

Squirrel-cage motors

1MA · increased safety

EEx e II type of protection

Selection and ordering data



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Aluminium housing

- 2-, 4-, 6-pole – 50 Hz

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Cast iron housing

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- 2-pole – 50 Hz

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- 4-pole – 50 Hz

- 6-pole – 50 Hz

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Special designs

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- Windings and motor protection

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- Paint finish

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- Mechanical design

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- Certification

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- Marine version

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1MA motors Increased safety

Frame size	63 to 315
Output range	0.12 to 165 kW
Temp. class	T1 to T3
Temp. class F	Utilization acc. to B

Pressure-resistant 1MJ1/1MJ8 motors are available for the output range from 160 kW to 400 kW (see "1MJ squirrel-cage motors").

1MA8 motors are not longer available.

For special versions (other frequencies, outputs, coolant temperatures, installation altitudes, etc.), certification costs may be incurred.

For motor types that have not yet been acceptance tested by the PTB, changes may arise in the technical specifications.

Squirrel-cage motors

1MA · EEx e II type of protection · Aluminium housing

Selection and ordering data

Rated output	Temperature classes	Size	Order No.	Operating data at rated output					Starting torque	Starting current	Stalling torque	t _E time		Torque class	Moment of inertia J	Weight
			Order No. supplement for voltage and type of construction, see table below	Rated speed	Efficiency η ¹⁾	Pow-er fac-tor p.f.	Rated current at 380 V to 420 V	Rated torque	For direct-on-line starting as multiple of the rated torque	For direct-on-line starting current	For direct-on-line starting torque	For temperature classes	T1	T3		
kW					rpm	%		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															
0.18	T1–T3	63 M	1MA7 060–2BA ..	2810	66	0.74	0.55	0.61	2.3	4.4	2.3	30	27	16	0.00018	4
0.25	T1–T3		1MA7 063–2BA ..	2800	68	0.85	0.70	0.85	2.2	4.4	2.3	19	16	16	0.00023	4
0.37	T1–T3	71 M	1MA7 070–2BA ..	2825	73	0.80	0.93	1.3	2.3	5.6	3.0	28	25	16	0.00035	6
0.55	T1–T3		1MA7 073–2BA ..	2785	72	0.84	1.4	1.9	3	5.2	2.6	18	13	16	0.00045	7
0.75	T1–T3	80 M	1MA7 080–2BA ..	2845	73	0.85	1.81	2.5	2.5	6.2	2.7	13	11	16	0.00085	9
1.1	T1–T3		1MA7 083–2BA ..	2855	79	0.85	2.5	3.7	2.8	6.4	3	12	10	16	0.0011	11
1.3	T1–T3	90 S	1MA7 090–2BA ..	2850	78	0.88	2.9	4.4	2.6	6.2	2.8	12	11	16	0.0015	13
1.85	T1–T3	90 L	1MA7 096–2BA ..	2860	81	0.88	3.95	6.2	2.8	7.2	2.8	9	8	16	0.002	16
2.5	T1–T3	100 L	1MA7 106–2BA ..	2865	82	0.87	5.3	8.3	2.6	7.4	2.8	9	8	16	0.0038	21
3.3	T1–T3	112 M	1MA7 113–2BB ..	2875	84	0.89	6.7	11	2.1	6.6	2.3	10	9	13	0.0055	27
