

## Orientation

### SIMOTICS XP 1MB1 explosion-proof motors

#### Technical specifications (continued)

Technical specifications of forced ventilation for 1MB1 explosion-proof motors (frame sizes 100 to 200) in the Ex tc (Zone 22) and Ex nA (Zone 2) versions

Technical specifications of separately driven fans (according to tolerances of EN 60034-1)				
Frame size	Rated voltage range V	Frequency Hz	Power consumption kW	Rated current A
100	1 AC 220 ... 277	50	0.066	0.28
	3 AC 200 ... 303 Δ	50	0.091	0.37
	3 AC 346 ... 525 Y	50	0.091	0.22
	1 AC 220 ... 277	60	0.075	0.30
	3 AC 220 ... 332 Δ	60	0.087	0.31
	3 AC 380 ... 575 Y	60	0.087	0.18
112	1 AC 220 ... 277	50	0.071	0.28
	3 AC 200 ... 303 Δ	50	0.097	0.35
	3 AC 346 ... 525 Y	50	0.097	0.20
	1 AC 220 ... 277	60	0.094	0.37
	3 AC 220 ... 332 Δ	60	0.103	0.31
	3 AC 380 ... 575 Y	60	0.103	0.18
132	1 AC 230 ... 277	50	0.098	0.40
	3 AC 200 ... 303 Δ	50	0.124	0.58
	3 AC 346 ... 525 Y	50	0.124	0.33
	1 AC 230 ... 277	60	0.149	0.57
	3 AC 220 ... 332 Δ	60	0.148	0.44
	3 AC 380 ... 575 Y	60	0.148	0.25
160 ... 200	1 AC 230 ... 277	50	0.253	0.97
	3 AC 200 ... 303 Δ	50	0.247	0.87
	3 AC 346 ... 525 Y	50	0.247	0.50
	3 AC 220 ... 332 Δ	60	0.360	0.93
	3 AC 380 ... 575 Y	60	0.360	0.56

Technical specifications of forced ventilation for 1MB1 explosion-proof motors (frame sizes 225 to 315) in the Ex tb (Zone 21), Ex tc (Zone 22) and Ex nA (Zone 2) versions

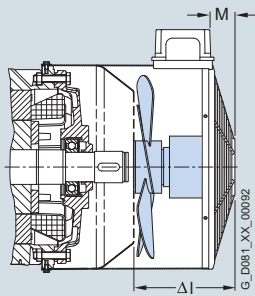
Frame size	Designation on rating plate of separately driven fan	Rated voltage range	Frequency	Rated speed	Power consumption kW	Rated current for rated voltage A
		V	Hz	rpm		
225 M ... 280 M	1LA7073-2AA62-Z	3 AC 230 Δ	50	2800	0.550	1.36
		3 AC 400 Y	50	2800	0.550	0.79
		3 AC 460 Y	60	3400	0.630	1.32
315 – 2-pole	1LA9073-2LA92-Z	3 AC 230 Δ	50	2780	0.700	1.73
		3 AC 400 Y	50	2780	0.700	1.00
		3 AC 460 Y	60	3385	0.700	1.64
315 – 4, 6, 8-pole	1LA7073-2AA62-Z	3 AC 230 Δ	50	2800	0.550	1.36
		3 AC 400 Y	50	2800	0.550	0.79
		3 AC 460 Y	60	3400	0.630	1.32

**Technical specifications** (continued)

Dimensions and weights of the explosion-proof separately driven fans (order code **F70**)

**1MB102, 1MB152, 1MB162, 1MB103, 1MB153, 1MB163**  
**Frame sizes 100 to 200**

Explosion-proof separately driven fan  
 Ex tc, Ex nA



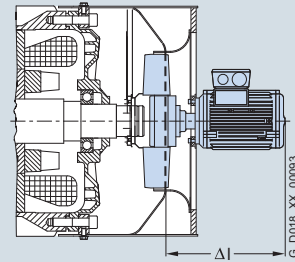
Type of protection/motor type

Ex tc (Zone 22)/1MB102, 1MB152, 1MB162  
 Ex nA (Zone 2)/1MB103, 1MB153, 1MB163

Frame size	Δl	Weight approx. kg
	mm	
100	141	4
112	158	4.5
132	177	5.5
160	227	7
180	269	10
200	272	11

**1MB151, 1MB161, 1MB152, 1MB162, 1MB153, 1MB163**  
**Frame sizes 225 to 315**

Explosion-proof separately driven fan  
 Ex tb, Ex tc, Ex nA



Type of protection/motor type

Ex tb (Zone 21)/1MB151, 1MB161  
 Ex tc (Zone 22)/1MB152, 1MB162  
 Ex nA (Zone 2)/1MB153, 1MB163

Frame size	Δl	Weight approx. kg
	mm	
225	267	24.5
250	272	27.5
280	270	30.5
315	280	38.5

## Orientation

### SIMOTICS XP 1MB1 explosion-proof motors

#### Technical specifications (continued)

##### VIK version

VIK = Verband der Industriellen Energie- und Kraftwirtschaft e.V.  
(German Association of the Energy and Power Supply Industry)

- **VIK standard version** –  
1LE1 + order code **C02**  
"VIK" identification on rating plate.  
→ Product spectrum catalog section 2.
- **VIK-Ex n version for line operation** –  
1MB1.3 + order code **C02**  
"VIK" and "Ex nA IIC T3 Gc" markings on the rating plate according to Directive 2014/34/EU (ATEX).  
→ Product spectrum in this catalog section.
- **VIK-Ex n version for converter operation** –  
1MB1.3 + order code **C02+B40/B41+...**  
"VIK" and "Ex nA IIC T3 Gc" markings on the rating plate and motor operating data for converter operation on the additional rating plate according to Directive 2014/34/EU (ATEX).

Both versions include technology for Zone 2 to type of protection Ex nA IIC T3 Gc. Motors up to frame size 355 can be supplied in accordance with the technical requirements of the VIK recommendation.

Minimum efficiency class:

- VIK standard version:  
IE3 from 7.5 kW in accordance with legal specifications (IE3 from 0.75 kW as of January 1, 2017)
- VIK-Ex n version:  
At least IE2 in accordance with March 2011 edition of VIK recommendation.

##### Notes:

- 8-pole motors or all motors < 0.75 kW are still possible as these motors are outside the power range specified for IE stamping.
- Motors in VIK version with mounted technology (brake, rotary pulse encoder and separately driven fan) are not compatible with Zone 2. Versions for Zone 21/22 are not possible.
- 1LA/1LG VIK motors: See Catalog D 81.1 · July 2011.

