

# SIMOTICS SD 1LA/1LG/1LP/1PP Standard Motors

Standard delivery times:

Supplements to order numbers and special versions

10 working days

20 working days

On request

## Voltages

Cast-iron series 1LA6, 1LG4, 1LG6, 1LP4, 1PP4

### Selection and ordering data

Voltages	Voltage code	Additional identification code with order code and plain text if required	Motor category		Standard delivery time (colored area)													
			Motor version	Motor type (cast-iron)	Motor type – Frame size													
					100	112	132	160	180	200	225	250	280	315 S/M	315 L			
			IE2 High Efficiency	1LG6														1LG6 ①
			IE3 Premium Efficiency	1LG6														1LG6 ②
			IE1 Standard Efficiency	1LA6/1LG4	1LA6 ③						1LG4 ④							
				1PP4							1PP4 ⑤							
				1LP4							1LP4 ⑥							
			NEMA Energy Efficient	1LG6							1LG6 ⑦							
			NEMA Premium Efficient	1LG6												1LG6 ⑧		
			Motor version	Motor type	Frame size													
					100	112	132	160	180	200	225	250	280	315 S/M	315 L			
<b>1PP4</b> . . . . . ■ .																		
<b>1L</b> . . . . . ■ .																		
<b>Voltage at 50 Hz or 60 Hz</b>																		
50 Hz 230 VΔ/400 VY, 60 Hz 460 VY	1	–	All	All	□	□	□	□	□	□	□	□	□	□	□	□	□	□
50 Hz 400 VΔ/690 VY, 60 Hz 460 VΔ <sup>1)</sup>	6	–	All except ⑦ and ⑧	All	□	□	□	□	□	□	□	□	□	□	□	□	□	□
<b>Voltage at 50 Hz and 50 Hz output</b>																		
500 VY	3	–	All	All	○	○	○	○	○	○	○	○	○	○	○	○	○	○
500 VΔ	5	–	All	All	–	–	–	–	○	○	○	○	○	○	○	○	○	○
220 VΔ/380 VY (440 VY at 60 Hz)	9	L1R	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
230 VΔ	9	L1E	All	All	○	○	○	○	○	○	○	○	○	○	○	○	○	–
380 VΔ/660 VY (440 VΔ at 60 Hz) <sup>1)</sup>	9	L1L	All except ⑦ and ⑧	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
415 VY	9	L1C	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
415 VΔ	9	L1D	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
400 VY	9	L1A	All	All	○	○	○	○	○	○	○	○	○	○	○	○	○	–
400 VΔ	9	L1B	All	All	○	○	○	○	○	○	○	○	○	○	○	○	○	○
400 VΔ (460 VΔ at 60 Hz)	9	L1U	All	All	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<b>Voltage at 60 Hz and required output at 60 Hz</b>																		
220 VΔ/380 VY; 50 Hz output	9	L2A	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
220 VΔ/380 VY; 60 Hz output <sup>2)</sup>	9	L2B	All except ⑦ and ⑧	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
380 VΔ/660 VY; 50 Hz output <sup>1)</sup>	9	L2C	All except ⑦ and ⑧	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
380 VΔ/660 VY; 60 Hz output <sup>1) 2)</sup>	9	L2D	All except ⑦ and ⑧	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
440 VY; 50 Hz output	9	L2Q	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
440 VY; 60 Hz output <sup>2)</sup>	9	L2W	All except ⑦ and ⑧	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
440 VΔ; 50 Hz output	9	L2R	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
440 VΔ; 60 Hz output <sup>2)</sup>	9	L2X	All except ⑦ and ⑧	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
460 VY; 50 Hz output	9	L2S	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
460 VY; 60 Hz output <sup>2)</sup>	9	L2E	All except ⑦ and ⑧	All	○	○	○	○	○	○	○	○	○	○	○	○	○	–
460 VΔ; 50 Hz output	9	L2T	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
460 VΔ; 60 Hz output <sup>2)</sup>	9	L2F	All except ⑦ and ⑧	All	○	○	○	○	○	○	○	○	○	○	○	○	○	○
575 VY; 50 Hz output	9	L2U	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
575 VY; 60 Hz output <sup>2)</sup>	9	L2L	All except ⑦ and ⑧	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
575 VΔ; 50 Hz output	9	L2V	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
575 VΔ; 60 Hz output <sup>2)</sup>	9	L2M	All except ⑦ and ⑧	All	○	○	○	○	○	○	○	○	○	○	○	○	○	○
<b>Non-standard voltage and/or frequencies</b>																		
Non-standard winding <sup>3)</sup>	9	L1Y • and identification code	All	All	■	■	■	■	■	■	■	■	■	■	■	■	■	■

