Selection and ordering data

Rated output	Temperature classes	Size	Order No. Order No. supplement for voltage and type of construction, see table below	Operating data at rated output: Rated speed	Efficiency η [1]	Power factor p.f.	Rated current at 380 V to 420 V	Rated torque	Starting torque For direct-on-line as multiple of the rated torque	Starting current	Stalling torque starting torque	t_E time For temperature classes T1 T2	t_E time For temperature classes T3	Torque class	Moment of inertia J	Weight Type of constr. IM B 3
kW				rpm	%		A	Nm				s	s	KL	kg m^2	approx. kg
Temperature classes T1 to T3, IP55 degree of protection, temperature class F																**ATEX**
	3000 rpm, 2-pole, 50 Hz															
2.5	T1–T3	100 L	**1MA6 106–2BA . .**	2865	82	0.87	5.3	8.3	2.6	7.4	2.8	9	8	16	0.0038	34
3.3	T1–T3	112 M	**1MA6 113–2BB . .**	2875	84	0.89	6.7	11	2.1	6.6	2.3	10	9	13	0.0055	43
4.6	T1–T3	132 S	**1MA6 130–2BB . .**	2920	83	0.90	9.2	15	1.9	6.8	2.5	15	13	13	0.016	53
5.5	T3	132 S	**1MA6 131–2BB . .** [2]	2925	86	0.92	10.6	18	2.2	7.7	2.7	15	13	13	0.021	58
6.5	T1,T2	132 S		2900	85	0.93	12.5	21	1.9	6.5	2.3	12	7	13	0.021	58
7.5	T3	160 M	**1MA6 163–2BB . .** [2]	2945	87.5	0.90	14.3	24	2.2	7.6	3.1	29	18	13	0.034	96
9.5	T1,T2	160 M		2920	87	0.91	18.1	31	1.7	6.0	2.4	24	–	13	0.034	96
10	T3	160 M	**1MA6 164–2BB . .** [2]	2940	88.5	0.92	18.6	33	2.1	7.6	2.9	23	12	13	0.04	105
13 ●	T1,T2	160 M		2910	87.5	0.92	24.5	43	1.6	5.8	2.2	16	–	13	0.04	105
12.5	T3	160 L	**1MA6 166–2BB . .** [2]	2940	89	0.93	23.0	41	2.3	7.6	3.0	21	9	13	0.052	115
16 ●	T1,T2	160 L		2910	87	0.93	30.0	53	1.8	5.8	2.3	15	–	13	0.052	115
15	T3	180 M	**1MA6 183–2BC . .**	2955	92	0.87	29	49	2	6.9	3.3	30	14	10	0.077	170
19	T1,T2			2935	91.1	0.88	36.5	62	1.6	5.5	2.6	24		10		
20	T3	200 L	**1MA6 206–2BC . .**	2950	91.2	0.87	49	64	1.9	6	2.9	35	14	10	0.14	245
25	T1,T2			2960	90.6	0.86	39	81	1.5	4.8	2.3	28		10		
24	T3		**1MA6 207–2BC . .**	2965	92	0.87	46	77	2	6.4	3	35	10	10	0.16	246
31	T1,T2			2950	91.4	0.88	60	100	1.5	4.9	2.3	26		10		
28	T3	225 M	**1MA6 223–2BC . .**	2970	93.6	0.9	51	90	1.8	6.4	2.7	30	13	10	0.24	310
38	T1,T2		**1MA6 223–2AC . .**	2970	93.9	0.89	69 [3]	122	1.8	7	2.7	16		10		
36	T3	250 M	**1MA6 253–2BC . .**	2975	93.5	0.91	64	116	1.5	6.6	2.7	30	11	10	0.45	415
47	T1,T2		**1MA6 253–2AC . .**	2975	93.9	0.9	85	151	1.5	6.5	2.7	18		10		
47	T3	280 S	**1MA6 280–2BD . .**	2983	94.5	0.9	84	150	1.5	7.1	2.9	30	23	7	0.79	570
64	T1,T2	280 S	**1MA6 280–2AD . .**	2980	94.3	0.89	115	205	1.5	7.8	2.9	19		7		
58	T3	280 M	**1MA6 283–2BD . .**	2982	94.7	0.91	104	186	1.5	7.2	2.8	27	11	7	0.92	610
76	T1,T2	280 M	**1MA6 283–2AD . .**	2978	94.8	0.9	134	244	1.5	7.5	2.8	15		7		
68	T3	315 S	**1MA6 310–2BD . .**	2985	94	0.91	120	218	1.4	7.1	2.8	50	21	7	1.3	790
95	T1,T2	315 S	**1MA6 310–2AD . .**	2985	94.6	0.9	169	304	1.5	7.3	2.9	30		7		
80	T3	315 M	**1MA6 313–2BD . .**	2985	94.8	0.91	142	256	1.6	7	2.8	40	19	7	1.5	850
112	T1,T2	315 M	**1MA6 313–2AD . .**	2985	94.8	0.91	198 [3]	358	1.4	7.5	2.7	21		7		
100	T3	315 L	**1MA6 316–2BD . .**	2984	94.9	0.92	174	320	1.4	6.8	2.7	40	11	7	1.8	990
135	T1,T2		**1MA6 316–2AD . .**	2984	95.2	0.91	234	432	1.6	7.4	2.9	17		7		
125	T3		**1MA6 317–2BD . .**	2985	95.5	0.91	214	400	1.5	7.3	2.5	30	7	7	2.3	1100
165	T1,T2		**1MA6 317–2AD . .**	2986	95.7	0.91	280	528	1.8	9.3	2.9	7		7		

