

PRODUCT DATASHEET

ES-FM-U01-OD104-T4NM-001

104 mm Frameless Torque Motor

Ultra Thin Frameless Torque Motors | ES-FM-U01-OD104 Ultra-Thin 104 mm Frameless Torque Motor Series

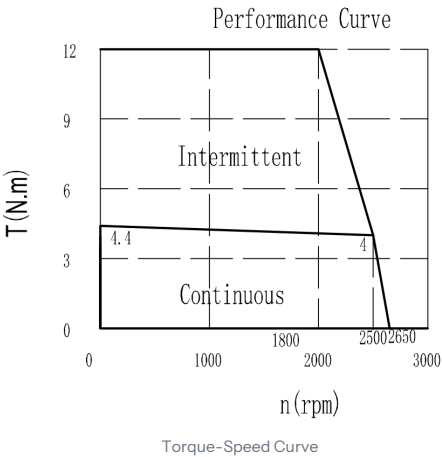
Product Overview

104 mm outer diameter, 43 mm rotor bore, 29 mm axial stack ultra thin frameless torque motor.

Typical Applications	Robot joints Direct-drive rotary axes Integrated actuator modules
Configuration Context	DC link: 48 V DC Temperature sensor: None Lead wire: 100 mm lead, no connector

Key Specifications

PARAMETER	VALUE	UNIT
Rated Speed	2500	rpm
Continuous Rated Output Power	1000	W
DC link voltage	48	V DC
Body Outer Diameter	104	mm
Rotor Inner Diameter	43	mm
Axial Stack Length	29	mm
Lead Wire Configuration	100 mm lead, no connector	
Motor Version	S version	
Number of Poles	16	



Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Speed	2500	rpm
Continuous Rated Output Power	1000	W
ELECTRICAL		
DC link voltage	48	V DC
Rated Current	22.5	A
THERMAL		
Temperature Sensor	None	
MECHANICAL		
Body Outer Diameter	104	mm
Rotor Inner Diameter	43	mm
Axial Stack Length	29	mm
INTEGRATION		
Lead Wire Configuration	100 mm lead, no connector	
Number of Pole Pairs	8 pole pairs / 8	
CONFIGURATION		
Motor Version	S version	
ADDITIONAL SPECIFICATIONS		
Number of Poles	16	
Line-to-Line Resistance	0.058	Ω

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Maximum outside diameter	Diameter 101.5 maximum
	Minimum internal diameter	Diameter 71.5 minimum
	Rotor bore diameter	Diameter 63.3
	Fit diameter with tolerance	Diameter 43 with upper deviation +0.028 and lower deviation 0
	Geometric tolerance relative to datum A	Geometric tolerance 0.1 relative to datum A; characteristic symbol not OCR-captured
		Geometric tolerance 0.6 relative to datum A; characteristic symbol not OCR-captured
	Maximum axial height	35.3 maximum
	Central axial length	30
	Right-side axial dimension with tolerance	29 with upper deviation +0.2 and lower deviation -0.3
	Chamfer	Chamfer 0.5 by 45 degrees
	End clearance or step dimension	0.5 ±0.2
	Maximum right-side height	8.8 maximum
	Magnet and rotor core end-face requirement	Magnet flush with rotor core end face
	Lower minimum diameter	Diameter 72 minimum
	Maximum outside diameter	Diameter 100.5 maximum
		Diameter 102 maximum
	Outside diameter with tolerance	Diameter 104 with upper deviation +0.038 and lower deviation -0.033

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01 Specifications are subject to change without notice. Verify the current product configuration before final design release.

02 2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.