

Voltages

Additional order codes for other voltages or voltage codes  
(without “-Z” supplement)

For some non-standard voltages at 50 or 60 Hz, order codes are specified. They are ordered by specifying the code digit 9 for voltage in the 11th position of the Order No. and the appropriate order code.

Plain text must be specified in the order:

Voltage, frequency, circuit, required rated output in kW.

Special versions	Voltage code 11th position of Order No.	Additional identification code with order code and plain text if required	Motor type frame size														
			56	63	71	80	90	100	112	132	160	180	200	225	250	280	315
Self-ventilated motors																	
						1LA7 (aluminum) temperature/time classes F200 and F300						1LA5 (aluminum) temperature/time classes F200 and F300					
Non-standard winding for voltages between 200 V and 690 V, (voltages outside this range are available on request) 1)	9	L1Y •				✓	✓	✓	✓	✓	✓	✓	✓	✓			
						1LA6 (cast-iron) temperature/time class F400						1LG6 (cast-iron) temperature/time classes F200, F300 and F400					
Non-standard winding for voltages between 200 V and 690 V, (voltages outside this range are available on request) 1)	9	L1Y •								✓	✓	✓	✓	✓	✓	✓	✓
Forced-air cooled motors																	
						1PP7 (aluminum) temperature/time classes F200 and F300						1PP5 (aluminum) temperature/time classes F200 and F300					
Non-standard winding for voltages between 200 V and 690 V, (voltages outside this range are available on request) 1)	9	L1Y •				✓	✓	✓	✓	✓	✓	✓	✓	✓			
						1PP6 (cast-iron) temperature/time classes F200, F300 and F400											
Non-standard winding for voltages between 200 V and 690 V, (voltages outside this range are available on request) 1)	9	L1Y •								✓	✓	✓	✓	✓	✓	✓	✓

- ✓ With additional charge
- This order code only determines the price of the version – Additional plain text is required.

1) When ordering, specify in plain text: Voltage, frequency, circuit, required rated output in kW



## Options

Options or order codes (supplement **-Z** is required)

Special versions	Additional identification code <b>-Z</b> with order code and plain text if required	Motor type frame size														
		56	63	71	80	90	100	112	132	160	180	200	225	250	280	315
Self-ventilated motors																
			1LA7 (aluminum) temperature/time classes F200 and F300						1LA5 (aluminum) temperature/time classes F200 and F300							
Motor protection																
Motor protection with PTC thermistors with 3 embedded temperature sensors for tripping <sup>1)</sup>	A11				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Motor protection with PTC thermistors with 6 embedded temperature sensors for tripping and alarm <sup>1)</sup>	A12				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Motor temperature detection with embedded temperature sensor KTY 84-130 <sup>1)</sup>	A23				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Installation of 3 PT 100 resistance thermometers <sup>1)</sup>	A60				–	–	–	–	–	–	–	–	–	✓		
Motor connection and connection box																
External earthing	L13				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Protruding cable ends – right side <sup>2)</sup>	L51				✓	✓	✓	○	○	○	○	○	○	○		
Protruding cable ends – left side <sup>2)</sup>	L52				✓	✓	✓	○	○	○	○	○	○	○		
Colors and paint finish																
Special finish in RAL 7030 stone gray					□	□	□	□	□	□	□	□	□	□		
Special finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005	Y54 • and special finish RAL ....				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Sea air resistant special finish	M94				O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.		
Unpainted (only cast iron parts primed)	K23				○	○	○	○	○	○	○	○	○	○		
Unpainted, only primed	K24				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mechanical design and degrees of protection																
With two additional eyebolts for IM V1/IM V3	K32				–	–	–	–	–	–	–	✓	✓	✓		
IP65 degree of protection	K50				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Condensation drainage holes <sup>3)</sup>	L12				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Non-rusting screws (externally)	M27				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

- ☐ Standard version
- ☐ Without additional charge
- ☒ With additional charge
- ☐ Not possible
- This order code only determines the price of the version – Additional plain text is required.
- ☐ Possible on request

2) No additional charge with types of construction without feet: IM B5, IM V1, IM V3.

3) Supplied with the condensation drainage holes sealed at the drive end DE and non-drive end NDE for IP55, IP56 and IP65 degrees of protection. If condensation drainage holes are required in motors of the IM B6, IM B7 or IM B8 type of construction (feet located on side or top), it is necessary to relocate the bearing plates at the drive end (DE) and non-drive end (NDE) so that the condensation drainage holes situated between the feet on delivery are underneath.

