

# SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

## Voltages

### Aluminum series 1LE10, 1PC10

#### Selection and ordering data

Voltages	Voltage code 12th and 13th position of the Article No.	Additional identification code with order code and plain text if required	Motor category															
			Motor version		Motor type (alum.)		Motor type – Frame size											
			63	71	80	90	100	112	132	160	180	200	225					
			IE2 High Efficiency	1LE1001			1LE1001 ①											
				1PC1001				1PC1001 ②										
			IE3 Premium Efficiency	1LE1003			1LE1003 ③											
			IE1 Standard Efficiency	1LE1002				1LE1002 ④										
				1PC1002				1PC1002 ⑤										
			NEMA Energy Efficient	1LE1021				1LE1021 Eagle Line ⑥										
			NEMA Premium Efficient	1LE1023				1LE1023 Eagle Line ⑦										
			Motor version	Motor type	Frame size													
					63	71	80	90	100	112	132	160	180	200	225			
<b>Voltage at 50 Hz or 60 Hz</b>																		
50 Hz 230 VΔ/400 VY, 60 Hz 460 VY <sup>1)</sup>	2	2	–	All	All		☐	☐	☐	☐	☐	☐						
50 Hz 400 VΔ/690 VY, 60 Hz 460 VΔ <sup>1)2)</sup>	3	4	–	All except ⑥ and ⑦			☐	☐	☐	☐	☐	☐						
50 Hz 400 VΔ, 60 Hz 460 VΔ <sup>1)2)</sup>				Only applicable for ⑥ and ⑦			☐	☐	☐	☐	☐	☐						
50 Hz 400 VY, 60 Hz 460 VY <sup>1)3)4)</sup>	0	2	–	All	All		☐	☐	–	–	–	–						
50 Hz 500 VY <sup>1)</sup>	2	7	–	All	All		○	○	○	○	○	○						
50 Hz 500 VΔ	4	0	–	All	All		–	–	○	○	○	○						
50 Hz 220 VΔ/380 VY, 60 Hz 440 VΔ <sup>1)</sup>	2	1	–	All	All		✓	✓	✓	✓	✓	✓						
50 Hz 380 VΔ/660 VY, 60 Hz 440 VΔ <sup>1)2)</sup>	3	3	–	All except ⑥ and ⑦			✓	✓	✓	✓	✓	✓						
50 Hz 380 VΔ <sup>2)</sup>				Only applicable for ⑥ and ⑦			–	–	✓	✓	✓	✓						
50 Hz 240 VΔ/415 VY, 60 Hz 480 VY <sup>1)2)</sup>	2	3	–	All	All		✓	✓	✓	✓	✓	✓						
50 Hz 415 VΔ, 60 Hz 480 VΔ	3	5	–	All	All		✓	✓	✓	✓	✓	✓						
<b>Voltage at 60 Hz and required output</b>																		
220 VΔ/380 VY; 50 Hz output <sup>1)</sup>	9	0	M2A	All	All		✓	✓	✓	✓	✓	✓						
220 VΔ/380 VY; 60 Hz output <sup>1)5)</sup>	9	0	M1A	All except ⑥ and ⑦			✓	✓	✓	✓	✓	✓						
380 VΔ/660 VY; 50 Hz output <sup>2)</sup>	9	0	M2B	All except ⑥ and ⑦			–	–	✓	✓	✓	✓						
380 VΔ; 50 Hz output <sup>2)</sup>				Only applicable for ⑥ and ⑦			–	–	✓	✓	✓	✓						
380 VΔ/660 VY; 60 Hz output <sup>2)5)</sup>	9	0	M1B	All except ⑥ and ⑦			–	–	✓	✓	✓	✓						
440 VY; 50 Hz output	9	0	M2C	All	All		–	–	✓	✓	✓	✓						
440 VY; 60 Hz output <sup>5)</sup>	9	0	M1C	All except ⑥ and ⑦			–	–	✓	✓	✓	✓						
440 VΔ; 50 Hz output	9	0	M2D	All	All		–	–	✓	✓	✓	✓						
440 VΔ; 60 Hz output <sup>5)</sup>	9	0	M1D	All except ⑥ and ⑦			–	–	✓	✓	✓	✓						
460 VY; 50 Hz output	9	0	M2E	All	All		–	–	✓	✓	✓	✓						
460 VY; 60 Hz output <sup>5)</sup>	9	0	M1E	All except ⑥ and ⑦			–	–	○	○	○	○						
460 VΔ; 50 Hz output	9	0	M2F	All	All		–	–	✓	✓	✓	✓						
460 VΔ; 60 Hz output <sup>5)</sup>	9	0	M1F	All except ⑥ and ⑦			–	–	○	○	○	○						
575 VY; 50 Hz output	9	0	M2G	All	All		–	–	✓	✓	✓	✓						
575 VY; 60 Hz output <sup>5)</sup>	9	0	M1G	All except ⑥ and ⑦			–	–	✓	✓	✓	✓						
575 VΔ; 50 Hz output	9	0	M2H	All	All		–	–	✓	✓	✓	✓						
575 VΔ; 60 Hz output <sup>5)</sup>	9	0	M1H	All except ⑥ and ⑦			–	–	✓	✓	✓	✓						
<b>Voltage at 87 Hz and 87 Hz output</b>																		
400 VΔ <sup>6)</sup>	9	0	M3A	All	All		✓	✓	✓	✓	✓	✓						
<b>Non-standard voltage and/or frequencies</b>																		
Non-standard winding <sup>7)</sup>	9	0	M1Y • and identification code	All	All		✓	✓	✓	✓	✓	✓						

