

# Hollow shaft motors HSM series

## **Compact**

- Compact size
- Integrated encoder
- Hollow shaft  
up to 40 mm
- Easy mounting

## **Applications**

- Ideal for direct drive
- Accurate positioning

## **Range**

- Servodrives
- Controls
- Gearboxes
- Accessories

## **Reliable**

- Low maintenance
- Robust construction
- Protection IP-65

## **Powerful**

- High torque
- Low inertia
- High stiffness

## Technical specifications

Winding type*	HSM 09J		HSM 09N		HSM 09Q
	Ma	Pa	Ma	Pa	Pa
Stall torque <sup>1</sup> [Nm]	2.8	2.8	5.1	5.1	6.0
Stall current [Arms]	4.31	2.44	6.99	4.05	5.04
Max. speed <sup>2</sup> [rpm]	5 000	-	3 900	-	-
Max. speed <sup>3</sup> [rpm]	5 000	4 700	5 000	3 900	3 900
Peak torque [Nm]	7.35	7.35	16.6	16.6	25.0
Peak current [Arms]	12.0	7.0	23.0	13.0	21.0
Nominal speed [rpm]	3 000	3 000	3 000	3 000	3 000
Nominal torque [Nm]	2.51	2.51	3.96	3.96	4.5
Nominal current [Arms]	3.92	2.30	5.42	3.32	3.8
Nominal power [W]	786	786	1 244	1 244	1 413
Torque constant [Nm/A]	0.64	1.13	0.73	1.26	1.19
EMF constant [Vs/rad]	0.38	0.68	0.74	0.83	0.69
EMF at 1000 rpm [V]	40	72	50	87	72
Phase-phase resistance [Ohm]	2.4	7.4	1.6	3.9	2.8
Phase-phase inductance [mH]	4.44	15.2	2.46	9.8	5.4
Rotor inertia [kgm <sup>2</sup> x10 <sup>-3</sup> ]	0.26	0.26	0.55	0.55	0.88
Weight [kg]	3.3	3.3	3.8	3.8	4.6

All data are valid at 25°C ambient temperature, motor with resolver feedback and sinusoidal commutation, 10 pole pairs