● Used acc. to class F.

Order No. supplements

Motor type	Penultimate position: Voltage identifier 50 Hz				Final position: Type of construction identifier IM B 3	Price supplement IM B 5	IM V 1 With protective cover	IM B 14 With standard flange	IM B 14 With special flange	IM B 35
	230 VΔ / 400 V$\curlyvee$	400 VΔ / 690 V$\curlyvee$	500 V$\curlyvee$	500 VΔ						
	For Δ-connection, overload protection with phase-failure protection must be provided.									
1MA6 106 to 1MA6 166	**1**	**6**	**3**	**5**	**0**	**1**	**4**	**2**	**3**	**6**
1MA6 183 to 1MA6 313	**1**	**6**	**3**	**5**	**0**	**1**	**4**	**–**	**–**	**6**
1MA6 316 to 1MA6 317	**–**	**6**	**3**	**5**	**0**	**–**	**4**	**–**	**–**	**6**

Other voltage and/or frequency, voltage identifier **"9"**.
Order codes are required for this purpose (see "Technical information", "Voltages, currents and frequencies").

For other types of construction, see "Technical information", "Types of construction".

1MA · EEx e II type of protection · Cast iron housing

Selection and ordering data

Rated output	Temperature classes	Size	Order No. Order No. supplement for voltage and type of construction, see table below	Operating data at rated output: Rated speed	Efficiency η [1]	Power factor p.f.	Rated current at 380 V to 420 V	Rated torque	Starting torque For direct-on-line as multiple of the rated torque	Starting current	Stalling torque starting torque	t_E time For temperature classes T1 T2	t_E time For temperature classes T3	Torque class	Moment of inertia J	Weight Type of constr. IM B 3
kW				rpm	%		A	Nm				s	s	KL	kg m^2	approx. kg
Temperature classes T1 to T3, IP55 degree of protection, temperature class F																**ATEX**
	1500 rpm, 4-pole, 50 Hz															
2	T1–T3	100 L	**1MA6 106–4BA . .**	1420	80	0.82	4.5	14	2.5	6.4	2.7	13	11	16	0.0048	33
2.5	T1–T3	100 L	**1MA6 107–4BA . .**	1415	81	0.83	5.5	17	2.6	6.4	2.7	12	10	16	0.0058	36
3.6	T1–T3	112 M	**1MA6 113–4BA . .**	1435	85	0.83	7.5	24	2.6	7.2	2.9	10	9	16	0.011	45
5	T1–T3	132 S	**1MA6 130–4BA . .**	1445	86	0.82	10.4	33	2.7	6.6	3.2	10	9	16	0.021	55
6.8	T1–T3	132 M	**1MA6 133–4BA . .**	1460	87	0.82	14.0	44	3.0	7.7	3.6	10	9	16	0.027	62
10	T1–T3	160 M	**1MA6 163–4BB . .**	1455	88	0.87	19.7	66	2.3	6.5	2.7	17	10	13	0.052	100
13.5	T1–T3	160 L	**1MA6 166–4BB . .**	1465	89	0.84	27	88	2.4	6.9	3.0	18	9	13	0.057	114
15	T3	180 M	**1MA6 183–4BC . .**	1465	90.7	0.80	31	97	1.8	6.1	2.9	18	11	10	0.13	165
17	T1,T2	180 M		1460	90.0	0.82	35.5	111	1.6	5.3	2.4	13		10		
17.5	T3	180 L	**1MA6 186–4BC . .**	1475	91.6	0.80	36	114	1.8	6.4	3	16	11	10	0.15	177
20	T1,T2	180 L		1465	90.6	0.82	41 [2]	130	1.6	5.6	2.6	13		10		
24	T3	200 L	**1MA6 207–4BC . .**	1480	92.5	0.82	47.5	155	2.2	7.9	3.1	20	11	10	0.32	280
27	T1,T2			1475	92.4	0.84	53	175	1.9	7.1	2.7	19		10		
30	T3	225 S	**1MA6 220–4BC . .**	1481	93.3	0.83	59	193	1.6	6.7	2.7	13	13	10	0.44	300
33	T1,T2	225 S		1480	93.1	0.84	64 [2]	213	1.4	6.2	2.5	11		10		
36	T3	225 M	**1MA6 223–4BC . .**	1484	93.8	0.84	70 [2]	232	1.7	6.9	2.8	12	12	10	0.52	330
40	T1,T2	225 M		1480	93.6	0.85	77 [2]	258	1.5	6.2	2.5	10		10		
44	T3	250 M	**1MA6 253–4BC . .**	1485	94	0.85	83	283	1.7	7.3	2.5	18	11	10	0.79	435
50	T1,T2			1485	93.8	0.86	94	322	1.5	6.4	2.1	15		10		
58	T3	280 S	**1MA6 280–4BC . .**	1488	94.6	0.84	111	372	1.7	6.3	2.5	30	7	10	1.4	610
68	T1,T2	280 S		1485	94.5	0.85	131	437	1.5	5.3	2.1	23		10		
70	T3	280 M	**1MA6 283–4BC . .**	1488	94.8	0.85	130	449	1.7	7	2.5	26	6	10	1.6	660
80	T1,T2	280 M		1485	94.8	0.87	150 [2]	514	1.5	6	2.2	20		10		
84	T3	315 S	**1MA6 310–4BD . .**	1492	95.4	0.84	158	538	1.7	7.7	2.8	28	8	7	2.2	830
100	T1,T2	315 S		1490	95.3	0.85	188	641	1.4	6.5	2.4	24		7		
100	T3	315 M	**1MA6 313–4BD . .**	1492	95.8	0.85	185	640	1.6	7.2	2.5	29	7	7	2.7	910
120	T1,T2	315 M		1488	95.7	0.86	222 [2]	770	1.3	6	2.1	24		7		
115	T3	315 L	**1MA6 316–4BD . .**	1490	95.6	0.86	214	740	1.7	7.5	2.5	28	5	7	3.2	1060
135	T1,T2			1488	95.5	0.86	248	868	1.4	6.4	2.1	21		7		
135	T3		**1MA6 317–4BD . .**	1492	95.8	0.86	245	868	1.7	7.8	2.8	26	7	7	4.2	1200
165	T1,T2			1485	95.8	0.87	305	1061	1.5	6.3	2.3	17		7		

