 or 3 PTC thermistors – for tripping (2 terminals)	Q11	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2 or 6 PTC thermistors – for alarm and tripping (4 terminals)	Q12	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1 KTY84-130 temperature sensor (2 terminals)	Q23	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2 KTY84-130 temperature sensors (4 terminals)	Q25	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3 bimetal sensors (NC contacts) for tripping (2 terminals)	Q31	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6 bimetal sensors (NC contacts) for alarm and tripping (4 terminals)	Q32	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3 bimetal sensors (NC contacts) for tripping (6 terminals)	Q33	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6 bimetal sensors (NC contacts) for alarm and tripping (12 terminals)	Q34	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1 Pt1000 resistance thermometer (2 terminals)	Q35	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2 Pt1000 resistance thermometers (4 terminals)	Q36	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3 Pt100 resistance thermometers – 2-wire input (6 terminals)	Q60	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6 Pt100 resistance thermometers – 2-wire input (12 terminals) ²⁷⁾	Q61	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1 Pt100 resistance thermometer – 2-wire input (2 terminals)	Q62	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3 Pt100 resistance thermometers – 3-wire input (9 terminals) ³⁰⁾	Q63	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6 Pt100 resistance thermometers – 3-wire input (18 terminals) ³⁰⁾	Q64	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2 Pt100 resistance thermometers in basic configuration for bearing (2 terminals) ²⁾	Q72	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
2 Pt100 resistance thermometers in 3-wire input for bearing (6 terminals)	Q78	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
2 Pt100 double resistance thermometers in 3-wire input for bearing (12 terminals)	Q79	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
Motor connection and terminal box															
External grounding	H04	✓	✓	✓	✓	✓	✓	✓	□	□	□	□	□	□	
Terminal box on NDE ²⁷⁾	H08	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second external grounding	H70	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Rotation of the terminal box through 90°, entry from DE ⁴⁰⁾	R10	○	○	○	○	○	○	○	✓	✓	✓	✓	✓	✓	
Rotation of the terminal box through 90°, entry from NDE	R11	○	○	○	○	○	○	○	✓	✓	✓	✓	✓	✓	
Rotation of the terminal box through 180°	R12	○	○	○	○	○	○	○	✓	✓	✓	✓	✓	✓	
One EMC cable gland	R14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
One metal cable gland	R15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
EMC cable gland, maximum configuration	R16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Stud terminal for cable connection, accessories pack (3 items)	R17	–	–	–	–	–	–	–	–	–	–	✓	✓	✓	
Metal cable gland, maximum configuration	R18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

For legends and footnotes, see page 3/137.

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

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

Special versions	Additional identification code -Z with order code and plain text if required	Frame size														Motor version			
		71	80	90	100	112	132	160	180	200	225	250	280	315					
					1LE1504 Basic Line										IEC	IE4	①		
					1LE1604 Performance Line												②		
		1LE1503 Basic Line											IE3	③					
					1LE1603 Performance Line										④				
					1LE1583										⑤				
		1LE1501 Basic Line											IE2	⑥					
					1LE1601 Performance Line										⑦				
					1LE1502 Basic Line										IE1	⑧			
					1LE1543 Basic Line											⑨			
					1LE1643 Performance Line										APAC Line	IE3	⑩		
					1LE1541 Basic Line												⑪		
		1LE1523 Basic Line											Eagle Line	NPE (NEMA)	⑫				
					1LE1623 Performance Line										⑬				
1LE1-Z	Order code				1LE1521 Basic Line											NEE (NEMA)	⑭		

Motor connection and terminal box (continued)

Saddle terminal for connection without cable lug, accessories pack	R19		-	-	-	-	-	-	-	-	✓	✓	✓	
3 cables protruding, 0,5 m long	R20		✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-
3 cables protruding, 1,5 m long	R21		✓	✓	✓	✓	✓	✓	✓	O. R.	O. R.	O. R.	O. R.	O. R.
6 cables protruding, 0,5 m long	R22		✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-
6 cables protruding, 1,5 m long	R23		✓	✓	✓	✓	✓	✓	✓	O. R.	O. R.	O. R.	O. R.	O. R.
6 cables protruding, 3 m long	R24		✓	✓	✓	✓	✓	✓	✓	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 entries	R30		-	-	-	✓	✓	✓	✓	-	-	-	-	-
Larger terminal box	R50		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminal box without cable entry opening	R51		-	-	-	○	○	○	○	○	○	○	○	○
Drilled removable entry plate	R52		-	-	-	-	-	-	-	✓	✓	✓	✓	✓
Undrilled removable entry plate	R53		-	-	-	-	-	-	-	✓	✓	✓	✓	✓
Cast-iron auxiliary terminal box (small 30)	R62		-	-	-	-	-	-	✓	✓	✓	✓	✓	✓
			-	-	-	✓	✓	✓	-	-	-	-	-	-
Non-standard threaded through hole (NPT or G thread)	Y61 • and customer specifications		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓

Windings and insulation

[illegible]

For legends and footnotes, see page 3/137.

