

SIMOTICS XP 1MJ Explosion-Proof Motors

Motors for Zone 1 in type of protection Ex de

Self-ventilated motors with Standard Efficiency IE1
Cast-iron series 1MJ6, 1MJ7

IE1

Selection and ordering data

P _{rated} , 50 Hz kW	P _{rated} , 60 Hz kW	Frame size FS	Operating values at rated output											Cast-iron series 1MJ6/1MJ7 – IE1 version for Zone 1 in type of protection Ex de	m _{IM B3 J}		Torque class CL		
			n _{rated} , 50 Hz rpm	T _{rated} , 50 Hz Nm	IE class	η _{rated} , 50 Hz, 4/4 %	η _{rated} , 50 Hz, 3/4 %	η _{rated} , 50 Hz, 2/4 %	COS- φ _{rated} , 50 Hz, 4/4	I _{rated} , 50 Hz, 400 V A	T _{LR} / I _{rated}	I _{LR} / I _{rated}	T _B / I _{rated}		L _{pFA} , 50 Hz dB(A)	L _{WA} , 50 Hz dB(A)		Order No.	kg
<ul style="list-style-type: none"> Cooling: Self-ventilated (IC 411) Efficiency: Standard Efficiency IE1 in accordance with IEC 60034-30 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 ¹⁾ , temperature classes T1 to T4																			
0.37	0.43	071 M	2750	1.3	–	65.8	64.8	60.8	0.81	1.00	2.3	4.3	2.3	52	63	1MJ6070-2CA	19	0.00035	16
0.55	0.63	071 M	2790	1.9	–	69.4	69.4	65.4	0.81	1.42	2.5	5.3	2.6	52	63	1MJ6073-2CA	20	0.00045	16
0.75	0.86	080 M	2840	2.5	IE1	72.1	72.1	68.1	0.86	1.75	2.4	6.3	2.3	56	67	1MJ6080-2CA	24	0.00085	16
1.1	1.27	080 M	2835	3.7	IE1	75.0	75.0	72.0	0.87	2.45	2.6	6.3	2.3	56	67	1MJ6083-2CA	24	0.0011	16
1.5	1.75	090 L	2850	5.0	IE1	77.2	77.7	74.2	0.84	3.35	2.5	6.7	2.5	62	74	1MJ6096-2CA	32	0.0015	16
2.2	2.55	090 L	2860	7.4	IE1	79.7	79.7	78.7	0.86	4.65	2.8	7.1	2.8	62	74	1MJ6097-2CA	35	0.0020	16
3	3.45	100 L	2885	9.9	IE1	81.5	81.5	80.5	0.85	6.3	2.8	7.7	3	62	74	1MJ6106-2CA	44	0.0038	16
4	4.55	112 M	2895	13	IE1	83.1	83.1	82.1	0.88	7.9	2.4	7.6	2.8	63	75	1MJ6113-2CA	56	0.0055	16
5.5	6.3	132 S	2925	18	IE1	84.7	84.7	83.7	0.89	10.5	2.0	6.3	2.6	68	80	1MJ6130-2CA	81	0.016	16
7.5	8.6	132 S	2930	24	IE1	86.0	86.0	85.0	0.89	14.1	2.3	6.9	2.6	68	80	1MJ6131-2CA	86	0.021	16
11	12.6	160 M	2930	36	IE1	87.6	87.6	86.6	0.88	20.5	2.1	6.3	2.6	70	82	1MJ6163-2CA	123	0.034	16
15	17.3	160 M	2930	49	IE1	88.7	88.7	87.7	0.91	27	2.2	7.2	3.1	70	82	1MJ6164-2CA	136	0.040	16
18.5	21.3	160 L	2930	60	IE1	89.3	89.3	88.3	0.91	33	2.4	7.7	3.3	70	82	1MJ6166-2CA	161	0.052	16
22	24.5	180 M	2940	71	IE1	89.9	89.9	88.9	0.88	40	2.5	6.9	3.2	70	83	1MJ6183-2CA	175	0.077	16
30	33.5	200 L	2940	97	IE1	90.7	90.7	89.7	0.89	54	2.4	6.5	2.8	71	84	1MJ6206-2CA	250	0.14	16
37	41.5	200 L	2945	120	IE1	91.2	91.2	90.2	0.90	65	2.4	7.7	2.8	71	84	1MJ6207-2CA	266	0.16	16
45	51	225 M	2955	145	IE1	91.7	91.8	91.5	0.90	79 ²⁾	2.3	6.9	2.7	71	84	1MJ7223-2CB	335	0.24	13
55	62	250 M	2965	177	IE1	92.1	91.9	91.1	0.90	96	2.1	6.9	2.8	75	89	1MJ7253-2CB	445	0.45	13
75	84	280 S	2975	241	IE1	92.7	92.6	91.7	0.90	130	1.9	7.0	2.7	77	91	1MJ7280-2CC	600	0.79	10
90	101	280 M	2975	289	IE1	93.0	92.8	92.3	0.91	153 ²⁾	2.0	7.0	2.7	77	91	1MJ7283-2CC	640	0.92	10
110	123	315 S	2980	353	IE1	93.3	92.6	91.7	0.90	189	1.8	7.0	2.8	79	93	1MJ7310-2CC	840	1.3	10
132	148	315 M	2980	423	IE1	93.5	92.7	91.7	0.90	225	1.9	7.0	2.8	79	93	1MJ7313-2CC	900	1.5	10

