

Voltages

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

Not possible for General Line motors with shorter delivery time.

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 12th position and **0** in the 13th position of the Order No. and the appropriate order code.

Special versions	Voltage code position 12/13 of the Order No.		Additional identifica- tion code with order code and plain text if required	Motor type frame size									
				56	63	71	80	90	100	112	132	160	
Self-ventilated motors in pole-changing version													
				1LE1 (aluminum)									
Voltage at 60 Hz													
220 V; 50 Hz output	9	0	M5K							✓	✓	✓	✓
220 V; 60 Hz output	9	0	M5C							✓	✓	✓	✓
380 V; 50 Hz output	9	0	M5L							✓	✓	✓	✓
380 V; 60 Hz output	9	0	M5D							✓	✓	✓	✓
440 V; 50 Hz output	9	0	M5M							✓	✓	✓	✓
440 V; 60 Hz output	9	0	M5E							✓	✓	✓	✓
460 V; 50 Hz output	9	0	M5N							✓	✓	✓	✓
460 V; 60 Hz output	9	0	M5F							✓	✓	✓	✓
575 V; 50 Hz output	9	0	M5P							✓	✓	✓	✓
575 V; 60 Hz output	9	0	M5G							✓	✓	✓	✓
Non-standard voltages and/or frequencies													
Non-standard winding for volt- ages between 200 V and 690 V (voltages outside this range are available on request) <sup>1)</sup>	9	0	M1Y							✓	✓	✓	✓

✓ With additional charge

<sup>1)</sup> Plain text must be specified in the order: Voltage, frequency, circuit, required rated output in kW.

Special versions	Voltage code 12th / 13th position of the Order No.	Additional identi- fication code with order code and plain text if required	Motor type frame size								
			56	63	71	80	90	100	112	132	160
Self-ventilated energy-saving motors with improved efficiency											
Self-ventilated energy-saving motors with high efficiency											
Self-ventilated motors with increased output and improved efficiency											
Self-ventilated motors with increased output and high efficiency											
Forced-air cooled motors without external fan and fan cover with improved efficiency											
Forced-air cooled motors without external fan and fan cover with high efficiency											
Self-cooled motors without external fan and fan cover with improved efficiency											
Self-cooled motors without external fan and fan cover with high efficiency											
			1LE1/1PC1 (Aluminum)								
Voltage at 60 Hz											
220 VΔ/380 VY; 50 Hz output	9	0	M2A					✓	✓	✓	✓
220 VΔ/380 VY; 60 Hz output	9	0	M1A					✓	✓	✓	✓
380 VΔ/660 VY; 50 Hz output	9	0	M2B					✓	✓	✓	✓
380 VΔ/660 VY; 60 Hz output	9	0	M1B					✓	✓	✓	✓
440 VY; 50 Hz output	9	0	M2C					✓	✓	✓	✓
440 VY; 60 Hz output	9	0	M1C					✓	✓	✓	✓
440 VΔ; 50 Hz output	9	0	M2D					✓	✓	✓	✓
440 VΔ; 60 Hz output	9	0	M1D					✓	✓	✓	✓
460 VY; 50 Hz output	9	0	M2E					✓	✓	✓	✓
460 VY; 60 Hz output	9	0	M1E					○	○	○	○
460 VΔ; 50 Hz output	9	0	M2F					✓	✓	✓	✓
460 VΔ; 60 Hz output	9	0	M1F					○	○	○	○
575 VY; 50 Hz output	9	0	M2G					✓	✓	✓	✓
575 VY; 60 Hz output	9	0	M1G					✓	✓	✓	✓
575 VΔ; 50 Hz output	9	0	M2H					✓	✓	✓	✓
575 VΔ; 60 Hz output	9	0	M1H					✓	✓	✓	✓
Non-standard voltages and / or frequencies											
Non-standard winding for volt- ages between 200 V and 690 V (voltages outside this range are available on request) <sup>1)</sup>	9	0	M1Y					✓	✓	✓	✓

- Without additional charge  
 ✓ With additional charge

<sup>1)</sup> Plain text must be specified in the order: voltage, frequency, circuit, required rated output in kW.

Not possible for General Line motors with shorter delivery time.