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

1) Depending on the selected voltage, shaft heights 80 and 90 are only available with motor protection (motor protection code B, C, F, G; see Motor protection on Page 2/47).

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

3) Shaft heights 80 and 90 are only available without motor protection (motor protection code A).

4) Delta connection is not possible.

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

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

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










# SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

Types of construction  
Aluminum series 1LE10, 1PC10

## Selection and ordering data

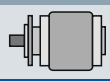
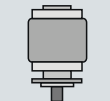
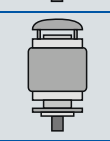
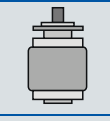
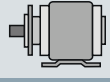
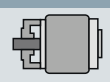
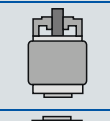
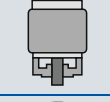
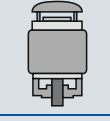
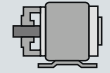
Types of construction	Type of construc. code 14th pos. of the Article No.	Additional identification code <b>-Z</b> with order code and plain text if required	Motor category												
			Motor version	Motor type (alum.)	Motor type – Frame size										
					63	71	80	90	100	112	132	160	180	200	225
<b>1LE1</b> ..... <b>1PC1</b> .....			IE2 High Efficiency	1LE1001				1LE1001 ①							
				1PC1001					1PC1001 ②						
			IE3 Premium Efficiency	1LE1003				1LE1003 ③							
			IE1 Standard Efficiency	1LE1002					1LE1002 ④						
				1PC1002					1PC1002 ⑤						
			NEMA Energy Efficient	1LE1021				1LE1021 Eagle Line ⑥							
			NEMA Premium Efficient	1LE1023				1LE1023 Eagle Line ⑦							
			Pole-changing	1LE1011					1LE1011 ⑧						
	1LE1012					1LE1012 ⑨									
			Motor version	Motor type	Frame size										
					63	71	80	90	100	112	132	160	180	200	225
<b>Without flange</b>															
IM B3 1) 2) 3)		<b>A</b>	–	All except ⑥			□	□	□	□	□	□			
IM B6 2) 3)		<b>T</b>	–	All except ⑥			□	□	□	□	□	□			
IM B7 2) 3)		<b>U</b>	–	All except ⑥			□	□	□	□	□	□			
IM B8 2) 3)		<b>V</b>	–	All except ⑥			□	□	□	□	□	□			
IM V6 2) 3)		<b>D</b>	–	All except ⑥			□	□	□	□	□	□			
IM V5 without protective cover 2) 3)		<b>C</b>	–	All except ⑥			□	□	□	□	□	□			
IM V5 with protective cover 2) 3) 4) 5) 6)		<b>C</b>	<b>-Z H00</b>	All except ②, ⑤, ⑥ and in combination with order code F90			✓	✓	✓	✓	✓	✓			

# SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

## Types of construction

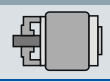
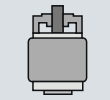
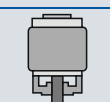
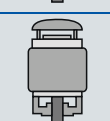
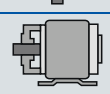
### Aluminum series 1LE10, 1PC10