4.6	T1–T3	132 S	1MA7 130–2BB ..	2920	83	0.90	9.2	15	1.9	6.8	2.5	15	13	13	0.016	53
5.5	T3		1MA7 131–2BB .. ²⁾	2925	86	0.92	10.6	18	2.2	7.7	2.7	15	13	13	0.021	44
6.5	T1, T2			2900	85	0.93	12.5	21	1.9	6.5	2.3	12	7	13	0.021	44
7.5	T3	160 M	1MA7 163–2BB .. ²⁾	2945	87.5	0.90	14.3	24	2.2	7.6	3.1	29	18	13	0.034	67
9.5	T1, T2			2920	87	0.91	18.1	31	1.7	6.0	2.4	24	–	13	0.034	67
10	T3	160 M	1MA7 164–2BB .. ²⁾	2940	88.5	0.92	18.6	33	2.1	7.6	2.9	23	12	13	0.04	72
13	T1, T2			2910	87.5	0.92	24.5	43	1.6	5.8	2.2	16	–	13	0.04	72
12.5	T3	160 L	1MA7 166–2BB .. ²⁾	2940	89	0.93	23.0	41	2.3	7.6	3	21	9	13	0.052	82
16	T1, T2			2910	87	0.93	30.0	53	1.8	5.8	2.3	15	–	13	0.052	82
	1500 rpm, 4-pole, 50 Hz															
0.12	T1–T3	63 M	1MA7 060–4BB ..	1375	55	0.66	0.52	0.83	1.9	2.6	1.9	35	30	13	0.0003	4
0.18	T1–T3		1MA7 063–4BB ..	1330	57	0.75	0.62	1.3	1.9	2.7	1.9	30	25	13	0.0004	4
0.25	T1–T3	71 M	1MA7 070–4BB ..	1310	60	0.77	0.80	1.8	1.9	3.1	1.9	50	40	13	0.0006	6
0.37	T3		1MA7 073–4BB ..	1355	67	0.74	1.10	2.6	1.9	3.7	2.1	35	29	13	0.00083	7
0.55	T1–T3	80 M	1MA7 080–4BA ..	1390	73	0.73	1.59	3.8	2.4	4.6	2.5	24	21	16	0.0015	9
0.75	T1–T3		1MA7 083–4BA ..	1395	73	0.75	2.05	5.1	2.6	4.8	2.6	19	16	16	0.0018	11
1	T1–T3	90 S	1MA7 090–4BA ..	1420	77	0.78	2.5	6.7	2.2	5.4	2.5	16	14	16	0.0028	13
1.35	T1–T3	90 L	1MA7 096–4BA ..	1415	78	0.82	3.1	9.1	2.3	5.9	2.5	15	13	16	0.0035	16
2	T1–T3	100 L	1MA7 106–4BA ..	1420	80	0.82	4.5	14	2.5	6.4	2.7	13	11	16	0.0048	20
2.5	T1–T3		1MA7 107–4BA ..	1415	81	0.83	5.5	17	2.6	6.4	2.7	12	10	16	0.0058	23
3.6	T1–T3	112 M	1MA7 113–4BA ..	1435	85	0.83	7.5	24	2.6	7.2	2.9	10	9	16	0.011	29
5	T1–T3	132 S	1MA7 130–4BA ..	1445	86	0.82	10.4	33	2.7	6.6	3.2	10	9	16	0.021	42
6.8	T1–T3	132 M	1MA7 133–4BA ..	1460	87	0.82	14.0	44	3	7.7	3.6	10	9	16	0.027	61
10	T1–T3	160 M	1MA7 163–4BB ..	1455	88	0.87	19.7	66	2.3	6.5	2.7	17	10	13	0.052	67
13.5	T1–T3	160 L	1MA7 166–4BB ..	1465	89	0.84	27	88	2.4	6.9	3	18	9	13	0.057	107
	1000 rpm, 6-pole, 50 Hz															
0.25	T1–T3	71 M	1MA7 073–6BA ..	850	63	0.72	0.81	2.8	2.2	3	2.1	130	70	16	0.0009	7
0.37	T1–T3	80 M	1MA7 080–6BA ..	920	68	0.7	1.14	3.6	2.3	3.6	2.4	60	55	16	0.0015	9
0.55	T1–T3		1MA7 083–6BA ..	930	69	0.67	1.75	5.6	2.4	4	2.4	30	27	16	0.0025	13
0.65	T1–T3	90 S	1MA7 090–6BA ..	915	70	0.75	1.8	6.8	2.3	3.9	2.4	35	30	16	0.0028	14
0.95	T1–T3	90 L	1MA7 096–6BA ..	910	72	0.75	2.6	9.9	2.3	4.1	2.4	22	19	16	0.0038	16
1.3	T1–T3	100 L	1MA7 106–6BA ..	935	77	0.73	3.35	13	2.4	4.8	2.5	26	26	16	0.0063	20
1.9	T1–T3	112 M	1MA7 113–6BB ..	940	79	0.76	4.7	19	2.3	5	2.5	19	16	13	0.011	24
2.6	T1–T3	132 S	1MA7 130–6BB ..	945	79	0.75	6.5	26	1.8	4.4	2.4	21	18	13	0.015	36
3.5	T1–T3	132 M	1MA7 133–6BB ..	955	81	0.72	9.0	35	2.3	5.1	2.8	16	13	13	0.019	41
4.8	T1–T3	132 M	1MA7 134–6BB ..	950	83	0.76	11.4	48	2.4	5.6	2.8	13	11	13	0.025	50
6.6	T1–T3	160 M	1MA7 163–6BB ..	960	85	0.75	14.9	65	2.7	6.4	3.1	18	9	13	0.041	70
9.7	T1–T3	160 L	1MA7 166–6BB ..	965	88	0.76	21.0	96	2.8	7.7	2.2	15	8	13	0.055	105

• Used acc. to class F.

