

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Voltages

Aluminum series 1MB10

Selection and ordering data

Voltages	Article No. supplement		Frame size						Motor version		
	Voltage code	Additional identification code with order code and plain text if required	80	90	100	112	132	160	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2 IE1
			1MB10.3								
			1MB10.1								
					1MB10.2						
	1MB10-....									
Voltage at 50 Hz or 60 Hz (50 Hz power)											
50 Hz 230 VΔ/400 VY, 60 Hz 460 VY	2	2	-	□	□	□	□	□	□		
50 Hz 400 VΔ/690 VY, 60 Hz 460 VΔ	3	4	-	□	□	□	□	□	□		
50 Hz 500 VY	2	7	-	○	○	○	○	○	○		
50 Hz 500 VΔ	4	0	-	-	-	○	○	○	○		
50 Hz 220 VΔ/380 VY, 60 Hz 440 VY	2	1	-	✓	✓	✓	✓	✓	✓		
50 Hz 380 VΔ/660 VY, 60 Hz 440 VΔ	3	3	-	✓	✓	✓	✓	✓	✓		
50 Hz 240 VΔ/415 VY, 60 Hz 480 VY	2	3	-	✓	✓	✓	✓	✓	✓		
50 Hz 415 VΔ, 60 Hz 480 VΔ	3	5	-	✓	✓	✓	✓	✓	✓		
50 Hz 400 VY, 60 Hz 460 VY ¹⁾	0	2	-	○	○	○	○	○	○		
50 Hz 400 VΔ, 60 Hz 460 VΔ ²⁾	0	4	-	○	○	○	○	○	○		
60 Hz 220 VΔ/380 VY	1	7	-	✓	✓	✓	✓	✓	✓		Not for: 1MB10.2
60 Hz 230 VΔ/400 VY	1	8	-	✓	✓	✓	✓	✓	✓		Not for: 1MB10.2
60 Hz 380 VΔ/660 VY	3	0	-	✓	✓	✓	✓	✓	✓		Not for: 1MB10.2
60 Hz 400 VΔ/690 VY	3	1	-	✓	✓	✓	✓	✓	✓		Not for: 1MB10.2
50 Hz 400 VY	9	0	M4A	○	○	○	○	○	○		
50 Hz 400 VΔ	9	0	M4B	○	○	○	○	○	○		
Voltage at 60 Hz (50 Hz power)											
220 VΔ/380 VY; 50 Hz power ³⁾	9	0	M2A	✓	✓	✓	✓	✓	✓		
220 VΔ/380 VY; 60 Hz power	9	0	M1A	✓	✓	✓	✓	✓	✓		
380 VΔ/660 VY; 50 Hz power ³⁾	9	0	M2B	✓	✓	✓	✓	✓	✓		
380 VΔ/660 VY; 60 Hz power	9	0	M1B	✓	✓	✓	✓	✓	✓		
440 VY; 50 Hz power ³⁾	9	0	M2C	✓	✓	✓	✓	✓	✓		
440 VY; 60 Hz power	9	0	M1C	✓	✓	✓	✓	✓	✓		
440 VΔ; 50 Hz power ³⁾	9	0	M2D	✓	✓	✓	✓	✓	✓		
440 VΔ; 60 Hz power	9	0	M1D	✓	✓	✓	✓	✓	✓		
460 VY; 50 Hz power ³⁾	9	0	M2E	✓	✓	✓	✓	✓	✓		
460 VY; 60 Hz power	9	0	M1E	○	○	○	○	○	○		
460 VΔ; 50 Hz power ³⁾	9	0	M2F	✓	✓	✓	✓	✓	✓		
460 VΔ; 60 Hz power	9	0	M1F	○	○	○	○	○	○		
575 VY; 50 Hz power ³⁾	9	0	M2G	✓	✓	✓	✓	✓	✓		
575 VY; 60 Hz power	9	0	M1G	✓	✓	✓	✓	✓	✓		
575 VΔ; 50 Hz power ³⁾	9	0	M2H	✓	✓	✓	✓	✓	✓		
575 VΔ; 60 Hz power	9	0	M1H	✓	✓	✓	✓	✓	✓		
400 VΔ/690 VY; 50 Hz power ³⁾	9	0	M2J	✓	✓	✓	✓	✓	✓		
400 VΔ/690 VY; 60 Hz power	9	0	M1J	✓	✓	✓	✓	✓	✓		
480 VY; 50 Hz power ³⁾	9	0	M2K	✓	✓	✓	✓	✓	✓		
480 VY; 60 Hz power	9	0	M1K	✓	✓	✓	✓	✓	✓		
480 VΔ; 50 Hz power ³⁾	9	0	M2L	✓	✓	✓	✓	✓	✓		
480 VΔ; 60 Hz power	9	0	M1L	✓	✓	✓	✓	✓	✓		
230 VΔ/400 VY; 50 Hz power ³⁾	9	0	M2M	✓	✓	✓	✓	✓	✓		
230 VΔ/400 VY; 60 Hz power	9	0	M1M	✓	✓	✓	✓	✓	✓		
Voltage at 87 Hz (87 Hz power)											
400 VΔ ⁵⁾	9	0	M3A	✓	✓	✓	✓	✓	✓		
Non-standard voltage and/or frequencies											
Non-standard winding ⁴⁾	9	0	M1Y • and customer specifications	✓	✓	✓	✓	✓	✓		

- Standard version
○ Without additional charge
✓ With additional charge

- Not possible
• This order code only determines the price of the version
- Additional plain text is required.

¹⁾ Delta connection is not possible.

²⁾ Star connection is not possible.

³⁾ A power of 3.7 kW is stamped on the rating plate for versions 1MB1... - 1BA2, 1MB1... - 1BB2, 1MB1... - 1CC2 and 1MB1... - 1DD2 at 60 Hz with 50 Hz power in accordance with the international efficiency classification to IEC 60034-30.

⁴⁾ 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 power in kW.

⁵⁾ Only possible for 4-pole, 6-pole and 8-pole motors and in combination with the order codes B40 and B41. The operating data for converter operation is also provided in a table on the additional rating plate. The motor contains winding version 50 Hz 230 VΔ.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Voltages

Cast-iron series 1MB1543, 1MB5543 Basic Line and 1MB1643, 1MB5643 Performance Line

Selection and ordering data

Voltages	Article No. supplement		Frame size											Motor version				
	Voltage code 12th and 13th position of the Article No.	Additional identification code with order code and plain text if required	71	80	90	100	112	132	160	180	200	225	250	280	315	IEC	Ex eb (Zone 1)	IE3
			1MB1543 Basic Line															
			1MB1643 Performance Line															
			1MB5543 Basic Line															
			1MB5643 Performance Line															
	1MB1543 -	■ - ■ .																
	1MB1643 -	■ - ■ .																
	1MB5543 -	■ - ■ .																
	1MB5643 -	■ - ■ .																
Voltage at 50 Hz or 60 Hz ³⁾																		
50 Hz 230 VΔ/400 VY	2	2	-	□	□	□	□	□	□	□	□	□	□	□	□	-		
50 Hz 400 VΔ/690 VY	3	4	-	□	□	□	□	□	□	□	□	□	□	□	□			
50 Hz 500 VY	2	7	-	○	○	○	○	○	○	○	○	○	○	○	○	-		
50 Hz 500 VΔ ¹⁾	4	0	-	-	-	-	○	○	○	○	○	○	○	○	○	○		
50 Hz 220 VΔ/380 VY	2	1	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-
50 Hz 230 VΔ	0	1	-	○	○	○	○	○	○	○	○	○	○	○	-	-	-	-
50 Hz 380 VΔ/660 VY	3	3	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
50 Hz 240 VΔ ¹⁾	2	3	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
50 Hz 415 VΔ	3	5	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
50 Hz 400 VY	9	0	M4A	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
50 Hz 400 VΔ	9	0	M4B	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Voltage at 60 Hz and required power																		
220 VΔ/380 VY; 50 Hz power	9	0	M2A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-
380 VΔ/660 VY; 50 Hz power ²⁾	9	0	M2B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
440 VY; 50 Hz power	9	0	M2C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
440 VΔ; 50 Hz power	9	0	M2D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
460 VY; 50 Hz power	9	0	M2E	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
460 VΔ; 50 Hz power	9	0	M2F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
575 VY; 50 Hz power ²⁾	9	0	M2G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
575 VΔ; 50 Hz power	9	0	M2H	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Non-standard voltage and/or frequencies																		
Non-standard winding ²⁾	9	0	M1Y • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

- Standard version
○ Without additional charge
✓ With additional charge

- Not possible
• This order code only determines the price of the version
- Additional plain text is required.

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¹⁾ Special certification is required for 60 Hz.

²⁾ Plain text must be specified in the order:
Voltage between 200 V and 690 V (voltages outside this range are available on request), frequency, circuit, for 60 Hz additionally required rated power in kW.

³⁾ Motors in these frame sizes have a second rating plate (T1/T2 and T3) as standard.

The T3 power is stamped on the rating plate as standard if the following motors are selected with PTC thermistor (protection by PTC thermistor only) or voltage code '90':
- 2-pole motors: Frame sizes 132 to 160
- 4-pole motors: Frame size 180
Alternatively, with order code **B33**, the "T1/T2 power is stamped on the rating plate".
- 2-pole motors: Frame sizes 132 to 200
- 4-pole motors: Frame sizes 180 to 200

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Voltages

Cast-iron series 1MB1553, 1MB5553

Selection and ordering data

Voltages	Article No. supplement	Voltage code 12th and 13th position of the Article No.	Additional identification code with order code and plain text if required	Order code	Frame size													Motor version			
					71	80	90	100	112	132	160	180	200	225	250	280	315	355	IEC	Ex db	Ex db eb
1MB.553 -					1MB1553													1MB5553			
Voltage at 50 Hz or 60 Hz																					
50 Hz 230 VΔ/400 VY, 60 Hz 460 VY	2	2	-		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	-	-
50 Hz 400 VΔ/690 VY, 60 Hz 460 VΔ	3	4	-		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
50 Hz 500 VY	2	7	-		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
50 Hz 500 VΔ	4	0	-		-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○
50 Hz 220 VΔ/380 VY, 60 Hz 440 VY	2	1	-		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
50 Hz 380 VΔ/660 VY, 60 Hz 440 VΔ	3	3	-		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
50 Hz 240 VΔ/415 VY, 60 Hz 480 VY	2	3	-		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
50 Hz 415 VΔ, 60 Hz 480 VΔ	3	5	-		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
50 Hz 400 VY	9	0	M4A		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
50 Hz 400 VΔ	9	0	M4B		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
50 Hz 230 VΔ	0	1	-		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
50 Hz 400 VY ¹⁾	0	2	-		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	-	-
50 Hz 400 VΔ ²⁾	0	4	-		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Voltage at 60 Hz and required power																					
220 VΔ/380 VY; 50 Hz power ³⁾	9	0	M2A		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
380 VΔ/660 VY; 50 Hz power ³⁾	9	0	M2B		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
440 VY; 50 Hz power ³⁾	9	0	M2C		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
440 VΔ; 50 Hz power ³⁾	9	0	M2D		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
460 VY; 50 Hz power ³⁾	9	0	M2E		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
460 VΔ; 50 Hz power ³⁾	9	0	M2F		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
575 VY; 50 Hz power ³⁾	9	0	M2G		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
575 VΔ; 50 Hz power ³⁾	9	0	M2H		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Voltage at 87 Hz (87 Hz power)																					
400 VΔ ⁵⁾	9	0	M3A		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
Non-standard voltage and/or frequencies																					
Non-standard winding ⁴⁾	9	0	M1Y • and customer specifications		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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

¹⁾ Delta connection is not possible.

²⁾ Star connection is not possible.

³⁾ Power at 60 Hz according to the specification in the selection and ordering data of the basic motor.

⁴⁾ 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 power in kW.

⁵⁾ Only possible for 4-pole, 6-pole and 8-pole motors and in combination with the order codes **B40** and **B41**. The operating data for converter operation is also provided in a table on the additional rating plate. The motor contains winding version 50 Hz 230 VΔ.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Voltages

Cast-iron series 1MB55.4, 1MB55.3, 1MB58.3

Selection and ordering data

Voltages	Article No. supplement		Frame size	Motor version				
	Voltage code 12th and 13th position of the Article No.	Additional identification code with order code and plain text, if required		$P_{rated} \leq 630 \text{ kW}$	$P_{rated} > 630 \text{ kW}$	IEC	Ex ec, Ex tc, Ex tb (Zones 2, 22 and 21)	IE4 IE3
			400, 450					
			1MB55 . 4					
			1MB55 . 3					
			1MB58 . 3					
	1MB5	- -	Order code					
Voltage at 50 Hz or 60 Hz								
50 Hz 400 VΔ/690 VY, 60 Hz 460 VΔ	3	4	–	□	O, R.			
50 Hz 500 VΔ	4	0	–	○	○			
60 Hz 575 VΔ			–	○	□ ²⁾			
50 Hz 690 VΔ	4	7	–	✓	□			
50 Hz 380 VΔ/660 VY, 60 Hz 440 VΔ	3	3	–	✓	O, R.			
50 Hz 415 VΔ, 60 Hz 480 VΔ	3	5	–	✓	O, R.			
50 Hz 600 VΔ, 60 Hz 690 VΔ	4	4	–	✓	✓			
50 Hz 660 VΔ	4	6	–	✓	✓			
Voltage at 50 Hz and required power								
400 VΔ; 50 Hz power	9	0	M4B	✓	O, R.			
Voltage at 60 Hz and required power								
440 VΔ; 60 Hz power	9	0	M1D	✓	O, R.			
460 VΔ; 60 Hz power	9	0	M1F	✓	O, R.			
575 VΔ; 60 Hz power	9	0	M1H	✓	✓ ²⁾			
400 VΔ/690 VY; 60 Hz power	9	0	M1J	O, R.	O, R.			
480 VΔ; 60 Hz power	9	0	M1L	✓	O, R.			
440 VΔ; 50 Hz power	9	0	M2D	✓	O, R.			
460 VΔ; 50 Hz power	9	0	M2F	✓	O, R.			
575 VΔ; 50 Hz power	9	0	M2H	✓	✓ ²⁾			
400 VΔ/690 VY; 50 Hz power	9	0	M2J	O, R.	O, R.			
480 VΔ; 50 Hz power	9	0	M2L	✓	O, R.			
Non-standard voltage and/or frequencies								
Non-standard winding ¹⁾	9	0	M1Y • and customer specifications	✓	✓			

- 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

¹⁾ Plain text must be specified in the order: Voltage between 380 and 690 V (voltages outside this range are available on request), frequency, circuit, rated power in kW.







²⁾ 2-pole version, frame size 450 for 60 Hz operation on request.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Aluminum series 1MB10

Selection and ordering data

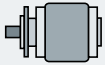







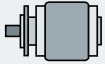



Types of construction	Article No. supplement	Type of construction code letter	For types of construction with order code(s) Article No. with additional identification code -Z	Frame size						Motor version	
				80	90	100	112	132	160		
				1MB10.3						IEC Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3
				1MB10.1							IE2
						1MB10.2					IE1
1MB10 .. -.....-.. (-Z)											
Without flange											
IM B3		A	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IM B6 ¹⁾		T	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IM B7 ¹⁾		U	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IM B8 ¹⁾		V	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IM V6 ¹⁾		D	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IM V5 with protective cover ^{1) 2)}		C	H00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

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SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Aluminum series 1MB10

Types of construction	Article No. supplement		Frame size						Motor version		
	Type of construction code letter	For types of construction with order code(s) Article No. with additional identification code -Z Order code	80	90	100	112	132	160	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2 IE1
1MB10 ... - .. (-Z)	F ... (-Z)		1MB10.3								
			1MB10.1			1MB10.2					
With flange	Acc. to EN 50347 Acc. to DIN 42 948		FF165 A 200	FF165 A 200	FF215 A 250	FF215 A 250	FF265 A 300	FF300 A 350			
IM B5 	F	–	✓	✓	✓	✓	✓	✓			
IM V1 with protective cover ^{1) 2)} 	G	H00	✓	✓	✓	✓	✓	✓			
IM V3 ¹⁾ 	H	–	✓	✓	✓	✓	✓	✓			
IM B35 	J	–	✓	✓	✓	✓	✓	✓			
With flange next largest	Acc. to EN 50347 Acc. to DIN 42 948		–	FF215 A 250	FF265 A 300	FF265 A 300	FF300 A 350	–			
IM B5 	F	P01	–	✓	✓	✓	✓	–			
IM V1 with protective cover ^{1) 2)} 	G	P01+H00	–	✓	✓	✓	✓	–			
IM V3 ¹⁾ 	H	P01	–	✓	✓	✓	✓	–			
IM B35 	J	P01	–	✓	✓	✓	✓	–			
With flange next smallest	Acc. to EN 50347 Acc. to DIN 42 948		FF130 A 160	–	FF165 A 200	FF165 A 200	FF215 A 250	–			
IM B5 	F	P02	✓	–	✓	✓	✓	–			
IM V1 with protective cover ^{1) 2)} 	G	P02+H00	✓	–	✓	✓	✓	–			
IM V3 ¹⁾ 	H	P02	✓	–	✓	✓	✓	–			
IM B35 	J	P02	✓	–	✓	✓	✓	–			

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SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Aluminum series 1MB10

Types of construction	Article No. supplement Type of construction code letter 14th position of the Article No. 1MB10...-...-...-...-...-...-...-...-...-...(-Z)	For types of construction with order code(s) Article No. with additional identification code -Z Order code	Frame size						Motor version		
			80	90	100	112	132	160	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2 IE1
			1MB10.3	1MB10.1	1MB10.2						
With flange	Acc. to EN 50347 Acc. to DIN 42 948		FT100 C 120	FT115 C 140	FT130 C 160	FT130 C 160	FT165 C 200	FT215 C 250			
IM B14 ¹⁾	K	–	✓	✓	✓	✓	✓	✓			
IM V19 ¹⁾	L	–	✓	✓	✓	✓	✓	✓			
IM V18 with protective cover ^{1) 2)}	M	H00	✓	✓	✓	✓	✓	✓			
IM B34	N	–	✓	✓	✓	✓	✓	✓			
With flange next largest	Acc. to EN 50347 Acc. to DIN 42 948		FT115 C 140	FT130 C 160	FT165 C 200	FT165 C 200	FT215 C 250	–			
IM B14 ¹⁾	K	P01	✓	✓	✓	✓	✓	–			
IM V19 ¹⁾	L	P01	✓	✓	✓	✓	✓	–			
IM V18 with protective cover ^{1) 2)}	M	P01+H00	✓	✓	✓	✓	✓	–			
IM B34	N	P01	✓	✓	✓	✓	✓	–			
With flange next smallest	Acc. to EN 50347 Acc. to DIN 42 948		–	–	FT115 C 140	–	–	–			
IM B14 ¹⁾	K	P02	–	–	✓	–	–	–			
IM V19 ¹⁾	L	P02	–	–	✓	–	–	–			
IM V18 with protective cover ^{1) 2)}	M	P02+H00	–	–	✓	–	–	–			
IM B34	N	P02	–	–	✓	–	–	–			

- Standard version
- ✓ With additional charge
- Not possible

¹⁾ The following applies for explosion-protected motors: In the case of the types of construction with shaft extension down, the version "with protective cover" is required. For types of construction with shaft extension pointing upwards, a suitable cover must be implemented to prevent small parts from falling into the fan cover (see the standard IEC/EN 60079-0). The cover must not block the cooling air flow.







²⁾ The "Standard cylindrical shaft extension (second shaft extension)" option (order code **L05**) is not possible.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Cast-iron series 1MB15 Basic Line, 1MB16 Performance Line

Selection and ordering data













Types of construction	Article No. supplement	Frame size	Motor version															
			71	80	90	100	112	132	160	180	200	225	250	280	315 S/M	315 L	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)
	Type of construction code letter 14th position of the Article No.	For types of construction with order code(s) Article No. with additional identification code -Z	1MB15.3 Basic Line													IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2
			1MB16.3 Performance Line															
			1MB15.1 Basic Line															
			1MB16.1 Performance Line															
1MB15 (-Z)																	
1MB16 (-Z)	Order code																
Without flange																		
IM B3	 A	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IM B6 1)	 T	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IM B7 1)	 U	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IM B8 1)	 V	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IM V6 1)	 D	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IM V5 with protective cover 1) 2)	 C	H00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

For legends and footnotes, see page 5/61.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Cast-iron series 1MB15 Basic Line, 1MB16 Performance Line

Types of construction	Article No. supplement		Frame size														Motor version	
	Type of construction code letter	For types of construction with order code(s) Article No. with additional identification code -Z	71	80	90	100	112	132	160	180	200	225	250	280	315 S/M	315 L	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)
		Order code	1MB15.3 Basic Line 1MB16.3 Performance Line 1MB15.1 Basic Line 1MB16.1 Performance Line															
1MB15(-Z)																	
1MB16(-Z)																	
With flange			Acc. to EN 50347 Acc. to DIN 42 948		FF130 A 160	FF165 A 200	FF165 A 200	FF215 A 250	FF215 A 250	FF265 A 300	FF300 A 350	FF300 A 350	FF350 A 400	FF400 A 450	FF500 A 550	FF600 A 660		
IM B5		F	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
IM V1 with protective cover 1) 2)		G	H00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
IM V3 1)		H	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
IM B35 1)		J	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
With flange next largest			Acc. to EN 50347 Acc. to DIN 42 948		-	-	FF215 A 250	FF265 A 300	FF265 A 300	FF300 A 350	-	-	-	-	-	-	-	
IM B5		F	P01	-	-	✓	✓	✓	✓	-	-	-	-	-	-	-	-	
IM V1 with protective cover 1) 2)		G	P01+H00	-	-	✓	✓	✓	✓	-	-	-	-	-	-	-	-	
IM V3 1)		H	P01	-	-	✓	✓	✓	✓	-	-	-	-	-	-	-	-	
IM B35 1)		J	P01	-	-	✓	✓	✓	✓	-	-	-	-	-	-	-	-	
With flange next smallest			Acc. to EN 50347 Acc. to DIN 42 948		-	FF130 A 160	-	FF165 A 200	FF165 A 200	FF215 A 250	FF265 A 300	FF265 A 300	FF300 A 350	-	-	-	-	
IM B5		F	P02	-	✓	-	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	
IM V1 with protective cover 1) 2)		G	P02+H00	-	✓	-	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	
IM V3 1)		H	P02	-	✓	-	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	
IM B35 1)		J	P02	-	✓	-	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	













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For legends and footnotes, see page 5/61.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Cast-iron series 1MB15 Basic Line, 1MB16 Performance Line

Types of construction	Article No. supplement		Frame size													Motor version	
	Type of construction code letter	For types of construction with order code(s) Article No. with additional identification code -Z	71	80	90	100	112	132	160	180	200	225	250	280	315 S/M	315 L	IEC
			1MB15.3 Basic Line													IEC	
			1MB16.3 Performance Line														
			1MB15.1 Basic Line														
			1MB16.1 Performance Line														
1MB15 (-Z)																
1MB16 (-Z)	Order code															
With flange	Acc. to EN 50347 Acc. to DIN 42 948		FT85 C 105	FT100 C 120	FT115 C 140	FT130 C 160	FT130 C 160	FT165 C 200	FT215 C 250	-	-	-	-	-	-		
IM B14 1)		K	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-		
IM V19 1)		L	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-		
IM V18 with protective cover 1) 2)		M	H00	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-		
IM B34		N	-	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-		
With flange next largest	Acc. to EN 50347 Acc. to DIN 42 948		FT115 C 140	FT130 C 160	FT130 C 160	FT165 C 200	FT165 C 200	FT215 C 250	-	-	-	-	-	-	-		
IM B14 1)		K	P01	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-		
IM V19 1)		L	P01	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-		
IM V18 with protective cover 1) 2)		M	P01+H00	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-		
IM B34		N	P01	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-		
With flange next smallest	Acc. to EN 50347 Acc. to DIN 42 948		-	-	-	FT115 C 140	-	-	-	-	-	-	-	-	-		
IM B14 1)		K	P02	-	-	-	✓	-	-	-	-	-	-	-	-		
IM V19 1)		L	P02+H00	-	-	-	✓	-	-	-	-	-	-	-	-		
IM V18 with protective cover 1) 2)		M	P02	-	-	-	✓	-	-	-	-	-	-	-	-		
IM B34		N	P02	-	-	-	✓	-	-	-	-	-	-	-	-		

- Standard version
- ✓ With additional charge
- Not possible

1) The following applies for explosion-protected motors: In the case of the types of construction with shaft extension down, the version "with protective cover" is required. For types of construction with shaft extension pointing upwards, a suitable cover must be implemented to prevent small parts from falling into the fan cover (see the standard IEC/EN 60079-0). The cover must not block the cooling air flow.












2) The "Standard cylindrical shaft extension (second shaft extension)" option (order code **L05**) is not possible.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Cast-iron series 1MB1543, 1MB5543 Basic Line and 1MB1643, 1MB5643 Performance Line

Selection and ordering data

Types of construction	Article No. supplement	Motor version	Frame size														
			71	80	90	100	112	132	160	180	200	225	250	280	315 S/M	315 L	
	Type of construction code letter 14th position of the Article No.	IEC Ex eb (Zone 1) IE3	1MB1543 Basic Line														
	For types of construction with order code(s) Article No. with additional identification code -Z		1MB1643 Performance Line														
	Order code		1MB5543 Basic Line														
			1MB5643 Performance Line														
Without flange																	
IM B3 2)	 A	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IM B6 1) 2)	 T	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IM B7 1) 2)	 U	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IM B8 1) 2)	 V	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IM V6 1) 2)	 D	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IM V5 with protective cover 1) 2)	 C	H00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
With flange																	
	Acc. to EN 50347 Acc. to DIN 42 948		FF130 A 160	FF165 A 200	FF165 A 200	FF215 A 250	FF215 A 250	FF265 A 300	FF300 A 350	FF300 A 350	FF350 A 400	FF400 A 450	FF500 A 550	FF500 A 550	FF600 A 660	FF600 A 660	
IM B5 2)	 F	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IM V1 with protective cover 1) 2) 3)	 G	H00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IM V3 1) 2)	 H	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IM B35 1) 2)	 J	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IM V15 1) 2)	 W	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>





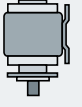

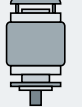


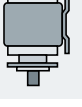
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For legends and footnotes, see page 5/64.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Cast-iron series 1MB1543, 1MB5543 Basic Line and 1MB1643, 1MB5643 Performance Line













Types of construction	Article No. supplement		Frame size														Motor version			
	Type of construction code letter 14th position of the Article No.	For types of construction with order code(s) Article No. with additional identification code -Z	71	80	90	100	112	132	160	180	200	225	250	280	315 S/M	315 L	IEC	Ex eb (Zone 1)	IE3	
1MB1543 -.....-■..(-Z)			1MB1543 Basic Line																	
1MB1643 -.....-■..(-Z)			1MB1643 Performance Line																	
1MB5543 -.....-■..(-Z)			1MB5543 Basic Line																	
1MB5643 -.....-■..(-Z)			1MB5643 Performance Line																	
		Order code																		
With flange next largest		Acc. to EN 50347 Acc. to DIN 42 948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IM B5 2)		F	P01	-	-	-	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
IM V1 with protective cover 1) 2) 3)		G	P01+H00	-	-	-	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
IM V3 1) 2)		H	P01	-	-	-	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
IM B35 1) 2)		J	P01	-	-	-	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
IM V15 1) 2)		W	P01	-	-	-	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
With flange next smallest		Acc. to EN 50347 Acc. to DIN 42 948	-	FF130 - A 160 -	-	FF165 A 200	FF165 A 200	FF215 A 250	FF265 A 300	FF265 A 300	FF300 A 350	-	-	-	-	-	-	-	-	
IM B5 2)		F	P02	-	✓	-	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-
IM V1 with protective cover 1) 2) 3)		G	P02+H00	-	✓	-	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-
IM V3 1) 2)		H	P02	-	✓	-	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-
IM B35 1) 2)		J	P02	-	✓	-	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-
IM V15 1) 2)		W	P02	-	✓	-	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-

For legends and footnotes, see page 5/64.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Cast-iron series 1MB1543, 1MB5543 Basic Line and 1MB1643, 1MB5643 Performance Line

Types of construction	Article No. supplement		Frame size														Motor version				
	Type of construction code letter 14th position of the Article No.	For types of construction with order code(s) Article No. with additional identification code -Z	71	80	90	100	112	132	160	180	200	225	250	280	315 S/M	315 L	IEC	Ex	eb (Zone 1)	IE3	
1MB1543 - - - - -	■ .. (-Z)		1MB1543 Basic Line																		
1MB1643 - - - - -	■ .. (-Z)		1MB1643 Performance Line																		
1MB5543 - - - - -	■ .. (-Z)		1MB5543 Basic Line																		
1MB5643 - - - - -	■ .. (-Z)		1MB5643 Performance Line																		
		Order code																			
With flange		Acc. to EN 50347 Acc. to DIN 42 948	FT85 C 105	FT100 C 120	FT115 C 140	FT130 C 160	FT130 C 160	FT165 C 200	FT215 C 250	-	-	-	-	-	-	-	-	-	-	-	
IM B14 1) 2)		K	-	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	
IM V19 1) 2)		L	-	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	
IM V18 with protec- tive cover 1) 2) 3)		M	H00	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	
IM B34 1) 2)		N	-	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	
With flange next largest		Acc. to EN 50347 Acc. to DIN 42 948	FT115 C 140	FT130 C 160	FT130 C 160	FT165 C 200	FT165 C 200	FT215 C 250	-	-	-	-	-	-	-	-	-	-	-	-	
IM B14 1) 2) 4)		K	P01	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	
IM V19 1) 2) 4)		L	P01	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	
IM V18 with protec- tive cover 1) 2) 3) 4)		M	P01+H00	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	
IM B34 1) 2) 4)		N	P01	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	
With flange next smallest		Acc. to EN 50347 Acc. to DIN 42 948	-	-	-	FT115 C 140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
IM B14 1) 2) 4)		K	P02	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	
IM V19 1) 2) 4)		L	P02	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	
IM V18 with protec- tive cover 1) 2) 3) 4)		M	P02+H00	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	
IM B34 1) 2) 4)		N	P02	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	

□ Standard version ✓ With additional charge - Not possible

1) The following applies for explosion-protected motors: In the case of the types of construction with shaft extension down, the version "with protective cover" is required. For types of construction with shaft extension pointing upwards, a suitable cover must be implemented to prevent small parts from falling into the fan cover (see the standard IEC/EN 60079-0). The cover must not block the cooling air flow.