Types of construction	Type of construction code 14th pos. of the Article No.	Additional identification code <b>-Z</b> with order code and plain text if required	Motor category																	
			Motor version	Motor type (alum.)	Motor type – Frame size															
					63	71	80	90	100	112	132	160	180	200	225					
<b>1LE1</b> ..... <b>1PC1</b> .....			IE2 High Efficiency	1LE1001 1PC1001					1LE1001 ①											
			IE3 Premium Efficiency	1LE1003					1LE1003 ③											
			IE1 Standard Efficiency	1LE1002 1PC1002							1LE1002 ④									
			NEMA Energy Efficient	1LE1021								1LE1021 Eagle Line ⑥								
			NEMA Premium Efficient	1LE1023									1LE1023 Eagle Line ⑦							
			Pole-changing	1LE1011										1LE1011 ⑧						
				1LE1012										1LE1012 ⑨						
						Motor version	Motor type	Frame size												
					63	71	80	90	100	112	132	160	180	200	225					
<b>With flange</b>			acc. to DIN EN 50347 acc. to DIN 42948						FF165 A 200	FF165 A 200	FF215 A 250	FF215 A 250	FF265 A 300	FF300 A 350						
IM B5 <sup>2) 7)</sup>		<b>F</b>	–	All	All				✓	✓	✓	✓	✓	✓						
IM V1 without protective cover <sup>2)</sup>		<b>G</b>	–	All	All				✓	✓	✓	✓	✓	✓						
IM V1 with protective cover <sup>2) 4) 5) 6)</sup>		<b>G</b>	<b>-Z H00</b>	All except ②, ⑤ and in combination with order code F90					✓	✓	✓	✓	✓	✓						
IM V3 <sup>4)</sup>		<b>H</b>	–	All	All				✓	✓	✓	✓	✓	✓						
IM B35 <sup>3)</sup>		<b>J</b>	–	All except ⑥					✓	✓	✓	✓	✓	✓						
<b>With standard flange</b>			acc. to DIN EN 50347 acc. to DIN 42948						FT100 C 120	FT115 C 140	FT130 C 160	FT130 C 160	FT165 C 200	FT215 C 250						
IM B14 <sup>2) 8)</sup>		<b>K</b>	–	All	All				✓	✓	✓	✓	✓	✓						
IM V19 <sup>2)</sup>		<b>L</b>	–	All	All				✓	✓	✓	✓	✓	✓						
IM V18 without protective cover <sup>2)</sup>		<b>M</b>	–	All	All				✓	✓	✓	✓	✓	✓						
IM V18 with protective cover <sup>2) 4) 5) 6)</sup>		<b>M</b>	<b>-Z H00</b>	All except ②, ⑤ and in combination with order code F90					✓	✓	✓	✓	✓	✓						
IM B34 <sup>3)</sup>		<b>N</b>	–	All except ⑥					✓	✓	✓	✓	✓	✓						

# SIMOTICS GP 1LE1/1PC1 Standard Motors

## Supplements to article numbers and special versions

Types of construction  
Aluminum series 1LE10, 1PC10

Types of construction	Type of construc. code 14th pos. of the Article No.	Additional identification code <b>-Z</b> with order code and plain text if required	Motor category															
			Motor version	Motor type (alum.)	Motor type – Frame size													
					63	71	80	90	100	112	132	160	180	200	225			
<b>1LE1</b> ...-.....-■... <b>1PC1</b> ...-.....-■...			IE2 High Efficiency	1LE1001 1PC1001			1LE1001 ①				1PC1001 ②							
			IE3 Premium Efficiency	1LE1003			1LE1003 ③											
			IE1 Standard Efficiency	1LE1002 1PC1002					1LE1002 ④				1PC1002 ⑤					
			NEMA Energy Efficient	1LE1021			1LE1021 Eagle Line ⑥											
			NEMA Premium Efficient	1LE1023			1LE1023 Eagle Line ⑦											
			Pole-changing	1LE1011					1LE1011 ⑧									
				1LE1012					1LE1012 ⑨									
			Motor version	Motor type	Frame size													
					63	71	80	90	100	112	132	160	180	200	225			
With special flange		acc. to EN 50347 acc. to DIN 42948					FT130 C 160	FT130 C 160	FT165 C 200	FT165 C 200	FT215 C 250	FT265 C 300						
IM B14 <sup>2) 8)</sup>		<b>K</b>	<b>-Z P01</b>	All	All		✓	✓	✓	✓	✓	–						
IM V19 <sup>2)</sup>		<b>L</b>	<b>-Z P01</b>	All	All		–	–	✓	✓	✓	–						
IM V18 without protective cover <sup>2)</sup>		<b>M</b>	<b>-Z P01</b>	All	All		–	–	✓	✓	✓	–						
IM V18 with protective cover <sup>2) 4) 5) 6)</sup>		<b>M</b>	<b>-Z P01+H00</b>	All except ②, ⑤ and in combination with order code F90			–	–	✓	✓	✓	–						
IM B34 <sup>3)</sup>		<b>N</b>	<b>-Z P01</b>	All except ⑥			–	–	✓	✓	✓	–						

- Standard version
- This order code only determines the price of the version – Additional plain text is required.
- ✓ With additional charge
- Not possible

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

2) The type of construction is stamped on the rating plate. When ordering with condensation drainage holes (order code **H03**), if mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.

3) For North America export version Eagle Line 1LE1021 NEMA Energy Efficient, types of construction with feet are not possible for 2-pole, 4-pole and 6-pole motors ≤ 200 hp in accordance with NEMA MG1 Table 12-11.

4) The Second shaft extension option (order code **L05**) is not possible.