##### Ex certification EAC for the Eurasian customs union (Russia, Belarus, Kazakhstan)

EAC = Eurasian Conformity

For the import and commissioning of explosion-proof motors in the Eurasian customs union, approval is required from a named Russian testing authority.

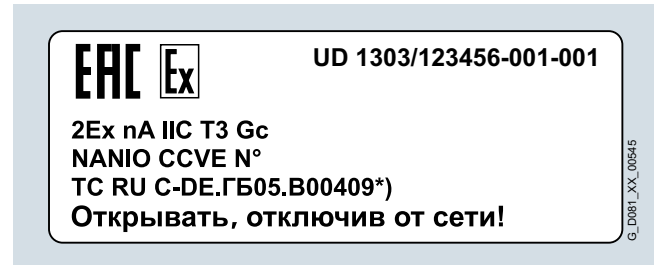
"EAC Ex certificate for the Eurasian customs union"

Order code **D35**

The explosion-proof motors in this catalog section all have Eurasian ex certification except for the following:

- 1MB10, frame sizes 80 and 90
- 1MB15, frame sizes 71 to 90
- 1MB15/6, frame sizes 225 to 315, in type of protection Ex tb
- 1MB1 in version for converter operation

When motors are ordered with order code **D35**, they are fitted with an additional rating plate displaying the logo "EAC Ex" and the Russian Ex marking.



Example: Additional rating plate

The "EAC Ex" logo can also be found on the package label. The motor must have an "EAC Ex certificate", although the certificate does not generally have to be shipped with the motor. The customs authorities use the motor article number to check the motor certification.

A copy of the EAC Ex certificate must be in the customer's possession before the motor is commissioned. The certificates are available from the SIOS (Siemens Industry Online Support) portal as well as the Drive Technology Configurator (DT Configurator).

##### Coolant temperature

Coolant temperature –40 to +40 °C for explosion-proof motor

For all 1MB10 motors, frame sizes 100 to 160 and 1MB15/6, frame sizes 100 to 315 in explosion protection types Ex nA or Ex t (Zone 21/22), the operating ambient temperature range can be optionally increased to –40 °C. Extensive technical measures are necessary in this case.

Order code **D03**

Order code **D03** is not possible in combination with order code **H02** "Vibration-proof version".

## Selection and ordering data

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

**1MB1511-1DB22-2AB4-Z  
R10**

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

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

### Ordering data:

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

Structure of the Article No.:		Position:	1	2	3	4	5	6	7	-	8	9	10	11	12	-	13	14	15	16		
<b>Positions 1 to 4:</b> Digit, letter, letter, digit	Explosion-proof – Self-ventilated by fan mounted on and driven by rotor		1	M	B	1																
<b>Position 5:</b> Digit	Aluminum housing Cast-iron housing Basic Line Cast-iron housing Performance Line						0 5 6															
<b>Positions 6 to 7:</b> 2 digits	Ex tb IIIC (Ex Zone 21) Ex tc IIIB (Ex Zone 22) Ex nA IIC T3 (Ex Zone 2)	Motors with IE2 High Efficiency Motors with IE1 Standard Efficiency Motors with IE3 Premium Efficiency Motors with IE2 High Efficiency Motors with IE1 Standard Efficiency Motors with IE3 Premium Efficiency Motors with IE2 High Efficiency Motors with IE1 Standard Efficiency Motors with IE3 Premium Efficiency						1 1 1 2 2 2 3 3 3	1 2 3 1 2 3 1 2 3													
<b>Positions 8, 9 and 11:</b> Digit, letter, digit	<b>Motor frame size</b> (frame size as a combination of shaft height and overall length, encoded)										0 ... 3	A ... E		0 ... 6								
<b>10th position:</b> Letter	<b>No. of poles</b> A: 2-pole, B: 4-pole, C: 6-pole, D: 8-pole											A ... D										
<b>Positions 12 and 13:</b> 2 digits	<b>Voltage, circuit and frequency</b> (encoded with two digits, 9-0 requires order code M.. (e.g. M1Y))														0 ... 9		0 ... 8					
<b>14th position:</b> Letter	<b>Type of construction</b> (encoded with A ... V)																	A ... V				
<b>15th position:</b> Letter	<b>Motor protection</b> (encoded with A ... J)																		A ... J			
<b>16th position:</b> Digit	<b>Terminal box position</b> 4: Terminal box top, 5: Terminal box right, 6: Terminal box left, 7: Terminal box below																			4 ... 7		
	Special order versions: encoded – additional order code required not encoded – additional plain text required																					- Z

