

Squirrel-cage motors

1MA · EEx e II type of protection

Order codes for special versions

Additional order suffix -Z with order code	Special designs	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	Anthracite grey
5012	Light blue	7022	Umbra grey
5015	Sky blue	7033	Cement grey

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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°		
G50	Measuring nipples for SPM shock pulse measurement for bearing monitoring	–	100 – 315
K15	With cast-iron terminal box	–	180 – 225
K34	With cast-iron cowl	–	225 – 315
K35	External metal fan	100 – 160	100 – 315
K50	Degree of protection IP65	100 – 160	100 – 315
K52	Degree of protection IP56 (non-heavy-sea)	100 – 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 – 315
	K38	Low noise version for 2-pole motors with anti-clockwise rotation ⁶⁾	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.

1) 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.

2) Not possible for size IM V 3, only for 4-pole to 6-pole motors for size 180 M upwards.

3) 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.

4) 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

5) For sizes 315 S to 315 L, low noise version also required.

6) 1MA6/1MA7 motors are up to 80 mm longer than normal.
Second shaft end not possible

7) 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).

8) For 1MA motors of class F used acc. to class B, derating may be necessary.