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

6) Not possible for 1PC1 naturally cooled motors and 1LE1 forced-air cooled motors with order code **F90** without external fan and fan cover.

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

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

# SIMOTICS GP 1LE1/1PC1 Standard Motors

## Supplements to article numbers and special versions

Motor protection  
Aluminum series 1LE10, 1PC10

### Selection and ordering data

Motor protection	Motor protection code 15th position of the Article No.	Additional identification code with order code and plain text if required	Motor category																							
			Motor version	Motor type (alum.)	Motor type – Frame size																					
					63	71	80	90	100	112	132	160	180	200	225											
1LE1..... 1PC1.....	.		IE2 High Efficiency	1LE1001 1PC1001					1LE1001																	
			IE3 Premium Efficiency	1LE1003					1LE1003																	
			IE1 Standard Efficiency	1LE1002						1LE1002																
				1PC1002						1PC1002																
			NEMA Energy Efficient	1LE1021					1LE1021 Eagle Line																	
			NEMA Premium Efficient	1LE1023					1LE1023 Eagle Line																	
			Pole-changing	1LE1011						1LE1011																
				1LE1012						1LE1012																
			Motor version	Motor type	Frame size																					
					63	71	80	90	100	112	132	160	180	200	225											
<b>Motor protection (winding protection)</b>																										
Without motor protection <sup>1) 2)</sup>	<b>A</b>	–	All	All				☐	☐	☐	☐	☐	☐													
Motor protection with PTC thermistors with 1 or 3 embedded temperature sensors for tripping <sup>2) 3)</sup>	<b>B</b>	–	All	All				✓	✓	✓	✓	✓	✓													
Motor protection with PTC thermistors with 6 embedded temperature sensors for alarm and tripping <sup>3)</sup>	<b>C</b>	–	All	All				✓	✓	✓	✓	✓	✓													
Motor temperature detection with embedded temperature sensor KTY 84-130 <sup>3)</sup>	<b>F</b>	–	All	All				✓	✓	✓	✓	✓	✓													
Motor temperature detection with embedded temperature sensor 2 × KTY 84-130 <sup>3)</sup>	<b>G</b>	–	All	All				✓	✓	✓	✓	✓	✓													
Installation of 3 PT100 resistance thermometers <sup>3)</sup>	<b>H</b>	–	All	All				–	–	✓	✓	✓	✓													
NTC thermistors for tripping	<b>Z</b>	<b>Q2A</b>	All	All				–	–	✓	✓	✓	✓													
Temperature detectors for tripping <sup>3)</sup>	<b>Z</b>	<b>Q3A</b>	All	All				✓	✓	✓	✓	✓	✓													

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

<sup>1)</sup> Depending on the selected voltage, shaft heights 80 and 90 are only available without motor protection (motor protection code A).

<sup>2)</sup> Depending on the selected voltage, shaft heights 80 and 90 are only available with motor protection (motor protection code B, C, F, G).

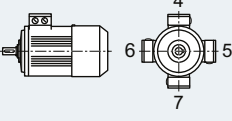
<sup>3)</sup> Evaluation with appropriate tripping unit (see Catalog IC 10) is recommended. For pole-changing motors with separate windings, double the number of temperature sensors or temperature detectors is required and will be installed at the factory. This also results in a double additional charge.

# SIMOTICS GP 1LE1/1PC1 Standard Motors

## Supplements to article numbers and special versions

Connection box position  
Aluminum series 1LE10, 1PC10

### Selection and ordering data

Connection box position		Additional identification code with order code and plain text if required	Motor category														
Motor version	Motor type (alum.)		Motor type – Frame size														
			63	71	80	90	100	112	132	160	180	200	225				
	Connection box code 16th position of the Article No.	Additional identification code with order code and plain text if required	IE2 High Efficiency		1LE1001		1LE1001		1PC1001								
			IE3 Premium Efficiency		1LE1003		1LE1003										
			IE1 Standard Efficiency		1LE1002		1LE1002		1LE1002		1PC1002						
			NEMA Energy Efficient		1LE1021		1LE1021 Eagle Line										
			NEMA Premium Efficient		1LE1023		1LE1023 Eagle Line										
			Pole-changing		1LE1011		1LE1011										
					1LE1012		1LE1012										
1LE1.....			Motor version		Motor type		Frame size										
1PC1.....							63	71	80	90	100	112	132	160	180	200	225
Connection box position																	
Connection box top <sup>1)</sup>	4	–	All	All			☐	☐	☐	☐	☐	☐					
Connection box on RHS <sup>2)</sup>	5	–	All	All			✓	✓	✓	✓	✓	✓	✓				
Connection box on LHS <sup>2)</sup>	6	–	All	All			✓	✓	✓	✓	✓	✓	✓				
Connection box bottom <sup>2) 3)</sup>	7	–	All	All			–	–	✓	✓	✓	✓					

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

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

<sup>2)</sup> For types of construction with feet, screwed-on feet are standard.