### Ordering example

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

# Motors in type of protection Ex tb, Ex tc, Ex nA for use in Zones 21, 22, 2

## SIMOTICS XP 1MB1 explosion-proof motors



### Self-ventilated motors with IE3 Premium Efficiency · Aluminum series 1MB10

#### Selection and ordering data

Operating values at rated power														Aluminum series		m <sub>M</sub> B3 J	Torque class				
P <sub>rated</sub> 50 Hz	P <sub>rated</sub> 60 Hz	Frame size	n <sub>rated</sub> 50 Hz	T <sub>rated</sub> 50 Hz	IE class 50 Hz 60 Hz	η <sub>rated</sub> 50 Hz	η <sub>rated</sub> 50 Hz	η <sub>rated</sub> 50 Hz	COS φ <sub>rated</sub> 50 Hz	I <sub>rated</sub> 400 V	T <sub>LR</sub> ed	I <sub>LR</sub> ed	T <sub>B</sub> ed	L <sub>p</sub> fA 50 Hz	L <sub>WA</sub> 50 Hz			1MB1 – IE3 version in accordance with IEC 60034-30 Article No.	kg	kgm <sup>2</sup>	CL
kW	kW	FS	rpm	Nm		%	%	%		A											
• Cooling: self-ventilated (IC 411) • Efficiency: IE3 Premium Efficiency • Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																					
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz <sup>1)</sup>																					
0.75	0.86	80 M	2850	2.5	IE3	IE3	80.7	82.2	81.9	0.86	1.56	2.6	6.2	3	60	71	1MB10 3-0DA2	11	0.0011	16	
1.1	1.27	80 M	2885	3.6	IE3	IE3	82.7	83.9	83.1	0.85	2.25	3	7.1	3.3	60	71	1MB10 3-0DA3	12	0.0013	16	
1.5	1.75	90 S	2910	4.9	IE3	IE3	84.2	84.6	83.2	0.86	3	2.7	8.1	4.2	65	77	1MB10 3-0EA0	15	0.0021	16	
2.2	2.55	90 L	2910	7.2	IE3	IE3	85.9	86.8	86.1	0.88	4.2	2.6	8.3	4	65	77	1MB10 3-0EA4	19	0.0031	16	
3	3.45	100 L	2920	9.8	IE3	IE3	87.1	87.9	87.5	0.88	5.6	3.2	8.1	4.6	67	79	1MB10 3-1AA4	26	0.0054	16	
4	4.55	112 M	2950	13	IE3	IE3	88.1	88.7	88.2	0.89	7.4	2.5	8.7	4	69	81	1MB10 3-1BA2	34	0.012	16	
5.5	6.3	132 S	2950	18	IE3	IE3	89.2	90.1	89.7	0.9	9.9	1.9	7.3	3.7	68	80	1MB10 3-1CA0	43	0.024	16	
7.5	8.6	132 S	2950	24	IE3	IE3	90.1	90.9	90.7	0.92	13.1	2.1	8.3	4	68	80	1MB10 3-1CA1	57	0.031	16	
11	12.6	160 M	2955	36	IE3	IE3	91.2	91.3	90.2	0.87	20	2.5	7.6	3.8	70	82	1MB10 3-1DA3	75	0.053	16	
15	17.3	160 M	2960	48	IE3	IE3	91.9	91.9	91	0.87	27	2.8	8.8	4.3	70	82	1MB10 3-1DA3	84	0.061	16	
18.5	21.3	160 L	2955	60	IE3	IE3	92.4	92.8	92.3	0.9	32	2.8	8.3	3.9	70	82	1MB10 3-1DA4	94	0.068	16	
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz <sup>1)</sup>																					
0.55	0.63	80 M	1440	3.6	IE3	IE3	80.8	81.1	79.3	0.78	1.26	2.1	5.9	3.1	53	64	1MB10 3-0DB2	11	0.0021	16	
0.75	0.86	80 M	1450	4.9	IE3	IE3	82.5	82.3	79.9	0.75	1.75	2.7	7.1	3.9	53	64	1MB10 3-0DB3	14	0.0029	16	
1.1	1.27	90 S	1440	7.3	IE3	IE3	84.1	84.7	83.4	0.78	2.4	2.9	6.9	3.6	56	68	1MB10 3-0EB0	16	0.0036	16	
1.5	1.75	90 L	1445	10	IE3	IE3	85.3	85.9	84.9	0.8	3.15	2.7	7.2	3.6	56	68	1MB10 3-0EB4	19	0.0049	16	
2.2	2.55	100 L	1465	14.3	IE3	IE3	86.7	87	85.9	0.83	4.4	3.2	8.4	4.4	60	72	1MB10 3-1BA4	30	0.014	16	
3	3.45	100 L	1460	19.6	IE3	IE3	87.7	88.5	87.9	0.83	5.9	2.5	8.3	3.9	60	72	1MB10 3-1AB5	30	0.014	16	
4	4.55	112 M	1460	26	IE3	IE3	88.6	89.2	88.6	0.82	7.9	2.4	7.1	3.7	58	70	1MB10 3-1BB2	34	0.017	16	
5.5	6.3	132 S	1470	36	IE3	IE3	89.6	90	89.4	0.82	10.8	2.9	8.6	3.7	64	76	1MB10 3-1CB0	64	0.046	16	
7.5	8.6	132 M	1475	49	IE3	IE3	90.4	91.1	90.8	0.84	14.3	2.6	8.2	3.7	64	76	1MB10 3-1CB2	64	0.046	16	
11	12.6	160 M	1475	71	IE3	IE3	91.4	91.8	91.2	0.84	20.5	2.6	7.6	3.4	65	77	1MB10 3-1DB2	83	0.083	16	
15	17.3	160 L	1475	97	IE3	IE3	92.1	92.3	91.5	0.82	28.5	2.5	8.5	3.8	65	77	1MB10 3-1DB4	100	0.099	16	
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz <sup>1)</sup>																					
0.37	0.43	80 M	940	3.8	IE3	IE3	73.5	73.1	69.4	0.66	1.1	2.3	4.2	2.7	42	53	1MB10 3-0DC2	12	0.0025	16	
0.55	0.63	80 M	935	5.6	IE3	IE3	77.2	77	73.9	0.67	1.53	2.5	4.5	2.8	42	53	1MB10 3-0DC3	14	0.0031	16	
0.75	0.86	90 S	945	7.6	IE3	IE3	78.9	80	78.8	0.7	1.96	2.2	4.6	2.6	43	55	1MB10 3-0EC0	16	0.004	16	
1.1	1.27	90 L	940	11	IE3	IE1	81	82	80.5	0.69	2.85	2.3	4.6	2.7	43	55	1MB10 3-0EC4	19	0.0048	16	
1.5	1.75	100 L	970	14.8	IE3	IE2	82.5	83.1	81.5	0.73	3.6	1.9	5.2	2.8	59	71	1MB10 3-1AC4	30	0.014	16	
2.2	2.55	112 M	970	22	IE3	IE2	84.3	85	83.9	0.75	5	2.2	5.6	2.8	65	74	1MB10 3-1BC2	39	0.014	16	
3	3.45	132 S	980	29	IE3	IE3	85.6	86.3	85.7	0.76	6.7	2	6.3	3	63	75	1MB10 3-1CC0	43	0.029	16	
4	4.55	132 M	975	39	IE3	IE3	86.8	87.7	87.4	0.76	8.8	2	6.1	2.8	63	75	1MB10 3-1CC2	52	0.037	16	
5.5	6.3	132 M	975	54	IE3	IE3	88	88.9	88.5	0.76	11.9	2	6.3	2.9	63	75	1MB10 3-1CC3	52	0.037	16	
7.5	8.6	160 M	980	73	IE3	IE3	89.1	89.8	89.2	0.76	16	2	5.1	2.3	67	79	1MB10 3-1DC2	93	0.098	16	
11	12.6	160 L	975	108	IE3	IE3	90.3	91.1	90.7	0.77	23	2	5.1	2.4	67	79	1MB10 3-1DC4	115	0.12	16	
<b>Zones</b>																					
Zone 21 (occasionally conductive and non-conductive dust) Ex tb IIIC																		1			
Zone 22 (rarely conductive or temporarily non-conductive dust) Ex tc IIIB																		2			
Zone 2 (rarely explosive or temporarily explosive gases) Ex nA IIC																		3			
<b>Voltages</b>																					
50 Hz		230 VΔ/400 VY		60 Hz <sup>1)</sup>		460 VY		No. of poles		Frame size		Motor type		Version		Order code(s)					
50 Hz		400 VΔ/690 VY		60 Hz <sup>1)</sup>		460 VΔ		2, 4, 6		80 M ... 160 L		1MB10 3-0D ... -1D		Standard		2 2					
50 Hz		500 VY						2, 4, 6		80 M ... 160 L		1MB10 3-0D ... -1D		Standard		3 4					
50 Hz		500 VΔ						2, 4, 6		80 M ... 160 L		1MB10 3-0D ... -1D		W/o add. charge		2 7					
Further voltages <sup>1)</sup>		For price information, code numbers, order codes and descriptions, see from page 4/28																			
<b>Types of construction</b>																					
		IM B3 <sup>2)</sup>						2, 4, 6		80 M ... 160 L		1MB10 3-0D ... -1D		Standard		A					
		IM B5 <sup>2)</sup>						2, 4, 6		80 M ... 160 L		1MB10 3-0D ... -1D		With add. charge		F					
		IM B14 <sup>2)</sup>						2, 4, 6		80 M ... 160 L		1MB10 3-0D ... -1D		With add. charge		K					
Further types of construction For price information, code letters and descriptions, see from page 4/30																					
<b>Motor protection</b>																					
								2, 4, 6		80 M ... 160 L		1MB10 3-0D ... -1D		Standard		A					
								2, 4, 6		80 M ... 160 L		1MB10 3-0D ... -1D		With add. charge		B					
Further motor protection For price information, code letters and descriptions, see from page 4/34																					
<b>Terminal box position</b>																					
								2, 4, 6		80 M ... 160 L		1MB10 3-0D ... -1D		Standard		4					
Further terminal box positions For price information, code numbers and descriptions, see from page 4/36																					
<b>Special versions</b>																					
Options		For price information, order codes and descriptions, see from page 4/38																			
																		1MB10 3- ... -Z		...+...+...+...	