Special versions	Additional identification code <b>-Z</b> with order code and plain text if required	Motor type frame size														
		56	63	71	80	90	100	112	132	160	180	200	225	250	280	315
Self-ventilated motors																
							1LA6 (cast-iron) temperature/time class F400				1LG6 (cast-iron) temperature/time classes F200, F300 and F400					
Motor protection																
Motor protection with PTC ther- mistors with 3 embedded tem- perature sensors for tripping <sup>1)</sup>	A11						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor protection with PTC ther- mistors with 6 embedded tem- perature sensors for tripping and alarm <sup>1)</sup>	A12						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor temperature detection with embedded temperature sensor KTY 84-130 <sup>1)</sup>	A23						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 3 PT 100 resistance thermometers <sup>1)</sup>	A60						–	–	–	–	✓	✓	✓	✓	✓	✓
Installation of 6 PT 100 resistance thermometers in stator winding <sup>1)</sup>	A61						–	–	–	–	–	–	–	✓	✓	✓
Installation of 2 PT 100 screw-in resistance thermometers (basic cir- cuit) for rolling-contact bearings <sup>1)</sup>	A72						–	–	–	–	✓	✓	✓	✓	✓	✓
Installation of 2 PT 100 screw-in resistance thermometers (3-wire circuit) for rolling-contact bearings <sup>1)</sup>	A78						–	–	–	–	✓	✓	✓	✓	✓	✓
Motor connection and connection box																
External earthing	L13						✓	✓	✓	✓	□	□	□	□	□	□
Protruding cable ends – right side <sup>2)</sup>	L51						✓	○	○	○	✓	✓	✓	✓	✓	✓
Protruding cable ends – left side <sup>2)</sup>	L52						✓	○	○	○	✓	✓	✓	✓	✓	✓
Colors and paint finish																
Special finish in RAL 7030 stone gray							□	□	□	□	□	□	□	□	□	□
Special finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005	Y54 • and special finish RAL ....						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Offshore special finish	M91						O. R.	O. R.	O. R.	O. R.	✓	✓	✓	✓	✓	✓
Sea air resistant special finish	M94						O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Unpainted (only cast iron parts primed)	K23						○	○	○	○	○	○	○	○	○	○
Unpainted, only primed	K24						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mechanical design and degrees of protection																
IP65 degree of protection	K50						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Condensation drainage holes <sup>3)</sup>	L12						✓	✓	✓	✓	□	□	□	□	□	□
Non-rusting screws (externally)	M27						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Special versions	Additional identification code <b>-Z</b> with order code and plain text if required	Motor type frame size															
		56	63	71	80	90	100	112	132	160	180	200	225	250	280	315	
Self-ventilated motors																	
							1LA6 (cast-iron) temperature/time class F400				1LG6 (cast-iron) temperature/time classes F200, F300 and F400						
Bearings and lubrication																	
Measuring nipple for SPM shock pulse measurement for bearing inspection	G50						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Regreasing device	K40						✓	✓	✓	✓	✓	✓	✓	✓	□	□	□
Balance and vibration quantity																	
Vibration quantity A							□	□	□	□	□	□	□	□	□	□	□
Vibration quantity B	K02						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Full key balancing	L68						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Balancing without key	M37						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Heating and ventilation																	
Anti-condensation heaters for 230 V	K45						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anti-condensation heaters for 115 V	K46						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rating plate and extra rating plates																	
Second lubricating plate, supplied loose	B06						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second rating plate, loose (standard version)							□	□	□	□	□	□	□	□	□	□	□
Extra rating plate with identification code	Y82 • and identification code						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Additional information on rating plate and on package label (maximum of 20 characters)	Y84 • and identification code						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Packaging, safety notes and test certificates																	
Acceptance test certificate 3.1 according to EN 10204	B02						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Operating instructions German/English enclosed in print	B23						✓	✓	✓	✓	–	–	–	–	–	–	–
Type test with heat run for horizontal motors, with acceptance	F83						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wire-lattice pallet	L99						○	○	○	○	–	–	–	–	–	–	–

- Standard version
- Without additional charge
- ✓

With additional charge
- Not possible
- This order code only determines the price of the version – Additional plain text is required.
- O. R.

Possible on request

1) Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended. For pole-changing motors with separate windings, the number of temperature sensors must be doubled. (order code A11, price of A12 or order code A12, price available on request.)

2) No additional charge with types of construction without feet: IM B5, IM V1, IM V3.

3) Supplied with the condensation drainage holes sealed at the drive end DE and non-drive end NDE for IP55, IP56 and IP65 degrees of protection. If condensation drainage holes are required in motors of the IM B6, IM B7 or IM B8 type of construction (feet located on side or top), it is necessary to relocate the bearing plates at the drive end (DE) and non-drive end (NDE) so that the condensation drainage holes situated between the feet on delivery are underneath.