SIMOTICS GP and SIMOTICS SD standard motors
Article No. supplements and special versions · Options

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

[illegible]

Article No. supplements and special versions · Options

Special versions	Additional identification code -Z with order code and plain text if required	Frame size														Motor version		
		71	80	90	100	112	132	160	180	200	225	250	280	315				
					1LE1504 Basic Line										IEC	IE4	①	
					1LE1604 Performance Line												②	
		1LE1503 Basic Line										IE3	③					
					1LE1603 Performance Line										④			
					1LE1583										⑤			
		1LE1501 Basic Line										IE2	⑥					
					1LE1601 Performance Line										⑦			
					1LE1502 Basic Line										IE1	⑧		
					1LE1543 Basic Line											APAC Line	⑨	
					1LE1643 Performance Line												⑩	
										1LE1541 Basic Line					IE2	⑪		
		1LE1523 Basic Line										Eagle Line	NPE (NEMA)	⑫				
					1LE1623 Performance Line										⑬			
1LE1-Z	Order code				1LE1521 Basic Line											NEE (NEMA)	⑭	

[illegible]

Mounting of LL 861 900 220 rotary pulse encoder ⁽¹⁰⁾	G04		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mounting of HOG 9 DN 1024 I rotary pulse encoder ⁽¹⁰⁾	G05		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mounting of HOG 10 D 1024 I rotary pulse encoder ⁽¹⁰⁾	G06		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mounting of POG 10 DN rotary pulse encoder (only in combination with separately driven fan or brake) ⁽¹¹⁾	G07		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
Mounting of POG 9 rotary pulse encoder (only in combination with separately driven fan or brake) ⁽¹¹⁾	G08		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
Mounting of HOG 10 DN 1024 I rotary pulse encoder, terminal box moisture protection	G15		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mounting of HOG 10 DN 1024 I rotary pulse encoder, terminal box dust protection	G16		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mounting of Kübler Sendix 5834FS2 1024, SIL-2 rotary pulse encoder	G21		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: ⑤
Mounting of Kübler Sendix 5834FS3 1024, SIL-3 rotary pulse encoder	G22		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: ⑤
Mounting of HOGS100S-B76.626.01024.1 rotary pulse encoder	G25		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	Only for: ⑤
Mounting of LL FSI 862-184560-1024, SIL-2 rotary pulse encoder	G27		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	Only for: ⑤
Mounting of rotary pulse encoder XSI 850 Overspeed	G93		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
Mounting of rotary pulse encoder XHI 861 Overspeed	G94		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
Mounting of a special type of rotary pulse encoder	Y70 • and customer specifications		–	–	–	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, (integrated centrifugal switch, speed ... rpm), terminal box moisture protection	Y74 • and spec. speed rpm		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
Mounting of rotary pulse encoder HOG 10 DN 1024 I + FSL, (integrated centrifugal switch, speed rpm), terminal box dust protection	Y76 • and spec. speed rpm		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	

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SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

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

Special versions	Additional identification code -Z with order code and plain text if required	Frame size														Motor version		
		71	80	90	100	112	132	160	180	200	225	250	280	315				
					1LE1504 Basic Line											IEC	IE4	①
					1LE1604 Performance Line													②
					1LE1503 Basic Line												IE3	③
					1LE1603 Performance Line													④
					1LE1583													⑤
					1LE1501 Basic Line												IE2	⑥
					1LE1601 Performance Line													⑦
					1LE1502 Basic Line												IE1	⑧
					1LE1543 Basic Line											APAC Line	IE3	⑨
					1LE1643 Performance Line													⑩
					1LE1541 Basic Line												IE2	⑪
					1LE1523 Basic Line											Eagle Line	NPE (NEMA)	⑫
					1LE1623 Performance Line													⑬
		1LE1 -Z			Order code												NEE (NEMA)	
Special technology (continued) ⁶⁾																		
Mounting of rotary pulse encoder HOG 10 DN 1024 I + ESL 93, (integrated electronic speed switch, speed rpm), terminal box dust protection	Y79 • and spec. speed (max 3) rpm		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓			
Mechanical version and degrees of protection																		
Low-noise version for 2-pole motors with clockwise direction of rotation	F77		–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	Not for: Motors in combination with order code F90		
Low-noise version for 2-pole motors with counterclockwise direction of rotation	F78		–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	Not for: Motors in combination with order code F90		
Prepared for mounted components, centering hole only	G40		–	✓	✓	✓	✓	✓	✓	□	□	□	□	□	□	Not for: Motors in combination with order code F90		
Prepared for mountings with D12 shaft	G41		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: Motors in combination with order code F90		
Prepared for mountings with D16 shaft	G42		–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: Motors in combination with order code F90		
Mechanical protection for encoder	G43		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: Motors in combination with order code F90		
Protective cover ^{8) 10) 12)}	H00		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: Motors in combination with order code F90		
Screwed-on (instead of cast) feet	H01		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Vibration-proof version; vibration resistance to Class 3M4 according to IEC 60721-3-3:1994 ³⁹⁾	H02		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Condensation drainage holes ³⁸⁾	H03		✓	✓	✓	□	□	□	□	□	□	□	□	□	□			
Rust-resistant screws (externally)	H07		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Degree of protection IP66	H19		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Degree of protection IP65 ¹⁴⁾	H20		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Degree of protection IP54	H21		–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓			
Degree of protection IP56 ¹⁵⁾	H22		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Drive-end seal for flange-mounting motors, oil-tight to 0.1 bar ^{13) 29)}	H23		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Grounding brush for converter operation	L52		–	–	–	–	–	–	–	–	–	–	–	✓	✓			
Coolant temperature and installation altitude																		
Coolant temperature –50 to +40 °C	D02		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Coolant temperature –40 to +40 °C ¹⁶⁾	D03		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Coolant temperature –30 to +40 °C ¹⁶⁾	D04		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Versions in accordance with standards and specifications																		
VIK version	C02		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: ③, ④ Not for: ⑤		
Version Chemstar chemical industry	C03		✓	✓	✓													
Version Chemstar oil & gas industry	C04		✓	✓	✓													
CCC China Compulsory Certification	D01		✓	✓	✓	–	–	–	–	–	–	–	–	–	–	Only for: Voltage code 21 or 22 Not for: ⑤		
Motor without CE marking for export outside EEA (see EU Directive 640/2009)	D22		○	○	○	○	○	○	○	○	○	○	○	○	○	Not for: ①, ②		
Motor exclusively according to the Energy-related Products Law, Article 1 dated 27.2.2008, motor to be used in means of transport for persons and goods	D23		○	○	○	○	○	○	○	○	○	○	○	○	○	Only for: ⑥, ⑦, ⑧, ⑪		
Electrical according to NEMA MG1-12 ¹⁸⁾	D30		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: ⑫, ⑬, ⑭		
	–		□	□	□	□	□	□	□	□	□	□	□	□	□	Only for: ⑫, ⑬, ⑭		
Design according to UL with "Recognition Mark" ¹⁸⁾	D31		–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: ⑫, ⑬, ⑭		
	–		□	□	□	□	□	□	□	□	□	□	□	□	□	Only for: ⑫, ⑬, ⑭		