4

For footnotes, see page 4/27



# Motors in type of protection Ex tb, Ex tc, Ex nA for use in Zones 21, 22, 2 SIMOTICS XP 1MB1 explosion-proof motors

Self-ventilated motors with IE3 Premium Efficiency · Cast-iron series 1MB15, 1MB16

## Selection and ordering data

Operating values at rated power														Cast-iron series		m <sub>IM B3</sub>	J	Torque class																			
P <sub>rat.</sub> ed, 50 Hz	P <sub>rat.</sub> ed, 60 Hz	Frame size	n <sub>rat.</sub> ed, 50 Hz	T <sub>rat.</sub> ed, 50 Hz	IE class	η <sub>rat.</sub> ed, 50 Hz	η <sub>rat.</sub> ed, 50 Hz	η <sub>rat.</sub> ed, 50 Hz	η <sub>rat.</sub> ed, 50 Hz	cos φ <sub>rated</sub>	I <sub>rated</sub> , 50 Hz	T <sub>LR</sub> / I <sub>LR</sub>	T <sub>P</sub> / I <sub>P</sub>	L <sub>pFA</sub> , 50 Hz	L <sub>WA</sub> , 50 Hz				Article No.	kg	kgm <sup>2</sup>	CL															
kW	kW	FS	rpm	Nm		%	%	%	%		A																										
<ul style="list-style-type: none"> <li>Cooling: self-ventilated (IC 411)</li> <li>Efficiency: IE3 Premium Efficiency</li> <li>Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)</li> </ul>																																					
2-pole: 3000 rpm at 50 Hz, 3600 rpm at 60 Hz <sup>1)</sup>																																					
0.37	0.43	71 M	2850	1.2	IE3	IE3	73.8	73.3	69.7	0.76	0.95	3.5	5.8	3.5	52	63	1MB15-3-0CA2	13	0.00045	16																	
0.55	0.63	71 M	2860	1.8	IE3	IE3	77.8	77.5	74.5	0.76	1.34	3.7	6.1	3.7	57	68	1MB15-3-0CA3	14.5	0.00056	16																	
0.75	0.88	80 M	2850	2.5	IE3	IE3	80.7	82.2	81.9	0.86	1.56	2.6	6.2	3	60	71	1MB15-3-0DA2	18	0.0011	16																	
1.1	1.27	80 M	2885	3.6	IE3	IE3	82.7	83.9	83.1	0.85	2.25	3	7.1	3.3	60	71	1MB15-3-0DA3	21	0.0013	16																	
1.5	1.75	90 S	2910	4.9	IE3	IE3	84.2	84.6	83.2	0.86	3	2.7	8.1	4.2	65	77	1MB15-3-0EA0	25.5	0.0021	16																	
2.2	2.55	90 L	2910	7.2	IE3	IE3	85.9	86.8	86.1	0.88	4.2	2.6	8.3	4	65	77	1MB15-3-0EA4	32	0.0031	16																	
3	3.45	100 L	2920	9.8	IE3	IE3	87.1	87.9	87.5	0.88	5.6	3.2	8.1	4.6	67	79	1MB15-3-1AA4	36	0.0054	16																	
4	4.55	112 M	2950	13	IE3	IE3	88.1	88.7	88.2	0.89	7.4	2.5	8.7	4	69	81	1MB15-3-1BA2	45	0.012	16																	
5.5	6.3	132 S	2950	18	IE3	IE3	89.2	90.1	89.7	0.9	9.9	1.9	7.3	3.7	68	80	1MB15-3-1CA0	58	0.024	16																	
7.5	8.6	132 S	2950	24	IE3	IE3	90.1	90.9	90.7	0.92	13.1	2.1	8.3	4	68	80	1MB15-3-1CA1	73	0.031	16																	
11	12.6	160 M	2955	36	IE3	IE3	91.2	91.3	90.2	0.87	20	2.5	7.6	3.8	70	82	1MB15-3-1DA2	100	0.053	16																	
15	17.3	160 M	2960	48	IE3	IE3	91.9	91.9	91	0.87	27	2.8	8.8	4.3	70	82	1MB15-3-1DA3	110	0.061	16																	
18.5	21.3	160 L	2955	60	IE3	IE3	92.4	92.8	92.3	0.9	32	2.8	8.3	3.9	70	82	1MB15-3-1DA4	127	0.068	16																	
22	24.5	180 M	2950	71	IE3	IE3	92.7	93	92.4	0.89	38.5	2.3	7.5	3.5	67	80	1MB15-3-1EA2	160	0.08	16																	
30	33.5	200 L	2955	97	IE3	IE3	93.3	93.6	93.3	0.87	53	2.5	7	3.3	67	80	1MB15-3-2AA4	225	0.134	16																	
37	41.5	200 L	2955	120	IE3	IE3	93.7	93.9	93.5	0.88	65	2.5	7.1	3.2	67	80	1MB15-3-2AA5	250	0.158	16																	
45	51	225 M	2960	145	IE3	IE3	94	94.5	94.4	0.89	78	2.4	6.9	3.3	73	87	1MB15-3-2BA2	315	0.26	16																	
55	62	250 M	2975	177	IE3	IE3	94.3	94.5	93.9	0.89	95	2.3	6.7	3.1	73	87	1MB15-3-2CA2	385	0.46	13																	
75	84	280 S	2975	241	IE3	IE2	94.7	94.8	94.1	0.89	128	2.4	6.8	3	74	88	1MB15-3-2DA0	510	0.77	13																	
90	101	280 M	2975	289	IE3	IE2	95	95.1	94.6	0.9	152	2.4	7.2	3.1	74	88	1MB15-3-2DA2	590	0.94	13																	
110	123	315 S	2982	352	IE3	IE3	95.2	95.4	94.9	0.91	183	2.4	7.1	3.1	75	89	1MB15-3-3AA0	750	1.4	13																	
132	148	315 M	2982	423	IE3	IE3	95.4	95.5	95.2	0.91	220	2.5	7.2	3.1	75	89	1MB15-3-3AA2	880	1.6	13																	
160	180	315 L	2982	512	IE3	IE2	95.6	95.7	95.2	0.92	265	2.8	7.8	3.3	77	91	1MB15-3-3AA4	980	1.9	13																	
200	224	315 L	2982	640	IE3	IE3	95.8	95.9	95.5	0.92	330	2.5	7.2	3	77	91	1MB15-3-3AA5	1150	2.3	13																	