<sup>3)</sup> Not generally possible for motors with feet.



# SIMOTICS GP 1LE1/1PC1 Standard Motors

## Supplements to article numbers and special versions

### Options

#### Aluminum series 1LE10, 1PC10

Special versions	Additional identification code -Z with order code and plain text if required	Motor category															
		Motor version	Motor type (alum.)	Motor type – Frame size													
				63	71	80	90	100	112	132	160	180	200	225			
		IE2 High Efficiency	1LE1001			1LE1001 ①											
			1PC1001					1PC1001 ②									
		IE3 Premium Efficiency	1LE1003			1LE1003 ③											
		IE1 Standard Efficiency	1LE1002						1LE1002 ④								
			1PC1002							1PC1002 ⑤							
		NEMA Energy Efficient	1LE1021								1LE1021 Eagle Line ⑥						
		NEMA Premium Efficient	1LE1023								1LE1023 Eagle Line ⑦						
		Pole-changing	1LE1011								1LE1011 ⑧						
		1LE1012							1LE1012 ⑨								
<b>1LE1</b> .....-Z		Motor version	Motor type	Frame size													
<b>1PC1</b> .....-Z				63	71	80	90	100	112	132	160	180	200	225			
<b>Windings and insulation (continued)</b>																	
Temperature class 155 (F), utilized according to 155 (F), other requirements	<b>Y52</b> • and specified output, CT ... °C or SA .... m above sea level	All	All			✓	✓	✓	✓	✓	✓						
<b>Colors and paint finish</b>																	
Special finish in RAL 7030 stone gray		All	All			□	□	□	□	□	□						
Special finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005 (see Catalog Section 1 "Introduction")	<b>Y54</b> • and special finish RAL....	All	All			✓	✓	✓	✓	✓	✓						
Special finish in special RAL colors: For RAL colors, see "Special finish in special RAL colors" (Catalog Section 1 "Introduction")	<b>Y51</b> • and special finish RAL....	All	All			✓	✓	✓	✓	✓	✓						
Special paint for use offshore	<b>S04</b>	All	All			–	–	O. R.	O. R.	O. R.	O. R.						
Special finish sea air resistant	<b>S03</b>	All	All			–	–	✓	✓	✓	✓						
Unpainted (only cast-iron parts primed)	<b>S00</b>	All	All			○	○	○	○	○	○						
Unpainted, only primed	<b>S01</b>	All	All			✓	✓	✓	✓	✓	✓						
<b>Modular technology – Basic versions <sup>7)</sup></b>																	
Mounting of separately driven fan	<b>F70</b>	All except ②, ⑤ and in combination with order code F90				✓	✓	✓	✓	✓	✓						
Mounting of brake <sup>8)</sup>	<b>F01</b>	All except ②, ⑤ and in combination with order code F90				✓	✓	✓	✓	✓	✓						
Mounting of brake for higher switching frequency <sup>8)</sup>	<b>F02</b>	All	All			O. R.	O. R.	O. R.	O. R.	O. R.	O. R.						
Mounting of 1XP8012-10 (HTL) rotary pulse encoder <sup>9)10)</sup>	<b>G01</b>	All except ②, ⑤ and in combination with order code F90				✓	✓	✓	✓	✓	✓						
Mounting of 1XP8012-20 (TTL) rotary pulse encoder <sup>9)10)</sup>	<b>G02</b>	All except ②, ⑤ and in combination with order code F90				✓	✓	✓	✓	✓	✓						
<b>Modular technology – Additional versions</b>																	
Brake supply voltage 24 V DC	<b>F10</b>	All except ②, ⑤ and in combination with order code F90				✓	✓	✓	✓	✓	✓						
Brake supply voltage 230 V AC, 50/60 Hz	<b>F11</b>	All except ②, ⑤ and in combination with order code F90				✓	✓	○	○	○	○						
Brake supply voltage 400 V AC, 50/60 Hz	<b>F12</b>	All except ②, ⑤ and in combination with order code F90				✓	✓	✓	✓	✓	✓						
Mechanical manual brake release with lever (no locking)	<b>F50</b>	All except ②, ⑤ and in combination with order code F90				✓	✓	✓	✓	✓	✓						
<b>Special technology <sup>7)</sup></b>																	
Mounting of LL 861 900 220 rotary pulse encoder <sup>9)</sup>	<b>G04</b>	All except ②, ⑤ and in combination with order code F90				–	–	✓	✓	✓	✓						
Mounting of HOG 9 D 1024 I rotary pulse encoder <sup>9)</sup>	<b>G05</b>	All except ②, ⑤ and in combination with order code F90				–	–	✓	✓	✓	✓						
Mounting of HOG 10 D 1024 I rotary pulse encoder <sup>9)</sup>	<b>G06</b>	All except ②, ⑤ and in combination with order code F90				–	–	✓	✓	✓	✓						
<b>Mechanical design and degrees of protection</b>																	
Protective cover <sup>9)11)</sup>	<b>H00</b>	All; except ②, ⑥ and in combination with order code F90				✓	✓	✓	✓	✓	✓						
Next larger standard flange	<b>P01</b>	All	All			–	–	✓	✓	✓	–						
Next smaller standard flange	<b>P02</b>	All	All			–	–	✓	✓	✓	✓						
Cast-iron bearing plate on DE	<b>P10</b>	All	All			✓	✓	–	–	–	–						
Screwed-on (instead of cast) feet	<b>H01</b>	All	All			✓	✓	✓	✓	✓	✓						
Enclosure with screw mounting	<b>H10</b>	Only possible for ③, ⑥ and ⑦				✓	✓	–	–	–	–						