Voltagess	No. of poles	Motor type 1MJ6	Motor type 1MJ7	Version	Order code(s)		
50 Hz	230 VΔ/400 VY	2	1MJ6070 ... 207	1MJ7223 ... 313	Standard	1	–
	400 VΔ/690 VY	2	1MJ6070 ... 207	1MJ7223 ... 313	Standard	6	–
	500 VY	2	1MJ6070 ... 207	1MJ7223 ... 313	Without additional charge	3	–
	500 VΔ	2	1MJ6106 ... 207	1MJ7223 ... 313	Without additional charge	5	–
Further voltages ¹⁾	For add. charges, voltage codes, order codes and descriptions, see suppl. and special versions.					9	...
Types of construction	No. of poles	Motor type 1MJ6	Motor type 1MJ7	Version	Order code(s)		
Without flange	IM B3/6/7/8, IM V6 ^{3) 4)}	2	1MJ6070 ... 207	1MJ7223 ... 313	Standard	0	–
With flange	IM B5 ^{3) 5)}	2	1MJ6070 ... 207	1MJ7223 ... 313	With additional charge	1	–
	IM V3 ^{3) 5)}	2	1MJ6070 ... 166	–	With additional charge	1	–
With standard flange	IM V1 with prot. cover ^{3) 5) 6)}	2	1MJ6183 ... 207	1MJ7223 ... 313	With additional charge	9	M1G
	IM B35	2	1MJ6070 ... 207	1MJ7223 ... 313	With additional charge	4	–
	IM B14, IM V19 ³⁾	2	1MJ6070 ... 097	–	With additional charge	6	–
With special flange	IM B34	2	1MJ6070 ... 097	–	With additional charge	2	–
	IM B14, IM V19 ³⁾	2	1MJ6070 ... 083	–	With additional charge	7	–
Further types of constr.	For add. charges, type of construction codes and descriptions, see suppl. and special versions.					9	...
Special versions		Motor type 1MJ6	Motor type 1MJ7		Order code(s)		
The 1MJ6/1MJ7 motors can also be ordered for use in type of protection Ex d/de (Zone 1), Dust Ex Zone 21, as well as Zone 22 with electrically conductive dust:							
Zone 1, 21, 22 (IP65)	Mains-fed operation	1MJ6070 ... 207	1MJ7223 ... 313	1MJ ... -Z	M76		
	Converter-fed operation (FC) with derating	1MJ6070 ... 207	1MJ7223 ... 313	1MJ ... -Z	M77		
Options	For add. charges, order codes and descriptions, see suppl. and special versions.				1MJ ... -Z	...+...+...+...	

Other versions up to 900 kW can be ordered as 2-pole versions from Lohrer in the DN series under order numbers 1PS4

(Ex de IIB) and 1PS5 (Ex de IIC), as well as with higher outputs and different numbers of poles.

- Voltages for 60 Hz can be ordered with voltage code 9 and the appropriate order code – see "Voltages" in supplements and special versions. Operating values at rated output for 60 Hz are available on request.
- For connection to 230 V, parallel feeders are necessary (see the "Introduction" section, "Connection, circuit and connection boxes").
- The following applies for explosion-proof 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.
- If motors 1MJ6183-... to 1MJ7313-... (motor series 1MJ6 frame size 180 M and higher to motor series 1MJ7 frame size 315 M) in types of construction with feet IM B6, IM B7 or IM V6 are fixed to the wall, it is recommended that the motor feet are supported.
- 1MJ7223-... to 1MJ7313-... motors (motor series 1MJ7 frame sizes 225 M to 315 M) are supplied with two screw-in eyebolts in accordance with IM B5, whereby one can be repositioned in accordance with IM V1 or IM V3. It is important to note that stress must not be applied perpendicular to the ring plane.
- The "Second shaft extension" option, order code K16 is not possible.