2) The type of construction is stamped on the rating plate. For orders 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) The "Standard cylindrical shaft extension (second shaft extension)" option (order code **L05**) is not possible.












4) With reference to standard EN 50347, flanges that are 2 steps larger are used with option P01 in the frame sizes 71 and 80.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Cast-iron series 1MB1553, 1MB5553

Selection and ordering data



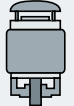

Types of construction	Article No. supplement	For types of construction with order code(s) Article No. with additional identification code -Z Order code	Frame size													Motor version				
			71	80	90	100	112	132	160	180	200	225	250	280	315	355	IEC	Ex db	Ex db eb	IE3
			1MB1553																	
																1MB5553				
1MB.553 - -Z																				
Without flange																				
IM B3		A	-																	
IM B6 1)		T	-																	
IM B7 1)		U	-																	
IM B8		V	-																	
IM V6 1) 3)		D	-																	
IM V5 with protective cover 1) 3)		C	H00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
With flange			Acc. to EN 50347 Acc. to DIN 42 948	FF130 A 160	FF165 A 200	FF165 A 200	FF215 A 250	FF215 A 250	FF265 A 300	FF300 A 350	FF300 A 350	FF350 A 400	FF400 A 450	FF500 A 550	FF500 A 550	FF600 A 660	FF740 A 800			
IM B5 1)		F	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
IM V1 with protective cover 2) 3)		G	H00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IM V3 3)		H	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
IM B35		J	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IM V15 2) 3)		W	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-

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SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Cast-iron series 1MB1553, 1MB5553

Types of construction	Article No. supplement		Frame size													Motor version					
	Type of construction code letter 14th position of the Article No.	For types of construction with order code(s) Article No. with additional identification code -Z Order code	71	80	90	100	112	132	160	180	200	225	250	280	315	355	IEC	Ex db,	Ex db eb	IE3	
			1MB1553																		
															1MB5553						
1MB.553 - (-Z)																				
With flange	Acc. to EN 50347		FT85	FT100	FT115	FT130	FT130	FT165	FT215	-	-	-	-	-	-	-	-	-	-	-	
	Acc. to DIN 42 948		C 105	C 120	C 140	C 160	C 160	C 200	C 250	-	-	-	-	-	-	-	-	-	-	-	
IM B14 3)		K	-	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	
IM V19 3)		L	-	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	
IM V18 with protective cover 2) 3)		M	H00	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	
IM B34		N	-	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	

- Standard version
- ✓ With additional charge
- Not possible

5

¹⁾ Only possible for frame size 315 S/M (horizontal mounting).

²⁾ The "Standard cylindrical shaft extension (second shaft extension)" option (order code **L05**) is not possible.









³⁾ The following applies for explosion-protected motors: In the case of the types of construction with shaft extension down, the version "with protective cover" is required. For types of construction with shaft extension pointing upwards, a suitable cover must be implemented to prevent small parts from falling into the fan cover (see the standard IEC/EN 60079-0). The cover must not block the cooling air flow.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Types of construction

Cast-iron series 1MB55.4, 1MB55.3, 1MB58.3

Selection and ordering data

Types of construction	Article No. supplement Type of construction code letter 14th position of the Article No.	For types of construction with order code(s) Article No. with additional identification code -Z Order code	Frame size		Motor version
			400	450	
			1MB55 . 4		IEC Ex ec, Ex tc, Ex tb (Zones 2, 22 and 21) IE4 IE3
			1MB55 . 3		
			1MB58 . 3		
1MB5 - . . (-Z)					
Without flange					
IM B3 ^{1) 2)}	 A	-	□	□	
IM V6 ²⁾	 D	-	O. R. ⁷⁾	O. R. ⁷⁾	
IM V5 without protective cover ²⁾	 C	-	O. R. ⁷⁾	O. R. ⁷⁾	
IM V5 with protective cover ^{2) 3) 4)}	 C	H00	O. R. ⁷⁾	O. R. ⁷⁾	
With flange					
	EN 50347 DIN 42948		FF940 A 1000	FF1080 A 1150	
IM B5 ^{2) 5)}	 F	-	✓ ⁶⁾	✓ ⁶⁾	
IM V1 without protective cover ²⁾	 G	-	✓ ⁷⁾	✓ ⁷⁾	
IM V1 with protective cover ^{2) 3) 4)}	 G	H00	✓ ⁷⁾	✓ ⁷⁾	
IM B35 ³⁾	 J	-	✓	✓	

- Standard version
- Without additional charge
- ✓ With additional charge

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

²⁾ The type of construction is stamped on the rating plate. If mounted in a different position, the position must be specified to ensure that the condensation drainage holes are positioned correctly.

³⁾ In combination with an encoder, it is not necessary to order the protective cover (order code **H00**), as this is delivered as a protection for the encoder as standard. In this case the protective cover is standard design (without additional charge).

⁴⁾ The "Standard cylindrical shaft extension (second shaft extension)" option (order code **L05**) is not possible.

⁵⁾ The types of construction IM V3 and IM V1 with/without protective cover are also possible as long as no stamping of these types of construction on the rating plate is required. As standard the type of construction IM B5 is then stamped on the rating plate. With type of construction IM V1 with protective cover, the protective cover has to be additionally ordered with order code **H00**. The protective cover is not stamped on the rating plate.

⁶⁾ For machines, type of construction IM B5, provide an additional support foot at the NDE. The support foot is not included in the scope of supply. Use an appropriately sized support foot with the appropriate rigidity. The support foot must be able to support the total weight of the machine.

⁷⁾ Not available for 2-pole motors.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Motor protection

Aluminum series 1MB10**Selection and ordering data**

Motor protection	Article No. supplement Motor protection code letter 15th position of the Article No.	Additional identification code with order code and plain text, if required Order code	Frame size						Motor version
			80	90	100	112	132	160	
			1MB10.3						IEC Ex tb (Zone 21), IE3 Ex tc (Zone 22), IE2 Ex ec (Zone 2) IE1
			1MB10.1						
					1MB10.2				
1MB10	■								

Motor protection										
None (standard)	A	–	□	□	□	□	□	□	□	
3 PTC thermistors – for tripping (2 terminals) ¹⁾	B	–	✓	✓	✓	✓	✓	✓	✓	
6 PTC thermistors – for warning and tripping (4 terminals) ¹⁾	C	–	✓	✓	✓	✓	✓	✓	✓	
1 KTY84-130 temperature sensor (2 terminals) ¹⁾	F	–	✓	✓	✓	✓	✓	✓	✓	
2 KTY84-130 temperature sensors (4 terminals) ¹⁾	G	–	✓	✓	✓	✓	✓	✓	✓	
3 Pt100 resistance thermometers – 2-wire input (6 terminals) ^{1) 2)}	H	–	–	–	✓	✓	✓	✓	✓	
1 Pt1000 resistance thermo- meter (2 terminals) ¹⁾	K	–	✓	✓	✓	✓	✓	✓	✓	
2 Pt1000 resistance thermo- meters (4 terminals) ¹⁾	L	–	✓	✓	✓	✓	✓	✓	✓	

- Standard version
- ✓ With additional charge
- Not possible

¹⁾ Evaluation with associated tripping unit (see Catalog IC 10) is recommended. In converter operation, PTC thermistor motor protection is always required.

²⁾ In combination with the 15th position of the Article No. "H", the order codes **Q02** and **Q03** are not possible for frame sizes 100 to 160. It can only be supplied with a star or delta winding for direct switch-on (3 terminals).

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Motor protection

Cast-iron series 1MB15 Basic Line, 1MB16 Performance Line

Selection and ordering data

Motor protection	Article No. supplement		Frame size													Motor version			
	Motor protection code letter 15th position of the Article No.	Additional identification code with order code and plain text, if required	71	80	90	100	112	132	160	180	200	225	250	280	315	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2	
			1MB15.3 Basic Line																
			1MB16.3 Performance Line																
			1MB15.1 Basic Line																
			1MB16.1 Performance Line																
	1MB15																		
	1MB16																		
		Order code																	
Motor protection																			
None (standard)	A	-	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	Only for: 1MB15.. Basic Line
3 PTC thermistors – for tripping (2 terminals) ¹⁾	B	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6 PTC thermistors – for warning and tripping (4 terminals) ²⁾	C	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB15.. Basic Line
			-	-	-	□	□	□	□	□	□	□	□	□	□	□	□	□	□
1 KTY84-130 temperature sensor (2 terminals) ²⁾	F	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2 KTY84-130 temperature sensors (4 terminals) ²⁾	G	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3 Pt100 resistance thermometers – 2-wire input (6 terminals) ^{2) 3)}	H	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6 Pt100 resistance thermometers – 2-wire input (12 terminals) ²⁾	J	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1 Pt1000 resistance thermometer (2 terminals) ²⁾	K	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2 Pt1000 resistance thermometers (4 terminals) ²⁾	L	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

- Standard version
- ✓ With additional charge
- Not possible

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

²⁾ Evaluation with associated tripping unit (see Catalog IC 10) is recommended. In converter operation, PTC thermistor motor protection is always required.

³⁾ In combination with the 15th position of the Article No. "H", the order codes **Q02** and **Q03** are not possible for frame sizes 100 to 160. It can only be supplied with a star or delta winding for direct switch-on (3 terminals).

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Motor protection

Cast-iron series 1MB1543, 1MB5543 Basic Line and 1MB1643, 1MB5643 Performance Line

Selection and ordering data

Motor protection	Article No. supplement Motor protection code letter 15th position of the Article No.	Additional identification code 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			
			1MB1543 Basic Line													IEC	Ex eb (Zone 1)	IE3
			1MB1643 Performance Line															
			1MB5543 Basic Line															
			1MB5643 Performance Line															
1MB1543 -	■																	
1MB1643 -	■																	
1MB5543 -	■																	
1MB5643 -	■																	
		Order code																
Motor protection																		
Without (standard) ¹⁾	A	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Only for: 1MB.5., Basic Line	
3 PTC thermistors – for tripping (2 terminals) ^{1) 2) 3)}	B	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Only for: 1MB.5., Basic Line	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Only for: MB.6., Performance Line	
6 PTC thermistors – for warning and tripping (4 terminals) ^{2) 3)}	C	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

- Standard version
 With additional charge

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

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

³⁾ Motors in these frame sizes have a second rating plate (T1/T2 and T3) as standard.

The T3 power is stamped on the rating plate as standard if the following motors are selected with PTC thermistor (protection by PTC thermistor only) or voltage code '90':

- 2-pole motors: Frame sizes 132 to 160
- 4-pole motors: Frame size 180

Alternatively, with order code **B33**, the "T1/T2 power is stamped on the rating plate".

- 2-pole motors: Frame sizes 132 to 200
- 4-pole motors: Frame sizes 180 to 200

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Motor protection

Cast-iron series 1MB1553, 1MB5553

Selection and ordering data

Motor protection	Article No. supplement Motor protection code letter 15th position of the Article No.	Additional identification code 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	355	IEC	Ex db, Ex db eb	IE3 (Zone 1)
			1MB1553											1MB5553					
	1MB.553 -	Order code																	
Motor protection																			
None (standard)	A	-	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	
3 PTC thermistors – for tripping (2 terminals) ¹⁾	B	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6 PTC thermistors – for warning and tripping (4 terminals) ^{1) 2)}	C	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3 Pt100 resistance thermometers – 2-wire input (6 terminals) ²⁾	H	Q60	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6 Pt100 resistance thermometers – 2-wire input (12 terminals) ^{2) 3)}	J	Q61	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1 Pt1000 resistance thermometers (2 terminals) ¹⁾	K	Q35	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2 Pt1000 resistance thermometers (4 terminals) ²⁾	L	Q36	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3 Pt100 resistance thermometers – 3-wire input (9 terminals) ^{2) 3)}	Q	Q63	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6 Pt100 resistance thermometers – 3-wire input (18 terminals) ^{2) 3)}	R	Q64	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	

- Standard version
- ✓ With additional charge
- Not possible

¹⁾ Mandatory winding monitoring of the motors suitable for converter operation.

²⁾ Maximum number of terminals for accessories, see the terminal box concept.

³⁾ Auxiliary terminal box required; option in Ex eb with order code **R62** or **R63**



SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Motor protection

Cast-iron series 1MB55.4, 1MB55.3, 1MB58.3

Selection and ordering data

Motor protection	Article No. supplement		Frame size		Motor version		
	Motor protection code letter 15th position of the Article No.	Additional identification code with order code and plain text, if required	400	450	IEC	Ex ec, Ex tc, Ex tb (Zones 2, 22 and 21)	IE4 IE3
			1MB55 . 4				
			1MB55 . 3				
			1MB58 . 3				
	1MB5	Order code					

Motor protection							
None (standard)	A	–	<input type="checkbox"/>		<input type="checkbox"/>		
1 or 3 PTC thermistors – for tripping (2 terminals) ¹⁾	B	–	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
2 or 6 PTC thermistors – for alarm and tripping (4 terminals) ¹⁾	C	–	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
1 KTY84-130 temperature sensor (2 terminals) ¹⁾	F	–	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
2 KTY84-130 temperature sensors (4 terminals) ¹⁾	G	–	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
3 Pt100 resistance thermometers – 2-wire input (6 terminals)	H	–	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
6 Pt100 resistance thermometers – 2-wire input (12 terminals)	J	–	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
1 Pt1000 resistance thermometer (2 terminals)	K	–	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
2 Pt1000 resistance thermometers (4 terminals)	L	–	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
1 Pt100 resistance thermometer – 2-wire input (2 terminals)	P	–	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
3 Pt100 resistance thermometers – 3-wire input (9 terminals)	Q	–	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
6 Pt100 resistance thermometers – 3-wire input (18 terminals)	R	–	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
3 NTC thermistors – for tripping (6 terminals)	Z	Q2A	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		

- Standard version
 With additional charge

Note:

Options are available specifically for bearing protection – for order codes and descriptions, see from page 5/96.

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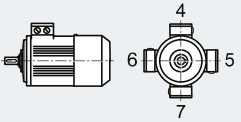
¹⁾ Evaluation with associated tripping unit (see Catalog IC 10) is recommended.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Terminal box position

Aluminum series 1MB10

Selection and ordering data

Terminal box position	Article No. supplement	Frame size						Motor version	
		80	90	100	112	132	160	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)
 <p>Terminal box position code 16th position of the Article No.</p>	Additional identification code with order code and plain text, if required	1MB10.3							
		1MB10.1							
		1MB10.2							
Order code									
Terminal box position									
Terminal box top ¹⁾	4	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Terminal box right-hand side ²⁾	5	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Terminal box left-hand side ²⁾	6	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Terminal box at bottom ^{2) 3)}	7	-	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- Standard version
 With additional charge

¹⁾ For types of construction with feet, cast feet are standard.
²⁾ For types of construction with feet, screwed-on feet are standard.
³⁾ Not generally possible for motors with feet.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Terminal box position

Cast-iron series 1MB15 Basic Line, 1MB16 Performance Line

Selection and ordering data

Terminal box position	Article No. supplement	Frame size	Motor version
	Terminal box position code 16th position of the Article No. Additional identification code with order code and plain text, if required Order code	71 80 90 100 112 132 160 180 200 225 250 280 315	IEC Ex tb (Zone 21), IE3 Ex tc (Zone 22), Ex ec (Zone 2) IE2
		1MB15.3 Basic Line	
		1MB16.3 Performance Line	
		1MB15.1 Basic Line	
1MB16.1 Performance Line			
1MB15			
1MB16			

Terminal box position															
Terminal box top ¹⁾	4	-	□	□	□	□	□	□	□	□	□	□	□	□	□
Terminal box right-hand side ²⁾	5	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminal box left-hand side ²⁾	6	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminal box bottom ³⁾	7	-	-	-	-	✓	✓	✓	✓	-	-	-	-	-	-

- Standard version
- ✓ With additional charge
- Not possible

¹⁾ For types of construction with feet, cast feet are standard.

²⁾ For types of construction with feet, screwed-on feet are standard.

³⁾ Not generally possible for motors with feet.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Terminal box position

Cast-iron series 1MB1543, 1MB5543 Basic Line and 1MB1643, 1MB5643 Performance Line

Selection and ordering data

Terminal box position	Article No. supplement	Additional identification code 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	IEC	Ex eb (Zone 1)
			1MB1543 Basic Line														
			1MB1643 Performance Line														
			1MB5543 Basic Line														
			1MB5643 Performance Line														
1MB15																	
1MB16																	
1MB55																	
1MB56																	
		Order code															
Terminal box position																	
Terminal box base left with terminal box at the top	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
Terminal box base right with terminal box at the top	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
Terminal box base left with oblique terminal box 45°	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
Terminal box base right with oblique terminal box 45°	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	□
Terminal box top ¹⁾	4	-	□	□	□	□	□	□	□	□	□	□	□	□	□	□	-
Terminal box right-hand side ²⁾	5	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminal box left-hand side ²⁾	6	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terminal box at bottom ^{2) 3)}	7	-	-	-	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-
Terminal box on left-hand side (base below)	9	R5L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
Terminal box on right-hand side (base below)	9	R6R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
Terminal box bottom left	9	R7L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
Terminal box bottom right	9	R7R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓

- Standard version
- Without additional charge
- ✓ With additional charge
- Not possible

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

²⁾ For types of construction with feet, screwed-on feet are standard.

³⁾ Not generally possible for motors with feet.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Terminal box position

Cast-iron series 1MB1553, 1MB5553**Selection and ordering data**

Terminal box position	Article No. supplement	Frame size	Motor version
	Terminal box position code 16th position of the Article No.	71 80 90 100 112 132 160 180 200 225 250 280 315 355	IEC Ex db, Ex db eb IE3 (Zone 1)
		1MB1553	
1MB.553 - -		Order code	
Terminal box position			
Terminal box top ¹⁾	4	-	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Terminal box right-hand side ¹⁾	5	-	- - - - - ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
Terminal box left-hand side ¹⁾	6	-	- - - - - ✓ ✓ ✓ ✓ ✓ ✓ - -
Terminal box bottom ²⁾	7	-	- - - ✓ ✓ ✓ ✓ - - - - -

- Standard version
- With additional charge
- Not possible

Standard version:

Cable entry from right, as seen looking onto the shaft, with terminal box position left, entry from below, on frame size 355 and with terminal box on the right-hand side, cable entry is from the NDE.

¹⁾ For types of construction with feet, cast feet are standard.

²⁾ Not generally possible for motors with feet.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Terminal box position

Cast-iron series 1MB55.4, 1MB55.3, 1MB58.3

Selection and ordering data

Terminal box position	Article No. supplement		Frame size		Motor version		
	Terminal box position code 16th position of the Article No.	Additional identification code with order code and plain text, if required	400	450	IEC	Ex ec, Ex tc, Ex tb (Zones 2, 22 and 21)	IE4 IE3
1MB5		Order code					
Terminal box position							
Terminal box base left with terminal box at the top	0	–	✓	✓			
Terminal box base right with terminal box at the top	1	–	✓	✓			
Terminal box base left with oblique terminal box 45°	2	–	○	○			
Terminal box base right with oblique terminal box 45°	3	–	□	□			
Terminal box on right-hand side	5	–	✓	✓			
Terminal box on left-hand side	6	–	✓	✓			
Terminal box left-hand side (base below) ¹⁾	9	R5L	✓	✓			
Terminal box right-hand side (base below) ¹⁾	9	R6R	✓	✓			
Terminal box bottom left ¹⁾	9	R7L	✓	✓			
Terminal box bottom right ¹⁾	9	R7R	✓	✓			

- Standard version
- Without additional charge
- ✓ With additional charge

¹⁾ Only possible in combination with type of construction IM V1.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Aluminum series 1MB10

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		
		1MB10.3						IEC Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3
		1MB10.1							IE2
				1MB10.2					IE1
1MB10 -Z	Order code								
Explosion-protected version									
Version additionally for dust Ex tc – Zone 22 ^{1) 14) 22)}	B30	✓	✓	✓	✓	✓	✓	Only for: 1MB103, – Ex ec (Zone 2)	
Version IIC with stamping of IIB ²²⁾	B31	○	○	○	○	○	○	Only for: 1MB103, – Ex ec (Zone 2)	
VIK version	C02	✓	✓	✓	✓	✓	✓	Only for: 1MB1033 – Ex ec IE3 (Zone 2)	
Version for converter operation									
Version for converter operation in basic version with operating data SINAMICS G120 with PM240-2. ¹⁵⁾	B40	✓	✓	✓	✓	✓	✓		
Version for converter operation in basic version with operating data SINAMICS S150 ¹⁵⁾	B41	✓	✓	✓	✓	✓	✓		
Operating data such as the order code with alternative SINAMICS converter on the rating plate • G120 with PM230 • G120 with PM240 • G120C • G120P with PM230 • G120P with PM240-2 • G120P with PM240P-2 • G120P with PM330 • G130, G150, G180 • S120 (BLM/SLM) • V20 Operating data such as order code with alternative SINAMICS converters on the rating plate • S120 (ALM)	Y68 • and converter type	○	○	○	○	○	○		
Motor protection									
1 Pt1000 resistance thermometer (2 terminals)	Q35	✓	✓	✓	✓	✓	✓		
2 Pt1000 resistance thermometers (4 terminals)	Q36	✓	✓	✓	✓	✓	✓		
Motor connection and terminal box									
External grounding		□	□	□	□	□	□		
Rotation of the terminal box through 90°, entry from DE	R10	○	○	○	○	○	○		
Rotation of the terminal box through 90°, entry from NDE	R11	○	○	○	○	○	○		
Rotation of the terminal box through 180°	R12	○	○	○	○	○	○		
Metal cable gland, maximum configuration	R18	✓	✓	✓	✓	✓	✓		
Larger terminal box	R50	□	□	–	–	–	–		
Windings and insulation									
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 % ²⁾	N05	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 % ²⁾	N06	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 % ²⁾	N07	✓	✓	✓	✓	✓	✓		
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N08	✓	✓	✓	✓	✓	✓		
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 • and spec. power, CT .. °C or IA m above sea level	✓	✓	✓	✓	✓	✓		

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For legends and footnotes, see page 5/81.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Aluminum series 1MB10

Special versions	Additional identification code -Z with order code and plain text if required	Frame size						Motor version	
		80	90	100	112	132	160		
		1MB10.3						IEC Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2 IE1
		1MB10.1							
				1MB10.2					
	1MB10...-Z Order code								
Colors and paint finish									
Special paint finish 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	✓	✓	✓	✓	✓	✓	✓	
Top coat polyurethane ¹²⁾	S06	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB103. – Ex ec (Zone 2)
Paint finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5002, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005 (see Catalog Section 1 "Introduction")	Y53 • and 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	✓	✓	✓	✓	✓	✓	✓	
Modular technology – Basic versions									
Mounting of separately driven fan ¹⁷⁾	F70	–	–	–	–	–	–	–	Only for: 1MB101. – Ex tb (Zone 21)
		–	–	✓	✓	✓	✓	✓	Only for: 1MB102. – Ex tc (Zone 22), 1MB103. – Ex ec (Zone 2)
Special technology									
Mounting of LL 841 (HTL); 1024 l explosion-protected rotary pulse encoder ¹⁶⁾	G30	–	–	✓	✓	✓	✓	✓	
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	–	–	–	–	✓	✓	✓	
Mechanical protection for encoder	G43	□	□	□	□	□	□	□	
Protective cover	H00	✓	✓	✓	✓	✓	✓	✓	
Screwed-on (instead of cast) feet	H01	✓	✓	✓	✓	✓	✓	✓	
Vibration-proof version; vibration resistance to Class 3M4 according to IEC 60721-3-3:1994	H02	✓	✓	✓	✓	✓	✓	✓	
Condensation drainage holes ⁶⁾	H03	✓	✓	✓	✓	✓	✓	✓	
Rust-resistant screws (externally)	H07	✓	✓	✓	✓	✓	✓	✓	
IP65 degree of protection ⁴⁾	H20	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB103. – Ex ec (Zone 2)
IP56 degree of protection ⁵⁾	H22	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB103. – Ex ec (Zone 2)
Drive-end seal for flange-mounting motors, oil-tight to 0.1 bar ³⁾	H23	✓	✓	✓	✓	✓	✓	✓	
Coolant temperature and installation altitude									
Coolant temperature –40 to +40 °C ²⁰⁾	D03	✓	✓	✓	✓	✓	✓	✓	
Versions in accordance with standards and specifications									
Ex certification for China	D32	✓	✓	✓	✓	✓	✓	✓	
China Energy Efficiency Label	D34	✓	✓	✓	✓	✓	✓	✓	
EAC Ex certificate for the Eurasian Customs Union ¹⁸⁾	D35	✓	✓	✓	✓	✓	✓	✓	
IECEx certification	D37	✓	✓	–	–	–	–	–	Only for: 1MB101. – Ex tb (Zone 21)
		✓	✓	✓	✓	✓	✓	✓	Only for: 1MB102. – Ex tc (Zone 22), 1MB103. – Ex ec (Zone 2)

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Aluminum series 1MB10

Special versions	Additional identification code -Z with order code and plain text if required	Frame size						Motor version		
		80	90	100	112	132	160	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2 IE1
		1MB10.3								
		1MB10.1								
				1MB10.2						
1MB10 -Z	Order code									
Bearings and lubrication										
Located bearing DE	L20	✓	✓	✓	✓	✓	✓			
Located bearing NDE	L21	✓	✓	✓	✓	✓	□			
Bearing design for increased cantilever forces ¹³⁾	L22	–	–	✓	✓	✓	✓			
Regreasing device	L23	–	–	✓	✓	✓	✓			
Bearings reinforced at both ends for DE and NDE, bearing size 63	L25	–	–	✓	✓	✓	✓			
Bearing insulation NDE	L51	–	–	✓	✓	✓	✓			
Measuring nipple for SPM shock pulse measurement for bearing inspection	Q01	–	–	✓	✓	✓	✓			
Balance and vibration severity										
Vibration severity grade A		□	□	□	□	□	□			
Vibration severity grade B ¹⁹⁾	L00	✓	✓	✓	✓	✓	✓			
Half-key balancing		□	□	□	□	□	□			
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	✓	✓	✓	✓	✓	✓			
Non-standard cylindrical shaft extension, DE ⁷⁾	Y58 • and customer specifications	✓	✓	✓	✓	✓	✓			
Non-standard cylindrical shaft extension, NDE ⁷⁾	Y59 • and customer specifications	✓	✓	✓	✓	✓	✓			
Heating and ventilation										
Metal external fan ⁸⁾	F76	□	□	–	–	–	–	Only for: 1MB103. – Ex ec (Zone 2)		
		□	□	✓	✓	✓	✓	Only for: 1MB101. – Ex tb (Zone 21), 1MB102. – Ex tc (Zone 22)		
Anti-condensation heating for 230 V (2 terminals) ⁹⁾	Q02	✓	✓	✓	✓	✓	✓			
Anti-condensation heating for 115 V (2 terminals) ⁹⁾	Q03	✓	✓	✓	✓	✓	✓			
Rating plate and additional rating plates										
Second rating plate, loose	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	✓	✓	✓	✓	✓	✓			

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For legends and footnotes, see page 5/81.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Aluminum series 1MB10

Special versions	Additional identification code -Z with order code and plain text if required	Frame size						Motor version		
		80	90	100	112	132	160	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2 IE1
		1MB10.3								
		1MB10.1								
				1MB10.2						
1MB10 -Z	Order code									

Packaging, safety notes, documentation and test certificates										
Printed Operating Instructions in German/English and a DVD with all official EU languages as well as Norwegian, Russian, Turkish, and Chinese ¹¹⁾		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Inspection certificate 3.1 according to EN 10204 ¹⁰⁾	B02	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Document – Electrical datasheet	B60	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Document – Order dimensional drawing	B61	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Type test with heat run for horizontal motors, with acceptance	B83	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
"Basic" documentation package	B90	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
"Advanced" documentation package	B91	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
"Projects" documentation package	B92	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Wire-lattice pallet packaging	B99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connected in star for dispatch	M01	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Connected in delta for dispatch	M02	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

- 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) Please inquire regarding combination with order codes **D03** and **C02**. Not possible in combination with order codes **H20** and **H22**.
- 2) There is no derating in combination with order codes **M2A**, **M2B**, **M2C**, **M2D**, **M2E**, **M2F**, **M2G**, **M2H**.
- 3) Not possible for type of construction IM V3.
- 4) For Zone 21, IP65 degree of protection is standard. Not possible for Zone 22, because only IP55 degree of protection is required.
- 5) Not admissible for Zone 21 (IP65 degree of protection) and Zone 22 (IP55 degree of protection).
- 6) 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.
- 7) 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 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
 For an explanation of the order codes, see Catalog Section 1 "Introduction".
- 8) The metal external fan is not possible in combination with the low-noise version – order code **F77** or **F78**.
- 9) In combination with the 15th position of the article number "H", the order codes **Q02** and **Q03** are not possible for frame sizes 100 to 160. It can only be supplied with a star or delta winding for direct switch-on (3 terminals).
- 10) The delivery time for the inspection certificate may differ from the delivery time for the motor.
- 11) The Operating Instructions are available on the Internet in PDF format for all official EU languages at <http://support.automation.siemens.com/WWW/view/en/10803948/133300>.