For legends and footnotes, see Page 2.

# SIMOTICS SD 1LG Standard Motors

## Supplements to order numbers and special versions

Voltages – Cast-iron series 1LG4 – pole-changing, 1LG6 – for converter-fed operation only

### Standard delivery times:

10 working days	20 working days	On request
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Voltages	Voltage code 11th position of the Order No.	Additional identification code with order code and plain text if required	Motor category		Standard delivery time (colored area)												
			Motor version	Motor type (cast-iron)	Motor type – Frame size												
					100	112	132	160	180	200	225	250	280	315 S/M	315 L		
<b>1LG4 . . . - . . . ■ .</b>			Pole-changing	1LG4	1LG4												
<b>Voltage at 50 Hz and 50 Hz output, direct switch-on</b>			Motor version	Motor type	Frame size												
230 V	1	–	All	All													
400 V	6	–	All	All													
500 V	5	–	All	All													
690 V	0	–	All	All													
<b>Voltage at 60 Hz and required output at 60 Hz</b>																	
220 V; 50 Hz output	9	L4A	All	All													
220 V; 60 Hz output	9	L4B	All	All													
380 V; 50 Hz output	9	L4C	All	All													
380 V; 60 Hz output	9	L4D	All	All													
440 V; 50 Hz output	9	L4G	All	All													
440 V; 60 Hz output	9	L4E	All	All													
460 V; 50 Hz output	9	L4J	All	All													
460 V; 60 Hz output	9	L4H	All	All													
575 V; 50 Hz output	9	L4N	All	All													
575 V; 60 Hz output	9	L4M	All	All													
<b>Non-standard voltage and/or frequencies</b>																	
Non-standard winding <sup>3)</sup>	9	L1Y • and identification code	All	All													

Voltages	Voltage code 11th position of the Order No.	Additional identification code with order code and plain text if required	Motor category		Standard delivery time (colored area)												
			Motor version	Motor type (cast-iron)	Motor type – Frame size												
					100	112	132	160	180	200	225	250	280	315 S/M	315 L		
<b>1LG6 . . . - . . . ■ .</b>			For converter-fed operation only	1LG6	1LG6												
<b>Voltage at 50 Hz and 50 Hz output</b>			Motor version	Motor type	Frame size												
500 VY	3	–	All	All													
500 VΔ	5	–	All	All													
690 VY	8	–	All	All													
400 VY	9	L1A	All	All													
400 VΔ	9	L1B	All	All													
<b>Non-standard voltage and/or frequencies</b>																	
Non-standard winding <sup>3) 4) 5)</sup>	9	L1Y • 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.
- O, R. Possible on request
- ✓ With additional charge
- Not possible

1) For the North America export version of 1LG6 with order code D41 NEMA Premium Efficient or D42 NEMA Energy Efficient, voltages above 600 V will not be stamped.

2) Not admissible in combination with order codes D41 NEMA Premium Efficient or D42 NEMA Energy Efficient.

3) 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.

4) Please inquire in the case of 1LG6 motors of frame size 315 for voltages in the 200 V range.

5) 60 Hz data is not admissible on the rating plate.