SIMOTICS XP 1MJ Explosion-Proof Motors

Motors for Zone 1 in type of protection Ex de



Self-ventilated motors with Standard Efficiency IE1
Cast-iron series 1MJ6, 1MJ7

Selection and ordering data (continued)

$P_{\text{rated, 50 Hz}}$	$P_{\text{rated, 60 Hz}}$	Frame size	$n_{\text{rated, 50 Hz}}$	$T_{\text{rated, 50 Hz}}$	IE class	$\eta_{\text{rated, 50 Hz, 4/4}}$	$\eta_{\text{rated, 50 Hz, 3/4}}$	$\eta_{\text{rated, 50 Hz, 2/4}}$	COS- $\phi_{\text{rated, 50 Hz, 4/4}}$	$I_{\text{rated, 50 Hz, 400 V}}$	$T_{\text{LR/}}$ t_{rated}	$I_{\text{LR/}}$ t_{rated}	$T_{\text{B/}}$ t_{rated}	$L_{\text{pfa, 50 Hz}}$	$L_{\text{WA, 50 Hz}}$	Cast-iron series	$m_{\text{IM B3}}$	J	Torque class
kW	kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	Order No.	kg	kgm ²	CL
Operating values at rated output																			
• Cooling: Self-ventilated (IC 411)																			
• Efficiency: Standard Efficiency IE1 in accordance with IEC 60034-30																			
• Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B)																			
4-pole: 1500 rpm at 50 Hz, 1800 rpm at 60 Hz¹⁾, temperature classes T1 to T4																			
0.25	0.29	071 M	1325	1.8	-	61.9	60.4	55.9	0.77	0.76	1.8	3.2	1.8	44	55	1MJ6070-4CB	20	0.00060	13
0.37	0.43	071 M	1375	2.5	-	65.8	64.8	60.8	0.74	1.1	2.0	3.6	2.0	44	55	1MJ6073-4CB	21	0.00080	13
0.55	0.63	080 M	1395	3.8	-	69.4	69.4	65.4	0.79	1.45	2.3	4.7	2.4	47	58	1MJ6080-4CA	24	0.0015	16
0.75	0.86	080 M	1395	5.1	IE1	72.1	72.1	68.1	0.79	1.9	2.5	5.0	2.6	47	58	1MJ6083-4CA	26	0.0018	16
1.1	1.27	090 L	1410	7.5	IE1	75.0	75.0	72.0	0.80	2.65	2.1	4.9	2.5	48	60	1MJ6096-4CA	32	0.0028	16
1.5	1.75	090 L	1420	10	IE1	77.2	77.7	74.2	0.80	3.5	2.2	5.8	2.6	48	60	1MJ6097-4CA	35	0.0035	16
2.2	2.55	100 L	1420	15	IE1	79.7	79.7	78.7	0.80	5.0	2.2	6.0	2.6	53	65	1MJ6106-4CA	44	0.0048	16
3	3.45	100 L	1415	20	IE1	81.5	81.5	80.5	0.82	6.5	2.7	6.4	3.0	53	65	1MJ6107-4CA	47	0.0058	16
4	4.55	112 M	1435	27	IE1	83.1	83.1	82.1	0.82	8.5	2.8	7.2	3.0	53	65	1MJ6113-4CA	58	0.011	16
5.5	6.3	132 S	1450	36	IE1	84.7	84.7	83.7	0.83	11.3	2.4	6.9	3.3	62	74	1MJ6130-4CA	76	0.018	16
7.5	8.6	132 M	1450	49	IE1	86.0	86.0	85.0	0.84	15	2.7	7.7	3.3	62	74	1MJ6133-4CA	90	0.024	16
11	12.6	160 M	1455	72	IE1	87.6	87.6	86.6	0.85	21.5	2.4	6.6	2.9	66	78	1MJ6163-4CA	128	0.040	16
15	17.3	160 L	1455	98	IE1	88.7	88.7	87.7	0.85	28.5	2.8	7.4	3.2	66	78	1MJ6166-4CA	158	0.052	16
18.5	21.3	180 M	1460	121	IE1	89.3	89.3	88.3	0.84	35.5	2.3	7.1	3.0	63	76	1MJ6183-4CA	175	0.13	16
22	25.3	180 L	1460	144	IE1	89.9	89.9	88.9	0.85	41.5	2.3	7.1	3.0	63	76	1MJ6186-4CA	189	0.15	16
30	34.5	200 L	1465	196	IE1	90.7	90.7	89.7	0.86	56	2.6	7.4	3.2	65	78	1MJ6207-4CA	247	0.24	16
37	42.5	225 S	1475	240	IE1	91.2	91.2	90.5	0.86	68 ²⁾	2.5	7.0	3.1	65	78	1MJ7220-4CA	325	0.44	16
45	52	225 M	1475	292	IE1	91.7	91.7	91.3	0.87	81 ²⁾	2.6	7.0	3.2	65	78	1MJ7223-4CA	355	0.52	16
55	63	250 M	1480	355	IE1	92.1	91.3	89.4	0.87	99	2.6	6.7	2.5	65	79	1MJ7253-4CA	465	0.79	16
75	86	280 S	1485	482	IE1	92.7	92.2	90.6	0.86	136	2.5	6.7	2.7	67	81	1MJ7280-4CA	630	1.4	16
90	104	280 M	1485	579	IE1	93.0	93.0	92.5	0.86	162 ²⁾	2.5	6.8	2.8	67	81	1MJ7283-4CA	680	1.6	16
110	127	315 S	1488	706	IE1	93.3	93.0	92.7	0.86	198	2.5	7.0	2.7	69	83	1MJ7310-4CA	870	2.2	16
132	152	315 M	1488	847	IE1	93.5	93.5	93.0	0.86	235	2.7	7.5	3.0	69	83	1MJ7313-4CA	950	2.7	16