For legends and footnotes, see page 3/137.

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

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

Special versions	Additional identification code -Z with order code and plain text if required	Frame size														Motor version			
		71	80	90	100	112	132	160	180	200	225	250	280	315					
					1LE1504 Basic Line										IEC	IE4		①	
					1LE1604 Performance Line													②	
				1LE1503 Basic Line											IE3		③		
					1LE1603 Performance Line												④		
					1LE1583													⑤	
				1LE1501 Basic Line											IE2		⑥		
					1LE1601 Performance Line												⑦		
					1LE1502 Basic Line											IE1		⑧	
					1LE1543 Basic Line												APAC Line	IE3	
					1LE1643 Performance Line														
					1LE1541 Basic Line											IE2		⑪	
				1LE1523 Basic Line										Eagle Line	NPE (NEMA)		⑫		
					1LE1623 Performance Line												⑬		
1LE1	-Z	Order code		1LE1521 Basic Line											NEE (NEMA)		⑭		

1LE1-Z

Order code

1LE1521 Basic Line

NEE (NEMA)

⑭

Versions in accordance with standards and specifications (continued)

KEMCO Korea Energy Efficiency Label	D33	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for:	⑨, ⑩, ⑪
China Energy Efficiency Label ⁴¹⁾	D34	-	-	-	O.R.	O.R.	O.R.	O.R.	✓	✓	✓	O.R.	O.R.	O.R.	O.R.	O.R.	Only for:	⑤
		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Not for:	⑥, ⑦, ⑧, ⑩, ⑪, ⑭
Canadian regulations (CSA) ¹⁷⁾	D40	-	-	-	○	○	○	○	○	○	-	-	-	-	-	-	Only for:	⑤
	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for:	⑫, ⑬, ⑭
NEMA Premium Efficient, North America version acc. to NEMA MG1, Table 12-11, incl. UL and CSA	D41	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	Only for:	⑫, ⑬, ⑭
TR CU product safety certificate EAC for Eurasian Customs Union ³⁵⁾	D47	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for:	⑤
MEPS Australia	D70	-	-	-	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	Only for:	⑤

Bearings and lubrication

Regreasing device with M10 × 1 grease nipple according to DIN 71412-A ¹⁾	L19	-	-	-	-	-	-	-	✓	✓	✓	✓	○	○	○	○	Only for:	①, ③, ⑤, ⑥, ⑧, ⑨, ⑫, ⑭
		-	-	-	-	-	-	-	○	○	○	○	○	○	○	○	Only for:	②, ④, ⑦, ⑩, ⑬
Located bearing DE	L20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Located bearing NDE	L21	✓	✓	✓	✓	✓	✓	✓	○	○	○	○	○	○	○	○		
Bearing design for increased cantilever forces ³⁶⁾	L22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for:	②, ④, ⑦, ⑩, ⑬
		✓	✓	✓	○	○	○	○	✓	✓	✓	✓	✓	✓	✓	✓	Only for:	②, ④, ⑦, ⑩, ⑬
Regreasing device ¹⁾	L23	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	○	○	○	○	Not for:	②, ④, ⑦, ⑩, ⑬
		-	-	-	✓	✓	✓	○	○	○	○	○	○	○	○	○	Only for:	②, ④, ⑦, ⑩, ⑬
Bearings reinforced at both ends for DE and NDE, bearing size 63 ¹⁹⁾	L25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	○	○	○	○	Not for:	②, ④, ⑦, ⑩, ⑬
	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Only for:	②, ④, ⑦, ⑩, ⑬
Reinforced bearings at both DE and NDE, DE bearing for increased cantilever forces	L28	-	-	-	-	-	-	-	✓	✓	✓	✓	-	-	-	-		
Bearing insulation DE	L50	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓		
Bearing insulation NDE	L51	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Measuring nipple for SPM shock pulse measurement for bearing inspection ¹⁾	Q01	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