Order No. supplements

Motor type	Penultimate position: Voltage identifier				Final position: Type of construction identifier					
	50 Hz	230 VΔ / 400 VY	400 VΔ / 690 VY	500 VY	500 VΔ	IM B 3	Price supplement	IM B 5	IM V 1 With protective cover	IM B 14 With standard flange
1MA7 060 to 1MA7 096	1	6 ⁴⁾	3 ⁵⁾	-		0	1	4	2	3
1MA7 106 to 1MA7 166	1	6	3	5		0	1	4	2	3

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".
For footnotes, see Page 4/3.

Squirrel-cage motors

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					Starting torque For direct-on-line starting as multiple of the rated torque	Starting current For direct-on-line starting as multiple of the rated current	Stalling torque	t _E time For temperature classes		Torque class	Moment of inertia J	Weight Type of constr. IM B 3
				Rated speed	Efficiency η ¹⁾	Power factor p.f.	Rated current at 380 V to 420 V	Rated torque				T1 T2	T3			
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.

■ VIK is not possible.

Order No. supplements

Motor type	Penultimate position: Voltage identifier				Final position: Type of construction identifier					
	50 Hz	230 VΔ / 400 VY	400 VΔ / 690 VY	500 VY	500 VΔ	IM B 3	Price supplement	IM B 5	IM V 1 With protective cover	IM B 14 With standard flange
1MA6 106 to 1MA6 166	1	6	3	5	0	0	1	4	2	3
1MA6 183 to 1MA6 313	1	6	3	5	0	0	1	4	—	—
1MA6 316 to 1MA6 317	—	6	3	5	0	—	—	4	—	—

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 voltage identifier "9", separate versions for T1, T2 and T3. For order code A11, only possible for one power output in each case.

3) For connection to 230 V, parallel supply cables are required.

4) Not possible for 1MA7 06 motors.

5) Not possible for 1MA7 060-4 motors.

Squirrel-cage motors

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					Starting torque For direct-on-line starting as multiple of the rated torque	Starting current For direct-on-line starting as multiple of the rated current	Stalling torque	t _E time For temperature classes		Torque class	Moment of inertia J	Weight Type of constr. IM B 3
				Rated speed	Efficiency η ¹⁾	Power factor p.f.	Rated current at 380 V to 420 V	Rated torque				T1 T2	T3			
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 2.5	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
	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 6.8	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
	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 13.5	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
	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 17	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
	T1,T2	180 M	1MA6 186–4BC ..	1460	90.0	0.82	35.5	111	1.6	5.3	2.4	13	10	10	0.15	177
17.5 20	T3	180 L		1475	91.6	0.80	36	114	1.8	6.4	3	16	11	10		
	T1,T2	180 L	1465	90.6	0.82	41 ²⁾	130	1.6	5.6	2.6	13	10	10			
24 27	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
	T1,T2	200 L	1MA6 207–4BC ..	1475	92.4	0.84	53	175	1.9	7.1	2.7	19	10	10		
30 33	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
	T1,T2	225 S	1MA6 223–4BC ..	1480	93.1	0.84	64 ²⁾	213	1.4	6.2	2.5	11	10	10	0.52	330
36 40	T3	225 M		1484	93.8	0.84	70 ²⁾	232	1.7	6.9	2.8	12	12	10		
	T1,T2	225 M	1480	93.6	0.85	77 ²⁾	258	1.5	6.2	2.5	10	10	10			
44 50	T3	250 M	1MA6 253–4BC ..	1485	94	0.85	83	283	1.7	7.3	2.5	18	11	10	0.79	435
	T1,T2	250 M	1MA6 253–4BC ..	1485	93.8	0.86	94	322	1.5	6.4	2.1	15	10	10		
58 68	T3	280 S	1MA6 280–4BC ..	1488	94.6	0.84	111	372	1.7	6.3	2.5	30	7	7	1.4	610
	T1,T2	280 S	1MA6 283–4BC ..	1485	94.5	0.85	131	437	1.5	5.3	2.1	23	10	10	1.6	660
70 80	T3	280 M		1488	94.8	0.85	130	449	1.7	7	2.5	26	6	10		
	T1,T2	280 M	1485	94.8	0.87	150 ²⁾	514	1.5	6	2.2	20	10	10			
84 100	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
	T1,T2	315 S	1MA6 313–4BD ..	1490	95.3	0.85	188	641	1.4	6.5	2.4	24	7	7	2.7	910
100 120	T3	315 M		1492	95.8	0.85	185	640	1.6	7.2	2.5	29	7	7		
	T1,T2	315 M	1488	95.7	0.86	222 ²⁾	770	1.3	6	2.1	24	7	7			
115 135	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
	T1,T2	315 L	1MA6 317–4BD ..	1488	95.5	0.86	248	868	1.4	6.4	2.1	21	7	7	4.2	1200
135 165	T3	315 L		1492	95.8	0.86	245	868	1.7	7.8	2.8	26	7	7		
	T1,T2	315 L	1485	95.8	0.87	305	1061	1.5	6.3	2.3	17	7	7			

■ VIK is not possible.