Voltages			No. of poles	Motor type 1MJ6	Motor type 1MJ7	Version	Order code(s)	
50 Hz	230 VΔ/400 VY		4	1MJ6070 ... 207	1MJ7220 ... 313	Standard	1 -	
	400 VΔ/690 VY		4	1MJ6070 ... 207	1MJ7220 ... 313	Standard	6 -	
	500 VY		4	1MJ6070 ... 207	1MJ7220 ... 313	Without additional charge	3 -	
	500 VΔ		4	1MJ6106 ... 207	1MJ7220 ... 313	Without additional charge	5 -	
Further voltages ¹⁾ For add. charges, voltage codes, order codes and descriptions, see suppl. and special versions.							9 ...	
Types of construction			No. of poles	Motor type 1MJ6	Motor type 1MJ7	Version	Order code(s)	
Without flange			IM B3/6/7/8, IM V6 ^{3) 4)}	4	1MJ6070 ... 207	1MJ7220 ... 313	Standard	0 -
With flange			IM B5 ^{3) 5)}	4	1MJ6070 ... 207	1MJ7220 ... 313	With additional charge	1 -
			IM V3 ^{3) 5)}	4	1MJ6070 ... 166	-	With additional charge	1 -
			IM V1 with prot. cover ^{3) 5) 6)}	4	1MJ6183 ... 207	1MJ7220 ... 313	With additional charge	9 M1G
				4	1MJ6070 ... 207	1MJ7220 ... 313	With additional charge	4 -
			IM B35	4	1MJ6070 ... 207	1MJ7220 ... 313	With additional charge	6 -
With standard flange			IM B14, IM V19 ³⁾	4	1MJ6070 ... 097	-	With additional charge	2 -
			IM B34	4	1MJ6070 ... 097	-	With additional charge	7 -
With special flange			IM B14, IM V19 ³⁾	4	1MJ6070 ... 083	-	With additional charge	3 -
Further types of constr. For add. charges, type of construction codes and descriptions, see suppl. and special versions.							9 ...	
Special versions				Motor type 1MJ6	Motor type 1MJ7		Order code(s)	
The 1MJ6/1MJ7 motors can also be ordered for use in type of protection Ex d/de (Zone 1), Dust Ex Zone 21, as well as Zone 22 with electrically conductive dust:								
Zone 1, 21, 22 (IP65)			Mains-fed operation	1MJ6070 ... 207	1MJ7220 ... 313	1MJ ... - ... - ... - Z	M76	
			Converter-fed operation (FC) with derating	1MJ6070 ... 207	1MJ7220 ... 313	1MJ ... - ... - ... - Z	M77	
Options			For add. charges, order codes and descriptions, see suppl. and special versions.			1MJ ... - ... - ... - Z	...+...+...+...	

Other versions up to 1400 kW can be ordered as 4-pole versions from Loher in the DN series under order numbers 1PS4

(Ex de IIB) and 1PS5 (Ex de IIC), as well as with higher outputs and different numbers of poles.