Balance and vibration severity

Vibration severity grade A		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Vibration severity grade B ²⁰⁾	L00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Half-key balancing (standard)		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Balancing without feather key	L01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Full-key balancing	L02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

Shaft and rotor

Shaft extension with standard dimensions, without feather keyway	L04	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Standard, cylindrical shaft extension (second shaft extension) NDE acc. to EN 50347	L05	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Standard shaft made of stainless steel (e.g. 1.4021)	L06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Shaft extension run-out in accordance with IEC 60072-1 precision class	L07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Shaft extension run-out, concentricity and perpendicularity in accordance with IEC 60072-1 precision class for flange-mounted motors	L08	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

For legends and footnotes, see page 3/137.

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

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

Special versions	Additional identification code -Z with order code and plain text if required	Frame size													Motor version		
		71	80	90	100	112	132	160	180	200	225	250	280	315			
					1LE1504 Basic Line									IEC	IE4	①	
					1LE1604 Performance Line											②	
				1LE1503 Basic Line										IE3	③		
					1LE1603 Performance Line										④		
					1LE1583											⑤	
				1LE1501 Basic Line										IE2	⑥		
					1LE1601 Performance Line										⑦		
					1LE1502 Basic Line										IE1	⑧	
					1LE1543 Basic Line									APAC Line	IE3	⑨	
					1LE1643 Performance Line											⑩	
					1LE1541 Basic Line										IE2	⑪	
				1LE1523 Basic Line									Eagle Line	NPE (NEMA)	⑫		
					1LE1623 Performance Line										⑬		
1LE1-.....-Z	Order code			1LE1521 Basic Line										NEE (NEMA)	⑭		

Shaft and rotor (continued)

Non-standard cylindrical shaft extension, DE ²¹⁾	Y58 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Non-standard cylindrical shaft extension, NDE ²¹⁾	Y59 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special shaft steel	Y60 • and customer specifications	–	–	–	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	□	□	□	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: ①, ③, ⑤, ⑥, ⑧, ⑨, ⑪, ⑫, ⑭	
	–	□	□	□	□	□	□	□	□	□	□	□	□	□	Only for: ②, ④, ⑦, ⑩, ⑬	
Metal external fan ^{22) 28)}	F76	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Without external fan and without fan cover	F90	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Anti-condensation heating for 230 V (2 terminals)	Q02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Anti-condensation heating for 115 V (2 terminals)	Q03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Separately driven fan with non-standard voltage and/or frequency	Y81 • and customer specifications	–	–	–	–	–	–	–	–	–	✓	✓	✓	✓		

Rating plate and additional rating plates

Additional rating plate for voltage tolerance ²³⁾	B07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: 8-pole motors	
Second rating plate, loose	M10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rating plate, stainless steel	M11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: ①, ③, ⑤, ⑥, ⑧, ⑨, ⑪, ⑫, ⑭	
	–	–	–	–	○	○	○	○	○	○	○	○	○	○	Only for: ④, ⑦, ⑩, ⑬	
	–	–	–	–	□	□	□	□	□	□	□	□	□	□	Only for: ②	
Additional rating plate with deviating rating plate data	Y80 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Additional rating plate with customer specifications	Y82 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Additional information on rating plate and on package label (max. 20 characters)	Y84 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Adhesive label, supplied loose (printed with: Article No., Serial No.; 2 lines of text)	Y85 • and customer specifications	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

Extension of the liability for defects

Extension of the liability for defects by 12 months to a total of 24 months (2 years) from delivery ²⁴⁾	Q80	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	Only for: ①, ③, ⑤, ⑥, ⑧, ⑨, ⑪, ⑫, ⑭	
Extension of the liability for defects by 24 months to a total of 36 months (3 years) from delivery ²⁴⁾	Q82	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	Only for: ①, ③, ⑤, ⑥, ⑧, ⑨, ⑪, ⑫, ⑭	
	–	–	–	–	□	□	□	□	□	□	□	□	□	□	Only for: ②, ④, ⑦, ⑩, ⑬ 36 months	

Packaging, safety notes, documentation and test certificates

Inspection certificate 3.1 according to EN 10204 ²⁵⁾	B02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Document - Electrical datasheet	B60	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

For legends and footnotes, see page 3/137.