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
Self-ventilated energy-saving motors with improved efficiency										
Self-ventilated energy-saving motors with high efficiency										
Self-ventilated motors with increased output and improved efficiency										
Self-ventilated motors with increased output and high efficiency										
							1LE1 (Aluminum)			
Motor connection and connection box										
One cable gland, metal	R15						✓	✓	✓	✓
Rotation of the connection box through 90°, entry from DE	R10						○	○	○	○
Rotation of the connection box through 90°, entry from NDE	R11						○	○	○	○
Rotation of the connection box through 180°	R12						○	○	○	○
Larger connection box	R50						✓	✓	✓	✓
Reduction piece for M cable gland in accordance with British standard, both cable entries mounted <sup>1)</sup>	R30						✓	✓	✓	✓
External earthing	H04						✓	✓	✓	✓
3 cables protruding, 0.5 m long <sup>2)3)</sup>	R20						✓	✓	✓	✓
3 cables protruding, 1.5 m long <sup>2)3)</sup>	R21						✓	✓	✓	✓
6 cables protruding, 0.5 m long <sup>2)</sup>	R22						✓	✓	✓	✓
6 cables protruding, 1.5 m long <sup>2)</sup>	R23						✓	✓	✓	✓
6 cables protruding, 3 m long <sup>2)</sup>	R24						✓	✓	✓	✓
Connection box on NDE <sup>4)</sup>	H08						✓	✓	✓	✓
Windings and insulation										
Temperature class 155 (F), used acc. to 155 (F), with service factor (SF)	N01						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), with increased output	N02						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), with increased coolant temperature	N03						✓	✓	✓	✓
Temperature class 180 (H) at rated power and max. CT 60 °C <sup>5)</sup>	N11						✓	✓	✓	✓
Increased air humidity/temperature, with 30 to 60 g water per m³ of air	N20						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 %	N05						✓	✓	✓	✓

Self-ventilated energy-saving motors with improved efficiency  
 Self-ventilated energy-saving motors with high efficiency  
 Self-ventilated motors with increased output and improved efficiency  
 Self-ventilated motors with increased output and high efficiency

## 1LE1 (Aluminum)

## Windings and insulation (continued)

Temperature class 155 (F), used acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 %	N06		✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 %	N07		✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N08		✓	✓	✓	✓
Increased air humidity/ temperature with 60 to 100 g water per m <sup>3</sup> of air	N21		✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), other requirements	Y52 • and identification code		✓	✓	✓	✓

## 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....		✓	✓	✓	✓
Special finish in special RAL colors: for RAL colors, see "Special finish in special RAL colors", Catalog D 81.1 part 0	Y51 • and special finish RAL....		✓	✓	✓	✓
Special finish sea air resistant	S03		O. R.	O. R.	O. R.	O. R.
Unpainted (only cast iron parts primed)	S00		○	○	○	○
Unpainted, only primed	S01		✓	✓	✓	✓

Modular technology – Basic versions <sup>6)</sup>

Mounting of separately driven fan	F70		✓	✓	✓	✓
Mounting of brake <sup>7)</sup>	F01		✓	✓	✓	✓
Mounting of 1XP8012-10 (HTL) rotary pulse encoder <sup>8)</sup>	G01		✓	✓	✓	✓
Mounting of 1XP8012-20 (TTL) rotary pulse encoder <sup>8)</sup>	G02		✓	✓	✓	✓

## Modular technology – Additional versions

Brake supply voltage 24 V DC	F10		✓	✓	✓	✓
Brake supply voltage 230 V AC, 50/60 Hz	F11		○	○	○	○
Brake supply voltage 400 V AC, 50/60 Hz	F12		✓	✓	✓	✓
Mechanical manual brake release with lever (no locking)	F50		✓	✓	✓	✓

Self-ventilated energy-saving motors with improved efficiency  
 Self-ventilated energy-saving motors with high efficiency  
 Self-ventilated motors with increased output and improved efficiency  
 Self-ventilated motors with increased output and high efficiency