Standard delivery times:

# SIMOTICS SD 1LA/1LG/1LP/1PP Standard Motors

Supplements to order numbers and special versions

10 working days

20 working days

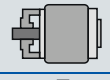
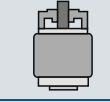
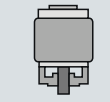
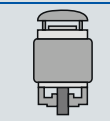
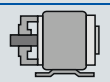
On request

Types of construction  
Cast-iron series 1LA6, 1LG4, 1LG6, 1LP4, 1PP4

Types of construction	Type of construction code 12th position of the Order No.	Additional identification code with order code and plain text if required	Motor category		Standard delivery time (colored area)													
			Motor version	Motor type (cast-iron)	100	112	132	160	180	200	225	250	280	315 S/M	315 L 2-pole	315 L 4 to 8-pole, pole-changing	315 L 1LG6 318-M, 1LG6 312-M	
			IE2 High Efficiency	1LG6													1LG6 ①	
			IE3 Premium Efficiency	1LG6													1LG6 ②	
			IE1 Standard Efficiency	1LA6/1LG4	1LA6 ③				1LG4 ④									
				1PP4													1PP4 ⑤	
				1LP4													1LP4 ⑥	
			NEMA Energy Efficient	1LG6													1LG6 ⑦	
			NEMA Premium Efficient	1LG6														1LG6 ⑧
			Pole-changing	1LG4													1LG4 ⑨	
			For converter-fed operation only	1LG6													1LG6 ⑩	

Motor version	Motor type	Frame size													
		100	112	132	160	180	200	225	250	280	315 S/M	315 L 2-pole	315 L 4 to 8-pole, pole-changing	315 L 1LG6 318-M, 1LG6 312-M	
1PP4															
1L															

	With standard flange	acc. to DIN EN 50347		FT130 FT130 FT165 FT215																	
		acc. to DIN 42948		C 160	C 160	C 200	C 250														
IM B14		2	-	All	All	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-		
IM V19		2	-	All	All	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-		
IM V18 without protective cover		2	-	All	All	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-		
IM V18 with protective cover 3)		9	M2A	All except ⑤ and ⑥		✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-		
IM B34 1)		7	-	All except ⑦ ≤ 200 hp		✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-		

# SIMOTICS SD 1LA/1LG/1LP/1PP Standard Motors

Standard delivery times:

Supplements to order numbers and special versions

10 working days

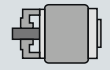
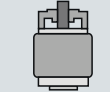
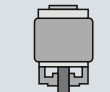
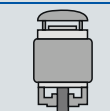
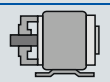
20 working days

On request

## Types of construction

Cast-iron series 1LA6, 1LG4, 1LG6, 1LP4, 1PP4

Types of construction	Type of construction code	Additional identification code with order code and plain text if required	Motor category		Standard delivery time (colored area)													
			Motor version	Motor type (cast-iron)	100	112	132	160	180	200	225	250	280	315 S/M	315 L 2-pole	315 L 4 to 8-pole, pole-changing	315 L 1LG6 318-M, 1LG6 312-M	
			IE2 High Efficiency	1LG6													1LG6 ①	
			IE3 Premium Efficiency	1LG6													1LG6 ②	
			IE1 Standard Efficiency	1LA6/1LG4	1LA6 ③												1LG4 ④	
				1PP4													1PP4 ⑤	
				1LP4													1LP4 ⑥	
			NEMA Energy Efficient	1LG6													1LG6 ⑦	
			NEMA Premium Efficient	1LG6														1LG6 ⑧
			Pole-changing	1LG4													1LG4 ⑨	
			For converter-fed operation only	1LG6													1LG6 ⑩	
			Motor version	Motor type	100	112	132	160	180	200	225	250	280	315 S/M	315 L 2-pole	315 L 4 to 8-pole, pole-changing	315 L 1LG6 318-M, 1LG6 312-M	
			1PP4															
			1L															

	With special flange	acc. to DIN EN 50347	acc. to DIN 42948	FT165 C 200	FT165 C 200	FT215 C 250	FT265 C 300	Standard delivery time (colored area)													
								100	112	132	160	180	200	225	250	280	315 S/M	315 L 2-pole	315 L 4 to 8-pole, pole-changing	315 L 1LG6 318-M, 1LG6 312-M	
IM B14		3	-	All	All	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-			
IM V19		3	-	All	All	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-			
IM V18 without protective cover		3	-	All	All	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-			
IM V18 with protective cover <sup>3)</sup>		9	M2B	All except ⑤ and ⑥		✓	✓	✓	✓	-	-	-	-	-	-	-	-	-			
IM B34 <sup>1)</sup>		9	M2C	All except ⑦ ≤ 200 hp		✓	✓	✓	✓	-	-	-	-	-	-	-	-	-			

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

1) For the North America export version of 1LG6 with order code D42 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.