<table border="1"> <thead> <tr> <th></th> <th>Relubrication</th> <th>Motor protection</th> <th>Fan cover</th> <th>Bearing size</th> <th>Warranty</th> </tr> </thead> <tbody> <tr> <td><b>Basic Line</b></td> <td>Optional (Standard from FS 280 upwards)</td> <td>Optional</td> <td>Steel</td> <td>62 (63 from FS 280 upwards)</td> <td>12 months</td> </tr> <tr> <td><b>Performance Line</b></td> <td>Standard from FS 160 (Optional for FS 100 to 132)</td> <td>Standard</td> <td>Steel</td> <td>63</td> <td>36 months</td> </tr> </tbody> </table>																					Relubrication	Motor protection	Fan cover	Bearing size	Warranty	<b>Basic Line</b>	Optional (Standard from FS 280 upwards)	Optional	Steel	62 (63 from FS 280 upwards)	12 months	<b>Performance Line</b>	Standard from FS 160 (Optional for FS 100 to 132)	Standard	Steel	63	36 months
	Relubrication	Motor protection	Fan cover	Bearing size	Warranty																																
<b>Basic Line</b>	Optional (Standard from FS 280 upwards)	Optional	Steel	62 (63 from FS 280 upwards)	12 months																																
<b>Performance Line</b>	Standard from FS 160 (Optional for FS 100 to 132)	Standard	Steel	63	36 months																																
<b>Zones</b>																																					
Zone 21 (occasionally conductive and non-conductive dust) Ex tb IIIC																																					
Zone 22 (rarely conductive or temporarily non-conductive dust) Ex tc IIIB																																					
Zone 2 (rarely explosive or temporarily explosive gases) Ex nA IIC																																					
<b>Voltages <sup>3)</sup></b>																																					
50 Hz	230 VΔ/400 VY	60 Hz <sup>1)</sup>	460 VY	2	71 M ... 315 L	1MB15-3-1A ... -3A	Standard	2	2	-																											
50 Hz	400 VΔ/690 VY	60 Hz <sup>1)</sup>	460 VΔ	2	71 M ... 315 L	1MB15-3-1A ... -3A	Standard	3	4	-																											
50 Hz	500 VY			2	71 M ... 315 L	1MB15-3-1A ... -3A	W/o add. charge	2	7	-																											
50 Hz	500 VΔ			2	71 M ... 315 L	1MB15-3-1A ... -3A	W/o add. charge	4	0	-																											
Further voltages <sup>1)</sup> For price information, code numbers, order codes and descriptions, see from page 4/29																																					
<b>Types of construction</b>																																					
Without flange	IM B3 <sup>2)</sup>			2	71 M ... 315 L	1MB15-3-1A ... -3A	Standard	A	-																												
With flange	IM B5 <sup>2)</sup>			2	71 M ... 315 M	1MB15-3-1A ... -3A	With add. charge	F	-																												
With standard flange	IM B14 <sup>2)</sup>			2	71 M ... 160 L	1MB15-3-1A ... -1D	With add. charge	K	-																												
Further types of construction For price information, code letters and descriptions, see from page 4/32																																					
<b>Motor protection</b>																																					
Without	Only possible for <b>Basic Line</b>			2	71 M ... 315 L	1MB15-3-1A ... -3A	Standard	A	-																												
PTC thermistor with 3 temperature sensors	<b>Basic Line</b>			2	71 M ... 315 L	1MB15-3-1A ... -3A	With add. charge	B	-																												
	<b>Performance Line</b>			2	71 M ... 315 L	1MB16-3-1A ... -3A	Standard	B	-																												
Further motor protection For price information, code letters and descriptions, see from page 4/35																																					
<b>Terminal box position</b>																																					
Terminal box at top				2	71 M ... 315 L	1MB15-3-1A ... -3A	Standard	4	-																												
Further terminal box positions For price information, code numbers and descriptions, see from page 4/37																																					
<b>Special versions</b>																																					
Options For price information, order codes and descriptions, see from page 4/42 1MB15-3-...-Z-...+...+...+...																																					