- 12) Order code **S06** cannot be combined with order code **B30**.
- 13) 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.
- 14) The Ex motor is not admissible in an explosive atmosphere of dust and air (hybrid). A standard is not currently available that describes the product requirements for a hybrid mixture.
- 15) In combination with order codes **B40** and **B41**, "B" or "C" must be added to the 15th position of the Article No. . For compliance with the admissible temperature class 130 (B), derating is necessary in the case of converter operation in Zones 2, 21 and 22. The operating data for SINAMICS converters from Siemens are on the rating plate – the torque is reduced in contrast to line operation. The motor operating data for converter operation is available in the DTC selection and ordering tool (www.siemens.com/dt-configurator). For converter operation, voltage codes/order codes are only admissible with one voltage only. When used in hazardous zones, the frequency converter must have a certified trip unit for motors of equipment category 1 (Zone 21). A certified trip unit is also recommended for motors of device category 3 (Zones 2 and 22). Alternatively, an external, certified trip unit can be used (see Catalog IC 10).
- 16) Can be combined with order codes **N30**, **N31**, **L51** and **F70** on request. Not admissible in combination with order code **L05**. Combination with protective cover as standard for frame sizes 100 to 200. Protective cover not possible for frame sizes 225 to 315.
- 17) In combination with order codes **N05**, **N06**, **N07**, **N08**, **N30**, **N31**, **D03**, **G30**, **C02**, **H20** and **H22** on request. Not admissible with order code **L05**. The degree of protection of the separately driven fan must match that of the motor.
- 18) Not admissible in combination with anti-condensation heating (order code **Q02/Q03**). For this component, no TR CU certificate is available yet.
- 19) Vibration severity grade B not admissible in combination with converter operation (order code **B40/B41**).
- 20) Not possible in combination with order codes **Q02** or **Q03**.
- 21) Not possible in vertical version with downward shaft extension DE.
- 22) Permissible paint film thickness up to 2 mm.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB15 Basic Line, 1MB16 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	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2
1MB15 -Z	Order code	1MB15.3 Basic Line													IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2
1MB16 -Z		1MB16.3 Performance Line															
		1MB15.1 Basic Line															
		1MB16.1 Performance Line															
Explosion-protected version																	
Version additionally for dust Ex tc – Zone 22 ^{1) 16)}	B30	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB1.3. – Ex ec (Zone 2)
Version IIC with stamping of IIB ²⁴⁾	B31	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Only for: 1MB1.3. – Ex ec (Zone 2)
VIK version	C02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB1.33 – Ex ec (Zone 2)
Version for converter operation																	
Version for converter operation in basic version with operating data SINAMICS G120 with PM240-2. ^{17) 20) 21) 22)}	B40	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ ²⁰⁾	✓ ²⁰⁾		
Version for converter operation in basic version with operating data SINAMICS S150 ^{17) 20) 21)}	B41	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ ²⁰⁾	✓ ²⁰⁾		
Operating data such as order code B40 with alternative SINAMICS converters on the rating plate ²⁰⁾	Y68 • and converter type	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Operating data such as order code B41 with alternative SINAMICS converters on the rating plate ²⁰⁾		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Motor protection																	
1 Pt1000 resistance thermometer (2 terminals)	Q35	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2 Pt1000 resistance thermometers (4 terminals)	Q36	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2 Pt100 resistance thermometers in basic configuration for bearings (2 terminals) ^{2) 3)}	Q72	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
2 Pt100 resistance thermometers in 3-wire input for bearings (6 terminals) ^{2) 3)}	Q78	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
2 Pt100 double resistance thermometers in 3-wire input for bearings (12 terminals) ^{2) 3)}	Q79	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Motor connection and terminal box																	
External grounding		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	
Rotation of the terminal box through 90°, entry from DE	R10	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Rotation of the terminal box through 90°, entry from NDE	R11	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Rotation of the terminal box through 180°	R12	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Stud terminal for cable connection, accessories pack (3 items)	R17	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	Only for: 1MB1.1. – Ex tb (Zone 21), 1MB1.2. – Ex tc (Zone 22)
Metal cable gland, maximum configuration	R18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Saddle terminal for connection without cable lug, accessories pack	R19	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	Only for: 1MB1.1. – Ex tb (Zone 21), 1MB1.2. – Ex tc (Zone 22)
		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	Only for: 1MB1.3. – Ex ec (Zone 2)
Larger terminal box ¹⁵⁾	R50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Cast-iron auxiliary terminal box (small)	R62	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	

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For legends and footnotes, see page 5/86.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB15 Basic Line, 1MB16 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	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2
		1MB15.3 Basic Line											IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2		
		1MB16.3 Performance Line															
		1MB15.1 Basic Line															
		1MB16.1 Performance Line															
Windings and insulation																	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 % ⁴⁾	N05	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 % ⁴⁾	N06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 % ⁴⁾	N07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N08	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
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 • and spec. power, CT... °C or IA m above sea level	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Colors and paint finish																	
Standard paint finish C2 in RAL 7030 stone gray		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	Only for: 1MB15..
Unpainted (only cast-iron parts primed)	S00	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Unpainted, only primed	S01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Special paint finish C3	S02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB15..
		–	–	–	□	□	□	□	□	□	□	□	□	□	□	□	Only for: 1MB16..
Special paint finish sea air resistant C4	S03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Special paint finish for use offshore C5	S04	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Top coat polyurethane ¹²⁾	S06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB1.3. – Ex ec (Zone 2)
Paint finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5002, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005 (see Catalog Section 1 "Introduction")	Y53 • and paint finish RAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB15..
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Modular technology – Basic versions																	
Mounting of separately driven fan ¹⁹⁾	F70	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	Only for: 1MB1.1. – Ex tb (Zone 21)
		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB1.2. – Ex tc (Zone 22)
		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Special technology																	
Mounting of LL 841 (HTL); 1024 l explosion-protected rotary pulse encoder ¹⁸⁾	G30	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB15 Basic Line, 1MB16 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	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2
		1MB15.3 Basic Line						1MB16.3 Performance Line									
		1MB15.1 Basic Line						1MB16.1 Performance Line									
1MB15 -Z		Order code															
1MB16 -Z		Order code															
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	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mechanical protection for encoder	G43	-	-	-	□	□	□	□	□	□	□	□	□	□	□	□	
Protective cover	H00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Screwed-on (instead of cast) feet	H01	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Vibration-proof version; vibration resistance to Class 3M4 according to IEC 60721-3-3:1994 ²⁷⁾	H02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Condensation drainage holes ⁷⁾	H03	✓	✓	✓	□	□	□	□	□	□	□	□	□	□	□	□	
Rust-resistant screws (externally)	H07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
IP65 degree of protection ⁵⁾	H20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB1.3, – Ex ec (Zone 2)
IP56 degree of protection ⁶⁾	H22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB1.3, – Ex ec (Zone 2)
Drive-end seal for flange-mounting motors, oil-tight to 0.1 bar	H23	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Not for: Type of construction IM V3
Coolant temperature and installation altitude																	
Coolant temperature –40 to +40 °C ²⁶⁾	D03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Versions in accordance with standards and specifications																	
Ex certification for China	D32	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB15..
		-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB16..
China Energy Efficiency Label	D34	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Only for: 1MB15..
		-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	Only for: 1MB16..
EAC Ex certificate for the Eurasian Customs Union ¹³⁾	D35	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
IECEx certification	D37	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Bearings and lubrication																	
Regreasing device with M10 × 1 grease nipple according to DIN 71412-A	L19	-	-	-	-	-	-	-	✓	✓	✓	✓	○	○			
Located bearing DE	L20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Located bearing NDE	L21	✓	✓	✓	✓	✓	✓	□	□	□	□	□	□	□	□	□	
Bearing design for increased cantilever forces ¹⁴⁾	L22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Regreasing device	L23	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	□	□		Only for: 1MB15..
		-	-	-	✓	✓	✓	□	□	□	□	□	□	□	□		Only for: 1MB16..
Bearings reinforced at both ends for DE and NDE, bearing size 63	L25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	□	□		Only for: 1MB15..
		-	-	-	□	□	□	□	□	□	□	□	□	□	□		Only for: 1MB16..
Bearing insulation NDE ²⁰⁾	L51	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	
Measuring nipple for SPM shock pulse measurement for bearing inspection	Q01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Balance and vibration severity																	
Vibration severity grade A ²¹⁾		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	
Vibration severity grade B ^{21) 22) 23)}	L00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Half-key balancing		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	
Balancing without feather key	L01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Full-key balancing	L02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

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SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB15 Basic Line, 1MB16 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	IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2
		1MB15.3 Basic Line												IEC	Ex tb (Zone 21), Ex tc (Zone 22), Ex ec (Zone 2)	IE3 IE2	
		1MB16.3 Performance Line															
		1MB15.1 Basic Line															
		1MB16.1 Performance Line															
Shaft and rotor																	
Shaft extension with standard dimensions, without feather keyway	L04	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Standard, cylindrical shaft extension (second shaft extension) NDE acc. to EN 50347 ²⁵⁾	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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Non-standard cylindrical shaft extension, DE ⁸⁾	Y58 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Non-standard cylindrical shaft extension, NDE ⁸⁾	Y59 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Heating and ventilation																	
Metal external fan ⁹⁾	F76	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB1.3, – Ex ec (Zone 2)
Anti-condensation heating for 230 V (2 terminals) ³⁾	Q02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Anti-condensation heating for 115 V (2 terminals) ³⁾	Q03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Rating plate and additional rating plates																	
Second rating plate, loose	M10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Rating plate, stainless steel	M11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB15., Only for: 1MB16.,
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Packaging, safety notes, documentation and test certificates																	
Printed Operating Instructions in German/English and a DVD with all official EU languages as well as Norwegian, Russian, Turkish, and Chinese ¹¹⁾		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	
Inspection certificate 3.1 according to EN 10204 ¹⁰⁾	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 XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB15 Basic Line, 1MB16 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
- Not possible

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- 1) Please inquire regarding combination with order codes **D03** and **C02**. Not possible in combination with order codes **H20** and **H22**.
- 2) Evaluation with associated tripping unit (see Catalog IC 10) is recommended. A certified tripping unit is necessary for use in hazardous areas.
- 3) In combination with the 15th position of the Article No. "**H**", the order codes **Q02** and **Q03** are not possible for frame sizes 100 to 160. It can only be supplied with a star or delta winding for direct switch-on (3 terminals).
- 4) There is no derating in combination with order codes **M2A, M2B, M2C, M2D, M2E, M2F, M2G, M2H**.
- 5) Order code **H20** (IP65 degree of protection) can only be ordered for Zone 2. For Zone 21, IP65 degree of protection is standard. Not possible for Zone 22, because only IP55 degree of protection is required.
- 6) Order code **H22** IP56 degree of protection is only possible for Zone 2. Degree of protection IP56 is not permissible for Zone 21 (IP65 degree of protection) and Zone 22 (IP55 degree of protection).
- 7) 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.
- 8) 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 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 in "Dimensions")
– Dimensions E and EA ≤ 2 × length E (standard) of the shaft extension
For an explanation of the order codes, see Catalog Section 1 "Introduction".
- 9) The metal external fan is not possible in combination with the low-noise version – order code **F77** or **F78**.
- 10) The delivery time for the manufacturer's test certificate may differ from the delivery time for the motor.
- 11) The Operating Instructions are available on the Internet in PDF format for all official EU languages at <http://support.automation.siemens.com/WWW/view/en/10803948/133300>.
- 12) Order code **S06** not possible in combination with order code **B30**.
- 13) Not admissible in combination with anti-condensation heating (order code **Q02/Q03**). For this component, no TR CU certificate is available yet.
- 14) 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.
- 15) A larger terminal box is the standard version in combination with the order code **Q02, Q03** and/or 15th position of the Article No. "**H**" for frame sizes 71 to 90.
- 16) The Ex motor is not admissible in an explosive atmosphere of dust and air (hybrid). A standard is not currently available that describes the product requirements for a hybrid mixture.
- 17) In combination with order codes **B40** and **B41**, "**B**" or "**C**" must be added to the 15th position of the Article No. . For compliance with the admissible temperature class 130 (B), derating is necessary in the case of converter operation in Zones 2, 21 and 22. The operating data for SINAMICS converters from Siemens are on the rating plate – the torque is reduced in contrast to line operation. The motor operating data for converter operation is available in the DTC selection and ordering tool (www.siemens.com/dt-configurator).
For converter operation, voltage codes/order codes are only admissible with one voltage only. When used in hazardous zones, the frequency converter must have a certified trip unit for motors of equipment category 1 (Zone 21). A certified trip unit is also recommended for motors of device category 3 (Zones 2 and 22). Alternatively, an external, certified trip unit can be used (see Catalog IC 10).
- 18) Can be combined with order codes **N30, N31, L51** and **F70** on request. Not admissible in combination with order code **L05**. Combination with protective cover as standard for FS 100 to 200. Protective cover not possible for FS 225 to 315.
- 19) In combination with order codes **N05, N06, N07, N08, N30, N31, D03, G30, C02, H20** and **H22** on request. Not admissible with order code **L05**. The degree of protection of the separately driven fan must match that of the motor.
- 20) The frame sizes 280 and 315 in combination with order code **B40** or **B41** are equipped with "Bearing insulation NDE" as standard (order code **L51** is included in **B40/B41**).
- 21) Not admissible for frame size 315, 2-pole. An exception is elastic installation (please inquire).
- 22) Not admissible in combination with converter operation (order code **B40, B41**).
- 23) On request for 2-pole motors for line operation (concerns frame sizes 315).
- 24) Permissible paint film thickness up to 2 mm.
- 25) Not possible in vertical version with downward shaft extension DE.
- 26) Not possible in combination with order code **Q02** or **Q03**.
- 27) Not possible in combination with order code **R50**.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB1543, 1MB5543 Basic Line and 1MB1643, 1MB5643 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	IEC	Ex eb (Zone 1)	IE3
		1MB1543 Basic Line															
		1MB1643 Performance Line															
		1MB5543 Basic Line															
		1MB5643 Performance Line															
1MB1543 - -Z																	
1MB1643 - -Z																	
1MB5543 - -Z																	
1MB5643 - -Z																	
	Order code																
Explosion-protected version																	
Version IIC with stamping of IIB ¹⁾	B31		○	○	○	○	○	○	○	○	○	○	○	○			
Version additionally for dust Ex tb – Zone 21; IP65 ²⁾	B32		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
T1/T2 on rating plate ³⁾	B33		–	–	–	–	–	○	○	○	○	○	○	○			
VIK version ¹⁹⁾	C02		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Motor protection																	
2 Pt100 resistance thermometers in basic configuration for bearings (2 terminals) ⁴⁾	Q72		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2 Pt100 resistance thermometers in 3-wire input for bearings (6 terminals) ⁴⁾	Q78		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2 Pt100 double resistance thermometers in 3-wire input for bearings (12 terminals) ⁴⁾	Q79		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Motor connection and terminal box																	
External grounding			□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Second external grounding	H70		–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotation of the terminal box through 90°, entry from DE	R10		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Rotation of the terminal box through 90°, entry from NDE	R11		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Rotation of the terminal box through 180°	R12		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Metal cable gland, maximum configuration	R18		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Saddle terminal for connection without cable lug, accessories pack	R19		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Larger terminal box	R50		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drilled removable entry plate	R52		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Undrilled removable entry plate	R53		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cast-iron auxiliary terminal box (small)	R62		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cast-iron auxiliary terminal box (large)	R63		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2 small cast-iron auxiliary terminal boxes	R67		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Windings and insulation																	
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 % ⁵⁾	N05		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 % ⁵⁾	N06		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 % ⁵⁾	N07		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 % ⁵⁾	N08		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB1543, 1MB5543 Basic Line and 1MB1643, 1MB5643 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				
		1MB1543 Basic Line											IEC	Ex eb (Zone 1)	IE3			
		1MB1643 Performance Line																
		1MB5543 Basic Line																
		1MB5643 Performance Line																
1MB1543 --Z																		
1MB1643 --Z																		
1MB5543 --Z																		
1MB5643 --Z	Order code																	
Colors and paint finish																		
Standard paint finish C2 in RAL 7030 stone gray		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	Only for: 1MB.5..	
Unpainted (only cast-iron parts primed)	S00	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Unpainted, only primed	S01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special paint finish C3	S02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB.5..	
		-	-	-	□	□	□	□	□	□	□	□	□	□	□	□	Only for: 1MB.6..	
Special paint finish sea air resistant C4	S03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Special paint finish for use offshore C5	S04	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Internal coating	S05	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Top coat polyurethane ⁶⁾	S06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Paint finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5002, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005 (see Catalog Section 1 "Introduction")	Y53 • and paint finish RAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Only for: 1MB.5..	
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mechanical version and degrees of protection																		
Low-noise version for 2-pole motors with clockwise direction of rotation ^{7) 19)}	F77	-	-	-	-	-	-	O. R.	O. R.	O. R.	O. R.	✓	✓	✓	✓	✓		
Low-noise version for 2-pole motors with anti-clockwise direction of rotation ^{7) 19)}	F78	-	-	-	-	-	-	O. R.	O. R.	O. R.	O. R.	✓	✓	✓	✓	✓		
Protective cover	H00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Screwed-on (instead of cast) feet	H01	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Vibration-proof version; vibration resistance to Class 3M4 according to IEC 60721-3-3:1994	H02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Condensation drainage holes ⁸⁾	H03	✓	✓	✓	□	□	□	□	□	□	□	□	□	□	□	□		
Rust-resistant screws (externally)	H07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
IP65 degree of protection ⁹⁾	H20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
IP56 degree of protection ⁹⁾	H22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Drive-end seal for flange-mounting motors, oil-tight to 0,1 bar Not possible for type of construction IM V3	H23	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Coolant temperature and installation altitude																		
Coolant temperature -40 to +40 °C ¹⁰⁾	D03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Versions in accordance with standards and specifications																		
IECEx certification	D37	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Bearings and lubrication																		
Regreasing device with M10 x 1 grease nipple according to DIN 71412-A	L19	-	-	-	-	-	-	✓	✓	✓	✓	○	○					
Located bearing DE	L20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Located bearing NDE	L21	✓	✓	✓	✓	✓	□	□	□	□	□	□	□	□	□	□		
Bearing design for increased cantilever forces ¹¹⁾	L22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Regreasing device	L23	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	□	□			Only for: 1MB.5..	
		-	-	-	✓	✓	✓	□	□	□	□	□	□	□	□	□	Only for: 1MB.6..	
Bearings reinforced at both ends for DE and NDE, bearing size 63	L25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	□	□		Only for: 1MB.5..	
		-	-	-	□	□	□	□	□	□	□	□	□	□	□	□	Only for: 1MB.6..	
Reinforced bearings at both DE and NDE, DE bearing for increased cantilever forces	L28	-	-	-	-	-	-	✓	✓	✓	✓	-	-					
Bearing insulation DE ²³⁾	L50	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓		
Bearing insulation NDE ²³⁾	L51	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓		
Measuring nipple for SPM shock pulse measurement for bearing inspection	Q01	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

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SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB1543, 1MB5543 Basic Line and 1MB1643, 1MB5643 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	IEC	Ex eb (Zone 1)	IE3
		1MB1543 Basic Line															
		1MB1643 Performance Line															
		1MB5543 Basic Line															
		1MB5643 Performance Line															
	Order code																
Balance and vibration severity																	
Vibration severity grade A ²¹⁾		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			
Vibration severity grade B ²¹⁾	L00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Half-key balancing		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			
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 ¹²⁾	L05	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Standard shaft made of stainless steel (e.g. 1.4021)	L06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Shaft extension run-out in accordance with IEC 60072-1 precision class ¹³⁾	L07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Shaft extension run-out, concentricity and perpendicularity in accordance with IEC 60072-1 precision class for flange-mounted motors ¹³⁾	L08	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Non-standard cylindrical shaft extension, DE ¹⁴⁾	Y58 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Non-standard cylindrical shaft extension, NDE ¹⁴⁾	Y59 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Heating and ventilation																	
Sheet metal fan cover		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			
Metal external fan ¹⁵⁾	F76	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐			
Anti-condensation heating for 230 V (2 terminals) ²⁰⁾	Q02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Anti-condensation heating for 115 V (2 terminals) ²⁰⁾	Q03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Rating plate and additional rating plates																	
Second rating plate, loose	M10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Rating plate, stainless steel	M11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	☐	☐	☐	☐	Only for: 1MB.5..	
		–	–	–	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Only for: 1MB.6..	
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
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 ¹⁵⁾	Q80	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	Only for: 1MB.5..		
		–	–	–	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Only for: 1MB.6..		
Extension of the liability for defects by 24 months to a total of 36 months (3 years) from delivery ¹⁶⁾	Q82	–	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	Only for: 1MB.5..		
		–	–	–	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Only for: 1MB.6..		

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB1543, 1MB5543 Basic Line and 1MB1643, 1MB5643 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			
		1MB1543 Basic Line											IEC	Ex eb (Zone 1)	IE3		
		1MB1643 Performance Line															
		1MB5543 Basic Line															
		1MB5643 Performance Line															
1MB1543 - -Z																	
1MB1643 - -Z																	
1MB5543 - -Z																	
1MB5643 - -Z	Order code																

Packaging, safety notes, documentation and test certificates

Printed Operating Instructions in German/English and a DVD with all official EU languages as well as Norwegian, Russian, Turkish, and Chinese ¹⁷⁾			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspection certificate 3.1 according to EN 10204 ¹⁸⁾	B02		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Document – Electrical datasheet	B60		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Document – Order dimensional drawing	B61		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Standard test (routine test) with acceptance	B65		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Type test with heat run for horizontal motors, without acceptance	B82		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Type test with heat run for horizontal motors, with acceptance	B83		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
"Basic" documentation package	B90		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
"Advanced" documentation package	B91		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
"Projects" documentation package	B92		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Connected in star for dispatch	M01		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Connected in delta for dispatch	M02		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 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

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- 1) Permissible paint film thickness up to 2 mm.
- 2) Please inquire regarding combination with order codes **D03** and **C02**. Not possible in combination with order codes **H20** and **H22**.
- 3) Motors in these frame sizes have a second rating plate (T1/T2 and T3) as standard. The T3 power is stamped on the rating plate as standard if the following motors are selected with PTC thermistor (protection by PTC thermistor only) or voltage code **90**:
 - 2-pole motors: Frame sizes 132 to 160
 - 4-pole motors: Frame size 180
 Alternatively, with order code **B33**, the "T1/T2 power is stamped on the rating plate".
 - 2-pole motors: Frame sizes 132 to 200
 - 4-pole motors: Frame sizes 180 to 200
- 4) Evaluation with associated tripping unit (see Catalog IC 10) is recommended. A certified tripping unit is necessary for use in hazardous areas.
- 5) The maximum possible certified power will be supplied. For motors with T1/T2, T3 power, T3 power is supplied. The T1/T2 power must be ordered with the order code B33.
- 6) Order code **S06** cannot be combined with order code **B32**.
- 7) The motors are up to 80 mm longer than normal. A second shaft extension is not possible.
- 8) Supplied with the condensation drainage holes sealed at the drive end DE and non-drive end NDE for IP55, IP56 and IP65 degrees of protection. 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 shields at the drive end (DE) and non-drive end (NDE) so that the condensation drainage holes situated between the feet on delivery are underneath.
- 9) Not possible in combination with version additionally for dust Ex tb – Zone 21; IP65 - order code **B32**. IP65 degree of protection is prescribed for the version for Zone 21.
- 10) Not possible in combination with vibration-proof version, order code **H02**.
- 11) Not possible for 2-pole motors, frame size 315 L in vertical frame sizes; bearings for increased cantilever forces for vibration severity grade B are available on request for motors of frame size 225 M and above. Not possible for motors of frame size 225 M and above in combination with shaft extension run-out, concentricity and perpendicularity according to DIN 42955 tolerance R for flange-mounting types.
- 12) For motors of frame size 180 M and above in vertical type of construction in version with second shaft extension on request. Not possible for low-noise version (2-pole) for frame sizes 132 S to 160 L. Version with protective cover not possible.
- 13) Can be combined with deep-groove bearings of series 60... and 63... Not possible in combination with cylindrical roller bearings (e.g. bearings for increased cantilever forces, order code **L22**).
- 14) 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 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 in "Dimensions")
 - Dimensions E and EA ≤ 2 × length E (standard) of the shaft extension
 For an explanation of the order codes, see Catalog Section 1 "Introduction".
- 15) The metal external fan is not possible in combination with the low-noise version – order code **F77** or **F78**.
- 16) Wearing parts (bearings) are excluded from the warranty extension.
- 17) The Operating Instructions are available on the Internet in SIOS too: <http://support.automation.siemens.com/WWW/view/en/10803948/133300>
- 18) The delivery time for the manufacturer's test certificate may differ from the delivery time for the motor.
- 19) The motors may exceed the noise levels defined by VIK.
- 20) For frame sizes 71 to 90 in combination with the order codes **Q02** and **Q03**, **R50** is the standard version (the additional charge **R50** is already contained in **Q02** and **Q03**).
- 21) Not permissible for frame size 315, 2-pole, except for elastic installation.
- 22) For frame sizes 100 and 112, only permissible in combination with order code **R50**.
- 23) It is not permissible to combine order codes **L50** and **L51**.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB1553, 1MB5553

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	355	IEC	Ex db, Ex db eb (Zone 1)	IE3
		1MB1553																
											1MB5553							
1MB.553 - -Z		Order code																
Explosion-protected version																		
Version IIC with stamping of IIB	B31	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
Version additionally for dust Ex tb – Zone 21; IP65	B32	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
VIK version ¹⁸⁾	C02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Version for converter operation																		
Version for converter operation with power data on the PWM converter ⁶⁾	B43	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Version for converter operation with power data on the PWM converter, utilization in accordance with temperature class 155 (F) ⁶⁾	B44	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Motor protection																		
2 Pt100 resistance thermometers in basic configuration for bearings (2 terminals) ¹⁾	Q72	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
2 Pt100 resistance thermometers in 3-wire input for bearings (6 terminals) ¹⁾	Q78	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
2 Pt100 double resistance thermometers in 3-wire input for bearings (12 terminals) ¹⁾	Q79	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Motor connection and terminal box																		
External grounding		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	
Second external grounding	H70	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Rotation of the terminal box through 90°, entry from DE	R10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Rotation of the terminal box through 90°, entry from NDE	R11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Rotation of the terminal box through 180°	R12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Metal cable gland, maximum configuration ¹⁷⁾	R18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1 cable gland, Ex eb, for armored cable, line feeder cable	R45	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2 cable glands, Ex eb, for armored cable, line feeder cable	R46	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Main terminal box in Ex db IIC ²⁷⁾	R48	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Auxiliary terminal box in Ex db IIC ²⁷⁾	R49	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Larger terminal box ¹⁷⁾	R50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	
Enlarged connection system for main terminal box ¹⁷⁾	R54	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	
Cast-iron auxiliary terminal box (small)	R62	✓ ²⁴⁾	✓ ²⁴⁾	✓ ²⁴⁾	✓ ²³⁾	✓ ²³⁾	✓ ²³⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Cast-iron auxiliary terminal box (large)	R63	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
2 small cast-iron auxiliary terminal boxes	R67	✓ ²⁴⁾	✓ ²⁴⁾	✓ ²⁴⁾	✓ ²³⁾	✓ ²³⁾	✓ ²³⁾	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Non-standard threaded through hole (NPT or G thread)	Y61 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Windings and insulation																		
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
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 ²²⁾	N31	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

