

PRODUCT DATASHEET

ES-FM-U01-OD076-TOP4NM-001

76 mm Frameless Torque Motor

Ultra Thin Frameless Torque Motors | ES-FM-U01-OD076 Ultra-Thin 76 mm Frameless Torque Motor Series

Product Overview

76 mm outer diameter, 38 mm rotor bore, 5 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	3000	rpm
Continuous Rated Output Power	117	W
DC link voltage	48	V DC
Body Outer Diameter	76	mm
Rotor Inner Diameter	38	mm
Axial Stack Length	5	mm
Lead Wire Configuration	100 mm lead, no connector	
Maximum Rotational Speed	4300	rpm
Motor Version	S version	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Speed	3000	rpm
Continuous Rated Output Power	117	W
Maximum Rotational Speed	4300	rpm
ELECTRICAL		
DC link voltage	48	V DC
Rated Current	3.2	A
THERMAL		
Temperature Sensor	None	
MECHANICAL		
Body Outer Diameter	76	mm
Rotor Inner Diameter	38	mm
Axial Stack Length	5	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	0.83	Ω

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Housing outer diameter with tolerance	$\Phi 76.0 / -0.07$
	Left housing maximum outer diameter	$\Phi 72.5 \text{Max}$
	Left bore minimum diameter	$\Phi 52 \text{Min}$
	Shaft diameter with positive tolerance	$\Phi 38 +0.025 / 0$
	Right bore minimum diameter	$\Phi 53 \text{Min}$
	Right housing maximum outer diameter	$\Phi 72.5 \text{Max}$
	Chamfer	C0.5
	Position tolerance	Perpendicularity 0.02 relative to datum A
	Datum A	
	Bottom dimension	6
Mechanical View 2	Magnetic pole polarity markings	Alternating magnetic pole markings using N and S labels around the ring

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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.