# SIMOTICS GP 1LE1/1PC1 Standard Motors

## Supplements to article numbers and special versions

Options  
Aluminum series 1LE10, 1PC10

Special versions	Additional identification code <b>-Z</b> with order code and plain text if required	Motor category																		
		Motor version	Motor type (alum.)	Motor type – Frame size																
				63	71	80	90	100	112	132	160	180	200	225						
		IE2 High Efficiency	1LE1001 1PC1001					1LE1001 ①												
		IE3 Premium Efficiency	1LE1003					1LE1003 ③												
		IE1 Standard Efficiency	1LE1002 1PC1002								1LE1002 ④									
		NEMA Energy Efficient	1LE1021									1LE1021 Eagle Line ⑥								
		NEMA Premium Efficient	1LE1023									1LE1023 Eagle Line ⑦								
		Pole-changing	1LE1011									1LE1011 ⑧								
			1LE1012									1LE1012 ⑨								
1LE1.....-Z 1PC1.....-Z		Motor version	Motor type	Frame size																
<b>Mechanical design and degrees of protection (continued)</b>																				
Drive-end seal for flange-mounting motors, oil-tight to 0.1 bar <sup>12)</sup>	H23	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Low-noise version for 2-pole motors with clockwise direction of rotation	F77	All except ②, ⑤ and in combination with order code F90				–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓		
Low-noise version for 2-pole motors with counter-clockwise direction of rotation	F78	All except ②, ⑤ and in combination with order code F90				–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓		
IP65 degree of protection <sup>13)</sup>	H20	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
IP56 degree of protection <sup>12)</sup>	H22	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Vibration-proof version	H02	All	All			–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓		
Condensation drainage holes sealed <sup>14)</sup>	H03	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rust-resistant screws (externally)	H07	All	All			–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓		
Prepared for mountings, center hole only <sup>10)</sup>	G40	All except ②, ⑤ and in combination with order code F90				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Prepared for mountings with shaft D12 <sup>15)</sup>	G41	All except ②, ⑤ and in combination with order code F90				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Prepared for mountings with shaft D16 <sup>15)</sup>	G42	All except ②, ⑤ and in combination with order code F90				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Protective cover for encoder (supplied loose – only for mountings with order codes G40, G41 and G42)	G43	All except ②, ⑤ and in combination with order code F90				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
<b>Coolant temperature</b>																				
Coolant temperature –40 to +40 °C <sup>16)</sup>	D03	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Coolant temperature –30 to +40 °C <sup>16)</sup>	D04	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
<b>Designs in accordance with standards and specifications</b>																				
CCC China Compulsory Certification <sup>17)</sup>	D01	All	All			–	–	–	–	✓	✓	–	–	–	–	–	–	–		
IE1 motor without CE marking for export outside EEA (see EU Directive 640/2009)	D22	Only possible for ④ and ⑤				–	–	–	–	○	○	○	○	○	○	○	○	○		
Electrical according to NEMA MG1-12 <sup>18)</sup>	D30	All; standard version for ⑥ and ⑦				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Design according to UL with "Recognition Mark" <sup>19)</sup>	D31	All; standard version for ⑥ and ⑦				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
VIK version	C02	All	All			–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓		
China Energy Efficiency Label	D34	Only possible for ①, ②, ⑥ and ⑦				–	–	–	–	–	○	○	○	○	○	○	○	○		
Train-compatible version	L82	All except ② and ⑤				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
<b>Bearings and lubrication</b>																				
Measuring nipple for SPM shock pulse measurement for bearing inspection <sup>20)</sup>	Q01	All	All			–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓		
Bearing design for increased cantilever forces	L22	All	All			–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓		
Special bearing for DE and NDE, bearing size 63	L25	All	All			–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓		
Regreasing device <sup>20)</sup>	L23	All	All			–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓		
Located bearing DE	L20	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Located bearing NDE	L21	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	□	✓		
<b>Balance and vibration quantity</b>																				
Vibration quantity level A		All	All			□	□	□	□	□	□	□	□	□	□	□	□	□		
Vibration quantity level B	L00	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Half-key balancing (standard)		All	All			□	□	□	□	□	□	□	□	□	□	□	□	□		
Full-key balancing	L02	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Balancing without feather key, feather key is supplied	L01	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
<b>Shaft and rotor</b>																				
Concentricity of shaft extension, coaxiality and linear movement in accordance with DIN 42955 Tolerance R for flange-mounting motors	L08	All	All			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