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

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

Special versions	Additional identification code -Z with order code and plain text if required	Frame size														Motor version			
		71	80	90	100	112	132	160	180	200	225	250	280	315					
					1LE1504 Basic Line										IEC	IE4	①		
					1LE1604 Performance Line												②		
		1LE1503 Basic Line										IE3	③						
					1LE1603 Performance Line												④		
					1LE1583												⑤		
		1LE1501 Basic Line										APAC Line	IE2	⑥					
					1LE1601 Performance Line										⑦				
					1LE1502 Basic Line										⑧				
					1LE1543 Basic Line					IE3	⑨								
					1LE1643 Performance Line						⑩								
									1LE1541 Basic Line						IE2	⑪			
		1LE1523 Basic Line										Eagle Line	NPE (NEMA)	⑫					
					1LE1623 Performance Line										⑬				
1LE1 -																			

1LE1 ...-...-...-Z

Order code

1LE1521 Basic Line

Packaging, safety notes, documentation and test certificates (continued)

Document - Order dimensional drawing	B61	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Standard test (routine test) with acceptance	B65	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Type test with heat run for horizontal motors, without acceptance	B82	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Type test with heat run for horizontal motors, with acceptance	B83	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
"Basic" documentation package	B90	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
"Advanced" documentation package	B91	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
"Projects" documentation package	B92	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Connected in star for dispatch	M01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Connected in delta for dispatch	M02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

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SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

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

- 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) 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. If the coolant temperature is increased by 10 K, the grease lifetime and regreasing interval are halved.
- 5) Not possible for 1LE15 and 1LE16 motors with increased power.
- 6) A second shaft extension is not possible. Please inquire for mounted brakes.
- 7) For order codes **F10**, **F11**, **F12**, **F17**, and **F18**, 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 1XP8032-10 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 an external fan). This option can be used in combination with brakes of type KFB! This option cannot be used in combination with brakes of type BFK458!
- 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 DN 1024 I rotary pulse encoder (order code **G05**) and/or brake BFK458 (order code **F01**).
- 15) Not possible in combination with brake BFK458 – 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 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 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 EN 50347, Form A are used. The feather keyway is positioned centrally on the shaft extension. The length is defined by the manufacturer in accordance with the appropriate standard. 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** the following applies:
 - Dimensions D and DA ≤ ball bearing inner diameter (see dimension tables for "Dimensions")
 - Dimensions E and EA ≤ 2 × length E (standard) of the shaft extension.
- 22) Converter 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) Wearing parts (bearings) are excluded from the warranty extension.
- 25) The delivery time for the manufacturer's 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/WW/view/en/40761976>.
- 27) With **H08**, feet dimensions C and CA differ from EN 50347! Further information is available in the DT Configurator (see Appendix, "Tools and engineering").
- 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.
- 33) Order code **S06** cannot be combined with order codes **S00**, **S01**, and **S02**. It can be combined with **Y53** and **Y56** on request.
- 34) Order codes **F70** (separately driven fan) and **H02** (vibration-proof version) cannot be combined for motors in frame sizes 71, 80, and 90.
- 35) Please note the additional use of order code **D22** "Motor without CE marking for export outside EEA (see EU Directive 640/2009)".
- 36) A minimum cantilever force F_{\min} of $0.5 \cdot F_{\max}$ is required for NU bearings (cylindrical roller bearings) in contrast to ball bearings. Cylindrical roller bearings are not suitable for coupling output or for brief periods of no-load operation without cantilever force.
- 37) Order code **R62** only possible in combination with **R50**.
- 38) 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.
- 39) Not possible in combination with order code **R50**.
- 40) With IM B5 flange, only possible in combination with **H08**.
- 41) Not possible in combination with voltage code (12th or 13th position of the Article No.) 17, 18, 30, 31 and 90 with the additional order codes M1E; M2E; M1F; M2F; M1G; M2G; M1H; M2H; M1J; M2J; M1K; M2K; M1L; M2L; M1M; M2M and M3A.

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

Aluminum series SIMOTICS GP 1LE1073 and cast-iron series SIMOTICS SD 1LE1573, 1LE5773

Selection and ordering data

Special versions	Additional identification code -Z with order code and plain text if required	Frame size													Motor version	
		80	90	100	112	132	160	180	200	225	250	280	315			
		1LE1073						1LE1573								
								1LE5773								
1LE1-.....-Z	Order code														IEC	IE3
Motor protection																
1 or 3 PTC thermistors – for tripping (2 terminals)	Q11		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
2 or 6 PTC thermistors – for alarm and tripping (4 terminals)	Q12		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
1 KTY84-130 temperature sensor (2 terminals)	Q23		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
2 KTY84-130 temperature sensors (4 terminals)	Q25		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
3 bimetal sensors (NC contacts) for tripping (2 terminals)	Q31		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
6 bimetal sensors (NC contacts) for alarm and tripping (4 terminals)	Q32		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
3 bimetal sensors (NC contacts) for tripping (6 terminals)	Q33		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
6 bimetal sensors (NC contacts) for alarm and tripping (12 terminals)	Q34		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
1 Pt1000 resistance thermometer (2 terminals)	Q35		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
2 Pt1000 resistance thermometer (4 terminals)	Q36		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
3 Pt100 resistance thermometers – 2-wire input (6 terminals)	Q60		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
6 Pt100 resistance thermometers – 2-wire input (12 terminals) ¹⁹⁾	Q61		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
1 Pt100 resistance thermometer – 2-wire input (2 terminals)	Q62		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
3 Pt100 resistance thermometers – 3-wire input (9 terminals) ²²⁾	Q63		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
6 Pt100 resistance thermometers – 3-wire input (18 terminals) ²²⁾	Q64		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
2 Pt100 resistance thermometers in basic configuration for bearing (2 terminals) ²⁾	Q72		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
2 Pt100 resistance thermometers in 3-wire input for bearing (6 terminals)	Q78		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
2 Pt100 double resistance thermometers in 3-wire input for bearing (12 terminals)	Q79		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	Not for:	
Motors in combination with order codes F40 and F41 (frame sizes 225 to 315)																
Motor connection and terminal box																
External grounding	H04		✓	✓	✓	✓	✓	✓	□	□	□	□	□	□		
Terminal box on NDE ¹⁹⁾	H08		O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	✓	✓	✓	✓		
Second external grounding	H70		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
Rotation of the terminal box through 90°, entry from DE ³⁰⁾	R10		O	O	O	O	O	O	✓	✓	✓	✓	✓	✓		
Rotation of the terminal box through 90°, entry from NDE	R11		O	O	O	O	O	O	✓	✓	✓	✓	✓	✓		
Rotation of the terminal box through 180°	R12		O	O	O	O	O	O	✓	✓	✓	✓	✓	✓		
One EMC cable gland	R14		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
One metal cable gland	R15		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
EMC cable gland, maximum configuration	R16		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Stud terminal for cable connection, accessories pack (3 items)	R17		–	–	–	–	–	–	–	–	–	✓	✓	✓		
Metal cable gland, maximum configuration	R18		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Saddle terminal for connection without cable lug, accessories pack	R19		–	–	–	–	–	–	–	–	–	✓	✓	✓		
3 cables protruding, 0.5 m long	R20		✓	✓	✓	✓	✓	✓	✓	–	–	–	–	–		
3 cables protruding, 1.5 m long	R21		✓	✓	✓	✓	✓	✓	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.		
6 cables protruding, 0.5 m long	R22		✓	✓	✓	✓	✓	✓	✓	–	–	–	–	–		
6 cables protruding, 1.5 m long	R23		✓	✓	✓	✓	✓	✓	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.		
6 cables protruding, 3 m long	R24		✓	✓	✓	✓	✓	✓	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.		