			1LE1 (Aluminum)			
Special technology <sup>6)</sup>						
Mounting of LL 861 900 220 rotary pulse encoder <sup>8)</sup>	G04		✓	✓	✓	✓
Mounting of HOG 9 D 1024 I rotary pulse encoder <sup>8)</sup>	G05		✓	✓	✓	✓
Mounting of HOG 10 D 1024 I rotary pulse encoder <sup>8)</sup>	G06		✓	✓	✓	✓
Mechanical design and degrees of protection						
Protective cover for types of construction <sup>8)</sup>	H00		✓	✓	✓	✓
Screwed-on feet (instead of cast)	H01		✓	✓	✓	✓
Radial seal on DE for flange-mounting motors with oil resistance to 0.1 bar <sup>9)</sup>	H23		✓	✓	✓	✓
Low-noise version for 2-pole motors with clockwise direction of rotation	F77		–	–	✓	✓
Low-noise version for 2-pole motors with counter-clockwise direction of rotation	F78		–	–	✓	✓
IP65 degree of protection <sup>10)</sup>	H20		✓	✓	✓	✓
IP56 degree of protection (non-heavy-sea) <sup>11)</sup>	H22		✓	✓	✓	✓
Vibration-proof version	H02		✓	✓	✓	✓
Condensation drainage holes <sup>12)</sup>	H03		✓	✓	✓	✓
Non-rusting screws (externally)	H07		✓	✓	✓	✓
Prepared for mountings, only center hole <sup>13)</sup>	G40		✓	✓	✓	✓
Prepared for mountings with D12 shaft <sup>13)</sup>	G41		✓	✓	✓	✓
Prepared for mountings with D16 shaft <sup>13)</sup>	G42		✓	✓	✓	✓
Protective cover for encoder (loosely enclosed – only for mountings acc. to order codes G40, G41 and G42)	G43		✓	✓	✓	✓
Coolant temperature and site altitude						
Coolant temperature –40 °C to +40 °C <sup>14)</sup>	D03		✓	✓	✓	✓
Coolant temperature –30 °C to +40 °C <sup>14)</sup>	D04		✓	✓	✓	✓
Designs in accordance with standards and specifications						
Electrical according to NEMA MG1-12 <sup>15)</sup>	D30		✓	✓	✓	✓
Design according to UL with “Recognition Mark” <sup>16)</sup>	D31		✓	✓	✓	✓
Canadian regulations (CSA) <sup>17)</sup>	D40		✓	✓	✓	✓
PSE Mark Japan <sup>18)</sup>	D46		✓	✓	✓	–

**Self-ventilated energy-saving motors with improved efficiency**  
**Self-ventilated energy-saving motors with high efficiency**  
**Self-ventilated motors with increased output and improved efficiency**  
**Self-ventilated motors with increased output and high efficiency**

**1LE1 (Aluminum)**

**Bearings and lubrication**

Measuring nipple for SPM shock pulse measurement for bearing inspection <sup>19)</sup>	<b>Q01</b>		✓	✓	✓	✓
Bearing design for increased cantilever forces	<b>L22</b>		✓	✓	✓	✓
Special bearing for DE and NDE, bearing size 63	<b>L25</b>		✓	✓	✓	✓
Regreasing device <sup>19)</sup>	<b>L23</b>		✓	✓	✓	✓
Located bearing at DE	<b>L20</b>		✓	✓	✓	✓
Located bearing at NDE	<b>L21</b>		✓	✓	✓	□

**Balance and vibration quantity**

Vibration quantity A			□	□	□	□
Vibration quantity B	<b>L00</b>		✓	✓	✓	✓
Half-key balancing (standard)			□	□	□	□
Full-key balancing	<b>L02</b>		✓	✓	✓	✓
Balancing without key	<b>L01</b>		✓	✓	✓	✓

**Shaft and rotor**

Concentricity of shaft extension, coaxiality and linear movement in accordance with DIN 42955 Tolerance R for flange-mounting motors	<b>L08</b>		✓	✓	✓	✓
Second standard shaft extension	<b>L05</b>		✓	✓	✓	✓
Shaft extension with standard dimensions, without featherkey way	<b>L04</b>		✓	✓	✓	✓
Concentricity of shaft extension in accordance with DIN 42955 Tolerance R	<b>L07</b>		✓	✓	✓	✓
Standard shaft made of non-rusting steel	<b>L06</b>		✓	✓	✓	✓
Non-standard cylindrical shaft extension <sup>20)</sup>	<b>Y55 • and identification code</b>		✓	✓	✓	✓