- Voltages for 60 Hz can be ordered with voltage code 9 and the appropriate order code – see "Voltages" in supplements and special versions. Operating values at rated output for 60 Hz are available on request.
- For connection to 230 V, parallel feeders are necessary (see the "Introduction" section, "Connection, circuit and connection boxes").
- The following applies for explosion-proof 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.
- If motors 1MJ6183-... to 1MJ7313-... (motor series 1MJ6 frame size 180 M and higher to motor series 1MJ7 frame size 315 M) in types of construction with feet IM B6, IM B7 or IM V6 are fixed to the wall, it is recommended that the motor feet are supported.
- 1MJ7220-... to 1MJ7313-... motors (motor series 1MJ7 frame sizes 225 S to 315 M) are supplied with two screw-in eyebolts in accordance with IM B5, whereby one can be repositioned in accordance with IM V1 or IM V3. It is important to note that stress must not be applied perpendicular to the ring plane.
- The "Second shaft extension" option, order code K16 is not possible.

SIMOTICS XP 1MJ Explosion-Proof Motors

Motors for Zone 1 in type of protection Ex de

Self-ventilated motors with Standard Efficiency IE1
Cast-iron series 1MJ6, 1MJ7

IE1

Selection and ordering data (continued)

P _{rated} , 50 Hz kW	P _{rated} , 60 Hz kW	Frame size FS	Operating values at rated output											Cast-iron series 1MJ6/1MJ7 – IE1 version for Zone 1 in type of protection Ex de Order No.	m _{IM B3 J}		Torque class CL		
			n _r rated, 50 Hz rpm	T _r rated, 50 Hz Nm	IE class	η _r rated, 50 Hz, 4/4 %	η _r rated, 50 Hz, 3/4 %	η _r rated, 50 Hz, 2/4 %	COS- φ _r rated, 50 Hz, 4/4	I _r rated, 50 Hz, 400 V A	T _{LR} /I _r rated	I _{LR} /I _r rated	T _B /I _r rated		L _p dB(A), 50 Hz dB(A)	L _{WA} , 50 Hz dB(A)		kg	kgm ²
6-pole: 1000 rpm at 50 Hz, 1200 rpm at 60 Hz ¹⁾ , temperature classes T1 to T4																			
0.25	0.29	071 M	870	2.7	–	60.5	59.0	54.5	0.70	0.85	2.2	3.1	2.2	39	50	1MJ6073-6CA	16	0.0090	16
0.37	0.43	080 M	910	3.9	–	64.1	63.1	59.1	0.71	1.17	1.9	3.3	2.0	40	51	1MJ6080-6CA	25	0.015	16
0.55	0.63	080 M	900	5.8	–	65.0	64.0	60.0	0.74	1.65	2.0	3.5	2.1	40	51	1MJ6083-6CA	23	0.018	16
0.75	0.86	090 L	910	8.0	IE1	70.0	70.0	66.0	0.76	2.05	2.2	3.9	2.3	43	55	1MJ6096-6CA	34	0.028	16
1.1	1.27	090 L	905	12	IE1	72.9	72.9	69.9	0.75	2.9	2.4	4.3	2.4	43	55	1MJ6097-6CA	32	0.035	16
1.5	1.75	100 L	930	15	IE1	75.2	75.2	72.2	0.73	3.95	2.3	4.5	2.5	47	59	1MJ6106-6CA	46	0.063	16
2.2	2.55	112 M	945	22	IE1	77.7	78.2	75.2	0.76	5.4	2.2	4.8	2.5	52	64	1MJ6113-6CA	52	0.11	16
3	3.45	132 S	945	30	–	79.0	79.5	77.0	0.75	7.3	2.0	4.8	2.2	63	75	1MJ6130-6CA	78	0.15	16
4	4.55	132 M	945	40	–	80.0	80.0	79.0	0.76	9.5	2.0	5.0	2.4	63	75	1MJ6133-6CA	85	0.19	16
5.5	6.3	132 M	950	55	IE1	83.1	83.1	82.1	0.76	12.6	2.2	5.4	2.5	63	75	1MJ6134-6CA	92	0.25	16
7.5	8.6	160 M	960	75	IE1	84.7	84.7	83.7	0.72	17.8	2.1	5.1	2.5	66	78	1MJ6163-6CA	132	0.041	16
11	12.6	160 L	960	109	IE1	86.4	86.4	85.4	0.74	25	2.3	5.5	2.5	66	78	1MJ6166-6CA	171	0.049	16
15	18	180 L	970	148	IE1	87.7	87.7	86.7	0.83	29.5	2.6	6.3	2.4	66	78	1MJ6186-6CA	190	0.20	16
18.5	22	200 L	975	181	IE1	88.6	88.6	87.6	0.82	37	2.6	6.3	2.3	66	78	1MJ6206-6CA	240	0.29	16
22	26.5	200 L	975	215	IE1	89.2	89.2	88.2	0.83	43	2.5	5.7	2.3	66	78	1MJ6207-6CA	255	0.33	16
30	36	225 M	978	293	IE1	90.2	90.7	90.8	0.84	57 ²⁾	2.6	5.7	2.2	66	78	1MJ7223-6CA	330	0.57	16
37	44.5	250 M	980	361	IE1	90.8	91.3	91.4	0.84	70	2.6	6.0	2.1	60	74	1MJ7253-6CA	440	0.89	16
45	54	280 S	982	438	IE1	91.4	91.8	91.9	0.86	83	2.4	6.0	2.3	60	74	1MJ7280-6CA	560	1.3	16
55	66	280 M	984	534	IE1	91.9	92.1	91.9	0.86	100	2.5	6.2	2.4	60	74	1MJ7283-6CA	600	1.5	16
75	90	315 S	988	725	IE1	92.6	92.4	92.0	0.85	138	2.4	6.2	2.5	63	77	1MJ7310-6CA	810	2.4	16
90	108	315 M	988	870	IE1	92.9	92.9	92.7	0.85	165	2.4	6.2	2.5	63	77	1MJ7313-6CA	870	2.9	16