2) If motors of frame sizes 180 M to 315 L are fixed to the wall, it is recommended that the motor feet are supported.

3) The "Second shaft extension" option, order code K16 is not possible.

4) 60 Hz version is available on request for 2-pole 1LG4/1LG6 motors of frame size 315 L.

5) 1LG4/1LG6 motors of frame sizes 225 S to 315 M are supplied with two screw-in eyebolts conforming to IM B5, whereby one can be repositioned to conform to IM V1 or IM V3. It is important to note that stress must not be applied perpendicular to the ring plane.



Standard delivery times:

# SIMOTICS SD 1LA/1LG/1LP/1PP Standard Motors

Supplements to order numbers and special versions

10 working days	20 working days	On request
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## Options Cast-iron series 1LA6, 1LG4, 1LG6, 1LP4, 1PP4

Special versions	Additional identification code -Z with order code and plain text if required	Motor category		Standard delivery time (colored area)												
		Motor version	Motor type (cast-iron)	Motor type – Frame size												
				100	112	132	160	180	200	225	250	280	315 S/M/L	315 L 1LG6 318-.M, 1LG6 312-.M <sup>*)</sup>		
		IE2 High Efficiency	1LG6					1LG6 ①								
		IE3 Premium Efficiency	1LG6										1LG6 ②			
		IE1 Standard Efficiency	1LA6/ 1LG4	1LA6 ③				1LG4 ④								
			1PP4					1PP4 ⑤								
			1LP4					1LP4 ⑥								
		NEMA Energy Efficient	1LG6					1LG6 ⑦								
		NEMA Premium Efficient	1LG6												1LG6 ⑧	
		Pole-changing	1LG4					1LG4 ⑨								
		For converter-fed operation only	1LG6					1LG6 ⑩								
		Motor version	Motor type	Frame size												
				100	112	132	160	180	200	225	250	280	315 S/M/L	315 L 1LG6 318-.M, 1LG6 312-.M <sup>*)</sup>		
		1PP4.....														
		1L.....														

Motor connection and connection box (continued)														
Connection box on top, feet screwed on	K11	All	All	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
Connection box in cast-iron version	K15	All except ⑤ and ⑥		□	□	□	□	✓	✓	✓	□	□	□	□
One metal cable gland	K54	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cable gland, max. configuration	K55	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotation of the connection box through 90°, entry from DE	K83	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotation of the connection box through 90°, entry from NDE	K84	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotation of the connection box through 180°	K85	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Next larger connection box	L00	All	All	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
External grounding	L13	All except ⑩		✓	✓	✓	✓	□	□	□	□	□	□	□
6 cables protruding, 1.5 m long 4)	L48	All	All	-	-	-	-	✓	✓	✓	O. R.	O. R.	O. R.	O. R.
6 cables protruding, 3 m long 4)	L49	All	All	-	-	-	-	✓	✓	✓	O. R.	O. R.	O. R.	O. R.
Protruding cable ends – right side 5) 6)	L51	All	All	-	-	-	-	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Protruding cable ends – left side 5) 6)	L52	All	All	-	-	-	-	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Auxiliary connection box 1XB3020	L97	All	All	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
Stud terminal for cable connection, accessories pack (3 items)	M46	All	All	-	-	-	-	-	-	-	✓	✓	✓	✓
Saddle terminal for connection without cable lug, accessories pack (6 items)	M47	All	All	-	-	-	-	-	-	-	✓	✓	✓	✓
Windings and insulation														
Temperature class 155 (F), used acc. to 155 (F), with service factor (SF)	C11	All except ⑩		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), with increased output	C12	All except ⑩		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), with increased coolant temperature	C13	All except ⑩		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



