

Description	Symbol	Unit	MKD112B-024		
Cooling mode – Motor overtemperature			Natural 60K	Natural 100K	Surface 60K /100K

Electric parameters

Characteristic motor speed	n_K	min^{-1}	2000		
Continuous torque at standstill	M_{dN}	Nm	28,0	33,0	42,0
Continuous current at standstill	I_{dN}	A	21,9	26,8	32,9
Peak current	I_{max}	A	98,5		
Torque constant at 20°C ¹⁾	K_m	Nm/A	1,43		
Voltage constant at 20°C	$K_{E(\text{eff})}$	V/1000min ⁻¹	130		
Winding resistance at 20°C	R_{12}	Ω	0,58		
Winding inductance	L_{12}	mH	7,6		
Number of pole pairs	p		4		

Rated data ²⁾

Rated speed	n_N	min^{-1}	3500	3500	3500
Rated torque	M_N	Nm	8,8	21,6	31
Rated current	I_N	A	4,9	12,4	17,2
Rated power	P_N	kW	3,9	9,9	13,8
Rated voltage	U_N	V	461	483	503
Rated frequency	f_N	Hz	233	233	233

Mechanical parameters

Rotor inertia

Theoretical maximum torque	J_M	kgm^2	$192,0 \times 10^{-4}$		
Minimum strand cross-section ⁴⁾	M_{max}	Nm	102		
Thermal time constant	S	mm^2	1,5	2,5	4
Maximum speed	T_{sh}	min	40	40	20
Motor mass ^{3) 5)}	m	kg	34,0		
Perm. storage and transport temp.	T_L	°C	-20 to +80		
Permissible ambient temperature ⁶⁾	T_{um}	°C	0 to 40		
Max. setup height ⁶⁾	h	m	1000 above NN		
Protection category ⁷⁾			IP65		
Insulation class (according to DIN VDE 0530 Part 1)			F		
Housing coat			Prime coat black in a/wRAL 9005		

¹⁾ K_m is to be used for calculations with crest values (I_{dN} , I_{max}). For calculations with root-mean-square values (rated data), the torque constant K_m must be multiplied by a factor of $\sqrt{2}$.

²⁾ Values determined according to EN 60034-1. Current and voltage specified as root-mean-square values.

³⁾ Use the declared value in bracket for motors holding brake.

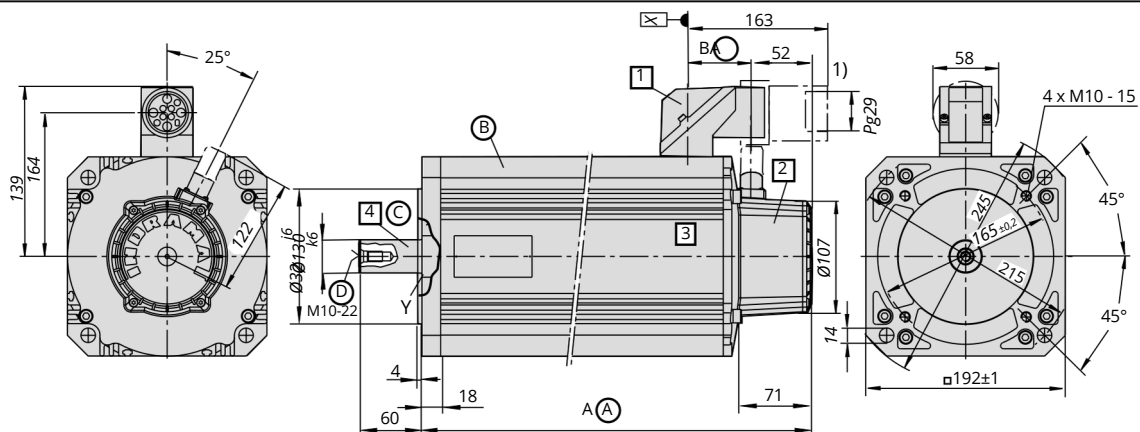
⁴⁾ Applicable to REXROTH INDRAMAT cables. Rated according to VDE0298-4 (1992) and installation type B2 according to EN 60204-1 (1993) at an ambient temperature of 40 °C.

⁵⁾ Without blower unit.

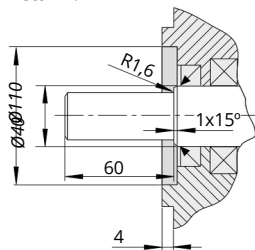
⁶⁾ If the limits specified are exceeded, the performance data must be reduced if necessary. For reduction factors, refer to the chapter entitled "Environmental Conditions".

⁷⁾ Provided the power and encoder cables are mounted properly

e-Servo



Detail Y:



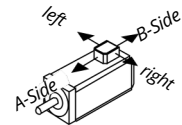
1) connector not included in delivery

Options:

1) Output direction

The output direction of the power connector is selected at the time of ordering. Possible directions are:

- to side A
- to side B
- to the right
- to the left



Side B is the output direction illustrated. The dimensions for side A as output direction can be obtained by turning the connector around the X- axis.