# SIMOTICS GP 1LE1/1PC1 Standard Motors

Supplements to article numbers and special versions

## Options

### Aluminum series 1LE10, 1PC10

Special versions	Additional identification code <b>-Z</b> with order code and plain text if required	Motor category																					
		Motor version	Motor type (alum.)	Motor type – Frame size																			
				63	71	80	90	100	112	132	160	180	200	225									
		IE2 High Efficiency	1LE1001 1PC1001				1LE1001 ①																
		IE3 Premium Efficiency	1LE1003				1LE1003 ③																
		IE1 Standard Efficiency	1LE1002 1PC1002								1LE1002 ④												
		NEMA Energy Efficient	1LE1021																				
		NEMA Premium Efficient	1LE1023																				
		Pole-changing	1LE1011																				
			1LE1012																				
		<b>1LE1.....-Z</b> <b>1PC1.....-Z</b>		Motor version	Motor type	Frame size									63	71	80	90	100	112	132	160	180
<b>Shaft and rotor (continued)</b>																							
Second standard shaft extension	<b>L05</b>	All except ②, ⑤ and in combination with order code F90	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Shaft extension with standard dimensions, without feather keyway	<b>L04</b>	All	All				–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Concentricity of shaft extension in accordance with DIN 42955 Tolerance R	<b>L07</b>	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Standard shaft made of stainless steel	<b>L06</b>	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Non-standard cylindrical shaft extension, DE <sup>21)</sup>	<b>Y58 •</b> and identification code	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Non-standard cylindrical shaft extension, NDE <sup>21)</sup>	<b>Y59 •</b> and identification code	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
<b>Heating and ventilation</b>																							
Fan cover for textile industry <sup>22)</sup>	<b>F75</b>	All except ②, ⑤ and in combination with order code F90	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Metal external fan <sup>23)</sup>	<b>F76</b>	All except ②, ⑤ and in combination with order code F90	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Without external fan and without fan cover	<b>F90</b>	All except ②, ⑤, ⑧ and ⑨	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Anti-condensation heating for 230 V	<b>Q02</b>	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Anti-condensation heating for 115 V	<b>Q03</b>	All	All				–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Sheet metal fan cover	<b>F74</b>	All except ②, ⑤ and in combination with order code F90	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
<b>Rating plate and extra rating plates</b>																							
Extra rating plate for voltage tolerance <sup>24)</sup>	<b>B07</b>	All except ②, ⑤, ⑧, ⑨ and 8-pole motors	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Second rating plate, loose <sup>25)</sup>	<b>M10</b>	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rating plate, stainless steel	<b>M11</b>	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Extra rating plate or rating plate with deviating rating plate data (rated data only, e.g. voltage, output, speed)	<b>Y80 •</b> and identification code	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Extra rating plate with identification codes	<b>Y82 •</b> and identification code	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Additional information on rating plate and on package label (max. 20 characters)	<b>Y84 •</b> and identification code	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Adhesive label, supplied loose (Printed with: Article No., serial number; 2 lines of text)	<b>Y85 •</b> and identification code	All	All				–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
<b>Packaging, safety notes, documentation and test certificates</b>																							
Printed German/English Operating Instructions (compact) enclosed in each wire-lattice pallet	<b>B01</b>	All	All				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Acceptance test certificate 3.1 according to EN 10204 <sup>26)</sup>	<b>B02</b>	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Printed German/English Operating Instructions (compact) enclosed <sup>27)</sup>		All	All				□	□	□	□	□	□	□	□	□	□	□	□	□	□	□		
Printed German/English operating instructions enclosed	<b>B04</b>	All	All				–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Document – Electrical data sheet	<b>B60</b>	All	All				–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Document – Order dimensional drawing	<b>B61</b>	All	All				–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Type test with heat run for horizontal motors, with acceptance	<b>B83</b>	All	All				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Wire-lattice pallet packaging	<b>B99</b>	All	All				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Connected in star for dispatch	<b>M01</b>	All	All				–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Connected in delta for dispatch	<b>M02</b>	All	All				–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