For footnotes, see page 4/27





# Motors in type of protection Ex tb, Ex tc, Ex nA for use in Zones 21, 22, 2

## SIMOTICS XP 1MB1 explosion-proof motors



### Self-ventilated motors with IE3 Premium Efficiency · Cast-iron series 1MB15, 1MB16

#### Selection and ordering data (continued)

Operating values at rated power														Cast-iron series		m <sub>IMB3</sub> J	Torque class					
P <sub>rat, ed</sub> 50 Hz	P <sub>rat, ed</sub> 60 Hz	Frame size	n <sub>rat, ed</sub> 50 Hz	T <sub>rat, ed</sub> 50 Hz	IE class	η <sub>rat, ed</sub> 50 Hz	η <sub>rat, ed</sub> 60 Hz	η <sub>rat, ed</sub> 50 Hz	η <sub>rat, ed</sub> 60 Hz	η <sub>rat, ed</sub> 50 Hz	η <sub>rat, ed</sub> 60 Hz	cos φ rated	I <sub>rated</sub> 50 Hz	T <sub>LR</sub> /I <sub>LR</sub> ed	T <sub>β</sub> /I <sub>β</sub> ed			L <sub>p</sub> fA 50 Hz	L <sub>WA</sub> 50 Hz	Article No.	kg	kgm <sup>2</sup>
<ul style="list-style-type: none"> <li>• Cooling: self-ventilated (IC 411)</li> <li>• Efficiency: IE3 Premium Efficiency</li> <li>• Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)</li> </ul>																						
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz <sup>1)</sup>																						
0.25	0.29	71 M	1395	1.7	IE3	IE3	73.5	73.6	70.4	0.72	0.68	2.5	4.2	2.6	44	55		1MB15 3-0CB2	13	0.0095	16	
0.37	0.43	71 M	1410	2.6	IE3	IE3	77.3	76.8	73.2	0.7	0.99	3.1	4.8	3.1	56	67		1MB15 3-0CB3	16	0.014	16	
0.55	0.63	80 M	1440	3.6	IE3	IE3	80.8	81.1	79.3	0.78	1.26	2.1	5.9	3.1	53	64		1MB15 3-0DB2	18.5	0.021	16	
0.75	0.88	80 M	1450	4.9	IE3	IE3	82.5	82.3	79.9	0.75	1.75	2.7	7.1	3.9	53	64		1MB15 3-0DB3	22.5	0.029	16	
1.1	1.27	90 S	1440	7.3	IE3	IE3	84.1	84.7	83.4	0.78	2.4	2.9	6.9	3.6	56	68		1MB15 3-0EB0	25	0.036	16	
1.5	1.75	90 L	1445	10	IE3	IE3	85.3	85.9	84.9	0.8	3.15	2.7	7.2	3.6	56	68		1MB15 3-0EB4	31	0.049	16	
2.2	2.55	100 L	1465	14.3	IE3	IE3	86.7	87	85.9	0.83	4.4	3.2	8.4	4.4	60	72		1MB1 3-1AB4	40	0.014	16	
3	3.45	100 L	1460	19.6	IE3	IE3	87.7	88.5	87.9	0.83	5.9	2.5	8.3	3.9	60	72		1MB1 3-1AB5	40	0.014	16	
4	4.55	112 M	1460	26	IE3	IE3	88.6	89.2	88.6	0.82	7.9	2.4	7.1	3.7	58	70		1MB1 3-1BB2	46	0.017	16	
5.5	6.3	132 S	1470	36	IE3	IE3	89.6	90	89.4	0.82	10.8	2.9	8.6	3.7	64	76		1MB1 3-1CB0	74	0.046	16	
7.5	8.6	132 M	1465	49	IE3	IE3	90.4	91.1	90.8	0.84	14.3	2.6	8.2	3.7	64	76		1MB1 3-1CB2	80	0.046	16	
11	12.6	160 M	1475	71	IE3	IE3	91.4	91.8	91.2	0.84	20.5	2.6	7.6	3.4	65	77		1MB1 3-1DB2	109	0.083	16	
15	17.3	160 L	1475	97	IE3	IE3	92.1	92.3	91.5	0.82	28.5	2.5	8.5	3.8	65	77		1MB1 3-1DB4	127	0.099	16	
18.5	21.3	180 M	1470	120	IE3	IE3	92.6	93.1	93	0.82	35	2.5	7.2	3.3	66	73		1MB1 3-1EB2	165	0.13	16	
22	25.3	180 L	1470	143	IE3	IE3	93	93.6	93.6	0.83	41	2.3	6.8	3.3	68	75		1MB1 3-1EB4	170	0.14	16	
30	34.5	200 L	1470	195	IE3	IE2	93.6	94.2	94.2	0.84	55	2.6	7.3	3.1	65	72		1MB1 3-2AB5	240	0.22	16	
37	42.5	225 S	1478	239	IE3	IE2	93.9	94.5	94.4	0.86	66	2.5	6.4	2.7	65	78		1MB1 3-2BB0	285	0.42	16	
45	52	225 M	1478	291	IE3	IE2	94.2	94.9	95.1	0.86	80	2.6	6.4	2.7	65	78		1MB1 3-2BB2	320	0.47	16	
55	63	250 M	1482	354	IE3	IE2	94.6	95.1	95	0.87	96	2.5	6.8	2.9	66	79		1MB1 3-2CB2	420	0.85	16	
75	86	280 S	1485	482	IE3	IE2	95	95.3	95	0.86	133	2.5	6.9	3	69	83		1MB1 3-2DB0	570	1.4	16	
90	104	280 M	1485	579	IE3	IE2	95.2	95.5	95.3	0.87	157	2.6	7.2	3	70	84		1MB1 3-2DB2	670	1.7	16	
110	127	315 S	1488	706	IE3	IE3	95.4	95.8	95.5	0.87	191	2.6	6.8	2.9	70	84		1MB1 3-3AB0	760	2.2	16	
132	152	315 M	1490	846	IE3	IE3	95.6	95.9	95.9	0.87	230	2.8	7.3	3	73	87		1MB1 3-3AB2	960	2.9	16	
160	184	315 L	1490	1025	IE3	IE3	95.8	96.1	96.1	0.87	275	2.9	7.3	3.1	73	87		1MB1 3-3AB4	990	3.1	16	
200	230	315 L	1488	1284	IE3	IE2	96	96.3	96.1	0.88	340	3.2	7.4	3	73	87		1MB1 3-3AB5	1190	3.7	16	
Basic Line		Relubrication		Optional (Standard from FS 280 upwards)	Motor protection	Optional	Fan cover	Steel	Bearing size	62 (63 from FS 280 upwards)	Warranty	12 months	5									
Performance Line		Standard from FS 160 (Optional for FS 100 to 132)		Standard PTC	Standard	Steel	63	36 months	6													
<b>Zones</b>																						
Zone 21 (occasionally conductive and non-conductive dust) Ex tb IIC																						
Zone 22 (rarely conductive or temporarily non-conductive dust) Ex tc IIIB																						
Zone 2 (rarely explosive or temporarily explosive gases) Ex nA IIC																						
<b>Voltages</b> <sup>3)</sup>																						
50 Hz	230 VΔ/400 VY	60 Hz <sup>1)</sup>	460 VY	4	No. poles	71 M ... 315 L	Motor type	1MB1 3-1A ... -3A	Version	Standard	2	2	Order code(s)									
50 Hz	400 VΔ/690 VY	60 Hz <sup>1)</sup>	460 VΔ	4	71 M ... 315 L	1MB1 3-1A ... -3A	Standard	3	4	-												
50 Hz	500 VY			4	71 M ... 315 L	1MB1 3-1A ... -3A	W/o add. charge	2	7	-												
50 Hz	500 VΔ			4	71 M ... 315 L	1MB1 3-1A ... -3A	W/o add. charge	4	0	-												
Further voltages <sup>1)</sup>		For price information, code numbers, order codes and descriptions, see from page 4/29																				
<b>Types of construction</b>																						
Without flange		IM B3 <sup>2)</sup>		4	No. poles	71 M ... 315 L	Motor type	1MB1 3-1A ... -3A	Version	Standard	A	Order code(s)										
With flange		IM B5 <sup>2)</sup>		4	71 M ... 315 M	1MB1 3-1A ... -3A	With add. charge	F	-													
With standard flange		IM B14 <sup>2)</sup>		4	71 M ... 160 L	1MB1 3-1A ... -1D	With add. charge	K	-													
Further types of construction		For price information, code letters and descriptions, see from page 4/32																				
<b>Motor protection</b>																						
Without		Only possible for Basic Line		4	No. poles	71 M ... 315 L	Motor type	1MB15 3-1A ... -3A	Version	Standard	A	Order code(s)										
PTC thermistor with 3 temperature sensors		Basic Line		4	71 M ... 315 L	1MB15 3-1A ... -3A	With add. charge	B	-													
		Performance Line		4	71 M ... 315 L	1MB16 3-1A ... -3A	Standard	B	-													
Further motor protection		For price information, code letters and descriptions, see from page 4/35																				
<b>Terminal box position</b>																						
Terminal box at top				4	No. poles	71 M ... 315 L	Motor type	1MB1 3-1A ... -3A	Version	Standard	4	Order code(s)										
Further terminal box positions		For price information, code numbers and descriptions, see from page 4/37																				
<b>Special versions</b>																						
Options		For price information, order codes and descriptions, see from page 4/42																				