**Heating and ventilation**

Fan cover for textile industry	<b>F75</b>		✓	✓	✓	✓
Metal external fan <sup>21)</sup>	<b>F76</b>		✓	✓	✓	✓
Anti-condensation heaters for 230 V	<b>Q02</b>		✓	✓	✓	✓
Anti-condensation heaters for 115 V	<b>Q03</b>		✓	✓	✓	✓
Sheet metal fan cover	<b>F74</b>		✓	✓	✓	✓

**Rating plate and extra rating plates**

Second rating plate, loose	<b>M10</b>		✓	✓	✓	✓
Nirosta rating plate	<b>M11</b>		✓	✓	✓	✓
Extra rating plate or rating plate with deviating rating plate data	<b>Y80 • and identification code</b>		✓	✓	✓	✓
Extra rating plate with identification codes	<b>Y82 • and identification code</b>		✓	✓	✓	✓
Additional information on rating plate and on package label (max. of 20 characters)	<b>Y84 • and identification code</b>		✓	✓	✓	✓

with order code  
and plain text if  
required

56 63 71 80 90 100 112 132 160

Self-ventilated energy-saving motors with improved efficiency  
Self-ventilated energy-saving motors with high efficiency  
Self-ventilated motors with increased output and improved efficiency  
Self-ventilated motors with increased output and high efficiency

1LE1 (Aluminum)

Packaging, safety notes, documentation and test certificates

Without safety and commissioning note. Customer's declaration of renouncement required.	<b>B00</b>		○	○	○	○
With one safety and start-up guide per box pallet	<b>B01</b>		○	○	○	○
Acceptance test certificate 3.1 in accordance with EN 10204	<b>B02</b>		✓	✓	✓	✓
Printed operating instructions English/German enclosed	<b>B04</b>		✓	✓	✓	✓
Type test with heat run for horizontal motors, with acceptance	<b>B83</b>		✓	✓	✓	✓
Wire-lattice pallet	<b>B99</b>		○	○	○	○
Connected in star for dispatch	<b>M01</b>		✓	✓	✓	✓
Connected in delta for dispatch	<b>M02</b>		✓	✓	✓	✓

- Standard version
- Without additional charge
- This order code only determines the price of the version – Additional plain text is required.
- R. Available on request
- ✓ With additional charge