\*Winding type Ma optimized for 230VAC

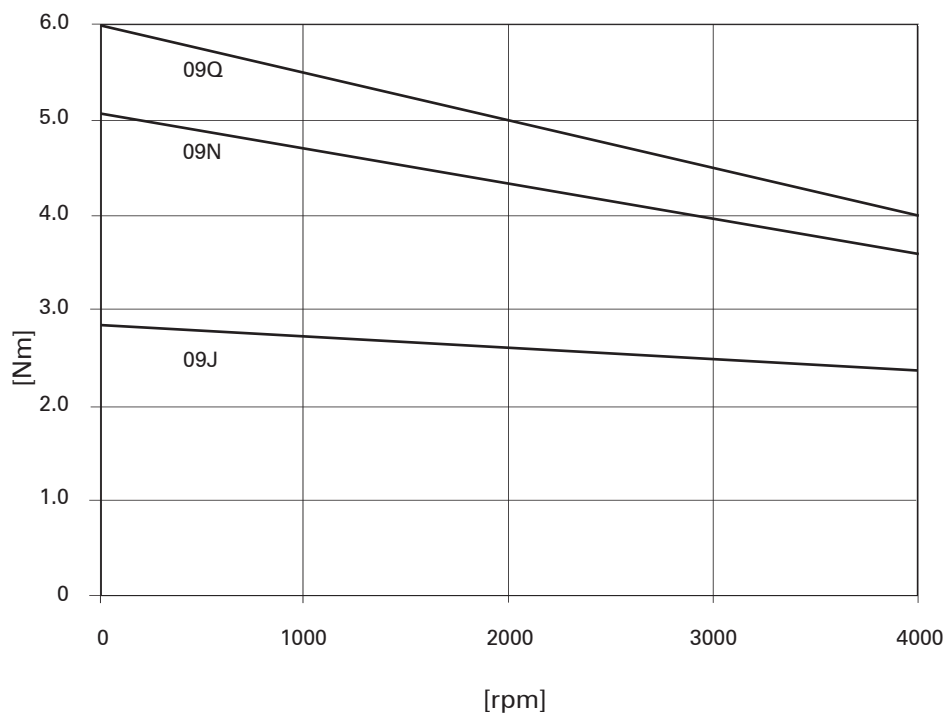
Winding type Pa optimized for 400VAC

<sup>1</sup>Mounted on aluminium sheet 260x200x12mm

<sup>2</sup>Max. speed without load at 230VAC

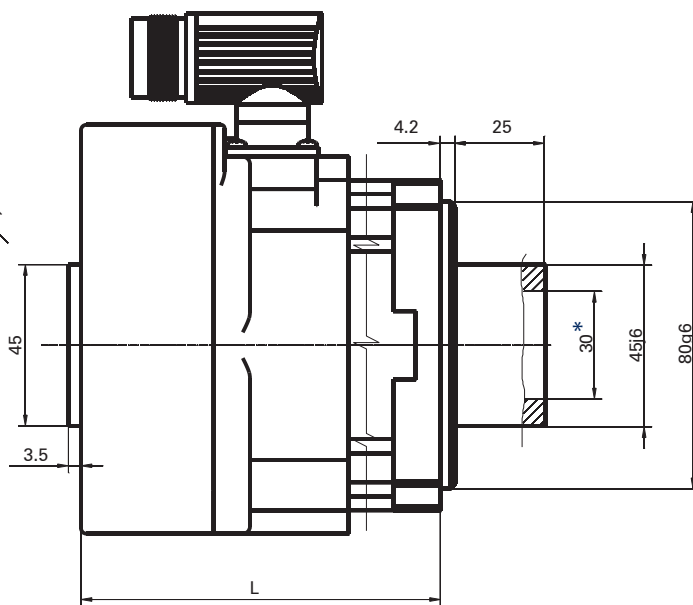
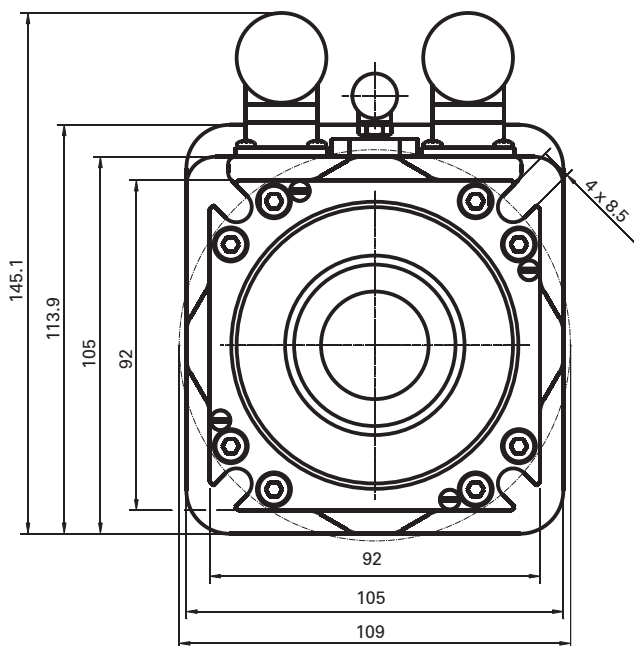
<sup>3</sup>Max. speed without load at 400VAC

## Curves

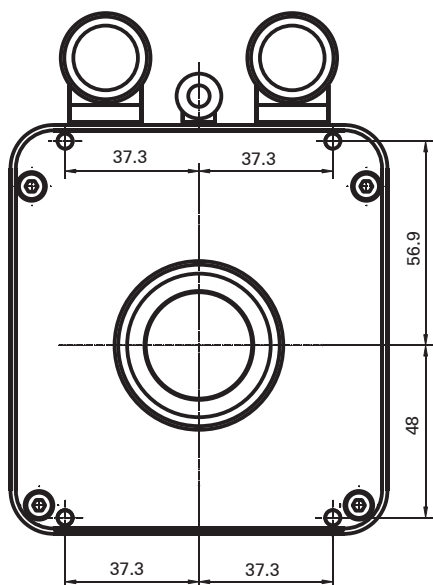


# Dimensions [mm]

## HSM 09



\* (Hollow shaft diameter up to 40 mm)



	Lenght L [mm]
HSM 09J	100.2
HSM 09N	127.9
HSM 09Q	150.3

### Options

- 0° or 90° connectors, cables output
- Hollow shaft up to 40 mm \*
- Air pressure plug for high protection
- Special windings