Special versions	Additional identification code <b>-Z</b> with order code and plain text if required	Motor type frame size														
		56	63	71	80	90	100	112	132	160	180	200	225	250	280	315
Forced-air cooled motors																
			1PP7 (aluminum) temperature/time classes F200 and F300						1PP5 (aluminum) temperature/time classes F200 and F300							
Motor protection																
Motor protection with PTC ther- mistors with 3 embedded tem- perature sensors for tripping <sup>1)</sup>	A11				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Motor protection with PTC ther- mistors with 6 embedded tem- perature sensors for tripping and alarm <sup>1)</sup>	A12				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Motor temperature detection with embedded temperature sensor KTY 84-130 <sup>1)</sup>	A23				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Installation of 3 PT 100 resistance thermometers <sup>1)</sup>	A60				–	–	–	–	–	–	–	–	–	✓		
Motor connection and connection box																
External earthing	L13				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Protruding cable ends – right side <sup>2)</sup>	L51				✓	✓	✓	○	○	○	○	○	○	○		
Protruding cable ends – left side <sup>2)</sup>	L52				✓	✓	✓	○	○	○	○	○	○	○		
Colors and paint finish																
Special finish in RAL 7030 stone gray					□	□	□	□	□	□	□	□	□	□		
Special finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005	Y54 • and special finish RAL ....				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Sea air resistant special finish	M94				O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.		
Unpainted (only cast iron parts primed)	K23				○	○	○	○	○	○	○	○	○	○		
Unpainted, only primed	K24				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Mechanical design and degrees of protection																
With two additional eyebolts for IM V1/IM V3	K32				–	–	–	–	–	–	–	✓	✓	✓		
IP65 degree of protection	K50				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Condensation drainage holes <sup>3)</sup>	L12				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Non-rusting screws (externally)	M27				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

Special versions	Additional identification code <b>-Z</b> with order code and plain text if required	Motor type frame size														
		56	63	71	80	90	100	112	132	160	180	200	225	250	280	315
Forced-air cooled motors																
				1PP7 (aluminum) temperature/time classes F200 and F300						1PP5 (aluminum) temperature/time classes F200 and F300						
Bearings and lubrication																
Measuring nipple for SPM shock pulse measurement for bearing inspection	G50				–	–	✓	✓	✓	✓	✓	✓	✓			
Regreasing device	K40				–	–	✓	✓	✓	✓	✓	✓	✓			
Balance and vibration quantity																
Vibration quantity A					□	□	□	□	□	□	□	□	□			
Vibration quantity B	K02				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Full key balancing	L68				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Balancing without key	M37				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Heating and ventilation																
Anti-condensation heaters for 230 V	K45				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Anti-condensation heaters for 115 V	K46				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Rating plate and extra rating plates																
Second lubricating plate, supplied loose	B06				–	–	✓	✓	✓	✓	✓	✓	✓			
Second rating plate, loose (standard version)					□	□	□	□	□	□	□	□	□			
Extra rating plate with identification code	Y82 • and identi- fication code				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Additional information on rating plate and on package label (maximum of 20 characters)	Y84 • and identi- fication code				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Packaging, safety notes and test certificates																
Acceptance test certificate 3.1 according to EN 10204	B02				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Operating instructions German/ English enclosed in print	B23				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Type test with heat run for horizon- tal motors, with acceptance	F83				✓	✓	✓	✓	✓	✓	✓	✓	✓			
Wire-lattice pallet	L99				○	○	○	○	○	○	○	○	–	–		

- Standard version
- Without additional charge
- ✓ With additional charge
- Not possible
- This order code only determines the price of the version – Additional plain text is required.
- . R. Possible on request

1) Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended. Double the number of temperature sensors are required for pole-changing motors with separate windings. (Order code A11, price of A12 or order code A12, prices on request).

2) No additional charge with types of construction without feet: IM B5, IM V1, IM V3.

3) Supplied with the condensation drainage holes sealed at the drive end DE and non-drive end NDE for IP55, IP56 and IP65 degrees of protection. If condensation drainage holes are required in motors of the IM B6, IM B7 or IM B8 type of construction (feet located on side or top), it is necessary to relocate the bearing plates at the drive end (DE) and non-drive end (NDE) so that the condensation drainage holes situated between the feet on delivery are underneath.