Voltagess	No. of poles	Motor type 1MJ6	Motor type 1MJ7	Version	Order code(s)
50 Hz 230 VΔ/400 VY	6	1MJ6073 ... 207	1MJ7223 ... 313	Standard	1 –
400 VΔ/690 VY	6	1MJ6073 ... 207	1MJ7223 ... 313	Standard	6 –
500 VY	6	1MJ6073 ... 207	1MJ7223 ... 313	Without additional charge	3 –
500 VΔ	6	1MJ6106 ... 207	1MJ7223 ... 313	Without additional charge	5 –
Further voltages ¹⁾	For add. charges, voltage codes, order codes and descriptions, see suppl. and special versions.				9 ...

Types of construction	No. of poles	Motor type 1MJ6	Motor type 1MJ7	Version	Order code(s)
Without flange	6	1MJ6073 ... 207	1MJ7223 ... 313	Standard	0 –
With flange	6	1MJ6073 ... 207	1MJ7223 ... 313	With additional charge	1 –
	6	1MJ6073 ... 166	–	With additional charge	1 –
With standard flange	6	1MJ6186 ... 207	1MJ7223 ... 313	With additional charge	9 – M1G
	6	1MJ6073 ... 207	1MJ7223 ... 313	With additional charge	4 –
	6	1MJ6073 ... 207	1MJ7223 ... 313	With additional charge	6 –
With special flange	6	1MJ6073 ... 097	–	With additional charge	2 –
	6	1MJ6073 ... 097	–	With additional charge	7 –
Further types of constr.	6	1MJ6073 ... 083	–	With additional charge	3 –
For add. charges, type of construction codes and descriptions, see suppl. and special versions.					9 ...

Special versions	Motor type 1MJ6	Motor type 1MJ7	Order code(s)
The 1MJ6/1MJ7 motors can also be ordered for use in type of protection Ex d/de (Zone 1), Dust Ex Zone 21, as well as Zone 22 with electrically conductive dust:			
Zone 1, 21, 22 (IP65) Mains-fed operation	1MJ6073 ... 207	1MJ7223 ... 313	1MJ ... -Z M76
Converter-fed operation (FC) with derating	1MJ6073 ... 207	1MJ7223 ... 313	1MJ ... -Z M77
Options	For add. charges, order codes and descriptions, see suppl. and special versions.		1MJ ... -Z ...+...+...+...

Other versions up to 1600 kW can be ordered as 6-pole versions from Loher in the DN series under order numbers 1PS4 (Ex de IIB) and 1PS5 (Ex de IIC), as well as with higher outputs and different numbers of poles.

¹⁾ Voltages for 60 Hz can be ordered with voltage code 9 and the appropriate order code – see "Voltages" in supplements and special versions. Operating values at rated output for 60 Hz are available on request.

²⁾ For connection to 230 V, parallel feeders are necessary (see the "Introduction" section, "Connection, circuit and connection boxes").

³⁾ The following applies for explosion-proof 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.