For footnotes, see page 4/27



# Motors in type of protection Ex tb, Ex tc, Ex nA for use in Zones 21, 22, 2 SIMOTICS XP 1MB1 explosion-proof motors

Self-ventilated motors with IE3 Premium Efficiency · Cast-iron series 1MB15, 1MB16

## Selection and ordering data (continued)

Operating values at rated power														Cast-iron series		m <sub>IMB3</sub>	J	Torque class																																																																																					
P <sub>rat, ed</sub> 50 Hz	P <sub>rat, ed</sub> 60 Hz	Frame size	n <sub>rat, ed</sub> 50 Hz	T <sub>rat, ed</sub> 50 Hz	IE class	η <sub>rat, ed</sub> 50 Hz	η <sub>rat, ed</sub> 60 Hz	η <sub>rat, ed</sub> 50 Hz	η <sub>rat, ed</sub> 60 Hz	η <sub>rat, ed</sub> 50 Hz	η <sub>rat, ed</sub> 60 Hz	cos φ <sub>rated</sub>	I <sub>rated</sub> 50 Hz	T <sub>LR</sub> /I <sub>LR</sub> ed	T <sub>β</sub> /I <sub>β</sub> ed				L <sub>p</sub> fA	L <sub>WA</sub> 50 Hz	1MB15.3 – Basic Line	1MB16.3 – Performance Line	IE3 version in accordance with IEC 60034-30	Article No.	kg	kgm <sup>2</sup>	CL																																																																												
kW	kW	FS	rpm	Nm		%	%	%	%	%	%	A																																																																																											
<ul style="list-style-type: none"> <li>Cooling: self-ventilated (IC 411)</li> <li>Efficiency: IE3 Premium Efficiency</li> <li>Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)</li> </ul>																																																																																																							
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz <sup>1)</sup>																																																																																																							
0.18	0.21	71 M	885	1.9	IE3	IE3	63.9	64.6	60.8	0.69	0.59	2.3	2.8	2.3	39	50		1MB15	3-0CC2	-		12.5	0.001	16																																																																															
0.25	0.29	71 M	900	2.7	IE3	IE3	68.6	69.5	66.2	0.69	0.76	2.6	3.2	2.6	46	57		1MB15	3-0CC3	-		15.5	0.0015	16																																																																															
0.37	0.43	80 M	940	3.8	IE3	IE3	73.5	73.1	69.4	0.66	1.1	2.3	4.2	2.7	42	53		1MB15	3-0DC2	-		18.5	0.0025	16																																																																															
0.55	0.63	80 M	935	5.6	IE3	IE3	77.2	77	73.9	0.67	1.53	2.5	4.5	2.8	42	53		1MB15	3-0DC3	-		22.5	0.0031	16																																																																															
0.75	0.88	90 S	945	7.6	IE3	IE3	78.9	80	78.8	0.7	1.96	2.2	4.6	2.6	43	55		1MB15	3-0EC0	-		26.5	0.004	16																																																																															
1.1	1.27	90 L	940	11	IE3	IE1	81	82	80.5	0.69	2.85	2.3	4.6	2.7	43	55		1MB15	3-0EC4	-		32	0.0048	16																																																																															
1.5	1.75	100 L	970	14.8	IE3	IE2	82.5	83.1	81.5	0.73	3.6	1.9	5.2	2.8	59	71		1MB1	3-1AC4	-		36	0.011	16																																																																															
2.2	2.55	112 M	970	22	IE3	IE2	84.3	85	83.9	0.75	5	2.2	5.6	2.8	65	74		1MB1	3-1BC2	-		53	0.017	16																																																																															
3	3.45	132 S	980	29	IE3	IE3	85.6	86.3	85.7	0.76	6.7	2	6.3	3	63	75		1MB1	3-1CC0	-		70	0.037	16																																																																															
4	4.55	132 M	975	39	IE3	IE3	86.8	87.7	87.4	0.76	8.8	2	6.1	2.8	63	75		1MB1	3-1CC2	-		70	0.037	16																																																																															
5.5	6.3	132 M	975	54	IE3	IE3	88	88.9	88.5	0.76	11.9	2	6.3	2.9	63	75		1MB1	3-1CC3	-		83	0.037	16																																																																															
7.5	8.6	160 M	980	73	IE3	IE3	89.1	89.8	89.2	0.76	16	2	5.1	2.3	67	79		1MB1	3-1DC2	-		122	0.098	16																																																																															
11	12.6	160 L	975	108	IE3	IE3	90.3	91.1	90.7	0.77	23	2	5.1	2.4	67	79		1MB1	3-1DC4	-		147	0.12	16																																																																															
15	18	180 L	975	147	IE3	IE2	91.2	91.9	91.9	0.8	29.5	2.3	5.9	2.8	61	68		1MB1	3-1EC4	-		180	0.19	16																																																																															
18.5	22	200 L	978	181	IE3	IE2	91.7	92.5	92.5	0.79	37	2.5	5.6	2.6	64	71		1MB1	3-2AC4	-		215	0.28	16																																																																															
22	26.5	200 L	978	215	IE3	IE2	92.2	93.1	93.2	0.79	43.5	2.5	5.6	2.6	61	68		1MB1	3-2AC5	-		230	0.32	16																																																																															
30	36	225 M	982	292	IE3	IE2	92.9	93.6	93.5	0.83	56	2.6	6.6	3	64	77		1MB1	3-2BC2	-		325	0.67	16																																																																															
37	44.5	250 M	985	359	IE3	IE2	93.3	94	94	0.85	67	2.7	7	2.9	62	75		1MB1	3-2CC2	-		405	1	16																																																																															
45	54	280 S	988	435	IE3	IE2	93.7	94.3	94.2	0.85	82	3	6.8	2.8	60	74		1MB1	3-2DC0	-		510	1.4	16																																																																															
55	66	280 M	988	532	IE3	IE2	94.1	94.6	94.4	0.85	99	3.2	7.2	3	60	74		1MB1	3-2DC2	-		560	1.6	16																																																																															
75	90	315 S	990	723	IE3	IE3	94.6	94.9	94.4	0.84	136	2.6	7.5	3.1	63	78		1MB1	3-3AC0	-		750	2.6	16																																																																															
