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	P_{rated}, 60 Hz [1]	Frame size	Operating values at rated output: 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, 4/4	I_{rated}, 50 Hz, 400 V	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	L_{pfA}, 50 Hz	L_{WA}, 50 Hz	Cast-iron series 1MJ6/1MJ7 – *IE1 version for Zone 1 in type of protection Ex de*	$m_{IM\ B3}$	J	Torque class
kW	kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	Order No.	kg	kgm²	CL
• 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

Voltages		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	–
		2	1MJ6183 ... 207	1MJ7223 ... 313	With additional charge	9	M1G
	IM V1 with prot. cover [3] [5] [6]	2	1MJ6070 ... 207	1MJ7223 ... 313	With additional charge	4	–
	IM B35	2	1MJ6070 ... 207	1MJ7223 ... 313	With additional charge	6	–
With standard flange	IM B14, IM V19 [3]	2	1MJ6070 ... 097	–	With additional charge	2	–
	IM B34	2	1MJ6070 ... 097	–	With additional charge	7	–
With special flange	IM B14, IM V19 [3]	2	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	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 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) 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.

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

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 1)	Frame size	Operating values at rated output: 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, 4/4	I_{rated}, 50 Hz, 400 V	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	L_{pfA}, 50 Hz	L_{WA}, 50 Hz	Cast-iron series 1MJ6/1MJ7 – *IE1 version for Zone 1 in type of protection Ex de*	$m_{IM\ B3}$	J	Torque class
kW	kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	Order No.	kg	kgm^2	CL
• 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 Hz 1), 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	–
		4	1MJ6183 ... 207	1MJ7220 ... 313	With additional charge	9	**M1G**
	IM V1 with prot. cover 3) 5) 6)	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.

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.

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	P_{rated}, 60 Hz [1]	Frame size	Operating values at rated output: 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, 4/4	I_{rated}, 50 Hz, 400 V	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	L_{pfA}, 50 Hz	L_{WA}, 50 Hz	Cast-iron series 1MJ6/1MJ7 – *IE1 version for Zone 1 in type of protection Ex de*	$m_{IM\ B3}$	J	Torque class
kW	kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	Order No.	kg	kgm²	CL
• 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)																			
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	0.00090	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	0.0015	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	0.0018	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	0.0028	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	0.0035	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	0.0063	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	0.011	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	0.015	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	0.019	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	0.025	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

Voltages		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	IM B3/6/7/8, IM V6 [3] [4]	6	1MJ6073 ... 207	1MJ7223 ... 313	**Standard**	0	–
With flange	IM B5 [3] [5]	6	1MJ6073 ... 207	1MJ7223 ... 313	With additional charge	1	–
	IM V3 [3] [5]	6	1MJ6073 ... 166	–	With additional charge	1	–
		6	1MJ6186 ... 207	1MJ7223 ... 313	With additional charge	9	**M1G**
	IM V1 with prot. cover [3] [5] [6]	6	1MJ6073 ... 207	1MJ7223 ... 313	With additional charge	4	–
	IM B35	6	1MJ6073 ... 207	1MJ7223 ... 313	With additional charge	6	–
With standard flange	IM B14, IM V19 [3]	6	1MJ6073 ... 097	–	With additional charge	2	–
	IM B34	6	1MJ6073 ... 097	–	With additional charge	7	–
With special flange	IM B14, IM V19 [3]	6	1MJ6073 ... 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	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.

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 [1]	Frame size	Operating values at rated output: 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, 4/4	I_{rated}, 50 Hz, 400 V	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	L_{pfA}, 50 Hz	L_{WA}, 50 Hz	Cast-iron series 1MJ6, 1MJ7 – *IE1 version for Zone 1 in type of protection Ex de*	$m_{IM\ B3}$	J	Torque class
kW	kW	FS	rpm	Nm		%	%	%		A				dB(A)	dB(A)	Order No.	kg	kgm²	CL
• 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**	–
		8	1MJ6186 ... 207	1MJ7220 ... 313	With additional charge	**9**	**M1G**
	IM V1 with protective cover [2] [4] [5]	8	1MJ6096 ... 207	1MJ7220 ... 313	With additional charge	**4**	–
	IM B35	8	1MJ6096 ... 207	1MJ7220 ... 313	With additional charge	**6**	–
With standard flange	IM B14, IM V19 [2]	8	1MJ6096 ... 097	–	With additional charge	**2**	–
	IM B34	8	1MJ6096 ... 097	–	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	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.