

PRODUCT DATASHEET

ES-FM-U01-OD085-T2NM-001

85 mm Frameless Torque Motor

Ultra Thin Frameless Torque Motors | ES-FM-U01-OD085 Ultra-Thin 85 mm Frameless Torque Motor Series

Product Overview

85 mm outer diameter, 42 mm rotor bore, 18 mm axial stack ultra thin frameless torque motor.

Typical Applications

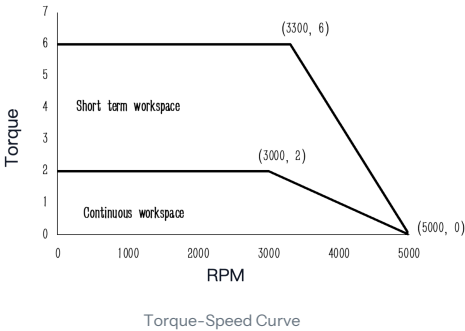
Robot joints | Direct-drive rotary axes | Integrated actuator modules

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	628	W
DC link voltage	48	V DC
Body Outer Diameter	85	mm
Rotor Inner Diameter	42	mm
Axial Stack Length	18	mm
Lead Wire Configuration	100 mm lead, no connector	
Maximum Rotational Speed	5000	rpm
Maximum Speed	5000	rpm



Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Speed	3000	rpm
Continuous Rated Output Power	628	W
Rated Power	628	W
Maximum Rotational Speed	5000	rpm
ELECTRICAL		
DC link voltage	48	V DC
Rated Current	21.3	A
THERMAL		
Temperature Sensor	None	
MECHANICAL		
Body Outer Diameter	85	mm

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
MECHANICAL		
Rotor Inner Diameter	42	mm
Axial Stack Length	18	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		
Maximum Speed	5000	rpm
Number of Poles	16	
Line-to-Line Resistance	0.07	Ω

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Section view identifier	Section G-G
Mechanical View 2	Top step axial length	18 mm, +0.15/-0.25
	Left maximum axial distance	5 MAX
	Right maximum axial distance	11 MAX
	Small step thickness	1 mm $\pm$ 0.2
	Maximum outside dimension	80 MAX
	Minimum internal or mounting dimension	57 MIN
	Datum cylindrical diameter	Diameter 42.500 mm, +0.021/0
	Overall height or diameter dimension	84.98 mm, 0/-0.07
	Concentricity or positional geometric tolerance to datum A	Geometric tolerance 0.05 relative to datum A
	Perpendicularity tolerance to datum A	Perpendicularity 0.02 to datum A
	Datum A	
	Bottom width	20

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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.