Order No. supplements

Motor type	Penultimate position: Voltage identifier				Final position: Type of construction identifier				
	50 Hz	230 VΔ / 400 VY	400 VΔ / 690 VY	500 VY	500 VΔ	IM B 3	Price supplement	IM B 5	IM V 1 With protective cover
1MA6 106 to 1MA6 166	1	6	3	5	0	1	4	2	3
1MA6 183 to 1MA6 313	1	6	3	5	0	1	4	—	—
1MA6 316 to 1MA6 317	—	6	3	5	0	—	4	—	—

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").

Squirrel-cage motors

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

Selection and ordering data

Rated output kW	Temperature classes	Size	Order No. Order No. supplement for voltage and type of construction, see table below	Operating data at rated output					Starting torque For direct-on-line starting as multiple of the rated torque	Starting current For direct-on-line starting as multiple of the rated current	Stalling torque	t _E time For temperature classes		Torque class	Moment of inertia J	Weight Type of constr. IM B 3
				Rated speed	Efficiency η ¹⁾	Pow-er fac-tor p.f.	Rated current at 380 V to 420 V	Rated torque				T1	T3			
				rpm	%		A	Nm				s	s	KL	kg m ²	approx. kg
Temperature classes T1 to T3, IP55 degree of protection, temperature class F																
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.

■ VIK is not possible.

Order No. supplements

Motor type	Penultimate position: Voltage identifier				Final position: Type of construction identifier					
	50 Hz	230 VΔ / 400 VY	400 VΔ / 690 VY	500 VY	500 VΔ	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
1MA6 106 to 1MA6 166	1	6	3	5		0	1	4	2	3
1MA6 183 to 1MA6 313	1	6	3	5		0	1	4	—	—
1MA6 316 to 1MA6 317	—	6	3	5		0	—	4	—	—

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.

Squirrel-cage motors

1MA · EEx e II type of protection

Order codes for special versions

Additional or- der suffix -Z with order code	Motor type – Size	
	Aluminium housing 1MA7	Cast iron housing 1MA6

Windings and motor protection

Y52 ●	Used acc. to class F and required power CT ... °C or AH... m above sea level	63 – 160 Please enquire. There may be charges for certification.	100 – 315 Please enquire. There may be charges for certification.
A11	Motor protection by means of PTC thermistor with 3 embedded temperature sensors for shutdown ¹⁾	63 – 160	100 – 315 ²⁾
A12	Motor protection by means of PTC thermistor with 6 embedded temperature sensors for alarm and shutdown ¹⁾	63 – 160	100 – 315 ²⁾

Paint finish

	Standard paintwork in RAL 7030 stone grey	–	225 – 315 standard design
K26	Special paintwork in RAL 7030 stone grey	Standard design (without order code)	225 – 315, standard design for 100 to 200 (without order code)
M16	Special paintwork in RAL 1002 sand yellow	63 – 160	100 – 200 For 225 – 315 with order code Y54 and special paintwork RAL . . .
M17	Special paintwork in RAL 1013 pearl white		
M18	Special paintwork in RAL 3000 flame red		
K27	Special paintwork in RAL 6011 mignonette green		
M19	Special paintwork in RAL 6021 pale green		
M20	Special paintwork in RAL 7001 silver grey		
K28	Special paintwork in RAL 7031 bluish grey		
L42	Special paintwork in RAL 7032 pebble grey		
M21	Special paintwork in RAL 7035 light grey		
M22	Special paintwork in RAL 9001 cream		
M23	Special paintwork in RAL 9002 grey white		
L43	Special paintwork in RAL 9005 jet black		
Y54 ●	Special paintwork in other colors: RAL 1015, 1019, 2003, 2004, 3007, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6019, 7000, 7004, 7011, 7016, 7022, 7033	63 – 160	100 – 315
Y53 ●	Standard paintwork in other colors	–	225 – 315
K23	Unpainted (only cast iron parts primed)	63 – 160	100 – 315
K24	Unpainted, only primed	63 – 160	100 – 200

- Additional plain text required.

1) For appropriate certified 3RN1 tripping unit, see Catalog LV 10.

2) Not permitted as sole protection from size 180 upwards; motor protection contactor required.