For legends and footnotes, see page 3/143.

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

Aluminum series SIMOTICS GP 1LE1073 and cast-iron series SIMOTICS SD 1LE1573, 1LE5773

Special versions	Additional identification code -Z with order code and plain text if required	Frame size												Motor version	
		80	90	100	112	132	160	180	200	225	250	280	315	IEC	IE3
		1LE1073						1LE1573				1LE5773			
1LE1-Z	Order code														
Motor connection and terminal box (continued)															
12 cables protruding with cable lugs		□	□	□	□	□	□	□	□	□	□	□	□		
Larger terminal box	R50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Terminal box without cable entry opening	R51	–	–	–	–	–	–	○	○	○	○	○	○		
Drilled removable entry plate	R52	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
Undrilled removable entry plate	R53	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
Cast-iron auxiliary terminal box (small 22)	R62	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓		
Cast-iron auxiliary terminal box (large)	R63	–	–	–	–	–	–	–	–	–	–	–	✓		
Non-standard threaded through hole (NPT or G thread)	Y61 • and customer specifications	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
Windings and insulation															
Temperature class 155 (F), utilized according to 155 (F), with service factor	N01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 155 (F), with increased power	N02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 155 (F), with increased coolant temperature	N03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 %	N05	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 %	N06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 %	N07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N08	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 180 (H)	N10	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	✓	✓	✓	✓		
Temperature class 180 (H) at rated power and max. CT 60 °C ⁴⁾	N11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Increased air humidity/temperature with 30 to 60 g water per m³ of air	N30	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Increased air humidity/temperature with 60 to 100 g water per m³ of air	N31	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), with higher coolant temperature and/or installation altitude	Y50 • CT ... °C or IA m above sea level	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 155 (F), other requirements	Y52 • CT ... °C or IA m above sea level	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Temperature class 180 (H), utilized according to 155 (F)	Y75 • CT ... °C or IA m above sea level	–	–	O. R.	O. R.	O. R.	O. R.	✓	✓	✓	✓	✓	✓		
Colors and paint finish															
Unpainted (only cast-iron parts primed)	S00	○	○	○	○	○	○	○	○	○	○	○	○		
Unpainted, only primed	S01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special paint finish C3	S02	□	□	□	□	□	□	□	□	□	□	□	□		
Special paint finish sea air resistant C4	S03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special paint finish for use offshore C5	S04	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
Internal coating	S05	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Top coat polyurethane ²⁵⁾	S06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
C5mid Special paint system with durability "medium"	S08	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		
CX Special paint system for offshore with durability "high"	S09	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓		

For legends and footnotes, see page 3/143.

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

Aluminum series SIMOTICS GP 1LE1073 and cast-iron series SIMOTICS SD 1LE1573, 1LE5773