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SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB1553, 1MB5553

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	355	IEC	Ex db	Ex db eb	IE3
		1MB1553																	
		1MB5553																	
1MB.553 - -Z	Order code																		
Windings and insulation (continued)																			
Temperature class 155 (F), utilized acc. to 130 (B), with higher coolant temperature and/or installation altitude	Y50 • and spec. power, CT.. °C or IA m above sea level	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Special paint finish for use offshore C5	S04	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Internal coating	S05	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Top coat polyurethane ¹⁶⁾	S06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Paint finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5002, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005 (see Catalog Section 1 "Introduction")	Y53 • and 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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Modular technology – Basic versions																			
Mounting of separately driven fan ²⁶⁾	F70	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓				
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	-	○	○	○	○	○	○	○	○	-	-	-	-	-				
Mechanical manual brake release with lever (no locking)	F50	-	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-				
Special technology																			
Mounting of brake in Ex db version ²⁸⁾	F20	-	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-				
Mounting of LL 841 (HTL); 1024 explosion-protected rotary pulse encoder	G30	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Mechanical version and degrees of protection																			
Low-noise version for 2-pole motors with clockwise direction of rotation ²⁶⁾	F77	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Low-noise version for 2-pole motors with counterclockwise direction of rotation ²⁶⁾	F78	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Protective cover ⁴⁾	H00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Vibration-proof version; vibration resistance to Class 3M4 according to IEC 60721-3-3:1994	H02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			Not for:	Combination with order code F20, F70, R50
External screws, bolts and unpainted materials made of stainless steel (V4A) ⁵⁾	H06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Rust-resistant screws (externally)	H07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
IP65 degree of protection	H20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
IP56 degree of protection	H22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Drive-end seal for flange-mounting motors, oil-tight to 0.1 bar	H23	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Adjustment screws for feet in horizontal installation ⁷⁾	H30	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓				
Coolant temperature and installation altitude																			
Coolant temperature -40 to +40 °C	D03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				

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SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB1553, 1MB5553

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	355	IEC	Ex db, Ex db eb (Zone 1)	IE3
1MB.553 - -Z	Order code	1MB1553											1MB5553					
Versions in accordance with standards and specifications																		
Ex certification for China ²⁵⁾	D32	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
China Energy Efficiency Label ²⁵⁾	D34	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
EAC Ex certificate for the Eurasian Customs Union ²⁵⁾	D35	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
IECEx certification	D37	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
MEPS Australia ²⁵⁾	D70	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Bearings and lubrication																		
Preparation for SPM measuring nipple – thread M8	G50	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Regreasing device with M10 × 1 grease nipple according to DIN 71412-A	L19	–	–	–	–	–	–	✓	✓	✓	✓	✓	○	○	○			
Located bearing DE	L20	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□		
Located bearing NDE	L21	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Bearing design for increased cantilever forces ¹⁹⁾	L22	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Regreasing device	L23	–	–	–	–	–	–	✓	✓	✓	✓	✓	□	□	□			
Bearing insulation NDE ³⁾	L51	–	–	–	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Measuring nipple for SPM shock pulse measurement for bearing inspection	Q01	–	–	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Balance and vibration severity																		
Vibration severity grade A		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□		
Vibration severity grade B ²⁾	L00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Half-key balancing		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□		
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Non-standard cylindrical shaft extension, DE ⁸⁾	Y58 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Non-standard cylindrical shaft extension, NDE ⁸⁾	Y59 • and customer specifications	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Heating and ventilation																		
Metal fan cover		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□		
Metal fan made of brass	F68	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Metal external fan ⁹⁾	F76	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Anti-condensation heating for 230 V (2 terminals) ^{1) 10)}	Q02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Anti-condensation heating for 115 V (2 terminals) ^{1) 10)}	Q03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Anti-condensation heating for 220 V (2 terminals) ^{1) 10)}	Q04	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Separately driven fan with non-standard voltage and/or frequency	Y81 • and customer specifications	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–		

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB1553, 1MB5553

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	355	IEC	Ex db, Ex db eb (Zone 1)
		1MB1553															
											1MB5553						
1MB.553 - -Z		Order code															
Rating plate and additional rating plates																	
Second rating plate, loose	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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Extension of the liability for defects																	
Extension of the liability for defects period by 12 months to a total of 24 months (2 years) from delivery	Q80	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Extension of the liability for defects period by 24 months to a total of 36 months (3 years) from delivery	Q82	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Packaging, safety notes, documentation and test certificates																	
Printed Operating Instructions in German/English and a DVD with all official EU languages as well as Norwegian, Russian, Turkish, and Chinese ¹¹⁾		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	
Inspection certificate 3.1 according to EN 10204 ¹²⁾	B02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Document – Electrical datasheet	B60	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Document – Order dimensional drawing	B61	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Standard test (routine test) with acceptance	B65	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Noise measurement without load with octave band analysis, without acceptance ¹³⁾	B71	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Noise measurement without load with octave band analysis, with acceptance ¹⁴⁾	B72	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Type test with heat run for vertical motors, without acceptance ¹³⁾	B80	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Type test with heat run for vertical motors, with acceptance ¹⁴⁾	B81	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Type test with heat run for horizontal motors, without acceptance ¹³⁾	B82	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Type test with heat run for horizontal motors, with acceptance ¹⁴⁾	B83	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
"Basic" documentation package ¹⁵⁾	B90	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
"Advanced" documentation package ¹⁵⁾	B91	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
"Projects" documentation package ¹⁵⁾	B92	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Wire-lattice pallet packaging	B99	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	✓
Connected in star for dispatch	M01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Connected in delta for dispatch	M02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	□	□	□	□	

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SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB1553, 1MB5553

- 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) Maximum number of connections for accessories, see terminal box concept.
- 2) Not admissible in combination with converter operation (order codes **B43**, **B44**).
- 3) The frame sizes 280, 315, and 355 in combination with order code **B43** or **B44** are equipped with "Bearing insulation NDE" as standard (order code **L51** is included in B43/B44).
- 4) The following applies for explosion-protected motors: In the case of the types of construction with shaft extension down, the version "with protective cover" is required. For types of construction with shaft extension pointing upwards, a suitable cover must be implemented to prevent small parts from falling into the fan cover (see the standard IEC/EN 60079-0). The cover must not block the cooling air flow.
- 5) Rating plate, screws, grounding, and options with order codes **L19**, **L23**, **Q01** made of stainless steel (V4A).
- 6) Power data in converter operation according to the VSD rating lists. Winding monitoring with PTC thermistor mandatory.
 - Only in combination with single voltages, e.g.: **M4A**.
 - Frame size 280 and larger with insulated bearings on the fan side (NDE).
- 7) 4 threads in the motor feet; adjustment screws not in the scope of supply.
- 8) 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 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 in "Dimensions")
 - Dimensions E and EA ≤ 2 × length E (standard) of the shaft extension
 For an explanation of the order codes, see Catalog Section 1 "Introduction".
- 9) The material of the fan is aluminum, for frame sizes 225 to 355 steel – metal fans are painted with paint finishes with film thickness 90 µm or more.
- 10) Connection in the main terminal box in the standard version.
- 11) The Operating Instructions are available on the Internet in PDF format for all official EU languages.
- 12) The delivery time for the inspection certificate may differ from the delivery time for the motor.
- 13) The delivery time is then approx. 20 working days longer.
- 14) The delivery time is then approx. 25 working days longer or the confirmed acceptance date.
- 15) Version and content of the documentation, see Chapter 1.
- 16) Not in combination with order codes **S00**, **S01**, and **S02**. Other colors, order codes **Y53** and **Y56**, on request.
- 17) Not in combination with order codes **R48** and **R49**.
- 18) For installation in a hostile and corrosive environment, paint finish with order code **S03** or better is recommended.
- 19) Only in combination with regreasing, order code **L19** or **L23**.
- 20) Cable glands in Ex e version.
- 21) Frame size 315 only in combination with order code **R50**, frame sizes 250 and 280 not in combination with order code **R50**.
- 22) Standard paint finish C2, we recommend C3 or better (e.g. order code **S02**, **S03**, **S04**).
- 23) Only possible in combination with order code **R50**.
- 24) Only possible in combination with order code **R54**.
- 25) Not possible in combination with **1MB..56** or **1MB..57**.
- 26) Not available in combination with order code **D03**.
- 27) Supplied without cable gland.
- 28) Select brake connection voltage separately, order codes **F10**, **F11**, or **F12** – note further details in Chapter 1 under "Modular technology", "Brakes".

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB55.4, 1MB55.3, 1MB58.3

Selection and ordering data

Special versions	Additional identification code -Z with order code and plain text if required	Frame size		Motor version		
		400	450	IEC	Ex ec, Ex tc, Ex tb (Zones 2, 22 and 21)	
		1MB55 . 4				IE4
		1MB55 . 3				IE3
1MB58 . 3						
1MB5 -Z Order code						
Explosion-protected version						
VIK version	C02	✓	✓			
Version additionally for dust Ex tc – Zone 22	B30	✓	✓			
Version IIC with stamping of IIB	B31	✓	✓			
Version for converter operation						
Version for converter operation in the basic version with SINAMICS G120 operating data with PM240-2	B40	O. R.	O. R.			
Version for converter operation in the basic version with SINAMICS S150 operating data	B41	O. R.	O. R.			
Version for converter operation with power data on the PWM converter	B43	O. R.	O. R.			
Operating data such as the B40 order code with alternative SINAMICS converter on the rating plate • G120 with PM230 • G120 with PM240 • G120C • G120P with PM230 • G120P with PM240-2 • G120P with PM240P-2 • G120P with PM330 • G130, G150, G180 • S120 (BLM/SLM) • V20 Operating data such as order code B41 with alternative SINAMICS converters on the rating plate • S120 (ALM)	Y68 • and converter type	O	O			
Motor protection						
1 or 3 PTC thermistors – for tripping (2 terminals) ¹⁾	Q11	✓	✓	Not for:	Combination with motor protection code letter B (15th position of the Article No.)	
2 or 6 PTC thermistors – for alarm and tripping (4 terminals) ¹⁾	Q12	✓	✓	Not for:	Combination with motor protection code letter C (15th position of the Article No.)	
3 NTC thermistors – for tripping (6 terminals)	Q21	✓	✓	Not for:	Combination with motor protection code letter F (15th position of the Article No.)	
1 KTY84-130 temperature sensor (2 terminals) ¹⁾	Q23	✓	✓	Not for:	Combination with motor protection code letter F (15th position of the Article No.)	
2 KTY84-130 temperature sensors (4 terminals) ¹⁾	Q25	✓	✓	Not for:	Combination with motor protection code letter G (15th position of the Article No.)	
1 Pt1000 resistance thermometer (2 terminals)	Q35	✓	✓			
2 Pt1000 resistance thermometers (4 terminals)	Q36	✓	✓			
6 Pt1000 resistance thermometers (12 terminals)	Q37	✓	✓			
3 Pt100 resistance thermometers – 2-wire input (6 terminals) ¹⁾	Q60	✓	✓	Not for:	Combination with motor protection code letter H (15th position of the Article No.)	
6 Pt100 resistance thermometers – 2-wire input (12 terminals) ¹⁾	Q61	✓	✓	Not for:	Combination with motor protection code letter J (15th position of the Article No.)	
1 Pt100 resistance thermometer – 2-wire input (2 terminals)	Q62	✓	✓			
3 Pt100 resistance thermometers – 3-wire input (9 terminals)	Q63	✓	✓			
6 Pt100 resistance thermometers – 3-wire input (18 terminals)	Q64	✓	✓			
2 Pt100 resistance thermometers in basic configuration for bearings (2 terminals)	Q72	✓	✓			
2 Pt100 resistance thermometers in 3-wire input for bearings (6 terminals)	Q78	✓	✓			
2 Pt100 double resistance thermometers in 3-wire input for bearings (12 terminals)	Q79	✓	✓			

For legends and footnotes, see page 5/100.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB55.4, 1MB55.3, 1MB58.3

Special versions	Additional identification code -Z with order code and plain text if required	Frame size		Motor version		
		400	450	IEC	Ex ec, Ex tc, Ex tb (Zones 2, 22 and 21)	IE4 IE3
		1MB55 . 4				
		1MB55 . 3				
1MB58 . 3						
1MB5 -Z	Order code					
Motor connection and terminal box						
External grounding		<input type="checkbox"/>	<input type="checkbox"/>			
Terminal box at NDE	H08	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Two terminal boxes at NDE ¹⁷⁾	H09	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Second external grounding	H70	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Subsequently rotatable main terminal box	R09	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Rotation of the terminal box through 90°, entry from DE ¹²⁾	R10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Not for: Combination with type of construction code letters F, G, J (14th position of the Article No.)
Rotation of the terminal box through 90°, entry from NDE	R11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Rotation of the terminal box through 180°	R12	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Saddle terminal for connection without cable lug, accessories pack	R19	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Larger terminal box ¹³⁾	R50	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Drilled removable entry plate	R52	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Undrilled removable entry plate		<input type="checkbox"/>	<input type="checkbox"/>			
Cast-iron auxiliary terminal box (small)	R62	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Cast-iron auxiliary terminal box (large)	R63	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Stainless steel auxiliary terminal box (large)	R65	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Non-standard threaded through hole (NPT or G thread) ²⁾	Y61 • and customer specifications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Windings and insulation						
Temperature class 155 (F), utilized acc. to 155 (F), with service factor ⁹⁾		<input type="checkbox"/>	<input type="checkbox"/>			
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 % ¹³⁾	N05	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 % ¹³⁾	N06	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 % ¹³⁾	N07	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Temperature class 155 (F), utilized acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 % ¹³⁾	N08	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Increased air humidity/temperature with 30 to 60 g water per m ³ of air	N30	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Increased air humidity/temperature with 60 to 100 g water per m ³ of air	N31	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Temperature class 155 (F), utilized acc. to 130 (B), with higher coolant temperature and/or installation altitude ⁹⁾	Y50 • and spec. power, CT ... °C or IA ... m above sea level	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Colors and paint finish						
Standard paint finish C2 in RAL 7030 stone gray		<input type="checkbox"/>	<input type="checkbox"/>			
Unpainted (only cast-iron parts primed)	S00	<input type="checkbox"/>	<input type="checkbox"/>			
Unpainted, only primed	S01	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Special paint finish C3	S02	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Special paint finish sea air resistant C4 ¹⁴⁾	S03	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Special paint finish for use offshore C5 ¹⁴⁾	S04	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Internal coating	S05	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Top coat polyurethane ⁶⁾		<input type="checkbox"/>	<input type="checkbox"/>			
Paint finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5002, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005 (see Catalog Section 1 "Introduction")	Y53 • and paint finish RAL....	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB55.4, 1MB55.3, 1MB58.3

Special versions	Additional identification code -Z with order code and plain text if required	Frame size		Motor version		
		400	450	IEC	Ex ec, Ex tc, Ex tb (Zones 2, 22 and 21)	IE4 IE3
		1MB55 . 4				
		1MB55 . 3				
		1MB58 . 3				
1MB5 -Z	Order code					
Colors and paint finish (continued)						
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....		✓	✓		
Modular technology – Basic versions						
Mounting of separately driven fan ¹⁰⁾	F70		✓	✓		
Special technology						
Mounting of LL 841 (HTL); 1024 l explosion-protected rotary pulse encoder	G30		✓	✓		
Mounting of a special type of rotary pulse encoder	Y70 • and customer specifications		O. R.	O. R.		
Mechanical version and degrees of protection						
Low-noise version for 2-pole motors with clockwise direction of rotation			☐	☐		
Low-noise version for 2-pole motors with counterclockwise direction of rotation	F78		○	○		
Prepared for mounted components, centering hole only			☐	☐		
Prepared for mountings with D16 shaft	G42		✓	✓		
Mechanical protection for encoder	G43		✓	✓		
Protective cover	H00		✓	✓		
Condensation drainage holes			☐	☐		
Rust-resistant screws (externally)	H07		✓	✓		
IP65 degree of protection ¹⁹⁾	H20		✓	✓		
IP56 degree of protection	H22		✓	✓		
Sealing ring made of fluoroelastomer (FKM)	H25		✓	✓		
Increased corrosion protection for external components	H90		✓	✓		
Coolant temperature and installation altitude						
Coolant temperature –40 to +40 °C	D03		✓	✓		
Versions in accordance with standards and specifications						
Electrical according to NEMA MG1-12			☐	☐		
IECEX certificate	D37		✓	✓		
Bearings and lubrication						
Regreasing device with M10 × 1 grease nipple according to DIN 71412-A	L19		○	○		
Located bearing DE			☐	☐		
Located bearing NDE ¹¹⁾	L21		✓	✓		
Bearing design for increased cantilever forces ^{7) 8)}	L22		O. R.	O. R.		
Regreasing device			☐	☐		
Drainage for used grease	L30		O. R.	O. R.		
Measuring nipple for SPM shock pulse measurement for bearing inspection	Q01		✓	✓		
Balance and vibration severity						
Vibration severity grade A			☐	☐		
Vibration severity grade B	L00		✓	✓		
Half-key balancing (standard)			☐	☐		
Balancing without feather key ¹⁶⁾	L01		✓	✓		
Full-key balancing ¹⁶⁾	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		✓	✓		
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		✓	✓		
Non-standard cylindrical shaft extension, DE ⁹⁾	Y58 • and customer specifications		✓	✓		

For legends and footnotes, see page 5/100.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB55.4, 1MB55.3, 1MB58.3

Special versions	Additional identification code -Z with order code and plain text if required	Frame size		Motor version		
		400	450	IEC	Ex ec, Ex tc, Ex tb (Zones 2, 22 and 21)	IE4 IE3
		1MB55 . 4				
		1MB55 . 3				
1MB58 . 3						
1MB5 -Z	Order code					
Shaft and rotor (continued)						
Non-standard cylindrical shaft extension, NDE ³⁾	Y59 • and customer specifications		✓	✓		
Special shaft steel	Y60 • and customer specifications		O. R.	O. R.		
Heating and ventilation						
Sheet metal fan cover			<input type="checkbox"/>	<input type="checkbox"/>		
Metal external fan			<input type="checkbox"/>	<input type="checkbox"/>		
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		✓	✓		
Anti-condensation heating for 400 V (2 terminals)	Q06		✓	✓		
Separately driven fan with non-standard voltage and/or frequency	Y81 • and customer specifications		O. R.	O. R.		
Rating plate and additional rating plates						
Second rating plate, loose	M10		✓	✓		
Rating plate, stainless steel			<input type="checkbox"/>	<input type="checkbox"/>		
Additional rating plate with deviating rating plate data ¹⁸⁾	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		✓	✓		
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 ⁴⁾	Q80		✓	✓		
Extension of the liability for defects by 18 months to a total of 30 months (2,5 years) from delivery ⁴⁾	Q81		✓	✓		
Extension of the liability for defects by 24 months to a total of 36 months (3 years) from delivery ⁴⁾	Q82		✓	✓		
Extension of the liability for defects by 30 months to a total of 42 months (3,5 years) from delivery ⁴⁾	Q83		✓	✓		
Extension of the liability for defects by 36 months to a total of 48 months (4 years) from delivery ⁴⁾	Q84		✓	✓		
Extension of the liability for defects by 48 months to a total of 60 months (5 years) from delivery ⁴⁾	Q85		✓	✓		
Packaging, safety notes, documentation and test certificates						
Inspection certificate 3.1 according to EN 10204 ⁴⁾	B02		✓	✓		
Printed German/English operating instructions enclosed ⁵⁾			<input type="checkbox"/>	<input type="checkbox"/>		
Equivalent circuit diagram	B51		✓	✓		
Starting diagram (torque vs. speed and current vs. speed)	B52		✓	✓		
Document – Electrical datasheet	B60		✓	✓		
Document – Order dimensional drawing	B61		✓	✓		
Standard test (routine test) with acceptance	B65		✓	✓		
Temperature test without acceptance	B67		✓	✓		
Temperature test with acceptance	B68		✓	✓		
Type test with heat run for vertical motors, without acceptance	B80		✓	✓		
Type test with heat run for vertical motors, with acceptance	B81		✓	✓		
Type test with heat run for horizontal motors, without acceptance	B82		✓	✓		

For legends and footnotes, see page 5/100.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Options

Cast-iron series 1MB55.4, 1MB55.3, 1MB58.3

Special versions	Additional identification code -Z with order code and plain text if required	Frame size		Motor version		
		400	450	IEC	Ex ec, Ex tc, Ex tb (Zones 2, 22 and 21)	IE4 IE3
		1MB55 . 4				
		1MB55 . 3				
		1MB58 . 3				
1MB5 -Z	Order code					

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

- 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

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- 1) Evaluation with associated tripping unit (see Catalog IC 10) is recommended.
- 2) 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.
- 3) 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 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.
- 4) The delivery time for the manufacturer's test certificate may differ from the delivery time for the motor.
- 5) 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>
- 6) Order code **S06** cannot be combined with order codes **S00** and **S01**. Possible without restriction in combination with **Y53** for frame sizes 315 to 355 and for frame sizes 400 and 450.
- 7) 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.
- 8) For frame sizes 400 and 450, permissible cantilever forces for motors with reinforced bearings are available on request. Please specify cantilever force and lever arm.
- 9) Only possible for line operation.
- 10) The separately driven fan motor is implemented with voltage code **34** (400 V/50 Hz; 460 V/60 Hz).
- 11) For frame sizes 400 and 450, not possible for a vertical type of construction.
- 12) For motors with flange (IM B5, IM B35, IM V1), only possible in conjunction with order code **H08**.
- 13) Restrictions can apply when mounting the terminal box.
- 14) Only available for 1MB552 (Ex tc for Zone 22). Not available for 1MB553 (Ex ec for Zone 2).
- 15) Not available for 8-pole motors, frame size 450.
- 16) Not possible in combination with order code **C02**.
- 17) Not possible in combination with order code **R50**.
- 18) Customer specifications: Voltage between 380 and 690 V (voltages outside this range are available on request), frequency, circuit, required rated power in kW.
- 19) Standard version for 1MB5.1 (Ex tb for Zone 21).

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Article No. supplements and special versions · Accessories

Overview

Couplings for use in hazardous areas

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

For standard applications, Siemens recommends that flexible couplings, types N-EUPEX and RUPEX or torsionally rigid couplings, types ARPEX and ZAPEX are used. For special applications, FLUDEX and ELPEX-S couplings are recommended. These coupling types are suitable for use in areas subject to explosion hazards and are offered with declaration of conformity and EU type-examination certificate according to Directive 2014/34/EU.

Available from:

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

or

Flender GmbH
Kupplungswerk Mussum
Industriepark Bocholt
Schlavenhorst 100
46395 Bocholt, Germany
Phone +49 (2871) 922185
Fax +49 (2871) 922579

www.flender.com

Email: flender-kupplungen-2.pd.de@siemens.com

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

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

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

Standardized taper pins are commercially available.

For instance, available from:

Otto Roth GmbH & Co. KG
Rutesheimer Strasse 22
70499 Stuttgart, Germany
Phone +49 711 1388-0
Fax +49 711 1388-233

www.ottoroth.de

Email: info@ottoroth.de

Foundation blocks according to DIN 799

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

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

Available from:

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

www.luetgert-antriebe.de

Email: info@luetgert-antriebe.de

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

Slide rails are used to tension the belt of a machine easily and conveniently when there is no belt-tensioning pulley. They are fixed to the base using stone bolts or foundation blocks.

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

Available from:

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

www.luetgert-antriebe.de

Email: info@luetgert-antriebe.de

More information

Replacement motors and repair parts

- Commitment to provide replacement motors and repair parts following delivery of the motor:
 - For up to 3 years after the delivery of the original motor, in the event of total motor failure – with regard to the mounting dimensions and functions – Siemens will supply a comparable replacement motor (the type series may vary).
 - If a spare motor is supplied within the 3-year period, this does not mean that the warranty restarts.
 - Replacement motors delivered after the active production of the motor series are also identified as spare motors on the rating plate.
 - Spare parts are available only on request for these spare motors. Repair or replacement is not possible.
 - After a period of 3 years (after the delivery of the original motor), it is only possible to repair these motors (depending on the availability of the spare parts required).
 - For up to 5 years after the delivery of the original motor, spare parts will be available and for a further 5 years, Siemens will provide information about spare parts and will supply documents when required.

- When repair parts are ordered, the following details must be provided:
 - Designation and part number
 - Article No. and factory number of the motor.
- For bearing types, see Catalog Section 1 "Introduction".
- Repair parts are available for 1MB1 motors on request.
- For standard components, a commitment to supply repaired parts does not apply.
- Support hotline
 - In Germany
 - Phone +49 911 895 7 222

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

www.siemens.com/automation/service&support

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions

Notes on the dimensions

Overview

- Dimension designations according to EN 50347 and IEC 60072.

- Fits

The shaft extensions specified in the dimension tables (DIN 748) and centering spigot diameters (EN 50347) are machined with the following fits:

Dimension designation	ISO fit DIN ISO 286-2	
D, DA	to 30	j6
	over 30 to 50	k6
	over 50	m6
N	to 250	j6
	over 250	h6
F, FA		h9
K		H17
S	flange (FF)	H17

The drilled holes of couplings and belt pulleys should have an ISO fit of at least H7.

- Dimensional tolerances

For the following dimension designations, the admissible deviations are given below:

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

Feather keyways and feather keys (dimensions GA, GC, F and FA) are made in compliance with DIN 6885 Part 1.

- All dimensions are specified in mm.

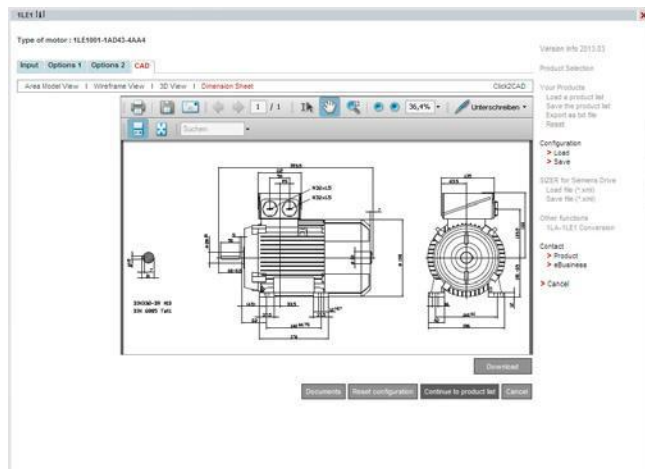
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions

Dimension sheet generator (within the DT Configurator)

Overview

A dimensional drawing can be created in the "Drive Technology Configurator" (DT Configurator) for every configurable motor. A dimensional drawing can be requested for every other motor.