Order No. supplements

Motor type	Penultimate position: Voltage identifier 50 Hz 230 VΔ / 400 V$\curlyvee$	400 VΔ / 690 V$\curlyvee$	500 V$\curlyvee$	500 VΔ	Final position: Type of construction identifier IM B 3	Price supplement IM B 5	IM V 1 With protective cover	IM B 14 With standard flange	IM B 14 With special flange	IM B 35
	For Δ-connection, overload protection with phase-failure protection must be provided.									
1MA6 106 to 1MA6 166	**1**	**6**	**3**	**5**	**0**	**1**	**4**	**2**	**3**	**6**
1MA6 183 to 1MA6 313	**1**	**6**	**3**	**5**	**0**	**1**	**4**	**–**	**–**	**6**
1MA6 316 to 1MA6 317	**–**	**6**	**3**	**5**	**0**	**–**	**4**	**–**	**–**	**6**

Other voltage and/or frequency, voltage identifier **"9"**.
Order codes are required for this purpose (see "Technical information", "Voltages, currents and frequencies").

For other types of construction, see "Technical information", "Types of construction".

1) With reference to 75 °C.

2) For connection to 230 V, parallel supply cables are required (see "Technical information", "Connections, circuits and terminal blocks").

Selection and ordering data

Rated output	Temperature classes	Size	Order No. / Order No. supplement for voltage and type of construction, see table below	Operating data at rated output: Rated speed	Efficiency η [1]	Power factor p.f.	Rated current at 380 V to 420 V	Rated torque	Starting torque / For direct-on-line as multiple of the rated torque	Starting current / For direct-on-line as multiple of the rated current	Stalling torque / For direct-on-line starting as multiple of the rated torque	t_E time / For temperature classes T1 T2	t_E time / For temperature classes T3	Torque class	Moment of inertia J	Weight / Type of constr. IM B 3
kW				rpm	%		A	Nm				s	s	KL	kg m^2	approx. kg
Temperature classes T1 to T3, IP55 degree of protection, temperature class F																**ATEX**
	1000 rpm, 6-pole, 50 Hz															
1.3	T1–T3	100 L	**1MA6 106–6BA . .**	935	77	0.73	3.35	13	2.4	4.8	2.5	26	26	16	0.0063	33
1.9	T1–T3	112 M	**1MA6 113–6BB . .**	940	79	0.76	4.7	19	2.3	5.0	2.5	19	16	13	0.011	40
2.6	T1–T3	132 S	**1MA6 130–6BB . .**	945	79	0.75	6.5	26	1.8	4.4	2.4	21	18	13	0.015	50
3.5	T1–T3	132 M	**1MA6 133–6BB . .**	955	81	0.72	9.0	35	2.3	5.1	2.8	16	13	13	0.019	57
4.8	T1–T3	132 M	**1MA6 134–6BB . .**	950	83	0.76	11.4	48	2.4	5.6	2.8	13	11	13	0.025	66
6.6	T1–T3	160 M	**1MA6 163–6BB . .**	960	85	0.75	14.9	65	2.7	6.4	3.1	18	9	13	0.041	103