Special versions	Additional identification code -Z with order code and plain text if required	Frame size												Motor version	
		80	90	100	112	132	160	180	200	225	250	280	315	IEC	IE3
		1LE1073						1LE1573				1LE5773			
1LE1 -Z	Order code														
Colors and paint finish (continued)															
Paint finish in other standard RAL colors: RAL 1015, 3000, 5002, 5009, 5010, 5012, 5015, 6011, 7001, 7011, 7016, 7031, 7032, 7035, 7037, 8012, 9005, 9010 (see Catalog Section 1 "Introduction")	Y53 • and paint finish RAL.....		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Paint finish in special RAL colors: For RAL colors, see "Special paint finish in special RAL colors" (see Catalog Section 1 "Introduction")	Y56 • and paint finish RAL.....		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Non-standard colors Colors see "Paint finish in non-standard colors" (see Catalog Section 1 "Introduction")	Y66 • and paint finish		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Modular technology – Basic versions ⁵⁾															
Mounting of holding brake (standard assignment) ^{6) 23) 24)}	F01		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mounting of PRECIMA brake	F04		–	–	✓	✓	✓	✓	✓	✓	✓	✓	–		
Mounting of separately driven fan ^{20) 26)}	F70		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mounting of Kübler Sendix 5020 HTL, 1024 I rotary pulse encoder	G11		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mounting of Kübler Sendix 5020 TTL, 1024 I rotary pulse encoder	G12		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Modular technology – Additional versions															
Brake supply voltage 24 V DC	F10		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Brake supply voltage 230 V AC, 50/60 Hz	F11		✓	✓	○	○	○	○	○	○	○	○	○		
Brake supply voltage 400 V AC, 50/60 Hz ²⁴⁾	F12		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Brake supply voltage 180 V DC	F17		✓	✓	✓	✓	✓	✓	✓	–	–	–	–		
Brake supply voltage 205 V DC	F18		✓	✓	✓	✓	✓	✓	✓	–	–	–	–		
Backstop, counterclockwise motion blocked, clockwise direction of rotation	F40		–	–	–	–	✓	✓	✓	✓	✓	✓	✓		
Backstop, clockwise motion blocked, counterclockwise direction of rotation	F41		–	–	–	–	–	–	✓	✓	✓	✓	✓		
Mechanical manual brake release with lever (no locking)	F50		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–		
Special technology ⁵⁾															
Mounting of LL 861 900 220 rotary pulse encoder ⁷⁾	G04		–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mounting of HOG 9 DN 1024 I rotary pulse encoder ⁷⁾	G05		–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mounting of HOG 10 D 1024 I rotary pulse encoder ⁷⁾	G06		–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mounting of POG 10 DN rotary pulse encoder (only in combination with separately driven fan or brake) ⁷⁾	G07		–	–	–	–	–	–	✓	✓	✓	✓	✓		
Mounting of POG 9 rotary pulse encoder (only in combination with separately driven fan or brake) ⁸⁾	G08		–	–	–	–	–	–	✓	✓	✓	✓	✓		
Mounting of HOG 10 DN 1024 I rotary pulse encoder, terminal box moisture protection	G15		–	–	–	–	–	–	✓	✓	✓	✓	✓		
Mounting of HOG 10 DN 1024 I rotary pulse encoder, terminal box dust protection	G16		–	–	–	–	–	–	✓	✓	✓	✓	✓		
Mounting of Kübler Sendix 5834FS2 1024, SIL-2 rotary pulse encoder	G21		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mounting of Kübler Sendix 5834FS3 1024, SIL-3 rotary pulse encoder	G22		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mounting of HOGS100S-B76.626.01024.1 rotary pulse encoder	G25		–	–	–	–	–	–	✓	✓	✓	✓	✓		
Mounting of LL FSI 862-184560-1024, SIL-2 rotary pulse encoder	G27		–	–	–	–	–	–	✓	✓	✓	✓	✓		
Mounting of rotary pulse encoder XSI 850 Overspeed	G93								✓	✓	✓	✓	✓		
Mounting of rotary pulse encoder XHI 861 Overspeed	G94								✓	✓	✓	✓	✓		

For legends and footnotes, see page 3/143.

Special versions	Additional identification code -Z with order code and plain text if required	Frame size												Motor version	
		80	90	100	112	132	160	180	200	225	250	280	315	IEC	IE3
		1LE1073						1LE1573				1LE5773			
1LE1-Z	Order code														
Special technology ⁵⁾ (continued)															
Mounting of rotary pulse encoder HOG 10 DN 1024 I + FSL, (integrated centrifugal switch, speed ... rpm), terminal box moisture protection	Y74 • and spec. speed rpm		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
Mounting of rotary pulse encoder HOG 10 DN 1024 I + FSL, (integrated centrifugal switch, speed rpm), terminal box dust protection	Y76 • and spec. speed rpm		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
Mounting of rotary pulse encoder HOG 10 DN 1024 I + ESL 93, (integrated electronic speed switch, speed rpm), terminal box dust protection	Y79 • and spec. speed (max 3) rpm		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
Mechanical version and degrees of protection															
Low-noise version for 2-pole motors with clockwise direction of rotation	F77		–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	
Low-noise version for 2-pole motors with counterclockwise direction of rotation	F78		–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	
Prepared for mounted components, centering hole only	G40		✓	✓	✓	✓	✓	✓	□	□	□	□	□	□	
Prepared for mountings with D12 shaft	G41		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Prepared for mountings with D16 shaft	G42		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mechanical protection for encoder	G43		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Protective cover ^{7) 9)}	H00		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Screwed-on (instead of cast) feet	H01		□	□	□	□	□	□	□	□	□	□	□	–	
Vibration-proof version; vibration resistance to Class 3M4 according to IEC 60721-3-3:1994 ²⁹⁾	H02		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Condensation drainage holes ²⁸⁾	H03		✓	✓	✓	✓	✓	✓	□	□	□	□	□	□	
Rust-resistant screws (externally)	H07		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Degree of protection IP66	H19		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Degree of protection IP56 ¹²⁾	H22		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Drive-end seal for flange-mounting motors, oil-tight to 0.1 bar ^{10) 21)}	H23		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Grounding brush for converter operation	L52		–	–	–	–	–	–	–	–	–	–	✓	✓	
Coolant temperature and installation altitude															
Coolant temperature –50 to +40 °C	D02		–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	
Coolant temperature –40 to +40 °C ¹³⁾	D03		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Coolant temperature –30 to +40 °C	D04		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Bearings and lubrication															
Regreasing device with M10 × 1 grease nipple according to DIN 71412-A ¹⁾	L19		–	–	–	–	–	–	✓	✓	✓	✓	○	○	
Located bearing DE	L20		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Located bearing NDE	L21		✓	✓	✓	✓	✓	□	□	□	□	□	□	□	
Bearing design for increased cantilever forces ²⁷⁾	L22		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Regreasing device ¹⁾	L23		–	–	✓	✓	✓	✓	✓	✓	✓	✓	□	□	
Bearings reinforced at both ends for DE and NDE, bearing size 63 ¹⁴⁾	L25		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	□	□	
Reinforced bearings at both DE and NDE, DE bearing for increased cantilever forces	L28		–	–	–	–	–	–	✓	✓	✓	✓	–	–	
Bearing insulation DE	L50		–	–	–	–	–	–	–	–	✓	✓	✓	✓	
Bearing insulation NDE	L51		–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Measuring nipple for SPM shock pulse measurement for bearing inspection ¹⁾	Q01		–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Balance and vibration severity															
Vibration severity grade A			□	□	□	□	□	□	□	□	□	□	□	□	
Vibration severity grade B ¹⁵⁾	L00		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Half-key balancing (standard)			□	□	□	□	□	□	□	□	□	□	□	□	
Balancing without feather key	L01		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Full-key balancing	L02		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