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

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

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

[Online access in the Siemens Industry Mall](#)

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

German: www.siemens.de/dt-konfigurator

English: www.siemens.com/dt-configurator

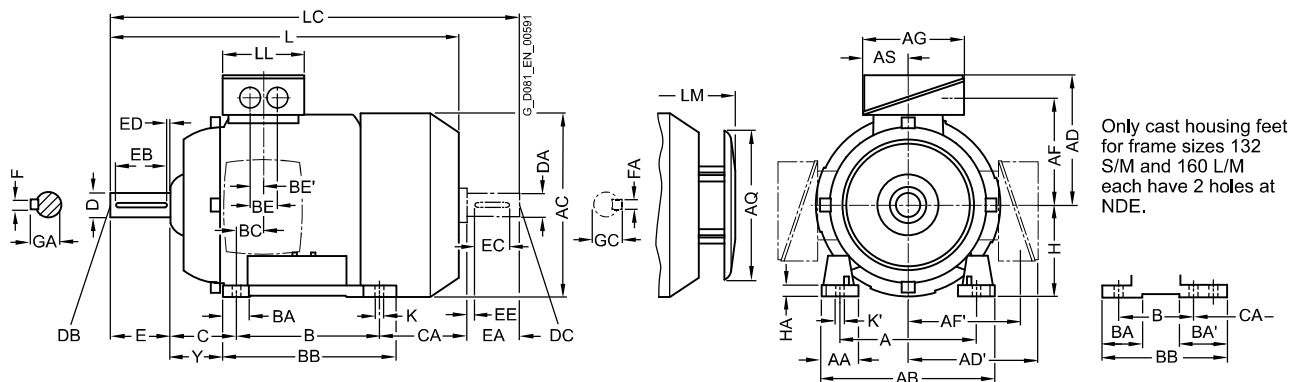
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Aluminum series SIMOTICS XP

IE3 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 80 M to 160 L

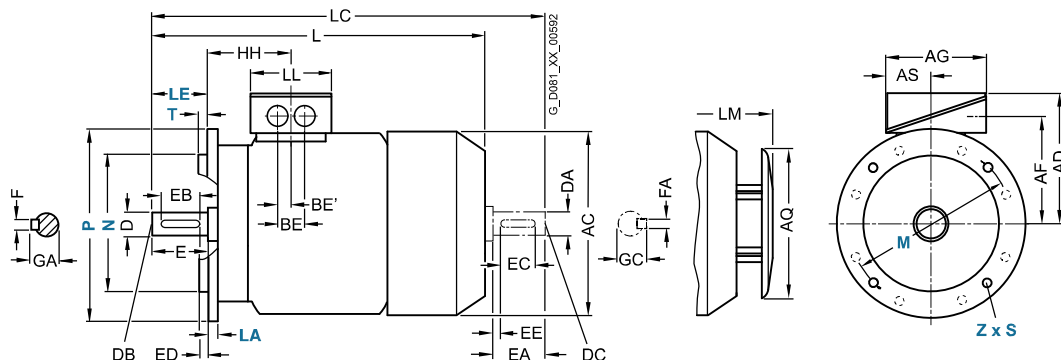
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

For motor			Dimension designation acc. to IEC																						
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AQ	AS	B	BA	BA'	BB	BC	BE	BE'	C	CA	H	HA	Y
80 M	ODA2, ODB2, ODC3 ODA3, ODB3, ODC3	2, 4, 6	125	30.5	150	159	121	121	96.5	96.5	93	155	43	100	32	32	118	23	36	18	50	113	80	8	41
90 S	All	2, 4, 6	140	30.5	165	178	126	126	101.5	101.5	93	155	43	100	33	33	143	22.5	36	18	56	159	90	10	47
90 L	All	2, 4, 6	140	30.5	165	178	126	126	101.5	101.5	93	155	43	125	33	33	143	22.5	36	18	56	199	90	10	47
100 L	All	2, 4	160	42	196	198	166	166	125.5	125.5	135	195	63.5	140	37.5	-	176	33.5	50	25	63	176	100	12	45
112 M	All	2, 4	190	46	226	222	177	177	136.5	136.5	135	195	63.5	140	35.4	-	176	26	50	25	70	155	112	12	52
132 S	1CA0, 1CC0	2, 6	216	53	256	262	202	202	159.5	159.5	155	260	70.5	140	38	76	218	26.5	48	24	89	128.5	132	15	69
	1CA1, 1CB0	2, 4														38	180					178.5			
132 M	1CC2	6	216	53	256	262	202	202	159.5	159.5	155	260	70.5	178	38	76	218	26.5	48	24	89	128.5	132	15	69
	1CB2, 1CC3	4, 6														38						178.5			
160 M	All	2, 4, 6	254	60	300	314	236.5	236.5	190	190	175	260	77.5	210	44	89	300	47	57	28.5	108	148	160	18	85
160 L	All	2, 4, 6	254	60	300	314	236.5	236.5	190	190	175	260	77.5	254	44	-	300	47	57	28.5	108	208	160	18	85

1) With screwed-on feet, dimension BA' is 43 mm.
 2) With screwed-on feet, dimension BB is 180 mm.
 3) With screwed-on feet, dimension BA' is 51 mm.

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

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

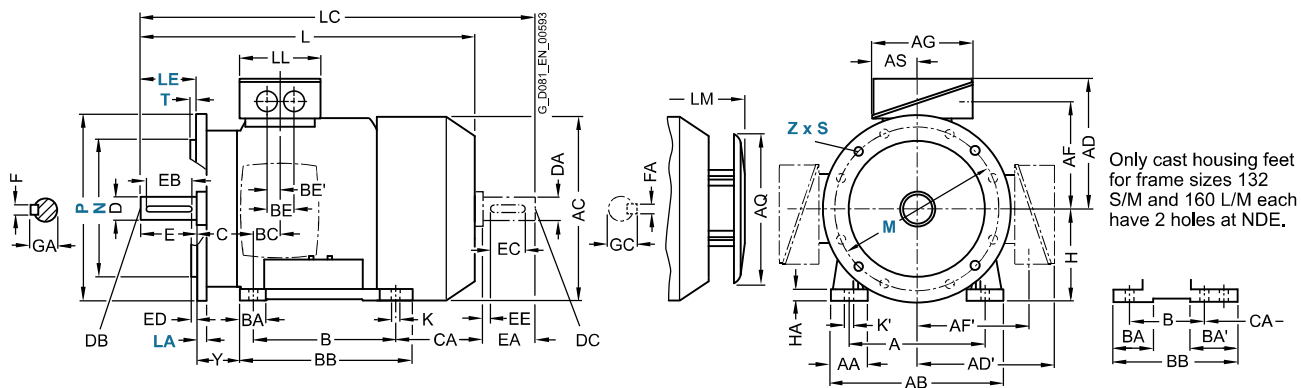
Dimensions · Aluminum series SIMOTICS XP

IE3 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 80 M to 160 L

Dimensional drawings

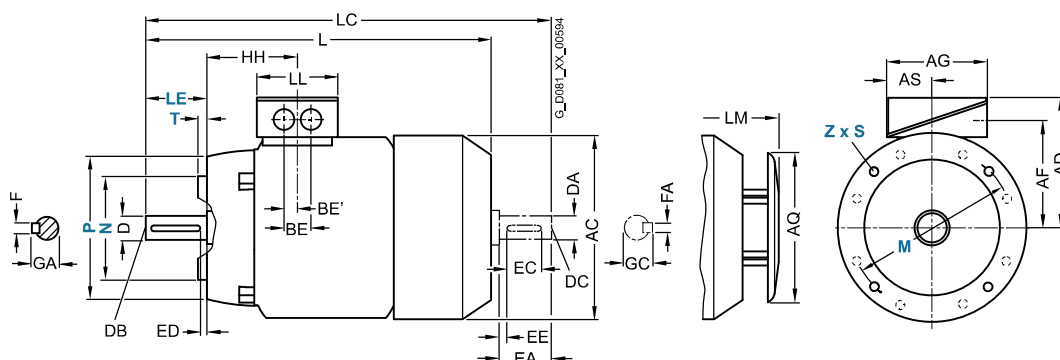
Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



Frame size	Motor type	No. of poles	Dimension designation acc. to IEC							DE shaft extension						NDE shaft extension							
			HH	K	K'	L	LC	LL	LM	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
80 M	0DA2, 0DB2, 0DC3	2, 4, 6	73	9.5	13.5	292	343	79	328	19	M6	40	32	4	6	21.5	19	M6	40	32	4	6	21.5
	0DA3, 0DB3, 0DC3					327																	
90 S	All	2, 4, 6	78.5	10	14	347	405	79	383	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5
90 L	All	2, 4, 6	78.5	10	14	387	445	79	383	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5
100 L	All	2, 4	100.5	12	16	418	489	112	463.5	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
112 M	All	2, 4	100.5	12	16	401	475	112	447	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
132 S	1CA0, 1CC0	2, 6	115.5	12	16	449.5	535.5	130	516.5	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
	1CA1, 1CB0	2, 4				499.5	585.5		550.5														
132 M	1CC2	6	115.5	12	16	449.5	535.5	130	516.5	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
	1CB2, 1CC3	4, 6				499.5	585.5		550.5														
160 M	All	2, 4, 6	145	15	19	586	730	145	654	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45
160 L	All	2, 4, 6	145	15	19	646	790	145	714	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45

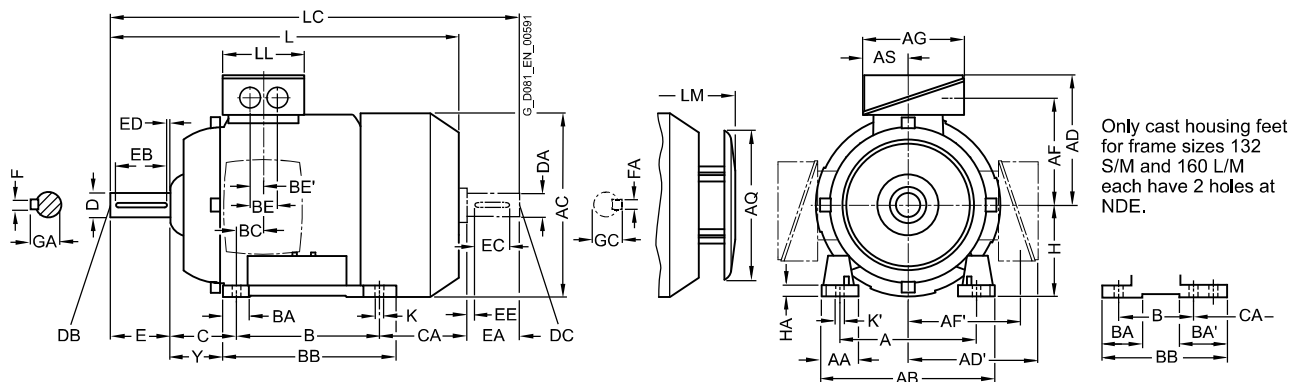
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Aluminum series SIMOTICS XP

IE2, IE1 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 80 M to 160 L

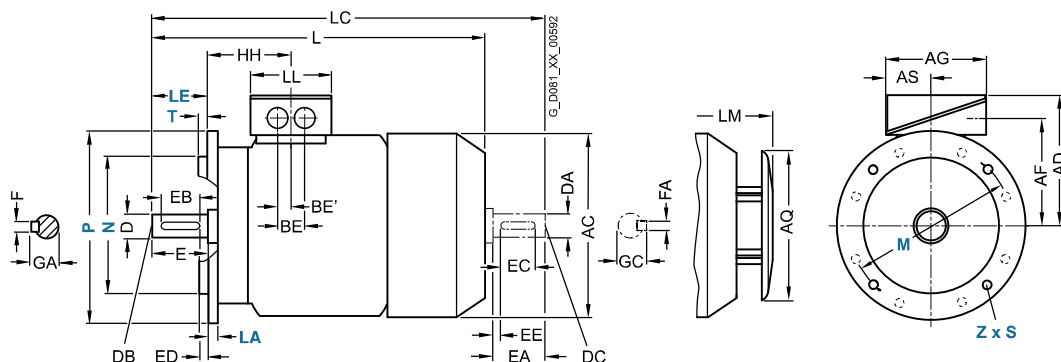
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

For motor		Dimension designation acc. to IEC																						
Frame size	Motor type No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AQ	AS	B	BA	BA'	BB	BC	BE	BE'	C	CA	H	HA	Y
80 M	1MB10.1 2, 4, 6	125	30.5	150	159	149	149	96.5	112.5	119.5	155	61.5	100	32	32	118	23	36	18	50	112.5	80	8	41
90 S	1MB10.1 2, 4, 6	140	30.5	165	178	154	154	101.5	117.5	119.5	155	62.5	100	33	54	143	22.5	36	18	56	159	90	10	47
90 L	1MB10.1 2, 4, 6	140	30.5	165	178	154	154	101.5	117.7	119.5	155	62.5	125	33	54	143	22.5	36	18	56	134	90	10	47
100 L	All 2, 4, 6, 8	160	42	196	198	166	166	125.5	125.5	135	195	63.5	140	37.5	37.5	176	33.5	50	25	63	141	100	12	45
112 M	All 2, 4, 6, 8	190	46	226	222	177	177	136.5	136.5	135	195	63.5	140	35.4	37.5	176	26	50	25	70	129.7	112	12	52
132 S	All 2, 4, 6, 8	216	53	256	262	202	202	159.5	159.5	155	260	70.5	140	38	76 ¹⁾	218 ²⁾	26.5	48	24	89	128.5 ³⁾	132	15	69
132 M	All 2, 4, 6, 8	216	53	256	262	202	202	159.5	159.5	155	260	70.5	178	38	76	218	26.5	48	24	89	128.5 ³⁾	132	15	69
160 M	All 2, 4, 6, 8	254	60	300	314	236.5	236.5	190	190	175	260	77.5	210	44	89 ⁴⁾	300 ⁵⁾	47	57	28.5	108	148 ⁶⁾	160	18	85
160 L	All 2, 4, 6, 8	254	60	300	314	236.5	236.5	190	190	175	260	77.5	254	44	89	300	47	57	28.5	108	148 ⁶⁾	160	18	85

1) With screwed-on feet, dimension BA' is 38 mm.
 2) With screwed-on feet, dimension BB is 180 mm.
 3) With screwed-on feet, dimension CA is 166.5 mm.
 4) With screwed-on feet, dimension BA' is 44 mm.

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

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

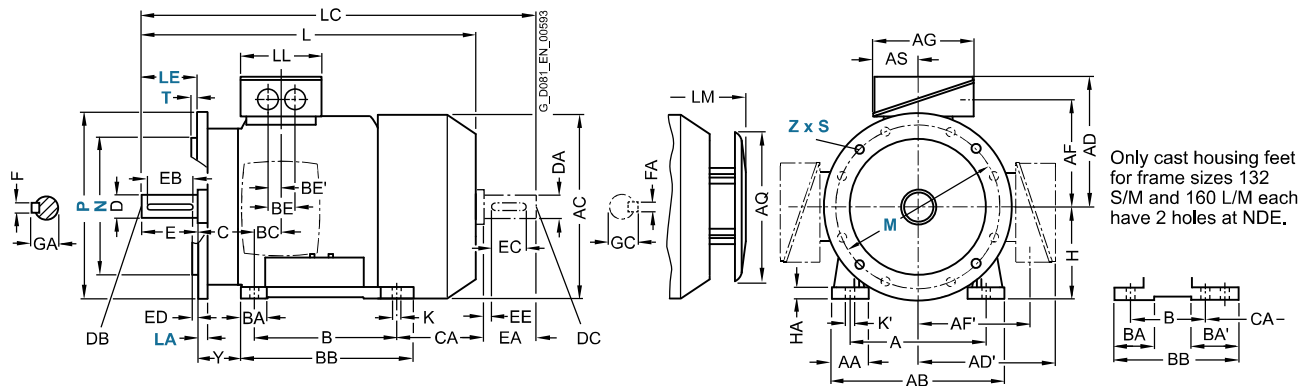
Dimensions · Aluminum series SIMOTICS XP

IE2, IE1 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 80 M to 160 L

Dimensional drawings

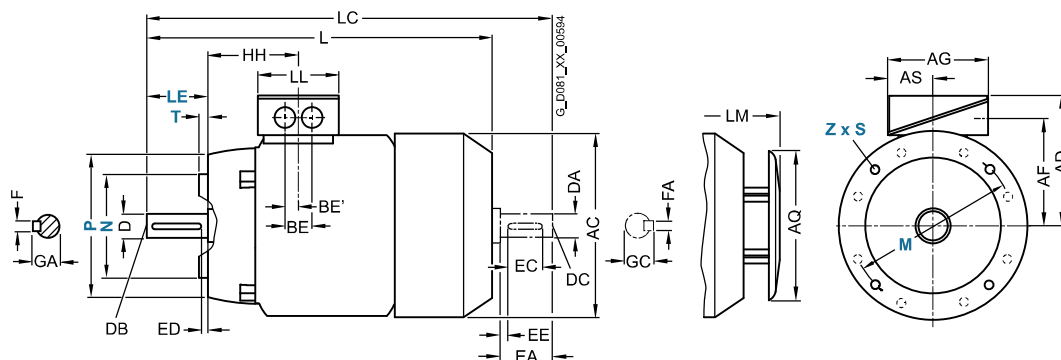
Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



For motor			Dimension designation acc. to IEC							DE shaft extension					NDE shaft extension								
Frame size	Motor type	No. of poles	HH	K	K'	L	LC	LL	LM	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
80 M	1MB10.1	2, 4, 6	73	9.5	13.5	253	342.5	123	328	19	M6	40	32	4	6	21.5	19	M6	40	32	4	6	21.5
90 S/L	1MB10.1	2, 4, 6	78.5	10	14	294.5	405	123	383	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5
90 L	1MB10.1	2, 4, 6	78.5	10	14	294.5	405	123	383	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5
100 L	All	2, 4, 6, 8	96.5	12	16	388.5	454	112	428.5	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
112 M	All	2, 4, 6, 8	96	12	16	382	450	112	422	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
132 S	All	2, 4, 6, 8	115.5	12	16	456.5	535.5	130	516.5	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
132 M	All	2, 4, 6, 8	115.5	12	16	456.5	535.5	130	516.5	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
160 M	All	2, 4, 6, 8	155	15	19	594	730	145	654	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45
160 L	All	2, 4, 6, 8	155	15	19	594	730	145	654	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45

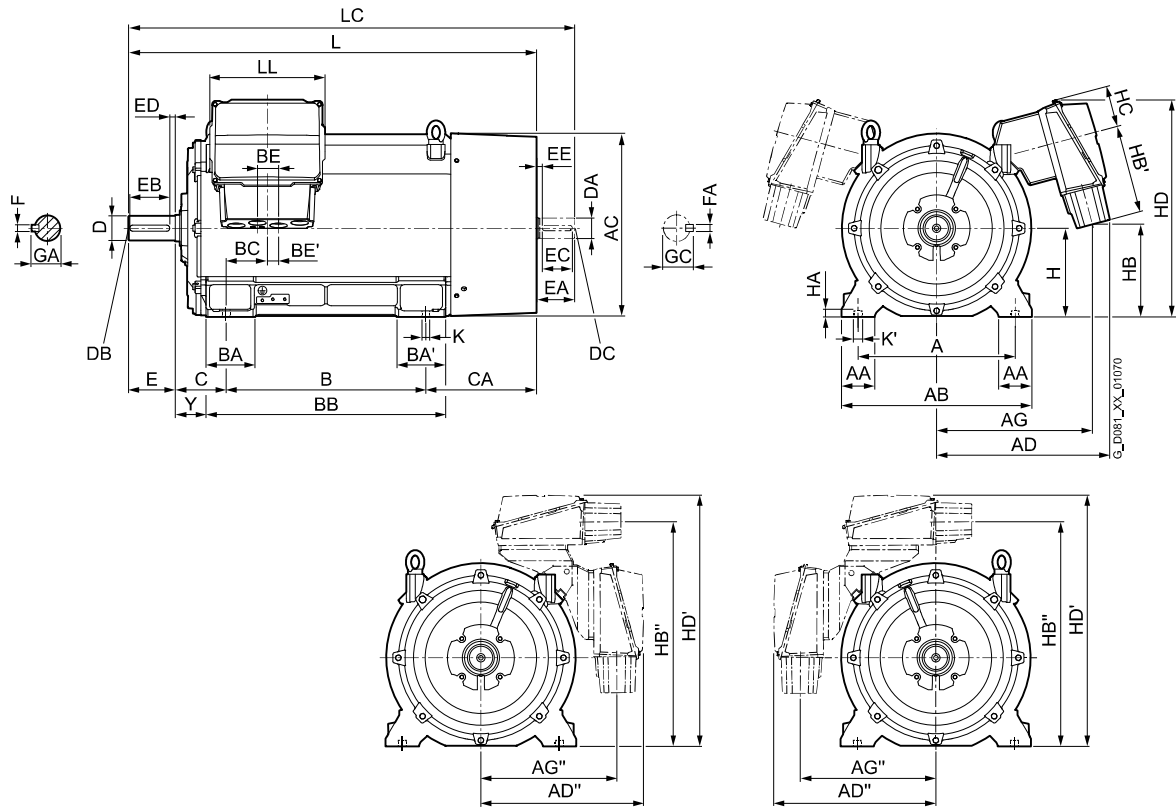
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE4, IE3 – 1MB5 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 400 and 450

Dimensional drawings

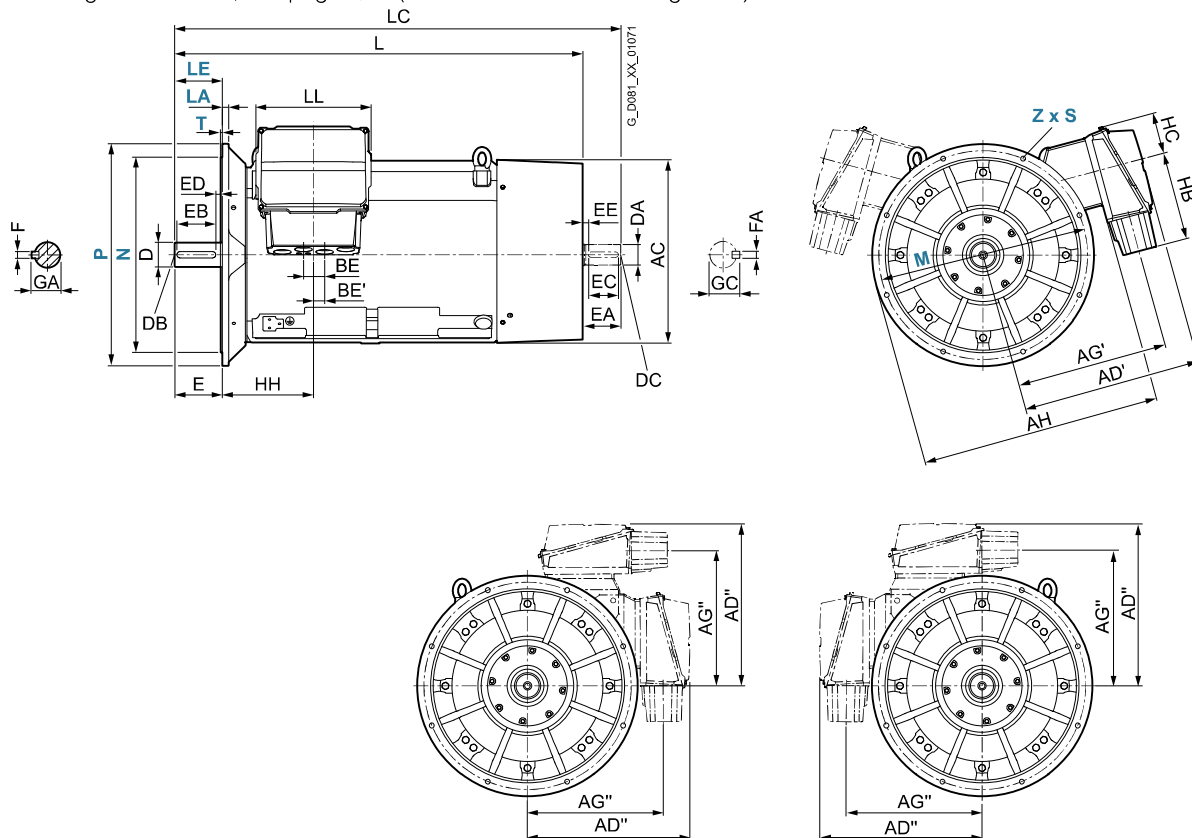
Type of construction IM B3



5

Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

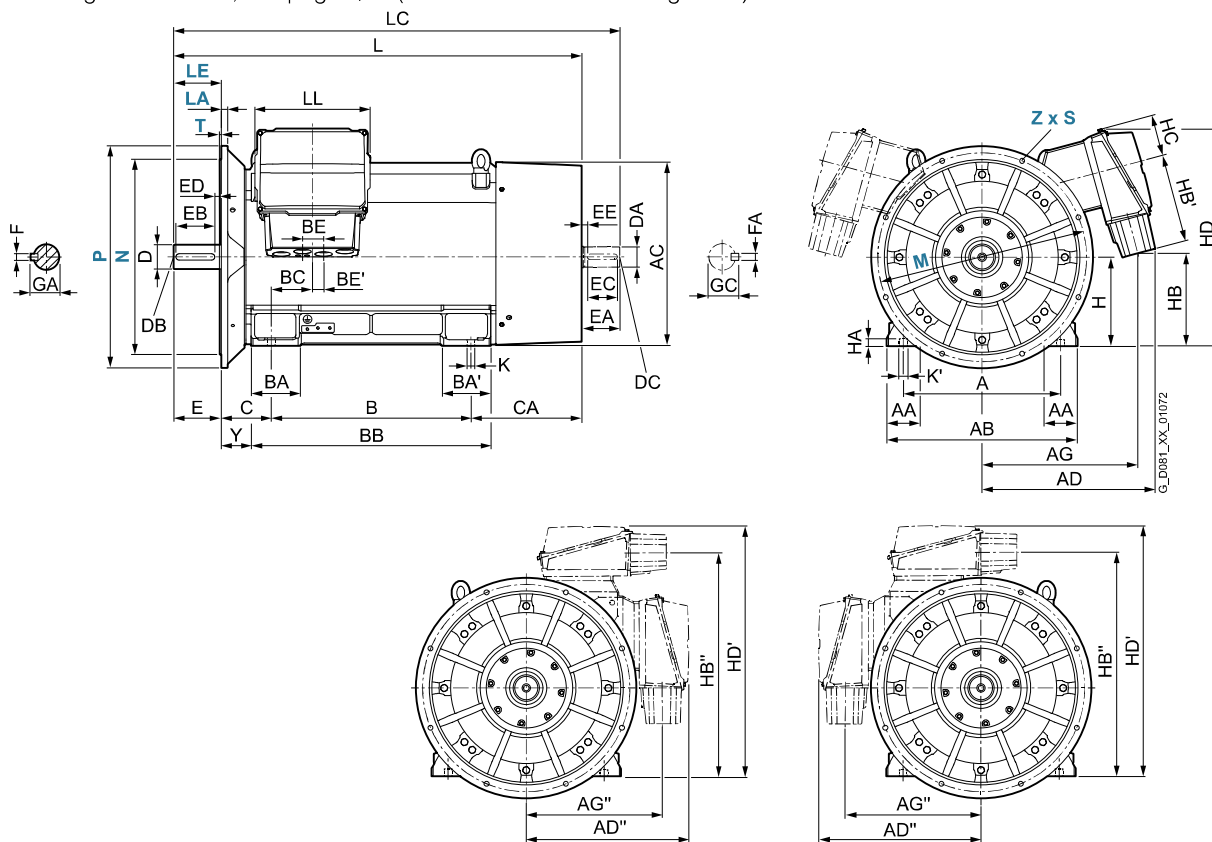
Dimensions · Cast-iron series SIMOTICS XP

IE4, IE3 – 1MB5 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 400 and 450

Dimensional drawings

Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC																											
Frame size	Motor type 1MB5.2-1MB5.3-	No. of poles	A	AA	AB	AC	AD	AD'	AD''	AG	AG'	AG''	AH	B	B'	B''	BA	BA'	BB	BC	BE	BE'	C	CA	C	C	H	H	HB
400	4AA	2	710	150	860	880	785	845	740	705	620	1110	900	-	-	220	220	1080	186	87.5	43.5	224	501	-	-	400	35	420	
	4AB	4																											
	4AC	6																											
	4AD	8																											
450	4BA	2	800	180	980	970	820	895	775	740	770	655	1235	1000	-	-	260	260	1220	170	87.5	43.5	250	535	-	-	450	42	505
	4BB	4																											
	4BC	6																											
	4BD	8																											

For motor		Dimension designation acc. to IEC														DE shaft extension			NDE shaft extension									
Frame size	Motor type 1MB5.2-1MB5.3-	No. of poles	HB'	HB''	HC	HD	HD'	HH	Y	K	K'	L	LC ¹⁾	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
400	4AA	2	400	1020	190	980	1140	410	134	35	42	1795	1940	519	80	M20	170	140	25	22	85	70	M20	140	125	10	20	74.5
	4AB	4										1835	2010		110	M24	210	180		28	116	90	M24	170	140	25	25	95
	4AC	6																										
	4AD	8																										
450	4BA	2	400	1105	190	1065	1225	420	140	42	50	1955	2100	519	90	M24	170	140	25	25	95	75	M20	140	125	10	20	79.5
	4BB	4										1995	2210		120		210	180		32	127	100	M24	210	180	25	28	106
	4BC	6																										
	4BD	8																										

¹⁾ In the low-noise version, a second shaft extension and/or mounted encoder is not possible.