90	108	315 M	991	867	IE3	IE2	94.9	95.2	94.9	0.85	161	2.5	6.7	2.8	63	78		1MB1	3-3AC2	-		890	3.1	16																																																																															
110	132	315 L	991	1060	IE3	IE2	95.1	95.5	95.3	0.84	199	2.8	7.2	3	63	78		1MB1	3-3AC4	-		990	3.9	16																																																																															
132	158	315 L	991	1272	IE3	IE2	95.4	95.9	95.8	0.84	240	2.7	7.2	3	67	82		1MB1	3-3AC5	-		1110	4.4	16																																																																															
160	192	315 L	991	1542	IE3	IE2	95.6	95.8	95.4	0.83	290	3.3	7.7	3.5	67	82		1MB1	3-3AC6	-		1160	4.6	16																																																																															
<table border="1"> <thead> <tr> <th></th> <th>Relubrication</th> <th>Motor protection</th> <th>Fan cover</th> <th>Bearing size</th> <th>Warranty</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td><b>Basic Line</b></td> <td>Optional (Standard from FS 280 upwards)</td> <td>Optional</td> <td>Steel</td> <td>62 (63 from FS 280 upwards)</td> <td>12 months</td> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><b>Performance Line</b></td> <td>Standard from FS 160 (Optional for FS 100 to 132)</td> <td>Standard PTC</td> <td>Steel</td> <td>63</td> <td>36 months</td> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>																											Relubrication	Motor protection	Fan cover	Bearing size	Warranty																					<b>Basic Line</b>	Optional (Standard from FS 280 upwards)	Optional	Steel	62 (63 from FS 280 upwards)	12 months	5																				<b>Performance Line</b>	Standard from FS 160 (Optional for FS 100 to 132)	Standard PTC	Steel	63	36 months	6																			
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Zone 21 (occasionally conductive and non-conductive dust) Ex tb IIC																																																																																																							
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Zone 2 (rarely explosive or temporarily explosive gases) Ex nA IIC																																																																																																							
<b>Voltages</b> <sup>3)</sup>																																																																																																							
50 Hz	230 VΔ/400 VY	60 Hz <sup>1)</sup>	460 VY	6	71 M ... 315 L	1MB1	3-1A ... -3A	Standard	2	2																																																																																													
50 Hz	400 VΔ/690 VY	60 Hz <sup>1)</sup>	460 VΔ	6	71 M ... 315 L	1MB1	3-1A ... -3A	Standard	3	4																																																																																													
50 Hz	500 VY			6	71 M ... 315 L	1MB1	3-1A ... -3A	W/o add. charge	2	7																																																																																													
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Further voltages <sup>1)</sup> For price information, code numbers, order codes and descriptions, see from page 4/29																																																																																																							
<b>Types of construction</b>																																																																																																							
Without flange	IM B3 <sup>2)</sup>			6	71 M ... 315 L	1MB1	3-1A ... -3A	Standard	A																																																																																														
With flange	IM B5 <sup>2)</sup>			6	71 M ... 315 M	1MB1	3-1A ... -3A	With add. charge	F																																																																																														
With standard flange	IM B14 <sup>2)</sup>			6	71 M ... 160 M	1MB1	3-1A ... -1D	With add. charge	K																																																																																														
Further types of construction For price information, code letters and descriptions, see from page 4/32																																																																																																							
<b>Motor protection</b>																																																																																																							
Without	Only possible for <b>Basic Line</b>			6	71 M ... 315 L	1MB15	3-1A ... -3A	Standard	A																																																																																														
PTC thermistor with 3 temperature sensors	<b>Basic Line</b>			6	71 M ... 315 L	1MB15	3-1A ... -3A	With add. charge	B																																																																																														
	<b>Performance Line</b>			6	71 M ... 315 L	1MB16	3-1A ... -3A	Standard	B																																																																																														
Further motor protection For price information, code letters and descriptions, see from page 4/35																																																																																																							
<b>Terminal box position</b>																																																																																																							
Terminal box at top				6	71 M ... 315 L	1MB1	3-1A ... -3A	Standard	4																																																																																														
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Options	For price information, order codes and descriptions, see from page 4/42 1MB1 3-... -Z ...+...+...+...																																																																																																						

For footnotes, see page 4/27

