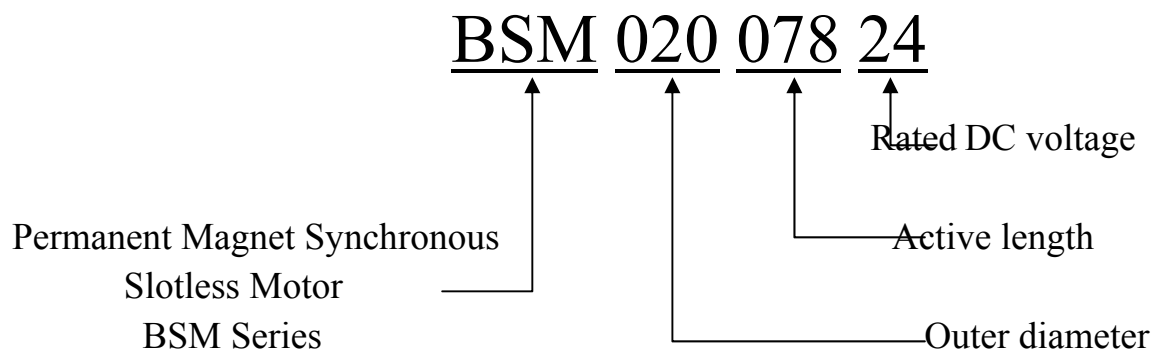




Permanent Magnet Synchronous Slotless Motor



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Product Description

The slotless motor of BSM 020 078 24 is a high performance brushless synchronous motor excited by rare earth permanent magnets located on the rotor. This motor was optimized for increased power density, zero cogging torque and compact design.

The stator core consists of a ring made of laminated steel. Due to the slotless configuration, the three phase star connected winding is placed in the airgap between stator core and permanent magnets. The winding is bonded to the stator core. The rotor consists of a magnetic steel ring on which there are placed high energy permanent magnets. This motor was designed to offer very low torque ripple combined with zero cogging torque.

This motor can be customized in order to be easily adapted to a wide range of applications. The winding can be customized for different bus voltage values.

Features

- Zero cogging torque
- Increased power density
- Very low torque ripple
- Smooth operation
- Maintenance free
- High energy NdFeB magnets maximize torque density
- Customized winding for different desired voltage

Applications

- Machine tools
- Laser scanning and printing
- Motion simulators
- Robots
- Medical equipment

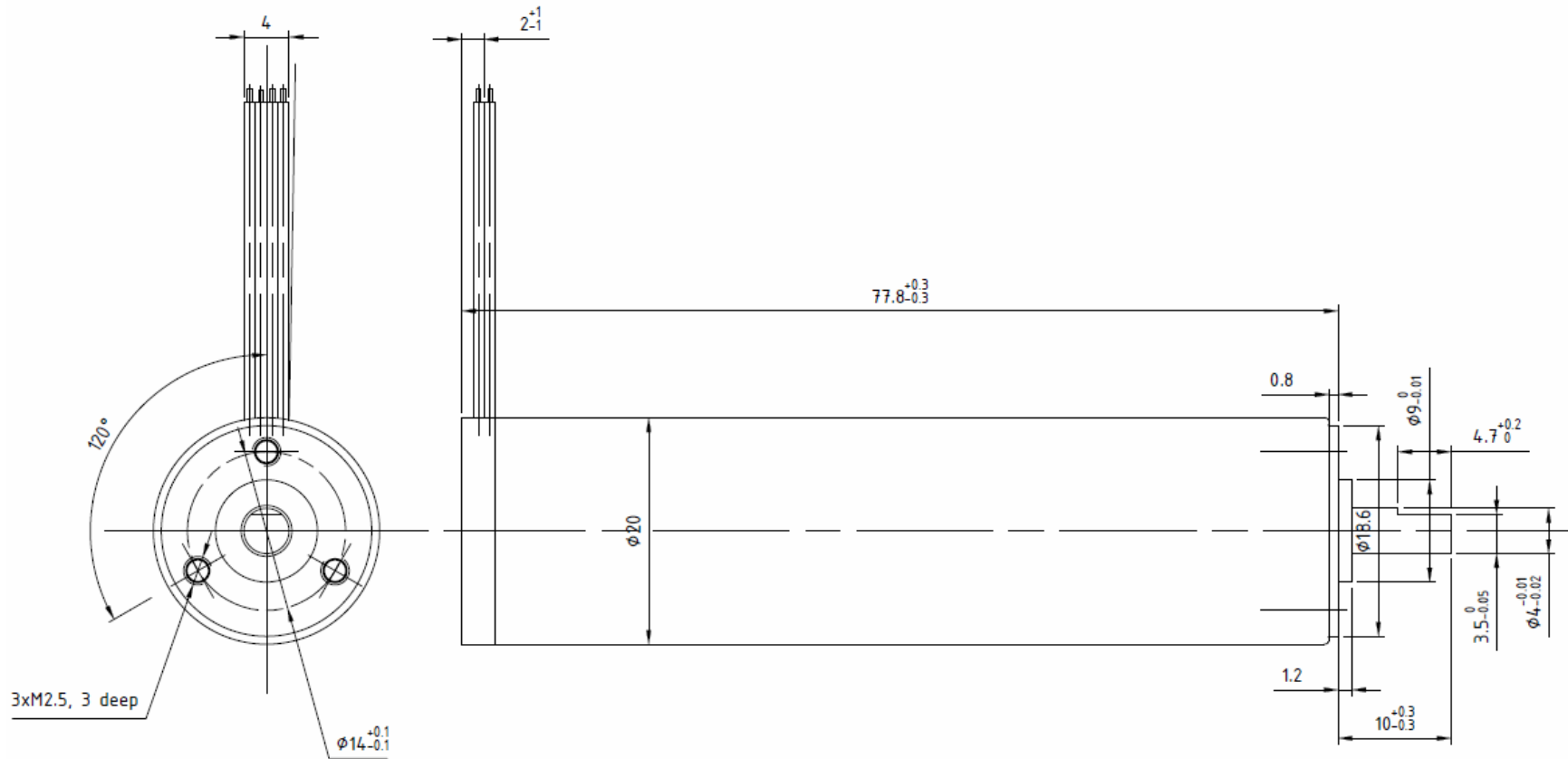


Slotless motor BSM 020 078 24 Specifications

Parameters	Tolerances	Units	BSM 020 078 24
Nominal power	±10%	W	23.5
Efficiency		%	> 80
Stall torque	±10%	mNm	38
Continuous torque	±10%	mNm	40
Peak torque	±10%	mNm	400
Cogging torque		Nm	0
Rated voltage	±10%	V_{DC}	24
Stall current	±10%	A_{rms}	1.7
Continuous current	±10%	A_{rms}	1.8
Peak current	±10%	A_{rms}	19.5
Rated speed	±10%	rpm	5900
Torque constant (K_T)	±10%	Nm/A_{RMS}	0.022
Back EMF constant (K_E)	±10%	$V_{peak}/Krpm$	2
Inertia	±10%	$Kg \cdot cm^2$	0.0052
Weight	±10%	Kg	0.14
Phase connection			Y
Number of poles			4
Electrical resistance (at 20°C)	±10%	Ω	1.3
Electrical inductance	±20%	mH	0.3
Insulation class			F
Ambient temperature		$^{\circ}C$	-30 to +40
Protection grade			IP 50
Speed/position sensor			3 HALL sensors



Slotless motor BSM 020 078 24 Dimensions



* Dimension in mm