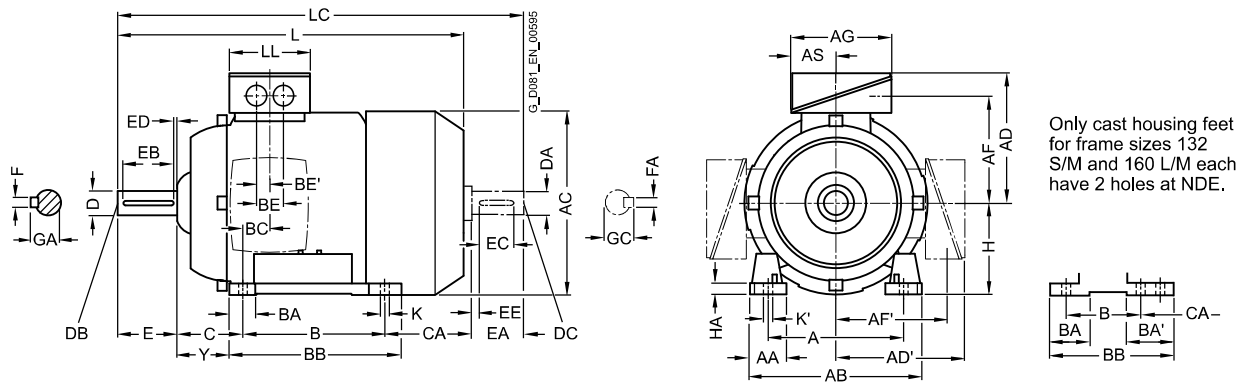
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 71 M to 160 L

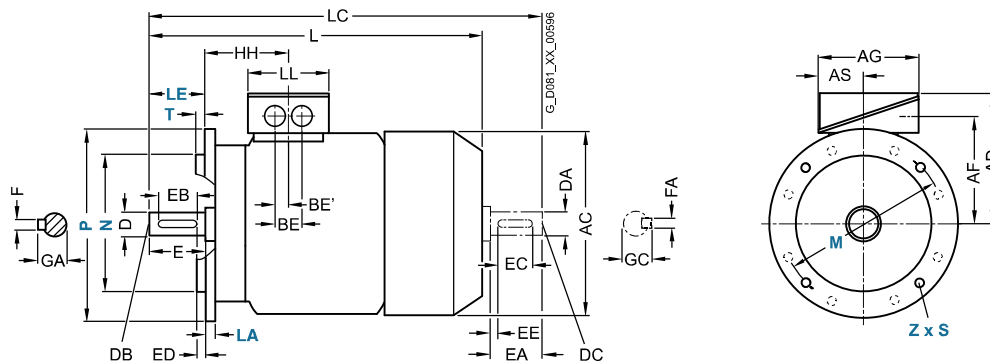
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

Frame size	Motor type	No. of poles	Dimension designation acc. to IEC																					
			A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B	BA	BA'	BB	BC	BE	BE'	C	CA	H	HA	Y
71 M	OCA2, 0CB2, OCC2 OCA3, 0CB3, OCC3	2, 4, 6	112	30.5	132	145	149	149	112	112	126	62	90	32	32	106	21	36	18	45	83	71	7	37
																		28						
80 M	ODA2, 0DB2, ODC2 ODA3, 0DB3, ODC3	2, 4, 6	125	30.5	150	162	159	159	122	122	126	62	100	32	32	118	22.5	36	18	50	112.5	80	8	41
90 S	All	2, 4, 6	140	30.5	165	180	164	164	127	127	126	62	100	33	54	143	24.5	36	18	56	149	90	10	47
90 L	All	2, 4, 6	140	30.5	165	180	164	164	127	127	126	62	125	33	54	143	24.5	36	18	56	164	90	10	47
100 L	All	2, 4, 6	160	42	196	198	193	193	147	147	163	80.5	140	40	40	176	37.5	48	24	63	176	100	12	45
112 M	All	2, 4, 6	190	46	226	222	195	195	150	150	163	80.5	140	40	40	176	30	48	24	70	155	112	12	52
132 S	1CA0, 1CC0 1CA1, 1CB0	2, 6	216	53	256	262	214.5	214.5	169	169	163	80.5	140	44	81 ¹⁾	218 ²⁾	26.5	48	24	89	128.5	132	15	69
		2, 4																						
132 M	1CC2 1CB2, 1CC3	6	216	53	256	262	214.5	214.5	169	169	163	80.5	178	44	81 ¹⁾	218	26.5	48	24	89	128.5	132	15	69
		4, 6																						
160 M	All	2, 4, 6	254	60	300	314	261	261	213	213	190	92	210	73	117 ³⁾	300 ⁴⁾	37	60	30	108	148	160	18	85
160 L	All	2, 4, 6	254	60	300	314	261	261	213	213	190	92	254	73	117 ³⁾	300	37	60	30	108	208	160	18	85

1) With screwed-on feet, dimension BA' is 43 mm.
 2) With screwed-on feet, dimension BB is 180 mm.
 3) With screwed-on feet, dimension BA' is 51 mm.

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

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

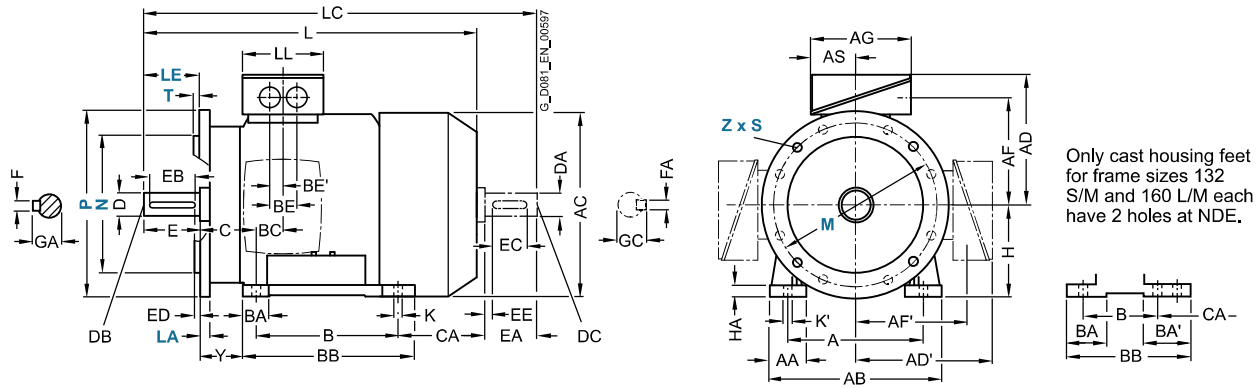
Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 71 M to 160 L

Dimensional drawings

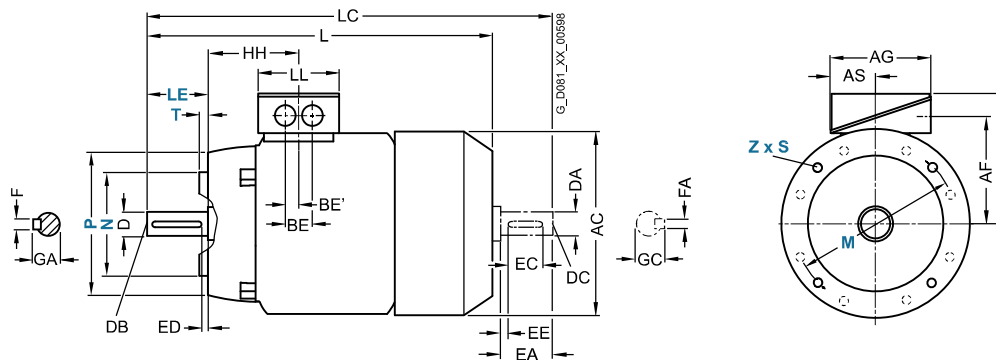
Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



Frame size	Motor type	No. of poles	Dimension designation acc. to IEC						DE shaft extension					NDE shaft extension								
			HH	K	K'	L	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
71 M	OCA2, OCB2, OCC2	2, 4, 6	63	7.5	7.5	240	278	102	14	M5	30	22	4	5	16	14	M5	30	22	4	5	16
	OCA3, OCB3, OCC3		70			280	318															
80 M	ODA2, ODB2, ODC2	2, 4, 6	72.5	10	13.5	292	342.5	102	19	M6	40	32	4	6	21.5	19	M6	40	32	4	6	21.5
	ODA3, ODB3, ODC3					327	377.5															
90 S	All	2, 4, 6	80.5	10	10	347	405	102	24	M8	50	40	5	8	27	24	M8	50	40	5	8	27
90 L	All	2, 4, 6	80.5	10	10	387	445	102	24	M8	50	40	5	8	27	24	M8	50	40	5	8	27
100 L	All	2, 4, 6	100.5	12	16	418	489	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
112 M	All	2, 4, 6	100.5	12	16	402	475	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
	1CA0, 1CC0	2, 6	115.5	12	16	449.5	536	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
132 S	1CA1, 1CB0	2, 4				499.5	586															
	1CC2	6	115.5	12	16	449.5	536	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
132 M	1CB2, 1CC3	4, 6				499.5	586															
160 M	All	2, 4, 6	145	15	19	586	730	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45
160 L	All	2, 4, 6	145	15	19	646	790	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45

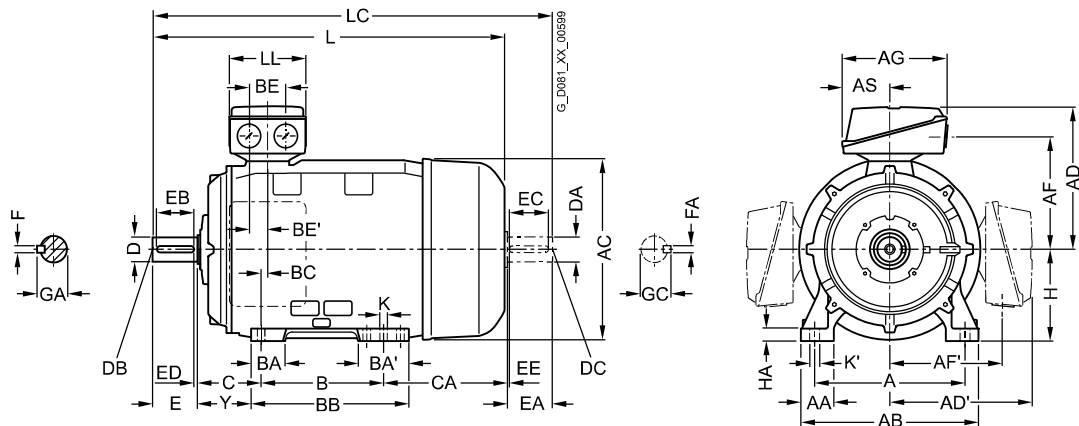
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 180 M to 315 L

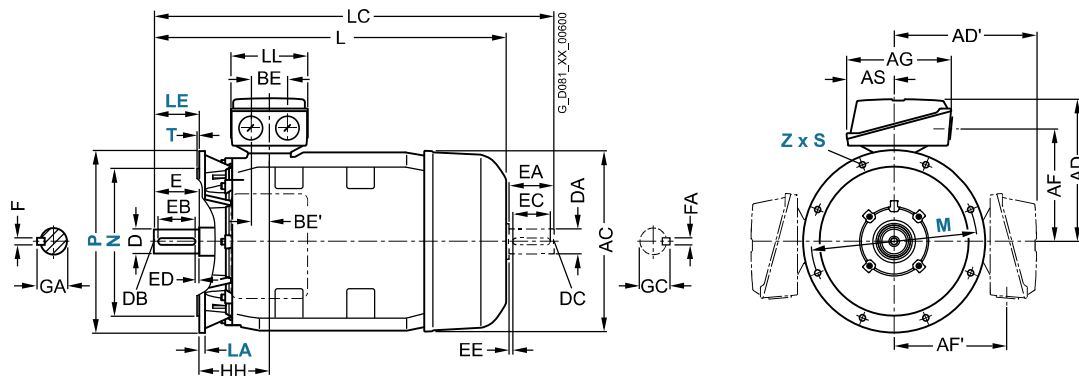
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

For motor			Dimension designation acc. to IEC																			
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AH	AS	B	BA	BA'	BB	BC	BE	BE'	C	CA
180 M	1EA2	2	279	65	339	356	286	286	234	234	190	468	92	241	85	120	328	34	60	30	121	202
	1EB2	4																				
180 L	1EB4	4	279	65	339	356	286	286	234	234	190	468	92	279	85	120	328	34	60	30	121	202
	1EC4	6																				
200 L	2AA4, 2AC4	2, 6	318	60	378	396	315	315	259	259	266	533	112	305	104	104	355	31	85	42.5	133	177
	2AA5, 2AB5, 2AC5	2, 4, 6																				
225 S	2BB0	4	356	80	436	449	338	338	282	282	266	556	112	286	92	117	361	15	85	42.5	149	218
225 M	2BA2	2	356	80	436	449	338	338	282	282	266	556	112	311	92	117	361	15	85	42.5	149	253
	2BB2, 2BC2	4, 6																				
250 M	2CA2	2	406	100	490	497	410	410	322	322	319	620	145	349	102	102	409	24	110	55	168	230
	2CB2, 2CC2	4, 6																				
280 S	2DA0	2	457	100	540	551	433	433	345	345	319	672	145	368	101	152	479	20	110	55	190	267
	2DB0, 2DC0	4, 6																				
280 M	2DA2	2	457	100	540	551	433	433	345	345	319	672	145	419	101	152	479	20	110	55	190	326
	2DB2	4																				
	2DC2	6																				216
315 S	3AA0	2	508	120	610	616	515	515	404	404	374	780	164	406	113	170	527	22	110	55	216	295
	3AB0, 3AC0	4, 6																				
315 M	3AA2	2	508	120	610	616	515	515	404	404	374	780	164	457	113	170	578	22	110	55	216	409
	3AB2, 3AC2	4, 6																				
315 L	3AA4	2	508	120	610	616	515	515	404	404	374	780	164	508	113	170	578	22	110	55	216	358
	3AB4, 3AC4	4, 6																				
	3AA5	2												176	227	648						513
	3AB5, 3AC5, 3AC6	4, 6																				

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

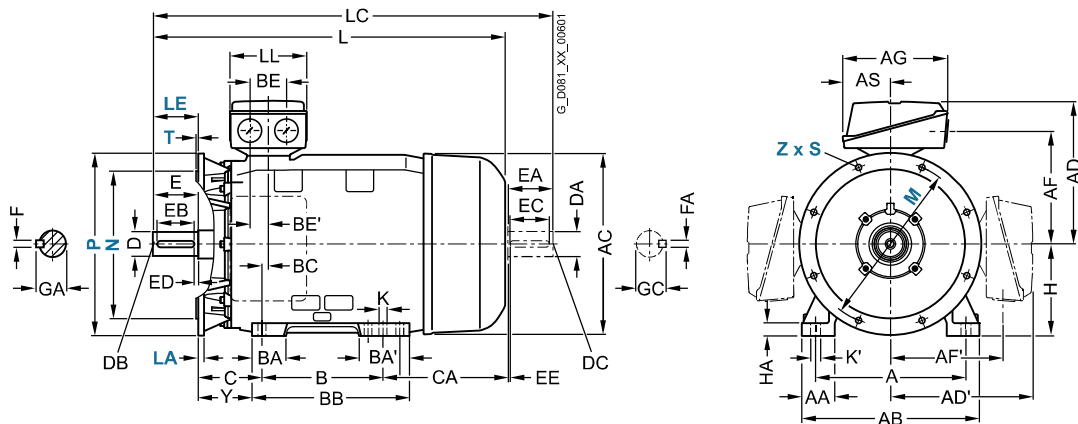
Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 180 M to 315 L

Dimensional drawings

Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



For motor			Dimension designation acc. to IEC										DE shaft extension					NDE shaft extension									
Frame size	Motor type	No. of poles	H	HA	Y	HH	K	K'	L	L' ¹⁾	LC ²⁾	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC	
180 M	1EA2	2	180	20	95	155	15	19	698	698	814	165	48	M16	110	100	5	14	52	48	M16	110	100	5	14	51.5	
	1EB2	4							668	668	784																
180 L	1EB4	4	180	20	95	155	15	19	698	698	814	165	48	M16	110	100	5	14	52	48	M16	110	100	5	14	51.5	
	1EC4	6							668	668	784																
200 L	2AA4, 2AC4	2, 6	200	25	108	164	19	25	721	755	835	197	55	M20	110	100	5	16	59	55	M20	110	100	5	16	59	
	2AA5, 2AB5, 2AC5	2, 4, 6							746	780	860																
225 S	2BB0	4	225	34	124	164	19	25	788	–	903	197	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59	
225 M	2BA2	2	225	34	124	164	19	25	818	852	933	197	55	M20	110	100	5	16	59	48	M16	110	100	5	14	51.5	
	2BB2, 2BC2	4, 6							848	–	963	60	140	125	10	18	64	55	M20						16	59	
250 M	2CA2	2	250	40	138	192	24	30	887	924	1002	233	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59	
	2CB2, 2CC2	4, 6							–	1032	65								69	60				140	125	10	18
280 S	2DA0	2	280	40	160	210	24	30	960	998	1105	233	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
	2DB0, 2DC0	4, 6							–		75								20	79.5	65					69	
280 M	2DA2	2	280	40	160	210	24	30	1070	1108	1105	233	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
	2DB2	4							–	1215	75								20	79.5	65					69	
	2DC2	6							960																		
315 S	3AA0	2	315	50	181	238	28	35	1052	1122	1197	299	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
	3AB0, 3AC0	4, 6							1082	–	1227	80	170	140	25	22	85	70							20	74.5	
315 M	3AA2	2	315	50	181	238	28	35	1217	1287	1362	299	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
	3AB2, 3AC2	4, 6							1247	–	1392	80	170	140	25	22	85	70							20	74.5	
315 L	3AA4	2	315	50	181	238	28	35	1217	1287	1362	299	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
	3AB4, 3AC4	4, 6							1247	–	1392	80	170	140	25	22	85	70							20	74.5	
	3AA5	2			146				1372	1442	1517	65	140	125	10	18	69	60							18	64	
	3AB5, 3AC5, 3AC6	4, 6							1402	–	1547	80	170	140	25	22	85	70							20	74.5	

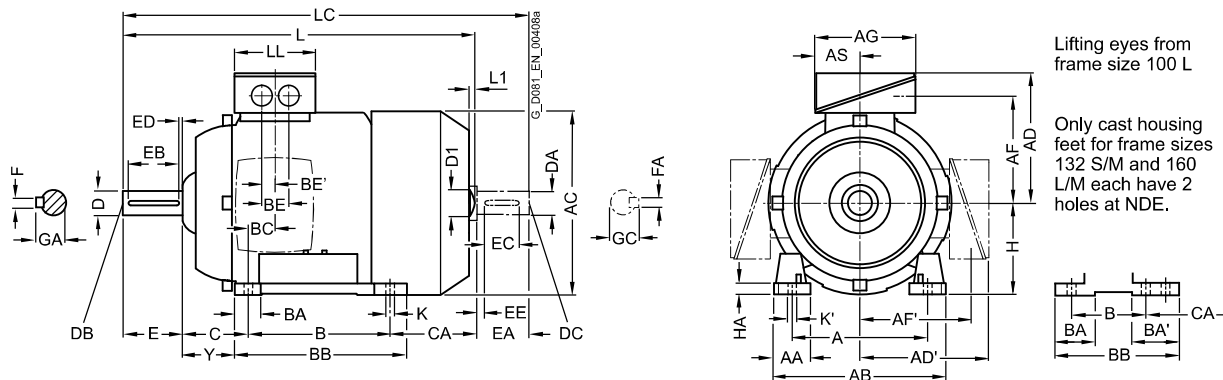
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with type of protection Ex eb – self-ventilated · Frame sizes 71 M to 160 L

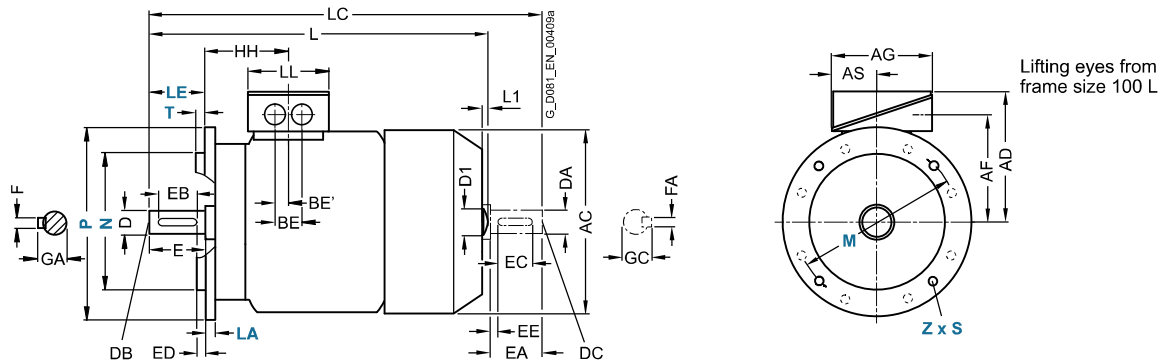
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

For motor		Dimension designation acc. to IEC																							
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B	BA	BA'	BB	BC	BE	BE'	C	CA	H	HA	Y	
71 M	0C.2 0C.3	2, 4, 6	112	30.5	132	145	173	173	129	129	163	80.5	90	32	32	106	21	48	24	45	83	71	7	37	
80 M	0D.2 0D.3	2, 4, 6	125	30.5	150	162	183	183	139	139	163	80.5	100	32	32	118	22.5	48	24	50	112.5	80	8	41	
90 S	0E.0	2, 4, 6	140	30.5	165	180	188	188	144	144	163	80.5	100	33	54	143	24.5	48	24	56	159	90	11	47	
90 L	0E.4	2, 4, 6	140	30.5	165	180	188	188	144	144	163	80.5	125	33	54	143	24.5	48	24	56	134	90	11	47	
100 L	All	2, 4, 6	160	42	196	217	193	193	147	147	163	80.5	140	48	48	176	37.5	48	24	63	141	100	12	45	
112 M	All	2, 4, 6	190	46	226	239	195	195	150	150	163	80.5	140	48	48	176	30	48	24	70	130	112	12	52	
132 S	1CA0, 1CC0 1CA1, 1CB0	2, 6 2, 4	216	53	256	281	214.5	214.5	169	169	163	80.5	140	52	89 ¹⁾	218 ²⁾	26.5	48	24	89	128.5 178.5	132	15	69	
132 M	1CC2 1CB2, 1CC3	6 4, 6	216	53	256	281	214.5	214.5	169	169	163	80.5	178	52	89 ¹⁾	218	26.5	48	24	89	128.5 178.5	132	15	69	
160 M	All	2, 4, 6	254	60	300	333.5	261	261	213	213	190	92	210	73	117 ³⁾	300 ⁴⁾	37	60	30	108	192	160	18	85	
160 L	All	2, 4, 6	254	60	300	333.5	261	261	213	213	190	92	254	73	117 ³⁾	300	37	60	30	108	208	160	18	85	

1) With screwed-on feet, dimension BA' is 43 mm.
 2) With screwed-on feet, dimension BB is 180 mm.
 3) With screwed-on feet, dimension BA' is 51 mm.
 4) With screwed-on feet, dimension BB is 256 mm.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

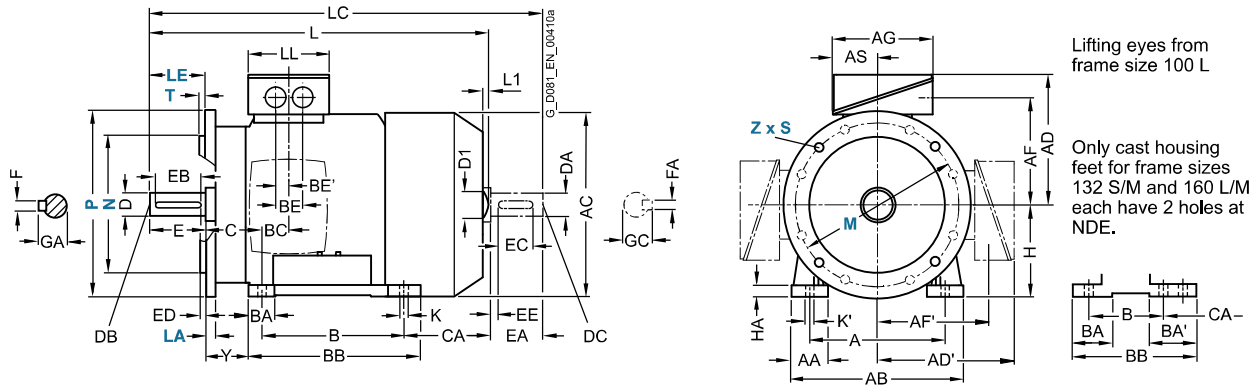
Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with type of protection Ex eb – self-ventilated · Frame sizes 71 M to 160 L

Dimensional drawings

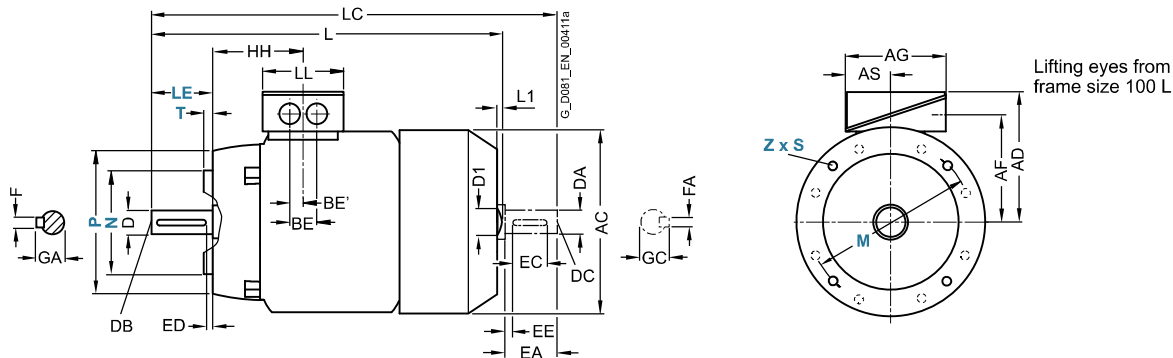
Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



Frame size	Motor type 1MB1543- 1MB1643-	No. of poles	Dimension designation acc. to IEC							DE shaft extension							NDE shaft extension							
			HH	K	K'	L ¹⁾	L1	D1	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
71 M	0C.2 0C.3	2, 4, 6	64.5	7.5	7.5	240 280	-	-	278	134	14	M5	30	22	4	5	16	14	M5	30	22	4	5	16
80 M	0D.2 0D.3	2, 4, 6	71.5	10	10	292 327	-	-	318	134	19	M6	40	32	4	6	21.5	19	M6	40	32	4	6	21.5
90 S	0E.0	2, 4, 6	79.5	10	10	347	-	-	343	134	24	M8	50	40	5	8	27	19	M6	50	40	5	8	21.5
90 L	0E.4	2, 4, 6	79.5	10	10	387	-	-	378	134	24	M8	50	40	5	8	27	19	M6	50	40	5	8	21.5
100 L	All	2, 4, 6	100.5	12	16	425.5	-	32	405	134	28	M10	M10	50	5	8	31	24	M8	M10	50	5	8	27
112 M	All	2, 4, 6	100.5	12	16	408.5	-	32	445	134	28	M10	60	50	5	8	31	24	M8	60	50	5	8	27
132 S	1CA0, 1CC0 1CA1, 1CB0	2, 6 2, 4	115.5	12	16	458	-	39	489	134	38	M12	80	70	5	10	41	28	M10	80	70	5	10	31
132 M	1CC2 1CB2, 1CC3	6 4, 6	115.5	12	16	508	-	39	342.5	134	38	M12	80	70	5	10	41	28	M10	80	70	5	10	31
160 M	All	2, 4, 6	145	14.5	18	596	-	45	475	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45
160 L	All	2, 4, 6	145	14.5	18	656	-	45	535.5	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45

¹⁾ For 1MB1643 motors less dimension L1.

²⁾ Only for 1MB1543 motors.