# SIMOTICS SD 1LA/1LG/1LP/1PP Standard Motors

Standard delivery times:

Supplements to order numbers and special versions

10  
working  
days

20  
working  
days

On  
request

**Options**  
Cast-iron series 1LA6, 1LG4, 1LG6, 1LP4, 1PP4

Special versions	Additional identification code -Z with order code and plain text if required	Motor category		Standard delivery time (colored area)										
		Motor version	Motor type (cast-iron)	Motor type – Frame size										
				100	112	132	160	180	200	225	250	280	315 S/M/L	315 L 1LG6 318-.M, 1LG6 312-.M <sup>*)</sup>
		IE2 High Efficiency	1LG6					1LG6 ①						
		IE3 Premium Efficiency	1LG6										1LG6 ②	
		IE1 Standard Efficiency	1LA6/ 1LG4	1LA6 ③				1LG4 ④						
			1PP4					1PP4 ⑤						
			1LP4					1LP4 ⑥						
		NEMA Energy Efficient	1LG6					1LG6 ⑦						
		NEMA Premium Efficient	1LG6											1LG6 ⑧
		Pole-changing	1LG4					1LG4 ⑨						
		For con-verter-fed operation only	1LG6					1LG6 ⑩						
		Motor version	Motor type	Frame size										
				100	112	132	160	180	200	225	250	280	315 S/M/L	315 L 1LG6 318-.M, 1LG6 312-.M <sup>*)</sup>
		<b>1PP4</b> .....												
		<b>1L</b> .....												
<b>Windings and insulation (continued)</b>														
Temperature class 180 (H) at rated output and max. CT 60 °C (7) 8) 9)	<b>C18</b>	Only possible for ③, ④, ⑤ and ⑨		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–
Increased air humidity/temperature with 30 to 60 g water per m <sup>3</sup> of air	<b>C19</b>	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 %	<b>C22</b>	All except ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 %	<b>C23</b>	All except ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 %	<b>C24</b>	All except ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	<b>C25</b>	All except ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Increased air humidity/temperature with 60 to 100 g water per m <sup>3</sup> of air	<b>C26</b>	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), with higher coolant temperature and/or site altitude	<b>Y50 •</b> and specified output, CT .. °C or SA .... m above sea level	All except ⑩		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), other requirements 8)	<b>Y52 •</b> and specified output, CT .. °C or SA .... m above sea level	All except ⑩		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



# SIMOTICS SD 1LA/1LG/1LP/1PP Standard Motors

Standard delivery times:

10  
working  
days

20  
working  
days

On  
request

Supplements to order numbers and special versions

**Options**  
Cast-iron series 1LA6, 1LG4, 1LG6, 1LP4, 1PP4

Special versions	Additional identification code -Z with order code and plain text if required	Motor category		Standard delivery time (colored area)											
		Motor version	Motor type (cast-iron)	Motor type – Frame size											
				100	112	132	160	180	200	225	250	280	315 S/M/L	315 L 1LG6 318-.M, 1LG6 312-.M <sup>*)</sup>	
		IE2 High Efficiency	1LG6					1LG6 ①							
		IE3 Premium Efficiency	1LG6										1LG6 ②		
		IE1 Standard Efficiency	1LA6/ 1LG4	1LA6 ③				1LG4 ④							
			1PP4					1PP4 ⑤							
			1LP4					1LP4 ⑥							
		NEMA Energy Efficient	1LG6					1LG6 ⑦							
		NEMA Premium Efficient	1LG6												1LG6 ⑧
		Pole-changing	1LG4					1LG4 ⑨							
		For con-verter-fed operation only	1LG6					1LG6 ⑩							
		Motor version	Motor type	Frame size											
				100	112	132	160	180	200	225	250	280	315 S/M/L	315 L 1LG6 318-.M, 1LG6 312-.M <sup>*)</sup>	
		1PP4.....													
		1L.....													
<b>Modular technology – Combinations of basic versions <sup>11)</sup></b>															
Mounting of separately driven fan and 1XP8001-1 rotary pulse encoder	H61	All except ⑤ and ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	
Mounting of brake and 1XP8001-1 rotary pulse encoder <sup>13)</sup>	H62	All except ⑤ and ⑥		–	–	–	–	✓	✓	✓	✓	✓	✓	–	
Mounting of brake and separately driven fan <sup>12) 13)</sup>	H63	All except ⑤ and ⑥		–	–	–	–	✓	✓	✓	✓	✓	✓	–	
Mounting of brake, separately driven fan and 1XP8001-1 rotary pulse encoder <sup>13)</sup>	H64	All except ⑤ and ⑥		–	–	–	–	✓	✓	✓	✓	✓	✓	–	
Mounting of separately driven fan and 1XP8001-2 rotary pulse encoder	H97	All except ⑤ and ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	
Mounting of brake and 1XP8001-2 rotary pulse encoder <sup>13)</sup>	H98	All except ⑤ and ⑥		–	–	–	–	✓	✓	✓	✓	✓	✓	–	
Mounting of brake, separately driven fan and 1XP8001-2 rotary pulse encoder <sup>13)</sup>	H99	All except ⑤ and ⑥		–	–	–	–	✓	✓	✓	✓	✓	✓	–	
<b>Modular technology – Additional versions</b>															
Brake supply voltage 24 V DC	C00	All except ⑤ and ⑥		–	–	–	–	✓	✓	✓	✓	✓	✓	–	
Brake supply voltage 400 V AC	C01	All except ⑤ and ⑥		–	–	–	–	✓	✓	✓	✓	✓	✓	–	
Mechanical manual brake release with lever (no locking)	K82	All except ⑤ and ⑥		–	–	–	–	✓	✓	✓	✓	✓	✓	–	
<b>Special technology <sup>11)</sup></b>															
Mounting of LL 861 900 220 rotary pulse encoder	H70	All except ⑤ and ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mounting of HOG 9 D 1024 I rotary pulse encoder	H72	All except ⑤ and ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mounting of HOG 10 D 1024 I rotary pulse encoder	H73	All except ⑤ and ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Prepared for mounting of LL 861 900 220	H78	All except ⑤ and ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Prepared for mounting of HOG 9 D 1024 I	H79	All except ⑤ and ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Prepared for mounting of HOG 10 D 1024 I	H80	All except ⑤ and ⑥		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mounting of HOG 10 DN 1024 I rotary pulse encoder, terminal box protection against humidity	J15	All except ⑤, ⑥, ⑨ and ⑩		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	







# SIMOTICS SD 1LA/1LG/1LP/1PP Standard Motors

Standard delivery times:

Supplements to order numbers and special versions

10  
working  
days

20  
working  
days

On  
request

**Options**  
Cast-iron series 1LA6, 1LG4, 1LG6, 1LP4, 1PP4

Special versions	Additional identification code -Z with order code and plain text if required	Motor category		Standard delivery time (colored area)										
		Motor version	Motor type (cast-iron)	Motor type – Frame size										
				100	112	132	160	180	200	225	250	280	315 S/M/L	315 L 1LG6 318-.M, 1LG6 312-.M *)
		IE2 High Efficiency	1LG6					1LG6 ①						
		IE3 Premium Efficiency	1LG6										1LG6 ②	
		IE1 Standard Efficiency	1LA6/1LG4	1LA6 ③				1LG4 ④						
			1PP4					1PP4 ⑤						
			1LP4					1LP4 ⑥						
		NEMA Energy Efficient	1LG6					1LG6 ⑦						
		NEMA Premium Efficient	1LG6											1LG6 ⑧
		Pole-changing	1LG4					1LG4 ⑨						
		For converter-fed operation only	1LG6					1LG6 ⑩						
		Motor version	Motor type	Frame size										
				100	112	132	160	180	200	225	250	280	315 S/M/L	315 L 1LG6 318-.M, 1LG6 312-.M *)
		1PP4.....												
		1L.....												
<b>Rating plate and extra rating plates</b>														
Second lubrication plate, loose	B06	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Extra rating plate for voltage tolerance <sup>34)</sup>	B07 <i>New!</i>	All except ⑥, ⑨ and 8-pole motors	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second rating plate, loose	K31	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rating plate, stainless steel	M40 <i>New!</i>	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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Packaging, safety notes, documentation and test certificates</b>														
With one safety and start-up guide per box pallet	B01	All	All	○	○	○	○	–	–	–	–	–	–	–
Acceptance test certificate 3.1 in acc. with EN 10204 <sup>35)</sup>	B02	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Printed German/English Operating Instructions (Compact) enclosed <sup>36)</sup>		All	All	□	□	□	□	□	□	□	□	□	□	□
Printed German/English Operating Instructions enclosed	B23	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Type test with heat run for horizontal motors, with acceptance	F83	All except ⑩	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wire-lattice pallet	L99	All	All	○	○	○	○	–	–	–	–	–	–	–
Connected in star for dispatch	M32	All	All	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Connected in delta for dispatch	M33	All	All	✓	✓	✓	✓	✓	✓	□	□	□	□	□