- 1) Not possible in combination with order code **R15** "One cable gland, metal".
- 2) In combination with motor protection (position 15 of the Order No.) or with option anti-condensation heater request required.
- 3) Not possible in combination with voltage code **22** or **34**.
- 4) Not possible in combination with the following order codes: **N01, N02, N03, N05, N06, N07, N08, N11**.  
Use according to temperature class 155 (F) possible only.
- 5) Cannot be used for motors in UL version (order code **D31**). The grease lifetime specified in Catalog D 81.1 part 0 refers to CT 40 °C. When the coolant temperature rises by 10 K, the grease lifetime or relubrication interval is halved.
- 6) A second shaft extension is not possible. Please inquire for mounted brakes.
- 7) When quoting or ordering, it is necessary to provide the brake supply voltage for order codes **F10, F11** and **F12**.
- 8) All encoders are supplied with a protective cover as standard. The protective cover is not supplied with the combination rotary pulse encoder with separately driven fan, as, in this case, the rotary pulse encoder is installed under the fan cover.
- 9) Not possible for type of construction IM V3.
- 10) Not possible in combination with rotary pulse encoder HOG 9 D 1024I (order code **G05**) and/or brake 2LM8 (order code **F01**).
- 11) Not possible in combination with brake 2LM8 – order code **F01**.
- 12) Supplied with the condensation drainage holes sealed at the drive end (DE) and non-drive end (NDE) (IP55, IP56, IP65). If condensation drainage holes are required for motors with IM B6, IM B7 or IM B8 type of construction (feet located on side or top), it is necessary to order the motors in their respective type of construction and order code **H03**, so that the condensation drainage holes can be mounted in the correct positional arrangement.
- 13) Motors that are prepared for additional mountings (order codes **G40, G41, G42**) are supplied without protective cover as standard. If a protective cover is requested as cover or as mechanical protection for mounting provided by the customer, it can be ordered with order code **G43**.  
Not possible in combination with order code **L00**, vibration quantity level B.
- 14) In connection with mountings, the respective technical data must be observed; request required.
- 15) 1LE1 motors in EFF1 version without additional charge (standard version).
- 16) Possible up to 600 V max. The rated voltage is indicated on the rating plate without voltage range.
- 17) The rated voltage is indicated on the rating plate without voltage range.
- 18) "Small power motors" with a rated output of up to 3 kW which are exported to Japan must bear the PSE marking.
- 19) Not possible when brake is mounted.
- 20) When motors are ordered that have a longer or shorter shaft extension than normal, the required position and length of the featherkey way must be specified in a sketch. It must be ensured that only featherkeys in accordance with DIN 6885, Form A are permitted to be used. The featherkey way is positioned centrally on the shaft extension. The length is defined by the manufacturer normatively. Not valid for: Conical shafts, non-standard threaded journals, non-standard shaft tolerances, friction welded journals, extremely "thin" shafts, special geometry dimensions (e.g. square journals), hollow shafts. Valid for non-standard shaft extensions DE or NDE. The featherkeys are supplied in every case. For order codes **Y55** and **L05**:
  - Dimensions D and DA ≤ internal diameter of roller bearing (see dimension tables under "Dimensions")
  - Dimensions E and EA ≤ 2 x length E (normal) of the shaft extensionFor an explanation of the order codes, see Catalog D 81.1 part 0.
- 21) For 1LE1 motors with metal external fan, converter-fed operation is permitted. The metal external fan is not possible in combination with the low-noise version – order code **F77** or **F78**.

Not possible for General Line motors with shorter delivery time.

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
Forced-air cooled motors without external fan and fan cover with improved efficiency										
Forced-air cooled motors without external fan and fan cover with high efficiency										
Self-cooled motors without external fan and fan cover with improved efficiency										
Self-cooled motors without external fan and fan cover with high efficiency										
							1LE1/1PC1 (Aluminum)			
Motor connection and connection box										
One cable gland, metal	R15						✓	✓	✓	✓
Rotation of the connection box through 90°, entry from DE	R10						○	○	○	○
Rotation of the connection box through 90°, entry from NDE	R11						○	○	○	○
Rotation of the connection box through 180°	R12						○	○	○	○
Larger connection box	R50						✓	✓	✓	✓
Reduction piece for M cable gland in accordance with British standard, both cable entries mounted <sup>1)</sup>	R30						✓	✓	✓	✓
External earthing	H04						✓	✓	✓	✓
3 cables protruding, 0.5 m long <sup>2)3)</sup>	R20						✓	✓	✓	✓
3 cables protruding, 1.5 m long <sup>2)3)</sup>	R21						✓	✓	✓	✓
6 cables protruding, 0.5 m long <sup>2)</sup>	R22						✓	✓	✓	✓
6 cables protruding, 1.5 m long <sup>2)</sup>	R23						✓	✓	✓	✓
6 cables protruding, 3 m long <sup>2)</sup>	R24						✓	✓	✓	✓
Connection box on NDE <sup>4)</sup>	H08						✓	✓	✓	✓
Windings and insulation										
Temperature class 155 (F), used acc. to 155 (F), with service factor (SF)	N01						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), with increased output	N02						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), with increased coolant temperature	N03						✓	✓	✓	✓
Temperature class 180 (H) at rated power and max. CT 60 °C <sup>5)</sup>	N11						✓	✓	✓	✓
Increased air humidity/temperature, with 30 to 60 g water per m³ of air	N20						✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 45 °C, derating approx. 4 %	N05						✓	✓	✓	✓



**Forced-air cooled motors without external fan and fan cover with improved efficiency****Forced-air cooled motors without external fan and fan cover with high efficiency****Self-cooled motors without external fan and fan cover with improved efficiency****Self-cooled motors without external fan and fan cover with high efficiency**