RAL No.	Name of color	RAL No.	Name of color
1015	Light ivory	5017	Traffic blue
1019	Grey beige	5018	Turquoise blue
2003	Pastel orange	5019	Capri blue
2004	Pure orange	6019	Pastel green
3007	Wine red	7000	Squirrel grey
5007	Black blue	7004	Signal grey
5009	Azure blue	7011	Iron grey
5010	Gentian blue	7016	Anthrax grey
5012	Light blue	7022	Umbra grey
5015	Sky blue	7033	Cement grey

Squirrel-cage motors

1MA · EEx e II type of protection

Order codes for special versions

Additional or- der suffix -Z with order code	Special designs	Motor type – Size	
		Aluminium housing 1MA7	Cast iron housing 1MA6

Mechanical design

K09	Terminal box on RHS (view onto drive end)	80 – 160	100 – 315
K10	Terminal box on LHS (view onto drive end)	80 – 160	100 – 315
K83	Rotation of terminal box by 90°, inserted from drive end	63 – 160	100 – 315
K84	Rotation of terminal box by 90°, inserted from non-drive end	63 – 160	100 – 315
K85	Rotation of terminal box by 180°	63 – 160	100 – 315
K01	Vibrational severity grade R	63 – 160	100 – 315
K16	Second standard shaft end ¹⁾	63 – 160	100 – 315
K17	Radial sealing ring on drive end with flange types ²⁾	63 – 160	100 – 315
K20	Bearing for increased cantilever forces ³⁾	100 – 160	100 – 315
K40	Regreasing device	100 – 160	100 – 250 standard version from 280 upwards
L04	Located bearing non-drive end	63 – 132, 160 standard version	100 – 132, 160 standard version
K94	Located bearing drive end	63 – 160	100 – 200
D01	CCC China Compulsory Certification	63 – 90 ⁴⁾	–
K30	VIK design ⁵⁾	63 – 160	100 – 315
K31	Extra rating plate, loose	63 – 160	100 – 315
Y82 ●	Extra rating plate	63 – 160	100 – 315
And order codes			
K37	Low noise version for 2-pole motors with clockwise rotation ⁶⁾	132 – 160	132 – 315
K38	Low noise version for 2-pole motors with anti-clockwise rotation ⁶⁾	132 – 160	132 – 315
K45	Anti-condensation heating for 230 V	–	225 – 315
K46	Anti-condensation heating for 115 V	–	225 – 315
L99	Wire-lattice pallet	63 – 160	100 – 180

Certification

B02	Factory test certificate 2.3 acc. to EN 10 204	63 – 160	100 – 315
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Marine version – "Operation below deck" ⁷⁾ ⁸⁾

E00	Without certificate acc. to ABS 50 °C/CCS 45 °C/ RINA 45 °C Temperature class F used acc. to F	63 – 160	100 – 315
E11	Certified according to GL (Germanischer Lloyd) Germany, CT 45 °C, Temperature class F used acc. to F	63 – 160	100 – 315
E21	Certified according to LRS (Lloyds Register of Shipping) Great Britain, CT 45 °C, Temperature class F used acc. to F	63 – 160	100 – 315
E31	Certified according to BV (Bureau Veritas) France, CT 45 °C, Temperature class F used acc. to F	63 – 160	100 – 315
E51	Certified according to DNV (Det Norske Veritas) Norway, CT 45 °C, Temperature class F used acc. to F	63 – 160	100 – 315

- Additional plain text required.

- Motors of size 180 M in vertical designs for version with second shaft end are available on request.
Low noise version (2-pole) not possible from size 132 S to 315 L.
Design with cover not available.
- Not possible for size 1M V 3, only for 4-pole to 6-pole motors for size 180 M upwards.

- Not possible for 2-pole 1MA6 motors, size 315L with vertical design;
Vibrational severity grade R on request for 1MA6 motors from size 225 M upwards.

- The following motors require a CCC certificate:
 - 2-pole motors: ≤ 2.2 kW
 - 4-pole motors: ≤ 1.1 kW
 - 6-pole motors: ≤ 0.75 kW
 - 8-pole motors: ≤ 0.55 kW
- For sizes 315 S to 315 L, low noise version also required.
- 1MA6/1MA7 motors are up to 80 mm longer than normal.
Second shaft end not possible.

- Works test certificate 2.3 to EN 10204 is also supplied (does not apply to Order Code **E00**). Individual acceptance test must be specified in plain text on ordering if required (price supplement).
- For 1MA motors of class F used acc. to class B, derating may be necessary.

Squirrel-cage motors

1MA · EEx e II type of protection

Notes

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