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

- 1) With 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 differ from EN 50347! See dimension sheet generator
- 4) In combination with motor protection (15th position of the Article No.) or anti-condensation heating option, please inquire before ordering.
- 5) Not possible for pole-changing motors and/or in combination with voltage code 22 or 34.
- 6) Cannot be used for motors in UL version (order code **D31**). The grease lifetime specified in Catalog Section 1 "Introduction" refers to CT 40 °C. When the coolant temperature rises by 10 K, the grease service lifetime or relubrication interval is halved.
- 7) A second shaft extension is not possible. Please inquire for mounted brakes.
- 8) For order codes **F10**, **F11** and **F12**, the brake supply voltage must be specified or ordered.
- 9) All encoders are supplied with a protective cover as standard. The protective cover is omitted at the factory when a rotary pulse encoder is combined with a separately driven fan, because in this case the rotary pulse encoder is installed under the fan cover.
- 10) Motors that are prepared for additional mountings (order codes **G40**, **G41**, **G42**) are supplied without a protective cover as standard. If a protective cover is requested as a cover or mechanical protection for mountings provided by the customer, this can be ordered with order code **G43**. Not possible in combination with order code **L00** vibration quantity level B. In combination with a separately driven fan (order code **F70**) the 1XP8032-10 rotary pulse encoder is used instead of 1XP8012-10 or 1XP8032-20 is used instead of 1XP8012-20.
- 11) Order code **H00** provides mechanical protection for encoders.
- 12) Not possible in combination with brake 2LM8 – order code **F01**.
- 13) Not possible in combination with rotary pulse encoder HOG 9 D 10241 (order code **G05**) and/or brake 2LM8 (order code **F01**).
- 14) Supplied with the condensation drainage holes sealed at the drive end DE and non-drive end NDE (IP55, IP56, IP65). If the condensation drainage holes are required for motors of the IM B6, IM B7 or IM B8 type of construction (feet on side or top), the motors must be ordered in the respective type of construction and with order code **H03**, so that the condensation drainage holes will be placed in the correct position.
- 15) Motors that are prepared for additional mountings (order code **G40**, **G41**, **G42**) are supplied without a protective cover as standard. If a protective cover is requested as a cover or mechanical protection for mountings provided by the customer, this can be ordered with order code **G43**. Not possible in combination with order code **L00** vibration quantity level B.
- 16) Not possible for type of construction IM V3.
- 17) CCC certification is required for
  - 2-pole motors  $\leq 2.2$  kW
  - 4-pole motors  $\leq 1.1$  kW
  - 6-pole motors  $\leq 0.75$  kW
  - 8-pole motors  $\leq 0.55$  kW
- 18) Possible up to 600 V max. The rated voltage is indicated on the rating plate without voltage range. Order codes **D30** and **D31** do not authorize importing into USA and Mexico. The North America export versions Eagle Line 1LE1021 NEMA Energy Efficient and 1LE1023 NEMA Premium Efficient are available for this purpose.
- 19) In connection with mountings, the respective technical specifications must be observed, please inquire before ordering.
- 20) Not possible when brake is mounted.
- 21) When motors are ordered that have a longer or shorter shaft extension than normal, the required position and length of the feather keyway must be specified in a sketch. It must be ensured that only feather keys in accordance with DIN 6885, Form A are permitted to be used. The feather keyway is positioned centrally on the shaft extension. The length is defined by the manufacturer normatively. Not valid for: Conical shafts, non-standard threaded journals, non-standard shaft tolerances, friction welded journals, extremely "thin" shafts, special geometry dimensions (e.g. square journals), hollow shafts. Valid for non-standard shaft extensions DE or NDE. The feather keys are supplied in every case. For order codes **Y58**, **Y59** and **L05**:
  - Dimensions D and DA  $\leq$  Inner diameter of roller bearing (see dimension tables under "Dimensions")
  - Dimensions E and EA  $\leq 2 \times$  length E (normal) of the shaft extension.
 For an explanation of the order codes, see Catalog Section 1 "Introduction".
- 22) The special requirements of the textile industry regarding the sheet metal cover open up the possibility that a finger may be inserted between the cover and enclosure. The customer must implement appropriate measures to ensure that the installed system is "finger-safe".
- 23) Converter-fed operation is permitted for **1LE1** motors with metal external fans. The metal external fan is not possible in combination with the low-noise version – order code **F77** or **F78**.
- 24) Can be ordered for 230 V $\Delta$ /400 VY or 400 V $\Delta$ /690 VY (voltage code "22" or "34"). Not possible for pole-changing motors, naturally cooled 1PC1 motors, 8-pole motors and in combination with order code **D34**.
- 25) As adhesive label for frame sizes 80 and 90.
- 26) The delivery time for the factory test certificate may differ from the delivery time for the motor and it will be dispatched by email.
- 27) The Operating Instructions (compact) are available in PDF format for all official EU languages at <http://support.automation.siemens.com/WWW/view/en/40761976>.