⁴⁾ If motors 1MJ6183-... to 1MJ7313-... (motor series 1MJ6 frame size 180 M and higher to motor series 1MJ7 frame size 315 M) in types of construction with feet IM B6, IM B7 or IM V6 are fixed to the wall, it is recommended that the motor feet are supported.

⁵⁾ 1MJ7220-... to 1MJ7313-... motors (motor series 1MJ7 frame sizes 225 S to 315 M) are supplied with two screw-in eyebolts in accordance with IM B5, whereby one can be repositioned in accordance with IM V1 or IM V3. It is important to note that stress must not be applied perpendicular to the ring plane.

⁶⁾ The "Second shaft extension" option, order code K16 is not possible.

SIMOTICS XP 1MJ Explosion-Proof Motors

Motors for Zone 1 in type of protection Ex de

IE1

Self-ventilated motors with Standard Efficiency IE1 Cast-iron series 1MJ6, 1MJ7

Selection and ordering data (continued)

P _{rated} 50 Hz	P _{rated} 60 Hz	Frame size	Operating values at rated output											Cast-iron series 1MJ6, 1MJ7 – IE1 version for Zone 1 in type of protection Ex de	m _{IM B3}	J	Torque class		
			n _{rated} 50 Hz	T _{rated} 50 Hz	IE class	η _{rated} 50 Hz, 4/4	η _{rated} 50 Hz, 3/4	η _{rated} 50 Hz, 2/4	COS- φ _{rated} 50 Hz, 400 V	I _{rated}	T _{LR} / I _{rated}	I _{LR} / I _{rated}	T _B / I _{rated}					L _{pfA} 50 Hz	L _{WA} 50 Hz
kW	kW	FS	rpm	Nm		%	%	%		A									
<ul style="list-style-type: none"> Cooling: Self-ventilated (IC 411) Efficiency: Standard Efficiency IE1 in accordance with IEC 60034-30 Insulation: Thermal class 155 (temperature class F), IP55 degree of protection, utilization in accordance with thermal class 130 (temperature class B) 																			
8-pole: 750 rpm at 50 Hz, 900 rpm at 60 Hz ¹⁾ , temperature classes T1 to T4																			
0.37	0.43	090 L	655	5.3	–	58.8	57.3	52.8	0.76	1.2	1.4	2.8	1.7	41	53	1MJ6096-8CB	28	0.0025	13
0.55	0.63	090 L	655	7.9	–	62.9	61.9	56.9	0.76	1.66	1.5	2.9	1.7	41	53	1MJ6097-8CB	30	0.0035	13
0.75	0.86	100 L	665	11	–	62.9	61.9	56.9	0.77	2.25	1.6	3.5	1.8	45	57	1MJ6106-8CB	40	0.0053	13
1.1	1.27	100 L	685	16	–	72.0	72.0	68.0	0.74	3.0	1.8	3.9	2.0	45	57	1MJ6107-8CB	48	0.0070	13
1.5	1.75	112 M	700	21	–	72.1	72.1	68.1	0.73	4.1	1.8	4.4	2.0	49	61	1MJ6113-8CB	52	0.013	13
2.2	2.55	132 S	695	30	–	72.2	72.2	68.2	0.72	6.1	1.7	4.2	2.1	53	65	1MJ6130-8CB	78	0.014	13
3	3.45	132 M	700	40	–	74.2	74.2	71.2	0.72	8.1	1.9	4.4	2.2	53	65	1MJ6133-8CB	85	0.019	13
4	4.55	160 M	715	54	–	79.3	79.8	77.3	0.72	10.1	2.1	4.8	2.3	63	75	1MJ6163-8CB	119	0.035	13
5.5	6.3	160 M	710	74	–	81.4	81.4	80.4	0.72	13.6	2.3	5.1	3.1	63	75	1MJ6164-8CB	134	0.043	13
7.5	8.6	160 L	715	100	–	82.4	82.4	81.4	0.72	18.2	2.6	5.8	2.8	63	75	1MJ6166-8CB	159	0.062	13
11	13.2	180 L	725	145	–	85.5	85.5	84.5	0.70	26.5	2.0	5.0	2.2	60	73	1MJ6186-8CB	191	0.21	13
15	18	200 L	725	198	–	86.1	86.1	85.1	0.78	32	2.1	5.0	2.2	58	71	1MJ6207-8CB	263	0.37	13
18.5	22	225 S	725	244	–	87.5	88.4	88.6	0.80	38	2.1	5.0	2.2	58	71	1MJ7220-8CB	325	0.58	13
22	26.5	225 M	725	290	–	88.0	88.7	88.7	0.81	44.5	2.1	5.0	2.2	58	71	1MJ7223-8CB	350	0.66	13
30	36	250 M	730	392	–	89.7	90.5	91.0	0.81	60	2.1	5.0	2.1	57	71	1MJ7253-8CB	465	1.1	13
37	44.5	280 S	732	483	–	90.4	91.0	90.9	0.82	72	2.2	5.5	2.2	58	72	1MJ7280-8CB	570	1.4	13
45	54	280 M	734	585	–	91.0	91.6	91.6	0.83	86	2.2	5.5	2.2	58	72	1MJ7283-8CB	620	1.6	13
55	66	315 S	738	712	–	91.6	92.0	91.8	0.82	106	2.2	6.0	2.4	62	76	1MJ7310-8CB	780	2.3	13
75	90	315 M	738	970	–	92.3	92.4	92.2	0.82	143	2.3	6.2	2.5	62	76	1MJ7313-8CB	890	3.0	13