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



- \* For 1LG6312-2MA.., 1LG6312-4MA.., 1LG6318-2MB.. and 1LG6318-4MA.. motors, it is not possible to use the options for country certificates (D31, D33, D34, D35, D40), marine certificates (E11, E21, E31, E51), explosion-proof version (M72, M73, M34, M35, M38, M39, M74, M75, C27), brakes, brakes with encoder (G26, H47, H62, H63, H64, H98, H99), low-noise versions (K37, K38) and mounting of a separately driven fan, separately driven fan with encoder (G17, H61, H64, H97, H99).
- 1) Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended. For pole-changing motors with separate windings, the number of temperature sensors must be doubled (order code A11, prices of A12 or order code A12, prices available on request).
- 2) For 1LG6 motors with special insulation for converter-fed operation, order code A72 is not possible for frame sizes 225 to 315 in combination with the option "Insulated bearing cartridge" – Order code L27.
- 3) For 1LG4 pole-changing motors in frame size 200, PT100 bearing monitoring is only possible at the drive end (DE).
- 4) In combination with the PTC thermistor option or anti-condensation heating option, please inquire before ordering.
- 5) Possible in combination with order code L44 to L49 or length specification in plain text.
- 6) For 1LG4 pole-changing motors, 1LG6 motors with special insulation for converter-fed operation and 1PP4 forced-air cooled motors, in combination with the PTC thermistor option or anti-condensation heating option, please inquire before ordering.
- 7) Cannot be used for motors in UL version (order code D31). Cannot be used for motors according to CSA approval (order code D40) for 1LG4/1LG6 motor series. The grease lifetime specified in Catalog D 81.1 · 2008 in Part 0 "Introduction" refers to CT 40 °C. When the coolant temperature rises by 10 K, the grease service lifetime or relubrication interval is halved.
- 8) Not possible for 1LG4 motors with increased output.
- 9) Order identically priced predecessor type for 1LG6...2AA../1LG6...2AB.. 2-pole motors or 1LG6...4AA.. 4-pole motors using the options for country certificates (D31, D33, D34, D35, D40), marine certificates (E11, E21, E31, E51), explosion-proof version (M72, M73, M34, M35, M38, M39, M74, M75, C27) and IE3 version for SH 315 (D25).
- 10) For frame sizes 100 to 160, do not specify an order code. Order code is only necessary for frame sizes 180 to 315.
- 11) Second shaft extension is not possible, with mounted brake on request. The order codes listed cannot be combined within the various technologies nor with each other within the same technology system.  
This applies for:
  - Modular technology
  - Basic versions of "Modular technology"
  - Combinations of basic versions "Special technology"
- 12) For 1LG4/1LG6 motors, order codes G17, G26 and H63 frame size 225 and above can also be combined with all rotary pulse encoders in the "Special technology" range.
- 13) The standard brake supply voltage is 230 V AC, 50/60 Hz. Other brake supply voltages are possible with order codes C00 and C01.
- 14) Not available for 2-pole motors of frame size 180 and above.
- 15) For 1LG4 motors, in the low-noise version, a second shaft extension and/or encoder mounting is not possible. Not necessary for 1LG6 motors because these motors are already noise optimized.
- 16) Not possible in combination with rotary pulse encoder HOG 9 D 1024 I (order code H72, H79) and/or brake 2LM8 (used for motors up to and including frame size 225, order code G26).
- 17) Not possible in combination with brake 2LM8 (used for motors up to and including frame size 225, order code G26).
