SIMOTICS GP and SIMOTICS SD standard motors

Orientation

Article number code

Selection and ordering data

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

1LE1001-1DB22-2CB5-Z H00

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

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

Ordering data:

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

Structure of the Article No.:		Posi- tion:	1	2	3	4	5	6	7	-	8	9	10	11	12	-	13	14	15	16
1st to 4th posi- tion: Digit, letter, letter, digit	Self-ventilated by fan mounted on and driven be Forced-air cooled by air flow from the fan to be option extension F90 ABNT Line – self-ventilated or forced-air cooled 1LE1	driven with		L	E	1 5														
	Naturally cooled without external fan and fan cooled	over	1	Р	С	1														
5th position: Digit	Aluminum housing Cast-iron housing Basic Line Cast-iron housing Performance Line Cast-iron housing ABNT Line IR3 (IE3)						0 5 6 7													
6th to 7th position: 2 digits	, ,																			
8th, 9th and 11th position: Digit, letter, digit	Motor frame size (frame size as a combination of shaft height and overall length, encoded)						0 	A E		0 6										
10th position: Letter	No. of poles A: 2-pole, B: 4-pole, C: 6-pole, D: 8-pole, J: 4/2-pole const. load torque, L: 8/4-pole const. load torque, P: 4/2-pole square-law load torque, Q: 6/4-pole square-law load torque, R: 8/4-pole square-law load torque								A R											
12th and 13th position: 2 digits	Voltage, circuit and frequency (encoded with two digits, 9-0 requires order code M (e.g. M1Y))									0 9		0 8								
14th position: Letter	Type of construction (encoded with A Z; Z requires order code Q (e.g. H00))																			
15th position: Letter	Motor protection (encoded with A Z; Z requires order code Q (e.g. Q2A))																			
16th position: Digit	Terminal box position 4 4: Terminal box top, 5: Terminal box right, 6: Terminal box left, 7: Terminal box bottom 7																			
	Special order versions: encoded – additional order code required not encoded – additional plain text required																			

Ordering example

<u> </u>		
Selection criteria	Requirement	Structure of the Article No.
Motor type 1LE1	Standard motor with IE3 High Efficiency, IP55 degree of protection, aluminum housing	1LE1003-
Motor frame size/No. of poles/Speed	160 M/4-pole/1500 rpm	1LE1003-1DB2#-####
Rated power	11 kW	
Voltage and frequency	230 VΔ/400 VY, 50 Hz	1LE1003-1DB22-2
Type of construction with special version	IM V5 with protective cover ¹⁾	1LE1003-1DB22-2C■■-Z H00
Motor protection	1 or 3 PTC thermistors – for tripping (2 terminals)	1LE1003-1DB22-2CB■-Z H00
Terminal box position	Terminal box right (viewed from DE)	1LE1003-1DB22-2CB5-Z H00

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

SIMOTICS SD standard motors next generation

Orientation

Article number code

Selection and ordering data

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

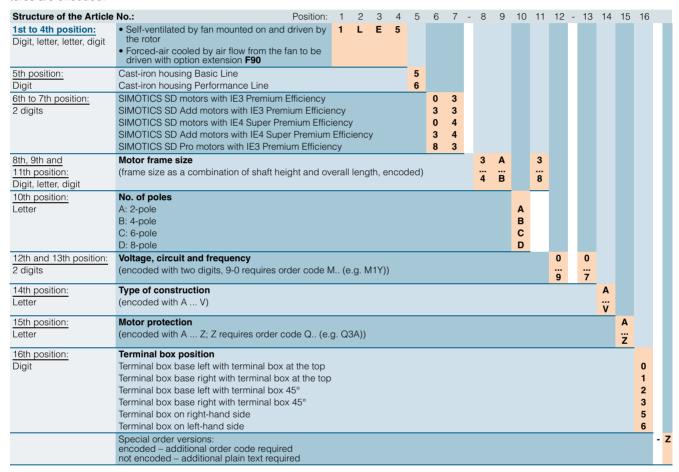
1LE5504-3AA63-4AA2-Z H00

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

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

Ordering data:

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



Ordering example

<u> </u>						
Selection criteria	Requirement	Structure of the Article No.				
Motor type 1LE5	Standard motor with IE4 Super Premium Efficiency, self-ventilated, IP55 degree of protection, cast-iron version, Performance Line	1LE5604-				
Motor frame size/No. of poles/Speed	315 L/2-pole/3000 rpm	1LE5604-3AA6M-WWW				
Rated power	250 kW					
Voltage and frequency	400 VΔ/690 VY, 50 Hz	1LE5604-3AA63-4				
Type of construction with special version	IM V5 with protective cover 1)	1LE5604-3AA63-4C■■-Z H00				
Motor protection	1 or 3 PTC thermistors – for tripping (2 terminals)	1LE5604-3AA63-4CB■-Z H00				
Terminal box position	Terminal box base left with terminal box 45°	1LE5604-3AA63-4CB2-Z H00				

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

Synchronous reluctance motors for SINAMICS converters – VSD4000 line

Orientation

Article number code

Selection and ordering data

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

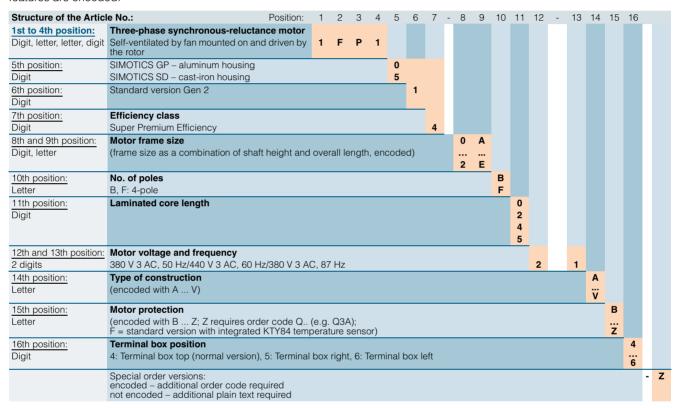
1FP1504-1DB42-1GF4-Z H00

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

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

Ordering data:

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



Synchronous reluctance motors for SINAMICS converters - VSD4000 line

Orientation

Article number code

Selection and ordering data

Ordering example:

Selection criteria	Requirement	Structure of the Article No.				
1FP10 motor type	Standard motor for converter operation SIMOTICS GP VSD4000 line, aluminum version, rated power at $P_{\rm rated 50}$ with 15 kW, $P_{\rm rated 60}$ with 17.3 kW or $P_{\rm rated 87}$ with 23.5 kW	1FP1014-				
Motor frame size	160 L	1FP1014-1D E 4 E-EEEE				
No. of poles	4-pole	1FP1014-1DB4 E-EEEE				
Motor voltage and frequency	380 V 3 AC, 50 Hz/440 V 3 AC, 60 Hz/380 V 3 AC, 87 Hz	1FP1014-1DB42-1				
Type of construction with special version	IM V5 with protective cover 1)	1FP1014-1DB42-1C■■-Z H00				
Motor protection	Motor protection with PTC thermistors with 1 or 3 embedded temperature sensors for tripping	1FP1014-1DB42-1CB■-Z H00				
Terminal box position	Terminal box right (viewed from DE)	1FP1014-1DB42-1CB5-Z H00				

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

Standard induction motors optimized for converter operation – VSD10 line Orientation

Article number code

Selection and ordering data

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

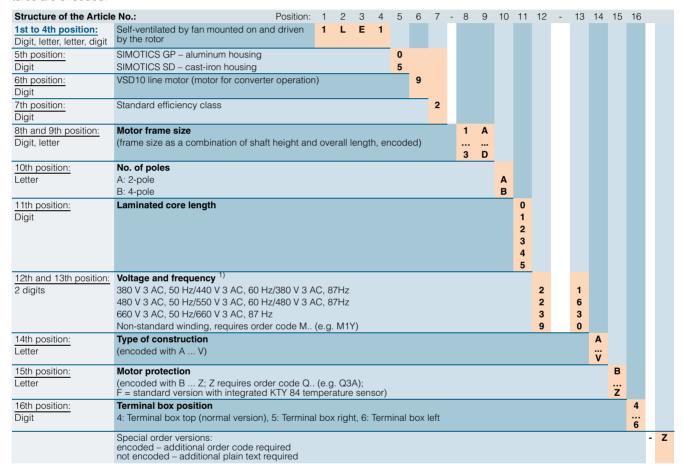
1LE1592-1DB42-1GF4-Z H00

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

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

Ordering data:

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



Depending on slip, the rated frequency is above 50 Hz, 60 Hz, or 87 Hz (see Technical specifications).

Standard induction motors optimized for converter operation – VSD10 line

Orientation

Article number code

Selection and ordering data

Ordering example:

Selection criteria	Requirement	Structure of the Article No.
Motor type 1LE1	Standard motor for converter operation SIMOTICS GP VSD10 line, aluminum version	1LE1092-
Motor frame size	160 L	1LE1092-1DB
No. of poles	4-pole	1LE1092-1DB4
Rated power	P _{rated 50} : 15 kW P _{rated 60} : 17.3 kW P _{rated 87} : 23.5 kW	
Voltage and frequency	380 V 3 AC, 50 Hz/440 V 3 AC, 60 Hz/380 V 3 AC, 87 Hz	1LE1092-1DB42-1
Type of construction with special version	IM V5 with protective cover 1)	1LE1092-1DB42-1C■■-Z H00
Motor protection	Motor protection with PTC thermistors with 1 or 3 embedded temperature sensors for tripping	1LE1092-1DB42-1CB■-Z H00
Terminal box position	Terminal box right (viewed from DE)	1LE1092-1DB42-1CB5-Z H00

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

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Orientation

Article number code

Selection and ordering data

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

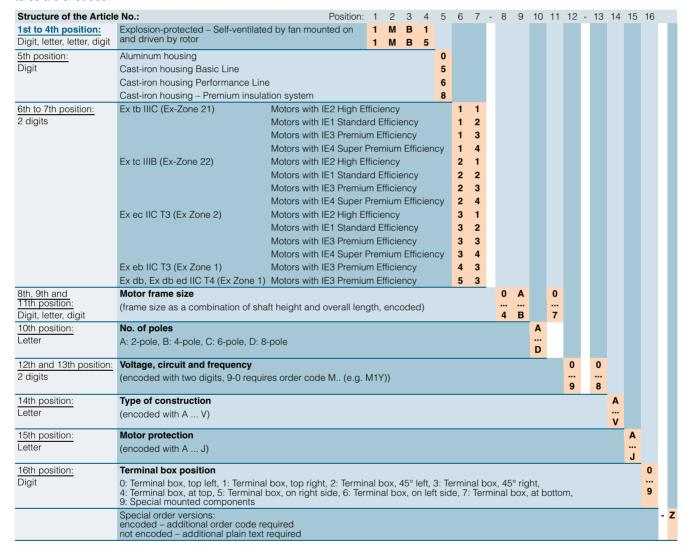
1MB1511-1DB22-2AB4-Z

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

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

Ordering data:

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



Ordering example

Ordering example		
Selection criteria	Requirement	Structure of the Article No.
Motor type 1MB1	Self-ventilated motor with explosion protection of type Ex tb IIIC (Ex Zone 21), cast-iron version, with IE2 High Efficiency, IP55 degree of protection	1MB1511-
Motor frame size/No. of poles/Speed	160 M/4-pole/1500 rpm	1MB1511-1DB2
Rated power	11 kW	
Voltage and frequency	230 VΔ/400 VY, 50 Hz	1MB1511-1DB22-2
Type of construction with special version	IM B3	1MB1511-1DB22-2A
Motor protection	Motor protection with PTC thermistor with 3 embedded temperature sensors for tripping	1MB1511-1DB22-2AB■
Terminal box position	Terminal box at top	1MB1511-1DB22-2AB4
Special version	Rotation of the terminal box through 90°, entry from DE	1MB1511-1DB22-2AB4-Z R10