Aluminum series SIMOTICS GP 1LE1073 and cast-iron series SIMOTICS SD 1LE1573, 1LE5773

Special versions	Additional identification code -Z with order code and plain text if required	Frame size												Motor version	
		80	90	100	112	132	160	180	200	225	250	280	315	IEC	IE3
		1LE1073						1LE1573							
								1LE5773							
1LE1 -															

For legends and footnotes, see page 3/143.

SIMOTICS GP and SIMOTICS SD standard motors

Article No. supplements and special versions · Options

Aluminum series SIMOTICS GP 1LE1073 and cast-iron series SIMOTICS SD 1LE1573, 1LE5773

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

3

- 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. If the coolant temperature is increased by 10 K, the grease lifetime and regreasing interval are halved.
- 5) A second shaft extension is not possible. Please inquire for mounted brakes.
- 6) For order codes **F10**, **F11**, **F12**, **F17**, and **F18**, the brake supply voltage must be specified or ordered.
- 7) 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.
- 8) Option (encoder mounting) is only possible for motors with a mounted separately driven fan or for naturally cooled motors (without an external 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!
- 9) Order code **H00** provides mechanical protection for encoders.
- 10) Not possible for type of construction IM V3.
- 11) Not possible in combination with HOG 9 DN 1024 I rotary pulse encoder (order code **G05**) and/or brake 2LM8 (order code **F01**).
- 12) Not possible in combination with 2LM8 brake – order code **F01**.
- 13) In connection with mountings, the respective technical specifications must be observed, please inquire before ordering.
- 14) From frame size 280 standard version.
- 15) On request for 2-pole motors (concerns frame sizes 225 to 315).
- 16) 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 EN 50347, Form A are used. The feather keyway is positioned centrally on the shaft extension. The length is defined by the manufacturer in accordance with the appropriate standard. 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** the following applies:
 - Dimensions D and DA ≤ ball bearing inner diameter (see dimension tables for "Dimensions")
 - Dimensions E and EA ≤ 2 × length E (standard) of the shaft extension.
- 17) Converter operation is permitted for 1LE1 motors with metal external fans.
- 18) The delivery time for the manufacturer's test certificate may differ from the delivery time for the motor.
- 19) With **H08**, feet dimensions C and CA differ from EN 50347! Further information is available in the DT Configurator (see Appendix, "Tools and engineering").
- 20) Order codes **F70** and **F76** cannot be combined.
- 21) Not possible in combination with order codes **Q72** and **Q78**.
- 22) For frame sizes 100 to 132 only possible in combination with order code **R50**.
- 23) Not possible in combination with order codes **N05**, **N06**, **N07**, **N08**, and **N11**.
- 24) For frame size 315, when combining order codes **F01** and **F12**, the rectifier for the brake will be supplied separately as a single part.
- 25) Order code **S06** cannot be combined with order codes **S00**, **S01**, and **S02**. It can be combined with **Y53** and **Y56** on request.
- 26) Order codes **F70** (separately driven fan) and **H02** (vibration-proof version) cannot be combined for motors in frame sizes 71, 80, and 90.
- 27) A minimum cantilever force F_{\min} of $0.5 \cdot F_{\max}$ is required for NU bearings (cylindrical roller bearings) in contrast to ball bearings. Cylindrical roller bearings are not suitable for coupling output or for brief periods of no-load operation without cantilever force.
- 28) 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.
- 29) Not possible in combination with order code **R50**.
- 30) With IM B5 flange, only possible in combination with **H08**.