Special versions	Additional identification code <b>-Z</b> with order code and plain text if required	Motor type frame size															
		56	63	71	80	90	100	112	132	160	180	200	225	250	280	315	
Forced-air cooled motors																	
			1PP6 (cast-iron) temperature/time classes F200, F300 and F400														
Motor protection																	
Motor protection with PTC ther- mistors with 3 embedded tem- perature sensors for tripping <sup>1)</sup>	A11						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor protection with PTC ther- mistors with 6 embedded tem- perature sensors for tripping and alarm <sup>1)</sup>	A12						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Motor temperature detection with embedded temperature sensor KTY 84-130 <sup>1)</sup>	A23						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Installation of 3 PT 100 resistance thermometers <sup>1)</sup>	A60						–	–	–	–	✓	✓	✓	✓	✓	✓	✓
Installation of 6 PT 100 resistance thermometers in stator winding <sup>1)</sup>	A61						–	–	–	–	–	–	–	✓	✓	✓	✓
Installation of 2 PT 100 screw-in resistance thermometers (basic cir- cuit) for rolling-contact bearings <sup>1)</sup>	A72						–	–	–	–	✓	✓	✓	✓	✓	✓	✓
Installation of 2 PT 100 screw-in resistance thermometers (3-wire circuit) for rolling-contact bearings <sup>1)</sup>	A78						–	–	–	–	✓	✓	✓	✓	✓	✓	✓
Motor connection and connection box																	
External earthing	L13						✓	✓	✓	✓	□	□	□	□	□	□	□
Protruding cable ends – right side <sup>2)</sup>	L51						✓	○	○	○	✓	✓	✓	✓	✓	✓	✓
Protruding cable ends – left side <sup>2)</sup>	L52						✓	○	○	○	✓	✓	✓	✓	✓	✓	✓
Colors and paint finish																	
Special finish in RAL 7030 stone gray							□	□	□	□	□	□	□	□	□	□	□
Special finish in other standard RAL colors: RAL 1002, 1013, 1015, 1019, 2003, 2004, 3000, 3007, 5007, 5009, 5010, 5012, 5015, 5017, 5018, 5019, 6011, 6019, 6021, 7000, 7001, 7004, 7011, 7016, 7022, 7031, 7032, 7033, 7035, 9001, 9002, 9005	Y54 • and special finish RAL ....						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Offshore special finish	M91						O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Sea air resistant special finish	M94						O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Unpainted (only cast iron parts primed)	K23						○	○	○	○	○	○	○	○	○	○	○
Unpainted, only primed	K24						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mechanical design and degrees of protection																	
IP65 degree of protection	K50						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Condensation drainage holes <sup>3)</sup>	L12						✓	✓	✓	✓	□	□	□	□	□	□	□
Non-rusting screws (externally)	M27						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Special versions	Additional identification code <b>-Z</b> with order code and plain text if required	Motor type frame size																
		56	63	71	80	90	100	112	132	160	180	200	225	250	280	315		
Forced-air cooled motors																		
			1PP6 (cast-iron) temperature/time classes F200, F300 and F400															
Bearings and lubrication																		
Measuring nipple for SPM shock pulse measurement for bearing inspection	G50							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Regreasing device	K40							✓	✓	✓	✓	✓	✓	✓	✓	✓	□	□
Balance and vibration quantity																		
Vibration quantity A								□	□	□	□	□	□	□	□	□	□	
Vibration quantity B	K02							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Full key balancing	L68							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Balancing without key	M37							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Heating and ventilation																		
Anti-condensation heaters for 230 V	K45							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Anti-condensation heaters for 115 V	K46							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Rating plate and extra rating plates																		
Second lubricating plate, supplied loose	B06							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Second rating plate, loose (standard version)								□	□	□	□	□	□	□	□	□	□	
Extra rating plate with identification code	Y82 • and identification code							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Additional information on rating plate and on package label (maximum of 20 characters)	Y84 • and identification code							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Packaging, safety notes and test certificates																		
Acceptance test certificate 3.1 according to EN 10204	B02							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Operating instructions German/English enclosed in print	B23							✓	✓	✓	✓	–	–	–	–	–	–	
Type test with heat run for horizontal motors, with acceptance	F83							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Wire-lattice pallet	L99							○	○	○	○	–	–	–	–	–	–	

- Standard version
- Without additional charge
- ✓ With additional charge
- Not possible
- This order code only determines the price of the version – Additional plain text is required.
- . R. Possible on request

1) Evaluation with appropriate tripping unit (see Catalog LV 1) is recommended. For pole-changing motors with separate windings, the number of temperature sensors must be doubled. (order code A11, price of A12 or order code A12, price available on request.)

2) No additional charge with types of construction without feet: IM B5, IM V1, IM V3.

3) Supplied with the condensation drainage holes sealed at the drive end DE and non-drive end NDE for IP55, IP56 and IP65 degrees of protection. If condensation drainage holes are required in motors of the IM B6, IM B7 or IM B8 type of construction (feet located on side or top), it is necessary to relocate the bearing plates at the drive end (DE) and non-drive end (NDE) so that the condensation drainage holes situated between the feet on delivery are underneath.