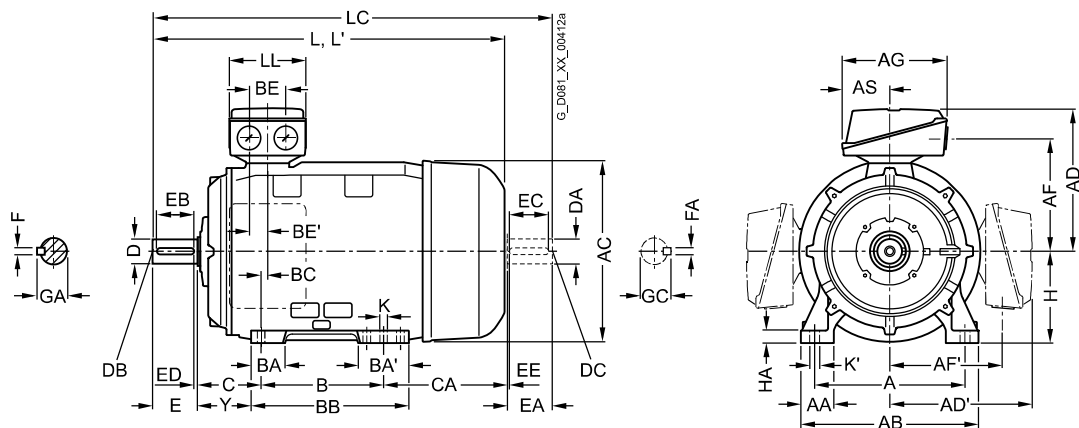
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with type of protection Ex eb – self-ventilated · Frame sizes 180 M to 280 M

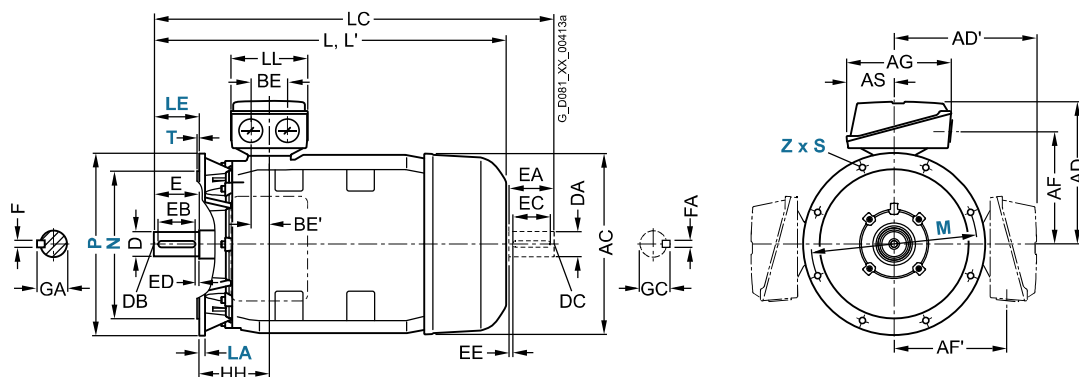
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

For motor			Dimension designation acc. to IEC																			
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B	BA	BA'	BB	BC	BE	BE'	C	CA	
180 M/ 180 L	1EA2, 1EB4 1EB2, 1EC4	2, 4 4, 6	279	65	339	356	286	286	234	234	190	92	241	85	120	328	34					
200 L	2AA4, 2AC4 2AA5, 2AB5, 2AC5	2, 4, 6 2, 4, 6	318	70	378	396	315	315	259	259	266	112	305	104	104	355	31					
225 S	2BB0	4	356	80	436	449	338	338	282	282	265	112	286	93	118	361	15					
225 M	2BA2 2BB2, 2BC2	2 4, 6											311									
250 M	2CA2 2CB2, 2CC2	2 4, 6	406	100	490	497	410	410	322	322	319	145	349	102	102	409	24					
280 S	2DA0 2DB0, 2DC0	2 4, 6	457	100	540	551	433	433	345	345	319	145	368	101	152	479	20					
280 M	2DA2 2DB2 2DC2	2 4 6											419									

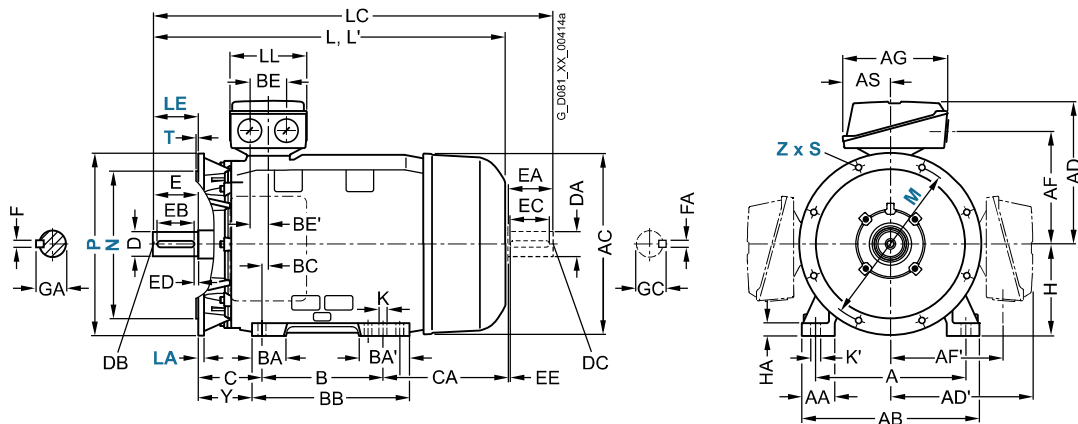
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with type of protection Ex eb – self-ventilated · Frame sizes 180 M to 280 M

Dimensional drawings

Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)

For motor Frame size	Motor type	No. of poles	Dimension designation acc. to IEC							LC ¹⁾	DE shaft extension							NDE shaft extension							
			H	HA	Y	HH	K	K'	L		LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
180 M/ 180 L	1EA2, 1EB4 1EB2, 1EC4	2, 4	180	20	95	155	15	19	698 668	814 784	164	48	M16	110	100	5	14	51.5	48	M16	110	100	5	14	51.5
200 L	2AA4, 2AC4 2AA5, 2AB5, 2, 4, 6 2AC5	2, 6	200	25	108	164	19	25	721 746	835 860	197	55	M20	110	100	5	16	59	55	M20	110	100	5	16	59
225 S	2BB0	4	225	34	124	164	19	25	788	963	197	60	M20	140	125	10	18	64	55	M20	175	100	70	16	59
225 M	2BA2 2BB2, 2BC2	2 4, 6							818 928	993 1103	55 60		110 140	100 125	5 10	16 18	59 64	48 55	M16 M20					14 16	51.5 59
250 M	2CA2 2CB2, 2CC2	2 4, 6	250	40	138	192	24	30	887 957	1062 1162	233 65	60	M20	140	125	10	18	64 69	55 60	M20	175 205	100 125	70 75	16 18	59 64
280 S	2DA0 2DB0, 2DC0	2 4, 6	280	40	160	210	24	30	960	1170	233	65 75	M20	140	125	10	18 20	69 79.5	60 65	M20	210	125	80	18	64 69
280 M	2DA2 2DB2 2DC2	6 2 4							1070 960	1280 1170	65 75					18 20	69 79.5	60 65						64 69	

¹⁾ In the low-noise version, a second shaft extension and/or mounted encoder is not possible.

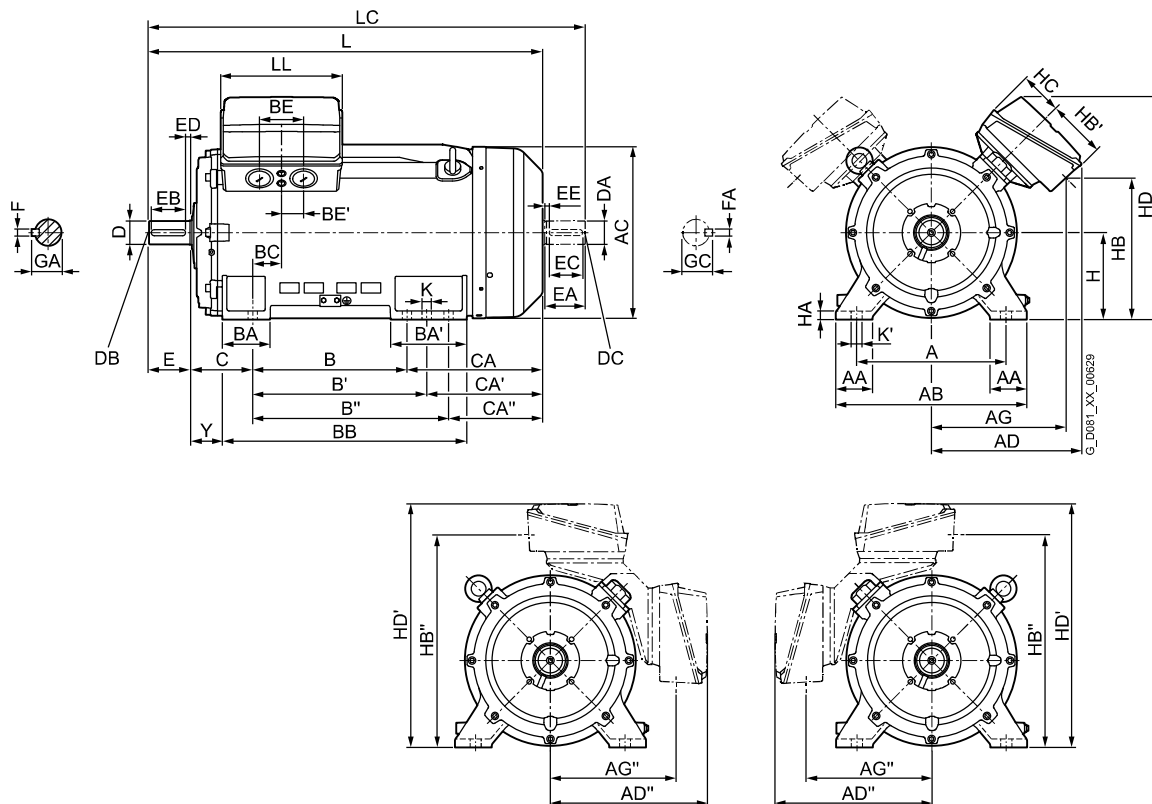
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB5 with type of protection Ex eb – self-ventilated · Frame sizes 315 S to 315 L

Dimensional drawings

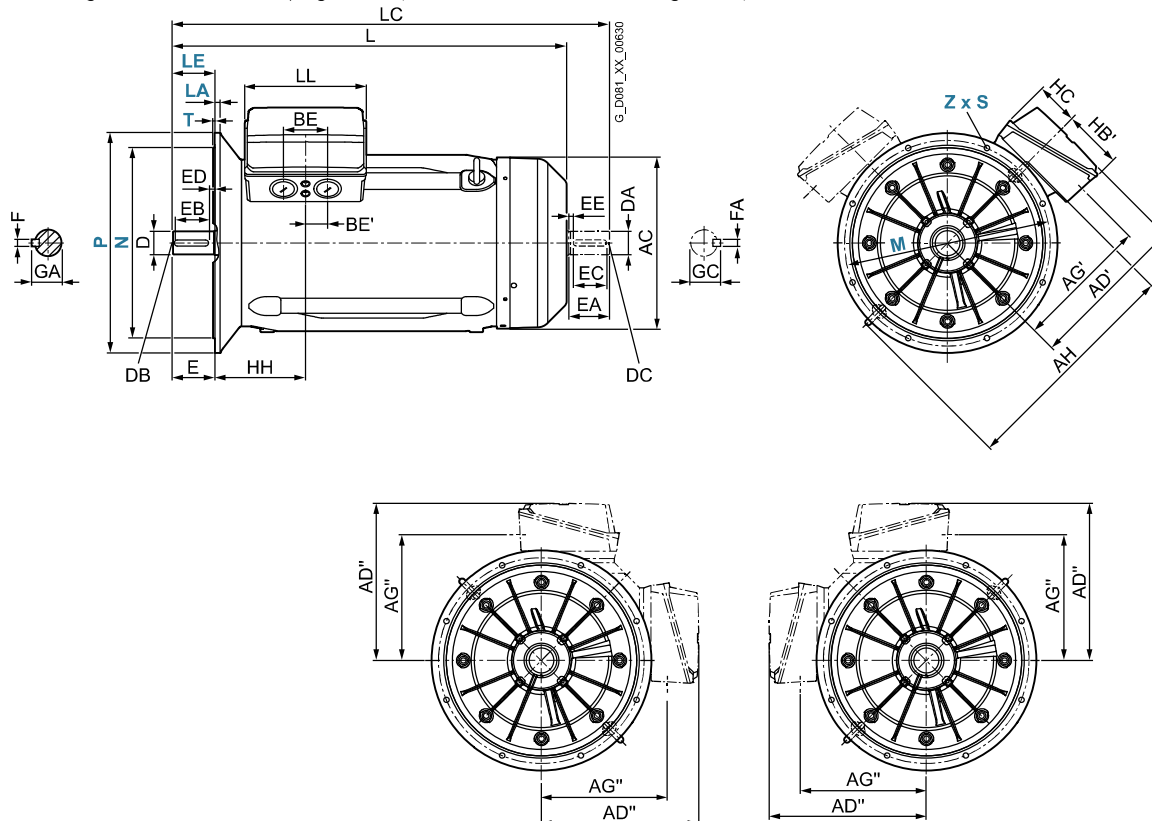
Type of construction IM B3



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Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

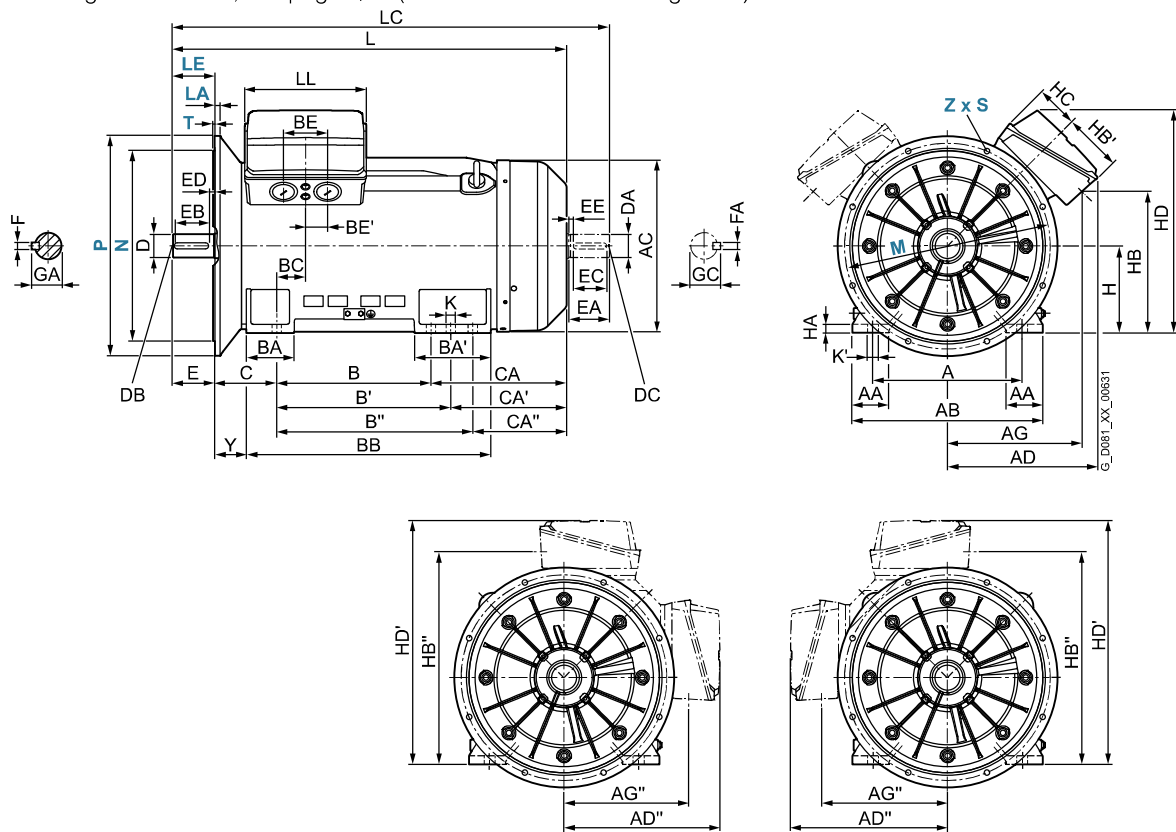
Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB5 with type of protection Ex eb – self-ventilated · Frame sizes 315 S to 315 L

Dimensional drawings

Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC																									
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AD''	AG	AG'	AG''	AH	B	B'	BA	BA'	BB	BC	BE	BE'	C	CA	CA'	H	HA	HB
315 S/M	3AA0, 3AA2	2	508	120	610	641	543	565	540	491	480	481	660	406	457	176	227	570	139	135	67.5	216	370	319	315	50	491
	3AB0, 3AB2	4, 6														177	226										
	3AC0, 3AC2																										
315 L	3AA4, 3AA5	2	508	120	610	641	543	565	540	491	480	481	660	457	508	176	227	648	139	135	67.5	216	469	418	315	50	491
	3AB4, 3AB5	4, 6																									
	3AC4, 3AC5																										
	3AC6																										

For motor		Dimension designation acc. to IEC													DE shaft extension				NDE shaft extension									
Frame size	Motor type	No. of poles	HB'	HB''	HC	HD	HD'	HH	Y	K	K'	L	LC ¹⁾	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
315 S/M	3AA0, 3AA2	2	225	796	167	800	880	355	146	28	35	1132	1277	327	65	M20	140	125	10	18	69	60	M20	140	125	80	18	64
	3AB0, 3AB2	4, 6										1162	1307		80	M20	170	140	25	22	85	70					20	74
	3AC0, 3AC2																											
315 L	3AA0, 3AA2	2	225	796	167	800	880	355	146	28	35	1282	1427	327	65	M20	140	125	10	18	69	60	M20	140	125	80	18	64
	3AB4, 3AB5	4, 6										1312	1457		80													
	3AC4, 3AC5																											
	3AC6																											

¹⁾ In the low-noise version, a second shaft extension and/or mounted encoder is not possible.

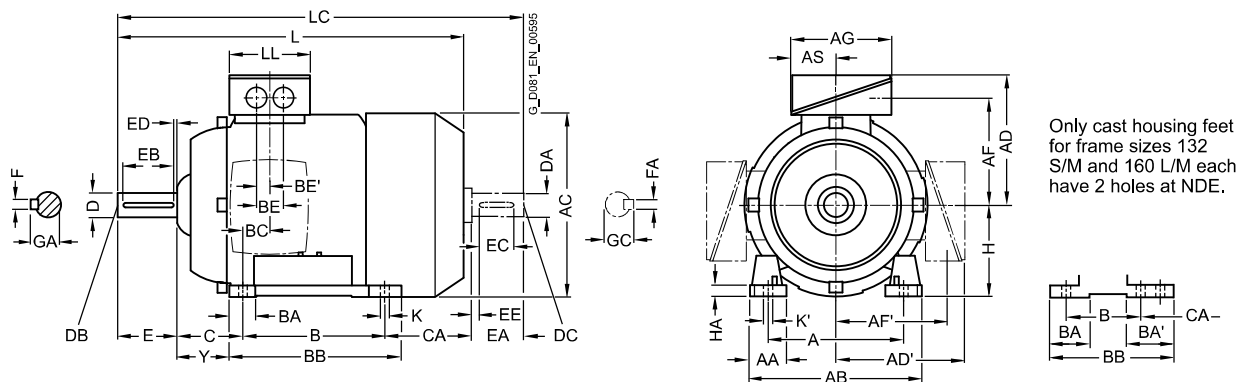
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with types of protection Ex db, Ex db eb – self-ventilated · Frame sizes 71 M to 160 L

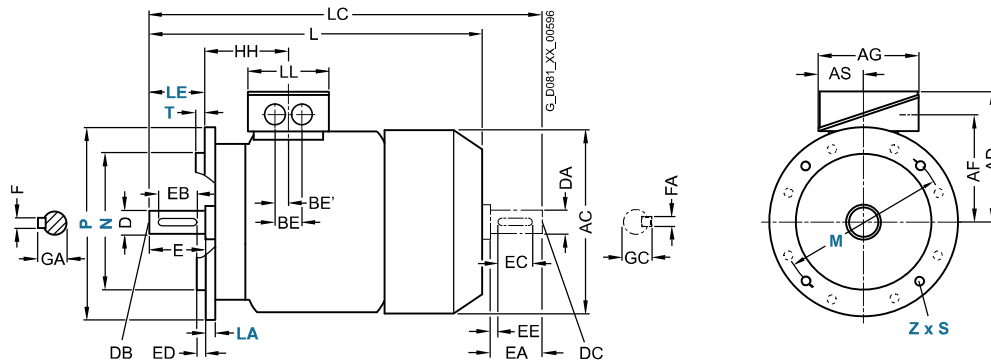
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

For motor		Dimension designation acc. to IEC																						
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B	BA	BA'	BB	BC	BE	BE'	C	CA	H	HA	Y
71 M	All	2, 4, 6, 8	112	25	140	169	240	-	195	-	163	81	90	30	45	125	76	36	18	45	199.5	71	10	35
80 M	All	2, 4, 6, 8	125	35	160	169	249	-	204	-	163	81	100	33	38	130	75.5	36	18	50	204	80	13	37.5
90 S/L	All	2, 4, 6, 8	140	40	180	182	261	-	216	-	163	81	125	41	40	155	80	36	18	56	239	90	13	41
100 L	All	2, 4, 6, 8	160	40	205	218	259	-	213	-	163	81	140	50	50	170	92	48	24	63	306	100	18	48
112 M	All	2, 4, 6, 8	190	45	240	230	279	-	233	-	163	81	140	50	50	170	92	48	24	70	280.5	112	18	55
132 S	All	2, 4, 6, 8	216	50	260	262	295	295	250	250	163	81	140	58	104	235	101	48	24	89	292	132	18	64
132 M	1CB2, 1CC3	4, 6	216	50	260	262	295	295	250	250	163	81	178	58	104	235	101	48	24	89	309	132	18	64
	1CC2, 1CD2	6, 8																			254			
160 M	All	2, 4, 6, 8	254	60	310	314	351	351	299	299	190	92	210	61	114	307	162.5	60	3	108	393	160	20	87.5
160 L	All	2, 4, 6, 8	254	60	310	314	351	351	299	299	190	92	254	61	114	307	162.5	60	3	108	349	160	20	87.5

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

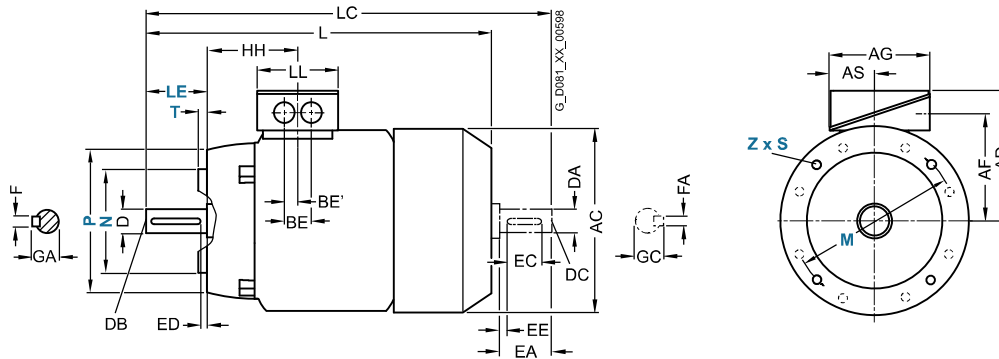
Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with types of protection Ex db, Ex db eb – self-ventilated · Frame sizes 71 M to 160 L

Dimensional drawings

Type of construction IM B14

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC										DE shaft extension				NDE shaft extension						
Frame size	Motor type 1MB1553-	No. of poles	HH	K	K'	L	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
71 M	All	2, 4, 6, 8	121	7	10	350	394.5	134	14	M5	30	22	4	5	16	14	M5	30	22	4	5	16
80 M	All	2, 4, 6, 8	125.5	10	15	374	434	134	19	M6	40	32	4	6	21.5	19	M6	40	32	4	6	21.5
90 S/L	All	2, 4, 6, 8	136	10	15	450	510	134	24	M8	50	40	5	8	27	19	M6	40	32	4	6	21.5
100 L	All	2, 4, 6, 8	155	12	19	544	619	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
112 M	All	2, 4, 6, 8	162	12	19	520	600.5	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
132 S	All	2, 4, 6, 8	190	12	19	571	661	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
132 M	1CB2, 1CC3	4, 6	190	12	19	626	716	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
	1CC2, 1CD2	6, 8				571	661															
160 M	All	2, 4, 6, 8	270.5	14.5	23	786	931	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45
160 L	All	2, 4, 6, 8	270.5	14.5	23	786	931	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45

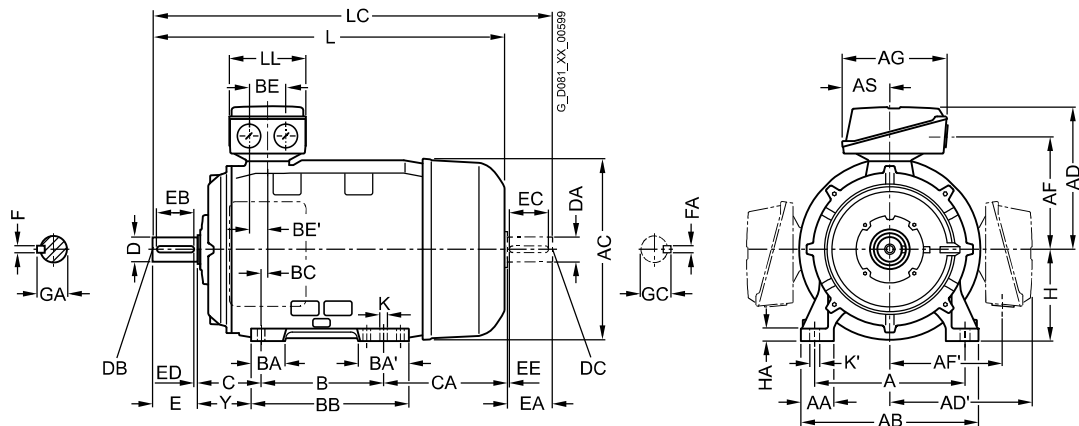
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with types of protection Ex db, Ex db eb – self-ventilated · Frame sizes 180 M to 280 M

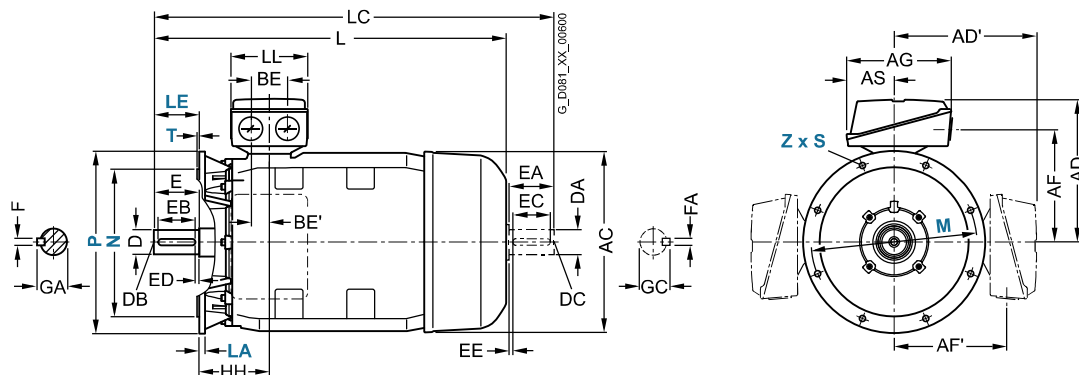
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

For motor			Dimension designation acc. to IEC																		
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B	BA	BA'	BB	BC	BE	BE'	C	CA
180 M	1EA2, 1EB2	2, 4	279	70	349	353	388	388	336	336	190	92	241	100	170	359	184	60	30	121	411
180 L	4EB4, 1EC4, 1ED4	4, 6, 8	279	70	349	353	388	388	336	336	190	92	279	100	170	359	184	60	30	121	373
200 L	All	2, 4, 6, 8	318	80	400	393	447	447	390	390	266	112	305	120	142	425	217	85	42,5	133	411
225 S	2BB0, 2BD0	4, 8	356	90	446	439	467	467	410	410	266	112	286	115	209	438	221	85	42,5	149	494
225 M	2BA2, 2BB2, 2BC2, 2BD2	2, 4, 6, 8	356	90	446	439	467	467	410	410	266	112	311	115	209	438	221	85	42,5	149	469
250 M	2CA2, 2CB2, 2CC2, 2CD2	2, 4, 6, 8	406	100	505	487	502	502	414	414	319	145	349	123	128	420	188	110	55	168	422
280 S	2CA0, 2DB0, 2DC0, 2DC0	2, 4, 6, 8	457	110	570	540	524	524	436	436	319	145	368	173	177	520	252	110	55	190	496
280 M	2DA2, 2CB2, 2DC2, 2DD2	2, 4, 6, 8	457	110	570	540	524	524	436	436	319	145	419	173	177	520	252	110	55	190	445

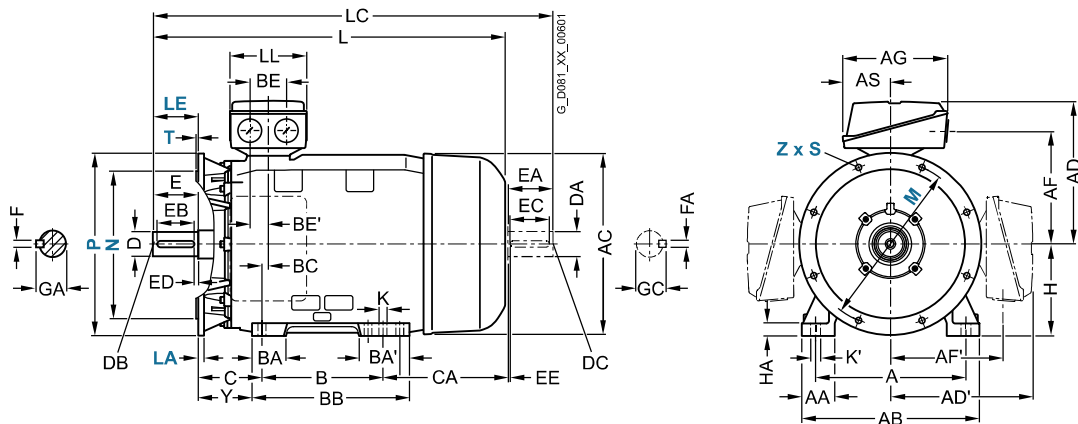
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB1 with types of protection Ex db, Ex db eb – self-ventilated · Frame sizes 180 M to 280 M

Dimensional drawings

Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)

For motor Frame size	Motor type 1MB1553-	No. of poles	Dimension designation acc. to IEC							DE shaft extension							NDE shaft extension								
			H	HA	Y	HH	K	K'	L	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
180 M	1EA2, 1EB2	2, 4	180	19	97	305	14.5	22	838	993	165	48	M16	110	100	5	14	51.5	48	M16	110	100	5	14	51.5
180 L	4EB4, 1EC4, 1ED4	4, 6, 8	180	19	97	305	14.5	22	838	993	165	48	M16	110	100	5	14	51.5	48	M16	110	100	5	14	51.5
200 L	All	2, 4, 6, 8	200	25	101	350	18.5	25	899	1069	197	55	M20	110	100	5	16	59	55	M20	110	100	5	16	59
225 S	2BB0, 2BD0	4, 8	225	25.5	117	370	18.5	25	1004	1179	197	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59
225 M	2BA2	2	225	25.5	117	370	18.5	25	974	1149	197	55	M20	110	100	5	16	59	48	M16	110	100	5	14	51.5
	2BB2, 2BC2, 2BD2	4, 6, 8																							
250 M	2CA2	2	250	35	133	356	24	40	1014	1189	233	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59
	2CB2, 2CC2, 2CD2	4, 6, 8																							
280 S	2CA0	2	280	40	140	442	24	40	1124	1334	233	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64
	2DB0, 2DC0, 2DD0	4, 6, 8																							
280 M	2DA2	2	280	40	140	442	24	40	1124	1334	233	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64
	2CB2, 2DC2, 2DD2	4, 6, 8																							