			1LE1/1PC1 (Aluminum)			
Windings and insulation (continued)						
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 50 °C, derating approx. 8 %	N06		✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 55 °C, derating approx. 13 %	N07		✓	✓	✓	✓
Temperature class 155 (F), used acc. to 130 (B), coolant temperature 60 °C, derating approx. 18 %	N08		✓	✓	✓	✓
Increased air humidity/ temperature with 60 to 100 g water per m³ of air	N21		✓	✓	✓	✓
Temperature class 155 (F), used acc. to 155 (F), other requirements	Y52 • and identi- fication code		✓	✓	✓	✓
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.....		✓	✓	✓	✓
Special finish in special-RAL colors: for RAL colors, see "Special finish in special RAL colors", Catalog D 81.1 part 0	Y51 • and special finish RAL.....		✓	✓	✓	✓
Special finish sea air resistant	S03		O. R.	O. R.	O. R.	O. R.
Unpainted (only cast iron parts primed)	S00		○	○	○	○
Unpainted, only primed	S01		✓	✓	✓	✓
Mechanical design and degree of protection						
Screwed-on feet (instead of cast)	H01		✓	✓	✓	✓
Radial seal on DE for flange- mounting motors with oil resis- tance to 0.1 bar <sup>6)</sup>	H23		✓	✓	✓	✓
IP65 degree of protection	H20		✓	✓	✓	✓
IP56 degree of protection (non-heavy-sea)	H22		✓	✓	✓	✓
Vibration-proof version	H02		✓	✓	✓	✓
Condensation drainage holes <sup>7)</sup>	H03		✓	✓	✓	✓
Non-rusting screws (externally)	H07		✓	✓	✓	✓
Coolant temperature and site altitude						
Coolant temperature -40 °C to +40 °C	D03		✓	✓	✓	✓
Coolant temperature -30 °C to +40 °C	D04		✓	✓	✓	✓

Forced-air cooled motors without external fan and fan cover with improved efficiency

Forced-air cooled motors without external fan and fan cover with high efficiency

Self-cooled motors without external fan and fan cover with improved efficiency

Self-cooled motors without external fan and fan cover with high efficiency

1LE1/1PC1 (Aluminum)

**Designs in accordance with standards and specifications**

Electrical according to NEMA MG1-12 <sup>8)</sup>	<b>D30</b>		✓	✓	✓	✓
Design according to UL with "Recognition Mark" <sup>9)</sup>	<b>D31</b>		✓	✓	✓	✓
Canadian regulations (CSA) <sup>10)</sup>	<b>D40</b>		✓	✓	✓	✓
PSE Mark Japan <sup>11)</sup>	<b>D46</b>		✓	✓	✓	—

**Bearings and lubrication**

Measuring nipple for SPM shock pulse measurement for bearing inspection	<b>Q01</b>		✓	✓	✓	✓
Bearing design for increased cantilever forces	<b>L22</b>		✓	✓	✓	✓
Special bearing for DE and NDE, bearing size 63	<b>L25</b>		✓	✓	✓	✓
Regreasing device	<b>L23</b>		✓	✓	✓	✓
Located bearing at DE	<b>L20</b>		✓	✓	✓	✓
Located bearing at NDE	<b>L21</b>		✓	✓	✓	□

**Balance and vibration quantity**

Vibration quantity A			□	□	□	□
Vibration quantity B	<b>L00</b>		✓	✓	✓	✓
Half-key balancing (standard)			□	□	□	□
Full-key balancing	<b>L02</b>		✓	✓	✓	✓
Balancing without key	<b>L01</b>		✓	✓	✓	✓

**Shaft and rotor**

Concentricity of shaft extension, coaxiality and linear movement in accordance with DIN 42955 Tolerance R for flange-mounting motors	<b>L08</b>		✓	✓	✓	✓
Shaft extension with standard dimensions, without featherkey way	<b>L04</b>		✓	✓	✓	✓
Concentricity of shaft extension in accordance with DIN 42955 Tolerance R	<b>L07</b>		✓	✓	✓	✓
Standard shaft made of non-rusting steel	<b>L06</b>		✓	✓	✓	✓
Non-standard cylindrical shaft extension <sup>12)</sup>	<b>Y55 • and identification code</b>		✓	✓	✓	✓