Voltages		No. of poles	Motor type 1MJ6	Motor type 1MJ7	Version	Order code(s)		
50 Hz	230 VΔ/400 VY	8	1MJ6096 ... 207	1MJ7220 ... 313	Standard	1 –		
	400 VΔ/690 VY	8	1MJ6096 ... 207	1MJ7220 ... 313	Standard	6 –		
	500 VY	8	1MJ6096 ... 207	1MJ7220 ... 313	Without additional charge	3 –		
	500 VΔ	8	1MJ6106 ... 207	1MJ7220 ... 313	Without additional charge	5 –		
Further voltages ¹⁾		For add. charges, voltage codes, order codes and descriptions, see suppl. and special versions.				9 ...		
Types of construction		No. of poles	Motor type 1MJ6	Motor type 1MJ7	Version	Order code(s)		
Without flange		IM B3/6/7/8, IM V6 ²⁾³⁾		8	1MJ6096 ... 207	1MJ7220 ... 313	Standard	0 –
With flange		IM B5 ²⁾⁴⁾		8	1MJ6096 ... 207	1MJ7220 ... 313	With additional charge	1 –
		IM V3 ²⁾⁴⁾		8	1MJ6096 ... 166	–	With additional charge	1 –
		IM V1 with protective cover ²⁾⁴⁾⁵⁾		8	1MJ6186 ... 207	1MJ7220 ... 313	With additional charge	9 M1G
With standard flange		IM B35		8	1MJ6096 ... 207	1MJ7220 ... 313	With additional charge	4 –
		IM B14, IM V19 ²⁾		8	1MJ6096 ... 097	–	With additional charge	6 –
		IM B34		8	1MJ6096 ... 097	–	With additional charge	2 –
Further types of constr.		For add. charges, type of construction codes and descriptions, see suppl. and special versions.				7 –		
						9 ...		
Special versions		Motor type 1MJ6		Motor type 1MJ7		Order code(s)		
The 1MJ6/1MJ7 motors can also be ordered for use in type of protection Ex d/de (Zone 1), Dust Ex Zone 21, as well as Zone 22 with electrically conductive dust:								
Zone 1, 21, 22 (IP65)	Mains-fed operation	1MJ6096 ... 207		1MJ7223 ... 313		1MJ ... - ... -Z M76		
	Converter-fed operation (FC) with derating	1MJ6096 ... 207		1MJ7223 ... 313		1MJ ... - ... -Z M77		
Options		For add. charges, order codes and descriptions, see suppl. and special versions.				1MJ ... - ... -Z ...+...+...+...		

Other versions up to 1350 kW can be ordered as 8-pole versions from Loher in the DN series under order numbers 1PS4 (Ex de IIB) and 1PS5 (Ex de IIC), as well as with higher outputs and different numbers of poles.

1) Voltages for 60 Hz can be ordered with voltage code 9 and the appropriate order code – see "Voltages" in supplements and special versions. Operating values at rated output for 60 Hz are available on request.

2) The following applies for explosion-proof 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.

3) If motors 1MJ6183-... to 1MJ7313-... (motor series 1MJ6 frame size 180 M and higher to motor series 1MJ7 frame size 315 M) in types of construction with feet IM B6, IM B7 or IM V6 are fixed to the wall, it is recommended that the motor feet are supported.

4) 1MJ7220-... to 1MJ7313-... motors (motor series 1MJ7 frame sizes 225 S to 315 M) are supplied with two screw-in eyebolts in accordance with IM B5, whereby one can be repositioned in accordance with IM V1 or IM V3. It is important to note that stress must not be applied perpendicular to the ring plane.

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