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

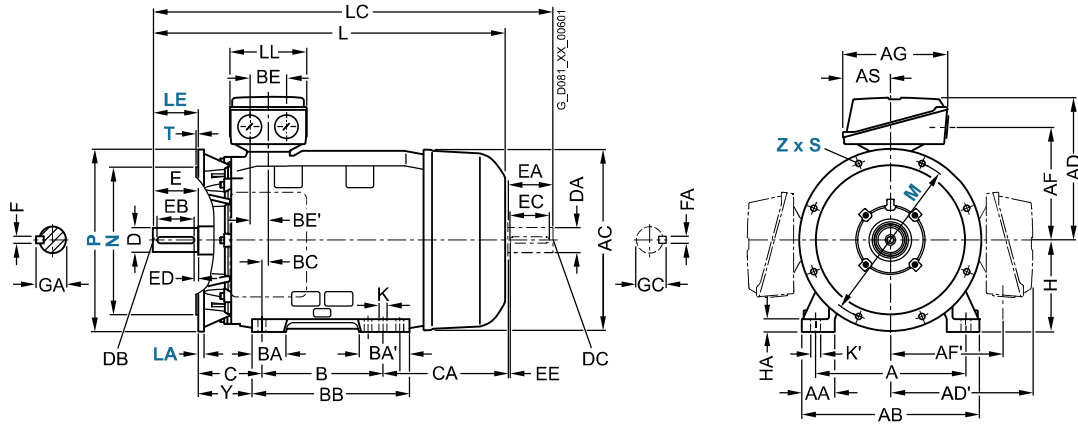
Dimensions · Cast-iron series SIMOTICS XP

IE3 – 1MB5 with types of protection Ex db, Ex db eb – self-ventilated · Frame sizes 315 S to 355 L

Dimensional drawings

Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



For motor		Dimension designation acc. to IEC										DE shaft extension					NDE shaft extension									
Frame size	Motor type	No. of poles	H	HA	Y	HH	K	K'	L	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC	
315 S	3AA0	2	315	50	146	385	28	28	1189	1399	327	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
	3AB0, 3AC0, 3AD0	4, 6, 8							1219	1429		80	M20	170	140	25	22	85	70					20	74.5	
315 M	3AA2	2	315	50	146	385	28	28	1279	1489	327	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
	3AB2	4							1309	1519		80		170	140	25	22	85	70					20	74.5	
	3AC2, 3AD2	6, 8							1219	1429																
315 L	3AA4	2	315	50	146	385	28	28	1279	1489	327	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64	
	3AA5								1349	1559																
	3AA6								1429	1639																
	3AB4, 3AC4, 3AD5, 3AD6	4, 6, 8							1309	1519		80		170	140	25	22	85	70						20	74.5
	3AB5, 3AC5, 3AC6	4, 6							1379	1589																
	3AB6, 3AC7, 3AD7	4, 6, 8							1459	1669																
	3AD4	8							1219	1429																
355 S	3BD0	8	315	50	146	385	28	28	1584	1834	497	95	M24	170	140	25	25	100	80	M20	170	140	25	22	85	
	3BD1								1694	1944																
355 M	3BD2	8	315	50	146	385	28	28	1694	1944	497	95	M24	170	140	25	25	100	80	M20	170	140	25	22	85	
355 L	3BA2	2	355	50	139	385	35	35	1479	1699	497	75	M20	140	125	10	20	79.5	60	M20	140	125	10	18	64	
	3BA3								1554	1774																
	3BA4, 3BA5								1664	1884																
	3BB2, 3BB3	4							1509	1759		95	M24	170	140	25	25	100	80	M20	170	125	25	22	85	
	3BB4, 3BC1	4, 6							1584	1834																
	3BB5, 3BC2, 3BC3, 3BC4	4, 6, 8							1694	1944																

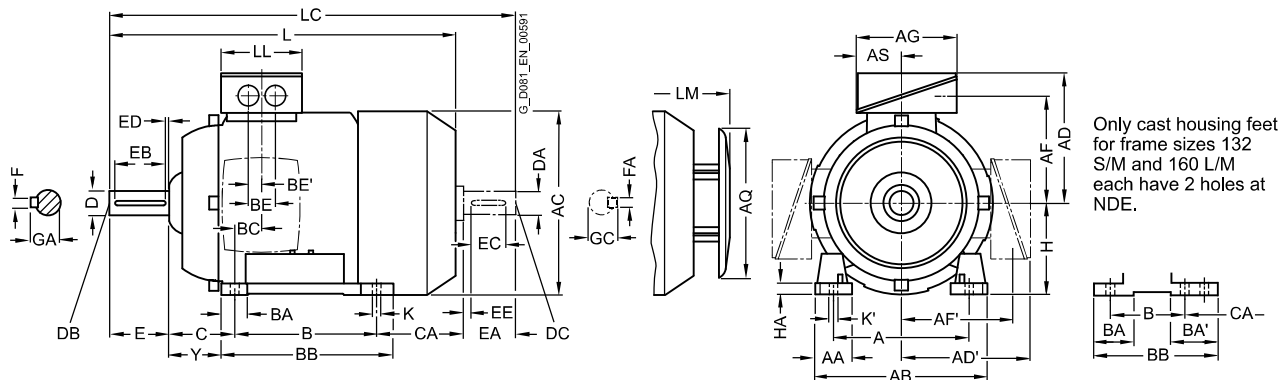
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE2 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 71 M to 160 L

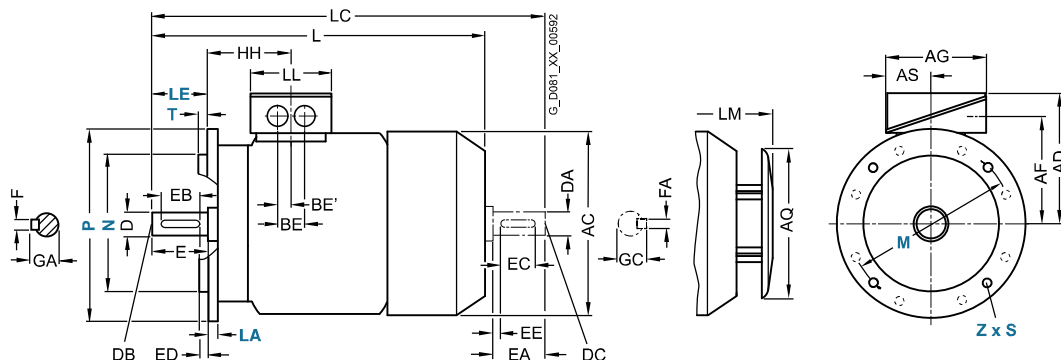
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

Frame size	Motor type	No. of poles	Dimension designation acc. to IEC																					
			A	AA	AB	AC	AD	AD'	AF	AF'	AG	AS	B	BA	BA'	BB	BC	BE	BE'	C	CA	H	HA	Y
71 M	OCA2, OCB2, OCC2, OCD2	2, 4, 6, 8	112	30.5	132	145	149	149	112	112	126	62	90	32	32	106	21	36	18	45	83	71	7	37
	OCA3, OCB3, OCC3, OCD3		28																					
80 M	ODA2, ODB2, ODC2, ODD2	2, 4, 6, 8	125	30.5	150	162	159	159	122	122	126	62	100	32	32	118	22.5	36	18	50	112.5	80	8	41
	ODA3, ODB3, ODC3, ODD3																							
90 S	All	2, 4, 6, 8	140	30.5	165	180	164	164	127	127	126	62	100	33	54	143	24.5	36	18	56	149	90	10	47
90 L	All	2, 4, 6, 8	140	30.5	165	180	164	164	127	127	126	62	125	33	54	143	24.5	36	18	56	124	90	10	47
100 L	All	2, 4, 6, 8	160	42	196	198	193	193	147	147	163	80.5	140	40	40	176	37.5	48	24	63	141	100	12	45
112 M	1BA2, 1BB2, 1BC2	2, 4, 6	190	46	226	222	195	195	150	150	163	80.5	140	40	40	176	30	48	24	70	129.7	112	12	52
	1BD2	8																						
132 S	All	2, 4, 6, 8	216	53	256	262	214.5	214.5	169	169	163	80.5	140	44	81 ¹⁾	218 ³⁾	26.5	48	24	89	167	132	15	69
132 M	All	2, 4, 6, 8	216	53	256	262	214.5	214.5	169	169	163	80.5	178	44	81 ¹⁾	218	26.5	48	24	89	129	132	15	69
160 M	All	2, 4, 6, 8	254	60	300	314	265	265	213	213	190	92	210	51	95 ²⁾	300 ⁴⁾	37	60	30	108	192	160	18	85
160 L	All	2, 4, 6, 8	254	60	300	314	265	265	213	213	190	92	254	51	95 ²⁾	300	37	60	30	108	148	160	18	85

1) With screwed-on feet, dimension BA' is 43 mm.
 2) With screwed-on feet, dimension BA' is 51 mm.
 3) With screwed-on feet, dimension BB is 180 mm.

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

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

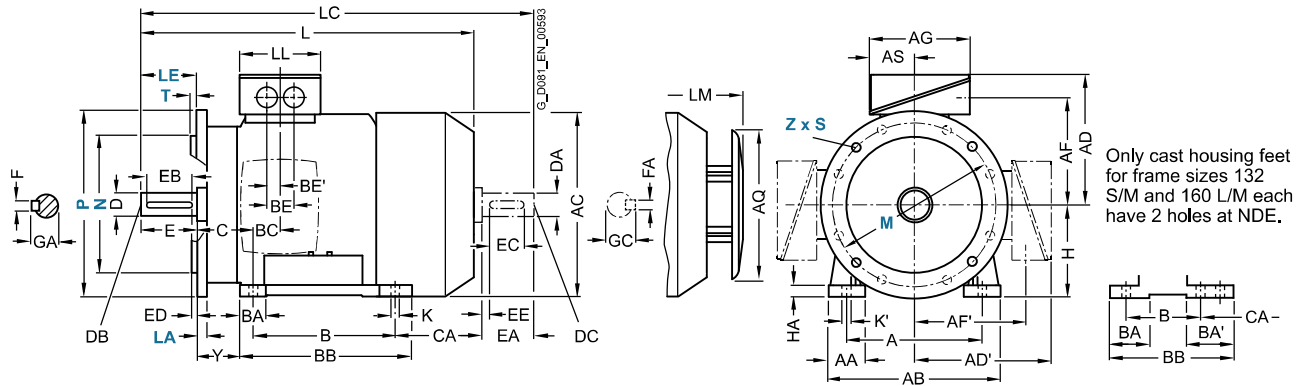
Dimensions · Cast-iron series SIMOTICS XP

IE2 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 71 M to 160 L

Dimensional drawings

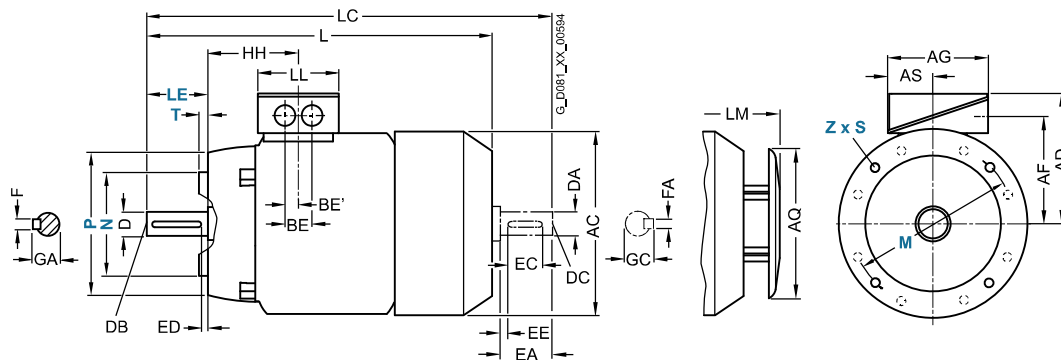
Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



Type of construction IM B14

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



For motor	Dimension designation acc. to IEC	DE shaft extension	NDE shaft extension																			
Frame size	Motor type	No. of poles	HH	K	K'	L	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
71 M	OCA2, OCB2, OCC2, OCD2	2, 4, 6, 8	63	7	7	240	278	102	14	M5	30	22	4	5	16	14	M5	30	22	4	5	16
	OCA3, OCB3, OCC3, OCD3		70			280	318															
80 M	ODA2, ODB2, ODC2, ODD2	2, 4, 6, 8	72.5	10	13.5	292	342.5	102	19	M6	40	32	4	6	21.5	19	M6	40	32	4	6	21.5
	ODA3, ODB3, ODC3, ODD3					327	377.5															
90 S	All	2, 4, 6, 8	80.5	10	10	347	405	102	24	M8	50	40	5	8	27	24	M8	50	40	5	8	27
90 L	All	2, 4, 6, 8	80.5	10	10	387	445	102	24	M8	50	40	5	8	27	24	M8	50	40	5	8	27
100 L	All	2, 4, 6, 8	100.5	12	16	390.5	454	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
112 M	1BA2, 1BB2, 1BC2	2, 4, 6	100.5	12	16	390.5	450	134	28	M10	60	50	5	8	31	24	M8	50	40	5	8	27
	1BD2	8				408.5	475															
132 S	All	2, 4, 6, 8	115.5	12	16	458	536	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
132 M	All	2, 4, 6, 8	115.5	12	16	458	536	134	38	M12	80	70	5	10	41	28	M10	60	50	5	8	31
160 M	All	2, 4, 6, 8	145	15	19	596	730	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45
160 L	All	2, 4, 6, 8	145	15	19	596	730	165	42	M16	110	90	10	12	45	42	M16	110	90	10	12	45

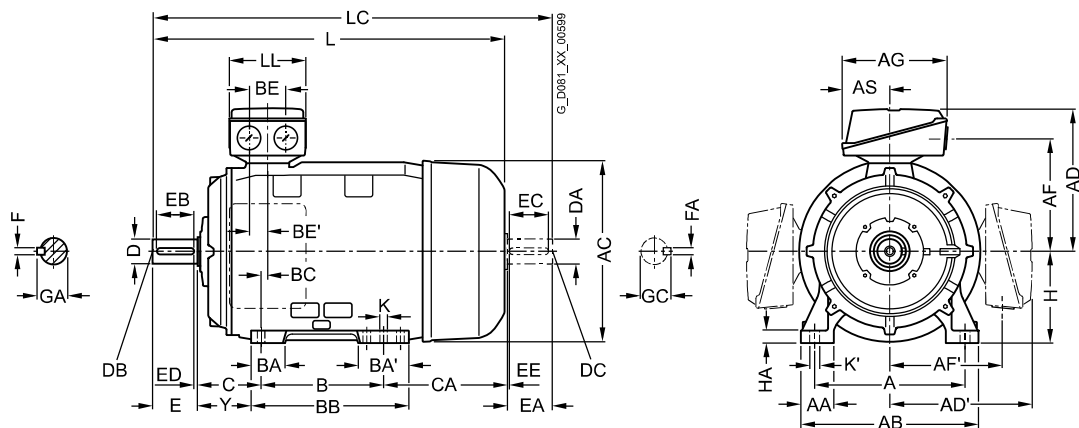
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE2 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 180 M to 250 M

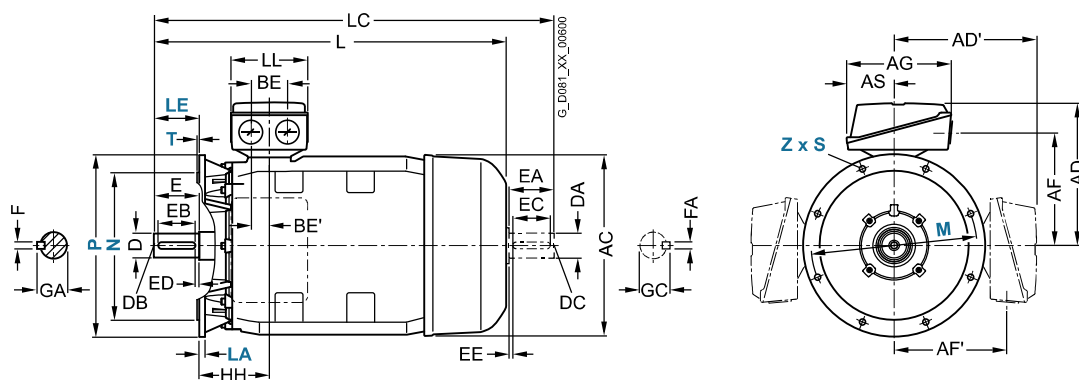
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

For motor		No. of poles	Dimension designation acc. to IEC																			
Frame size	Motor type		A	AA	AB	AC	AD	AD'	AF	AF'	AG	AH	AS	B	BA	BA'	BB	BC	BE	BE'	C	CA
180 M/ 180 L	1EA2, 1EB24 1EC4, 1ED4 1EB4	2, 4 6, 8 4	279	65	339	356	286	286	234	234	190	468	92	241	85	120	328	34	60	30	121	202
200 L	All	2, 4, 6, 8	318	60	378	396	315	315	259	259	266	533	112	305	104	104	355	31	85	42.5	133	177
225 S/ 225 M	2BB0, 2BD0, 2BB2, 2BC2, 2BD2 2BA2	4, 8 4, 6, 8 2	356	80	436	449	338	338	282	282	266	556	112	311	92	117	361	15	85	42.5	149	253
250 M	2CA2 2CB2, 2CC2, 2CD2	2 4, 6, 8	406	100	490	497	410	410	322	322	319	620	145	349	102	102	409	24	110	55	168	230

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

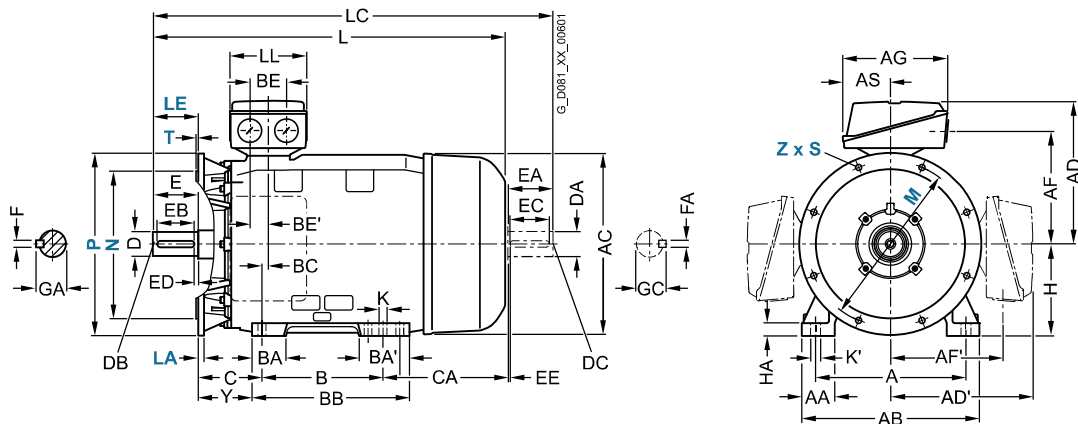
Dimensions · Cast-iron series SIMOTICS XP

IE2 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 180 M to 250 M

Dimensional drawings

Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



For motor		No. of poles	Dimension designation acc. to IEC										DE shaft extension					NDE shaft extension							
Frame size	Motor type		H	HA	Y	HH	K	K'	L	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC
180 M/ 180 L	1MB15.1-, 1MB16.1- 1EA2, 1EB2 1EC4, 1ED4 1EB4	2, 4 6, 8 4	180	20	95	155	15	19	668	784	165	48	M16	110	100	5	14	52	48	M16	110	100	5	14	51.5
200 L	All	2, 4, 6, 8	200	25	108	164	19	25	721	835	197	55	M20	110	100	5	16	59	55	M20	110	100	5	16	59
225 S/ 225 M	2BB0, 2BD0, 2BB2, 2BC2, 2BD2 2BA2	4, 8 4, 6, 8 2	225	34	124	164	19	25	788	903	197	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59
									848	963															
									818	933	55		110	100	5	16	59	48	M16					14	51.5
250 M	2CA2 2CB2, 2CC2, 2CD2	2 4, 6, 8	250	40	138	192	24	30	887	1002	233	60	M20	140	125	10	18	64	55	M20	110	100	5	16	59
										1032	65							69	60		140	125	10	18	64

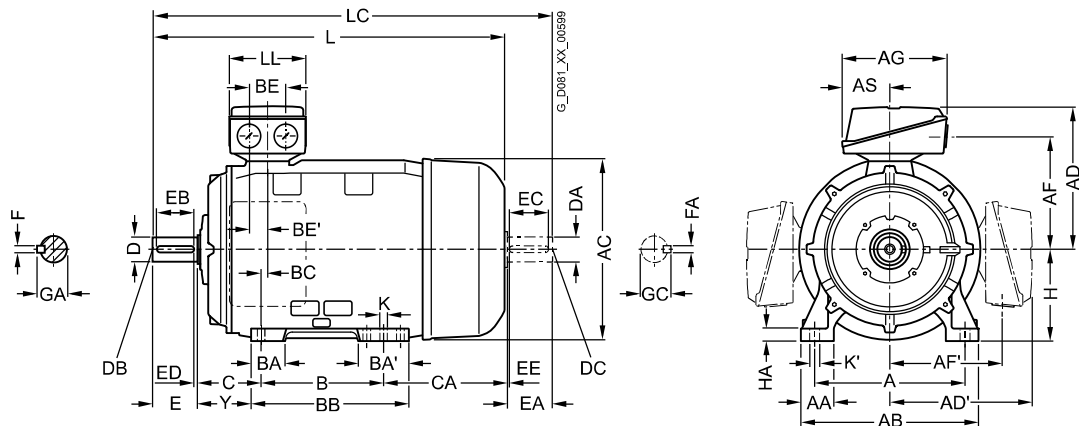
SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

Dimensions · Cast-iron series SIMOTICS XP

IE2 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 280 S to 315 L

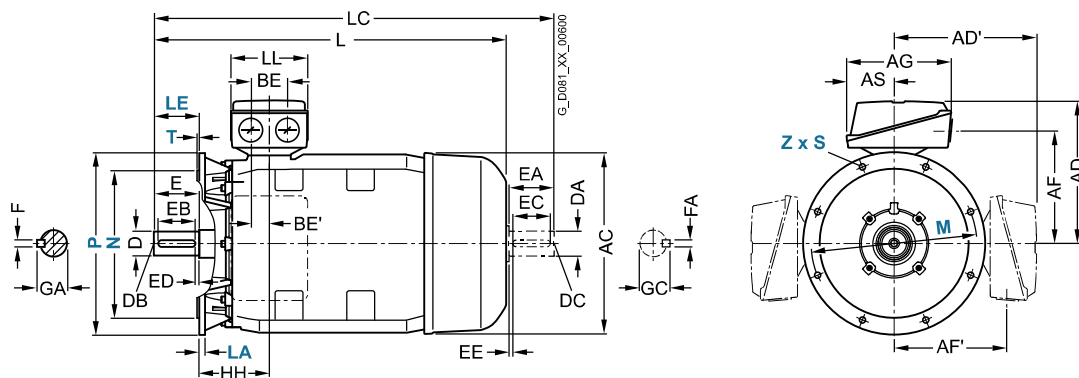
Dimensional drawings

Type of construction IM B3



Types of construction IM B5 and IM V1

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

For motor			Dimension designation acc. to IEC																				
Frame size	Motor type	No. of poles	A	AA	AB	AC	AD	AD'	AF	AF'	AG	AH	AS	B	BA	BA'	BB	BC	BE	BE'	C	CA	
280 S	1MB15.1-, 1MB16.1-	2	457	100	540	551	433	433	345	345	319	672	145	368	101	152	479	20	110	55	190	267	
	2DB0, 2DC0, 2DD0	4, 6, 8																					
280 M	2DA2	2	457	100	540	551	433	433	345	345	319	672	145	419	101	152	479	20	110	55	190	216	
	2DB2, 2DC2, 2DD2	4, 6, 8																					
315 S	3AA0	2	508	120	610	616	515	515	404	404	374	780	164	406	113	170	527	22	110	55	216	295	
	3AB0, 3AC0, 3AD0	4, 6, 8																					
315 M	3AA2	2	508	120	610	616	515	515	404	404	374	780	164	457	113	170	578	22	110	55	216	409	
	3AB2	4																					
	3AC2, 3AD2	6, 8															327					244	
315 L	3AA4	2	508	120	610	616	515	515	404	404	374	780	164	508	113	170	578	22	110	55	216	358	
	3AB4, 3AC4, 3AD4, 3AC5, 3AD5, 3AD6	4, 6, 8																					
	3AA5	2															176	227	648				513
	3AB5 ¹⁾ , 3AC6 ¹⁾	4, 6																					

¹⁾ When ordering a terminal box positioned on the left-hand side or right-hand side, the feet are screwed on as standard. These screwed-on feet have 3 drill holes on the NDE with the respective dimension B 406, 457 and 508 mm; the dimension BB is 666 mm.

SIMOTICS XP 1MB1, 1MB5 explosion-protected motors

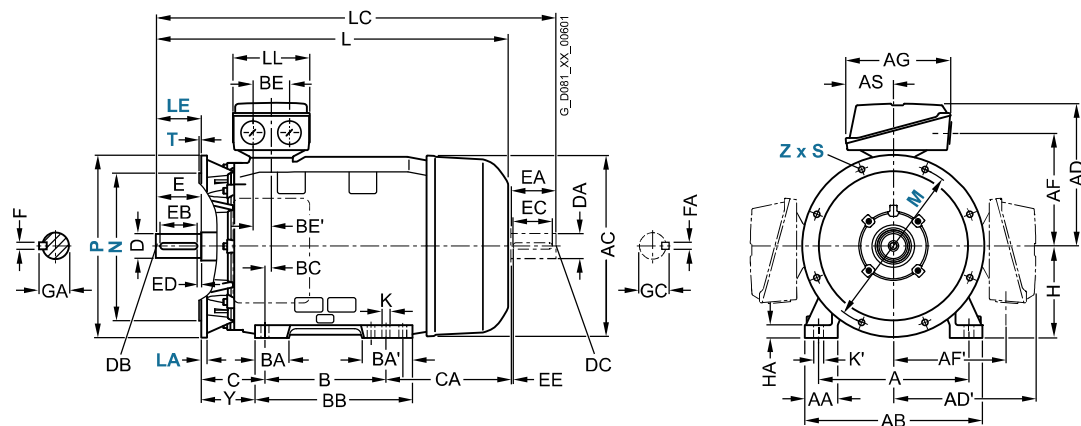
Dimensions · Cast-iron series SIMOTICS XP

IE2 – 1MB1 with types of protection Ex tb, Ex tc, Ex ec – self-ventilated · Frame sizes 280 S to 315 L

Dimensional drawings

Type of construction IM B35

For flange dimensions, see page 1/47 (Z = the number of retaining holes)



5

For motor		Dimension designation acc. to IEC	DE shaft extension													NDE shaft extension																									
Frame size	Motor type		No. of poles	H	HA	Y	HH	K	K'	L	LC	LL	D	DB	E	EB	ED	F	GA	DA	DC	EA	EC	EE	FA	GC															
280 S	1MB15.1-, 1MB16.1-	2	280	40	160	210	24	30	960	1105	233	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64																
	2DA0	4, 6, 8																								75	20	79.5	65	69											
280 M	2DA2	2	280	40	160	210	24	30	960	1105	233	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64																
	2DB2, 2DC2, 2DD2	4, 6, 8																								75	20	79.5	65	69											
315 S	3AA0	2	315	50	181	238	28	35	1052	1197	299	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64																
	3AB0, 3AC0, 3AD0	4, 6, 8																								80	22	85	70	74.5											
315 M	3AA2	2	315	50	181	238	28	35	1217	1362	299	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64																
	3AB2	4																								1247	1392	80	22	85	70	74.5									
	3AC2, 3AD2	6, 8																								1082	1227														
315 L	3AA4	2	315	50	181	238	28	35	1217	1362	299	65	M20	140	125	10	18	69	60	M20	140	125	10	18	64																
	3AB4, 3AC4, 3AD4, 3AC5, 3AD5, 3AD6	4, 6, 8																								1247	1392	80	22	85	70	74.5									
	3AA5	2																									146	1372	1517	65		140	125	10	18	69	60			18	64
	3AB5, 3AC6	4, 6																								1402	1547	80		170	140	25	22	85	70			20	74.5		