- 18) Supplied with the condensation drainage holes sealed at the drive end DE and non-drive end NDE (IP55, IP56, IP65). If condensation drainage holes are required in motors of the IM B6, IM B7 or IM B8 type of construction (feet located on side or top), it is necessary to relocate the bearing plates at the drive end (DE) and non-drive end (NDE) so that the condensation drainage holes situated between the feet on delivery are underneath.
- 19) Not necessary 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.
- 20) For 1LG6 motors with special insulation for converter-fed operation, in connection with mountings, their respective technical data must be considered, please inquire before ordering.
- 21) In combination with order code D02, the motor achieves IP54 degree of protection.
- 22) Possible up to 600 V max. Order with voltage code 9 and order code for voltage and frequency. The rated voltage is indicated on the rating plate. Order codes D30 and D31 do not authorize importing into USA and Mexico. The North America export version of the 1LG6 with order code D41 NEMA Premium Efficient or D42 NEMA Energy Efficient is available for this purpose.
- 23) The 2, 4 and 6-pole IE2 motors 1LA9 and 1LG6 in the 0.75 kW to 200 kW range for 50 Hz output at 60 Hz are certified for Korea.
- 24) Order with voltage code 9 and order code for voltage and frequency. The rated voltage is indicated on the rating plate. Order code D40 does not authorize importing into Canada. The North America export version of the 1LG6 with order code D41 NEMA Premium Efficient or D42 NEMA Energy Efficient is available for this purpose.
- 25) "Small power motors" with a rated output of up to 3 kW which are exported to Japan must bear the correct marking.
- 26) Not possible for 2-pole motors, frame size 315 L in vertical types of construction; bearings for increased cantilever forces at vibration quantity level B are available on request for motors of frame size 180 and above. Not possible for motors of frame size 180 and above in the combination "Concentricity of the shaft extension, coaxiality and linear movement in accordance with DIN 42955 Tolerance R for flange-mounting motors" – Order code K04.
- 27) With 4-pole to 8-pole motors of frame size 280 and above, standard version.
- 28) For 1LG6 motors with special insulation for converter-fed operation, this option is not possible for frame sizes 225 to 315 in combination with the option "Installation of 2 PT100 screw-in resistance thermometers in basic circuit for rolling-contact bearings" – Order code A72.
- 29) Can be combined with deep-groove bearings of series 60.., 62.. and 63... Not possible in combination with parallel roller bearings (e.g. bearings for increased cantilever forces, order code K20), brake mounting or encoder mounting.
- 30) Possible for motors of frame size 315 and above in vertical types of construction or 2-pole for version with second shaft extension on request. Version with protective cover not possible.
- 31) 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 Y55 and K16:
  - Dimensions D and DA ≤ internal diameter of roller bearing (see dimension tables under "Dimensions")
  - Dimensions E and EA ≤ 2 x length E (normal) of the shaft extension.
 For an explanation of the order codes, see Catalog D 81.1 · 2008 Part 0 "Introduction".
- 32) 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".
- 33) Converter-fed operation is permitted for 1LG motors with metal external fans. The metal external fan is not possible in combination with the low-noise version – Order code K37 or K38.
- 34) Can be ordered for 230VΔ/400VY or 400VΔ/690VY (voltage code 1 or 6). Not possible for pole-changing motors, naturally cooled motors, 8-pole motors and in combination with order code D34.
- 35) The delivery time for the factory test certificate may differ from the delivery time for the motor.
- 36) The Operating Instructions (Compact) are available in PDF format for all official EU languages at <http://support.automation.siemens.com/WW/view/en/10803948/133300>.