**Heating and ventilation**

Anti-condensation heaters for 230 V	<b>Q02</b>		✓	✓	✓	✓
Anti-condensation heaters for 115 V	<b>Q03</b>		✓	✓	✓	✓

with order code  
and plain text if  
required

56 63 71 80 90 100 112 132 160

Forced-air cooled motors without external fan and fan cover with improved efficiency

Forced-air cooled motors without external fan and fan cover with high efficiency

Self-cooled motors without external fan and fan cover with improved efficiency

Self-cooled motors without external fan and fan cover with high efficiency

		1LE1/1PC1 (Aluminum)				
Rating plate and extra rating plates						
Second rating plate, loose	M10		✓	✓	✓	✓
Nirosta rating plate	M11		✓	✓	✓	✓
Extra rating plate or rating plate with deviating rating plate data	Y80 • and identification code		✓	✓	✓	✓
Extra rating plate with identification codes	Y82 • and identification code		✓	✓	✓	✓
Additional information on rating plate and on package label (max. of 20 characters)	Y84 • and identification code		✓	✓	✓	✓
Packaging, safety notes, documentation and test certificates						
Without safety and commissioning note. Customer's declaration of renouncement required.	B00		○	○	○	○
With one safety and start-up guide per box pallet	B01		○	○	○	○
Acceptance test certificate 3.1 in accordance with EN 10204	B02		✓	✓	✓	✓
Printed operating instructions English/German enclosed	B04		✓	✓	✓	✓
Type test with heat run for horizontal motors, with acceptance	B83		✓	✓	✓	✓
Wire-lattice pallet	B99		○	○	○	○
Connected in star for dispatch	M01		✓	✓	✓	✓
Connected in delta for dispatch	M02		✓	✓	✓	✓

- Standard version
- Without additional charge
- This order code only determines the price of the version – Additional plain text is required.
- R. Available on request
- ✓ With additional charge

- 1) Not possible in combination with order code **R15** "One cable gland, metal".
- 2) In combination with motor protection (position 15 of the Order No.) or with option anti-condensation heater request required.
- 3) Not possible in combination with voltage code **22** or **34**.
- 4) Not possible in combination with the following order codes: **N01, N02, N03, N05, N06, N07, N08, N11**. Use according to temperature class 155 (F) possible only.
- 5) Cannot be used for motors in UL version (order code **D31**). The grease lifetime specified in Catalog D 81.1 part 0 refers to CT 40 °C. When the coolant temperature rises by 10 K, the grease lifetime or relubrication interval is halved.
- 6) Not possible for type of construction IM V3.
- 7) Supplied with the condensation drainage holes sealed at the drive end (DE) and non-drive end (NDE) (IP55, IP56, IP65). If condensation drainage holes are required for motors with IM B6, IM B7 or IM B8 type of construction (feet located on side or top), it is necessary to order the motors in their respective type of construction and order code **H03**, so that the condensation drainage holes can be mounted in the correct positional arrangement.

- 8) 1LE1 motors in EFF1 version without additional charge (standard version).
- 9) Possible up to 600 V max. The rated voltage is indicated on the rating plate without voltage range.
- 10) The rated voltage is indicated on the rating plate without voltage range.
- 11) "Small power motors" with a rated output of up to 3 kW which are exported to Japan must bear the PSE marking.
- 12) When motors are ordered that have a longer or shorter shaft extension than normal, the required position and length of the featherkey way must be specified in a sketch. It must be ensured that only featherkeys in accordance with DIN 6885, Form A are permitted to be used. The featherkey way is positioned centrally on the shaft extension. The length is defined by the manufacturer normatively. Not valid for: Conical shafts, non-standard threaded journals, non-standard shaft tolerances, friction welded journals, extremely "thin" shafts, special geometry dimensions (e.g. square journals), hollow shafts. Valid for non-standard shaft extensions DE or NDE. The featherkeys are supplied in every case. For order code **Y55**:
  - Dimensions D and DA ≤ internal diameter of roller bearing (see dimension tables under "Dimensions")
  - Dimensions E and EA ≤ 2 x length E (normal) of the shaft extension
 For an explanation of the order codes, see Catalog D 81.1 part 0.