Ⓐ Dimensions

Motor	Dim. A	Dim. B
MKD112A	309	67
MKD112B	375	67
MKD112C	458	96
MKD112D	526	96
Dim. A: motor length Dim. B: power connection		

Ⓑ Motor as per DIN EN 60034-7 1996-06, B5 for all mounting orientations

Ⓒ

- Flange as per DIN 42948, ed. 11.65
- Position accuracy per concentricity, excentricity and coaxiality to shaft as per DIN 42955 tolerance class N, ed. 12.81

Ⓓ

- Shaft end per DIN 748 part 3, ed. 07.75, IEC 72, ed. 1971, cylindrical
- center drill hole DS M10 per DIN 332 part 2, ed. 05.83
- max. screw tightening torque 25,0 Nm
- vibration severity level N per DIN VDE 0530 part 14, ed. 02.93

2) Motor encoder

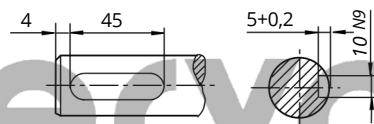
- Resolverfeedback (RSF)
 - Resolverfeedback (RSF) with integral multiturn absolute encoder
- The dimensions are identical.

3) Holding brake:

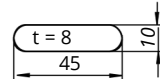
- without
 - with
- The dimensions are identical.

4) Output shaft

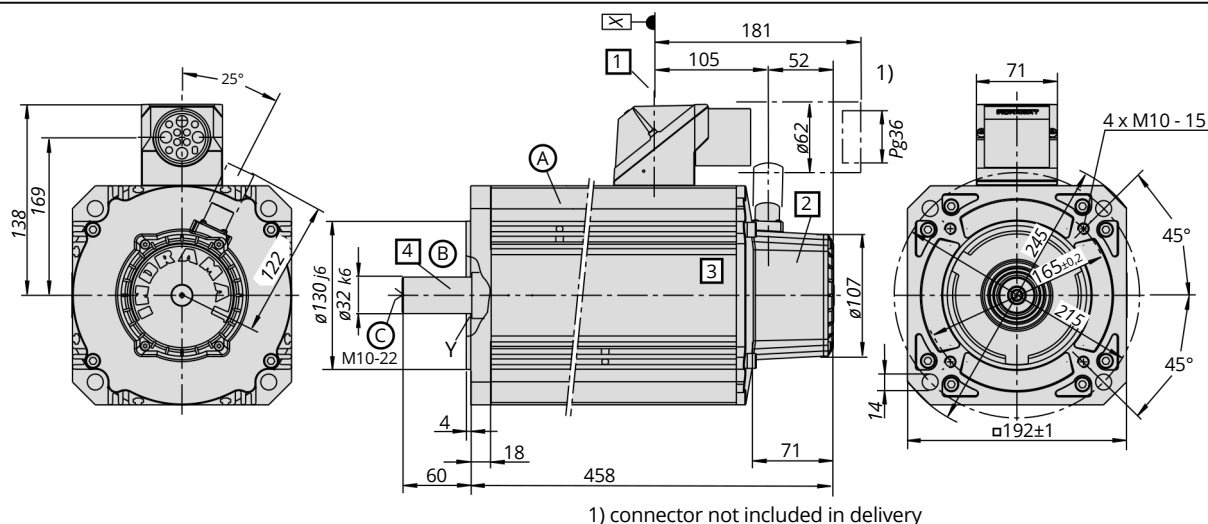
- plain shaft (preferred type)
- with keyway per DIN 6885 sheet 1, ed. 08.68 (Note! balanced with entire key!)



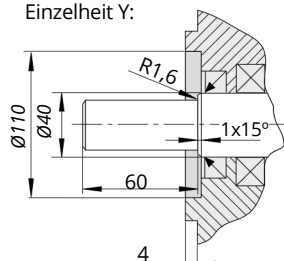
Matching keyway: DIN 6885-A 10 x 8 x 45, not part of delivery.



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Einzelheit Y:

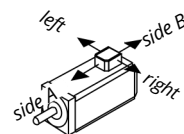


Options:

1) Output direction

The output direction of the power connector is selected at the time of ordering. Possible directions are:

- to side A
- to side B
- to the right
- to the left



Side B is the output direction illustrated. The dimensions for side A as output direction can be obtained by turning the connector around the X-axis.

- Ⓐ Motor as per DIN EN 60034-7 1996-06, B5 for all mounting orientations
- Ⓑ • Flange as per DIN 42948, ed. 11.65
• Position accuracy per concentricity, excentricity and coaxiality to shaft as per DIN 42955 tolerance class N, ed. 12.81
- Ⓒ • Shaft end per DIN 748 part 3, ed. 07.75, IEC 72, ed. 1971, cylindrical
• center drill hole DS M10 per DIN 332 part 2, ed. 05.83
max. screw tightening torque 25,0 Nm
• vibration severity level N per DIN VDE 0530 part 14, ed. 02.93

2) Motor encoder

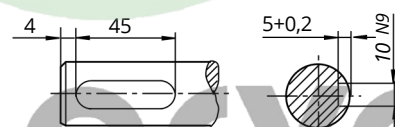
- Resolverfeedback (RSF)
 - Resolverfeedback (RSF) with integral multturn absolute encoder
- The dimensions are identical.

3) Holding brake:

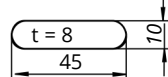
- without
 - with
- The dimensions are identical.

4) Output shaft

- plain shaft (preferred type)
 - with keyway per DIN 6885 sheet 1, ed. 08.68
- (Note! balanced with entire key!)



Matching keyway: DIN 6885-A 10 x 8 x 45, not part of delivery.



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