9.7	T1–T3	160 L	**1MA6 166–6BB . .**	965	88	0.76	21.0	96	2.8	7.7	2.2	15	8	13	0.055	122
13.2	T1–T3	180 L	**1MA6 186–6BC . .**	975	89.6	0.78	28.5	129	1.6	5.4	2.5	22	18	10	0.20	177
16.5	T1–T3	200 L	**1MA6 206–6BC . .**	980	90.5	0.81	34.5	161	1.7	5.4	2.6	23	19	10	0.29	220
20	T1–T3		**1MA6 207–6BC . .**	980	90.8	0.82	41	195	1.7	5.6	2.6	22	17	10	0.33	235
27	T1–T3	225 M	**1MA6 223–6BC . .**	975	92.5	0.82	54	263	1.6	5.6	2.5	15	15	10	0.57	305
33	T1–T3	250 M	**1MA6 253–6BC . .**	985	93	0.83	66	320	1.6	5.3	2.4	16	16	10	0.89	410
40	T1–T3	280 S	**1MA6 280–6BC . .**	990	93.3	0.85	77	386	1.5	6.2	2.6	13	13	10	1.3	540
46	T3	280 M	**1MA6 283–6BC . .**	988	93.5	0.86	86	445	1.6	6.5	2.5		12	10	1.5	580
50	T1,T2	280 M		987	93.3	0.86	96	484	1.5	5.8	2.3	14		10		
64	T3	315 S	**1MA6 310–6BC . .**	991	94.3	0.84	124	617	1.7	6.2	2.5		14	10	2.4	770
68	T1,T2	315 S		990	94.2	0.85	131	656	1.6	5.9	2.3	22		10		
76	T3	315 M	**1MA6 313–6BC . .**	991	94.6	0.84	146	732	1.7	6.4	2.5		8	10	2.9	830
82	T1,T2	315 M		990	94.5	0.84	158	791	1.6	5.9	2.3	18		10		
92	T3	315 L	**1MA6 316–6BC . .**	991	95	0.85	172	887	1.7	6.5	2.5		9	10	3.5	970
98	T1,T2			990	94.8	0.85	185	945	1.6	6.1	2.3	20		10		
110	T3		**1MA6 317–6BC . .**	991	95.2	0.84	210	1060	1.7	6.8	2.5		6	10	4.3	1060
120	T1,T2			990	95	0.85	230	1160	1.6	6.2	2.3	16		10		
125	T3		**1MA6 318–6BC . .**	991	95.2	0.86	220 ●	1210	1.6	7	2.5		6	10	4.9	1100
135	T1,T2			990	95	0.86	240 ●	1300	1.5	6.5	2.3	17		10		

● Certified for 400 V rated voltage only.

Order No. supplements

Motor type	**Penultimate position: Voltage identifier** 50 Hz: 230 V△ / 400 VY	400 V△ / 690 VY	500 VY	500 V△	**Final position: Type of construction identifier** IM B 3	Price supplement IM B 5	IM V 1 With protective cover	IM B 14 With standard flange	IM B 14 With special flange	IM B 35
	For △-connection, overload protection with phase-failure protection must be provided.									
1MA6 106 to 1MA6 166	**1**	**6**	**3**	**5**	**0**	**1**	**4**	**2**	**3**	**6**
1MA6 183 to 1MA6 313	**1**	**6**	**3**	**5**	**0**	**1**	**4**	**–**	**–**	**6**
1MA6 316 to 1MA6 317	**–**	**6**	**3**	**5**	**0**	**–**	**4**	**–**	**–**	**6**

Other voltage and/or frequency, voltage identifier **"9"**.
Order codes are required for this purpose (see "Technical information", "Voltages, currents and frequencies").

For other types of construction, see "Technical information", "Types of construction".

1) With reference to 75 °C.