

PRODUCT DATASHEET

ES-FM-U01-OD127-TTBDNM-002

127 mm Frameless Torque Motor

Ultra Thin Frameless Torque Motors | ES-FM-U01-OD127 Ultra-Thin 127 mm Frameless Torque Motor Series

Product Overview

127 mm outer diameter, 57 mm rotor bore, 30 mm axial stack ultra thin frameless torque motor.

Typical Applications

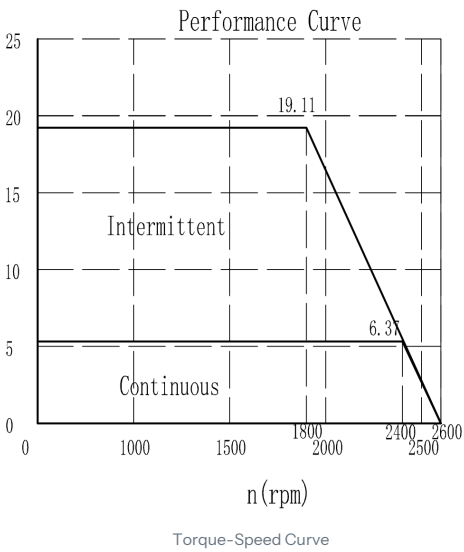
Robot joints | Direct-drive rotary axes | Integrated actuator modules

Configuration Context

DC link: 48 V DC | Temperature sensor: None | Lead wire: 100 mm lead, no connector

Key Specifications

PARAMETER	VALUE	UNIT
Rated Speed	2400	rpm
Continuous Rated Output Power	1600	W
DC link voltage	48	V DC
Body Outer Diameter	127	mm
Rotor Inner Diameter	57	mm
Axial Stack Length	30	mm
Lead Wire Configuration	100 mm lead, no connector	
Motor Version	S version	
Number of Poles	16	



Technical Specifications

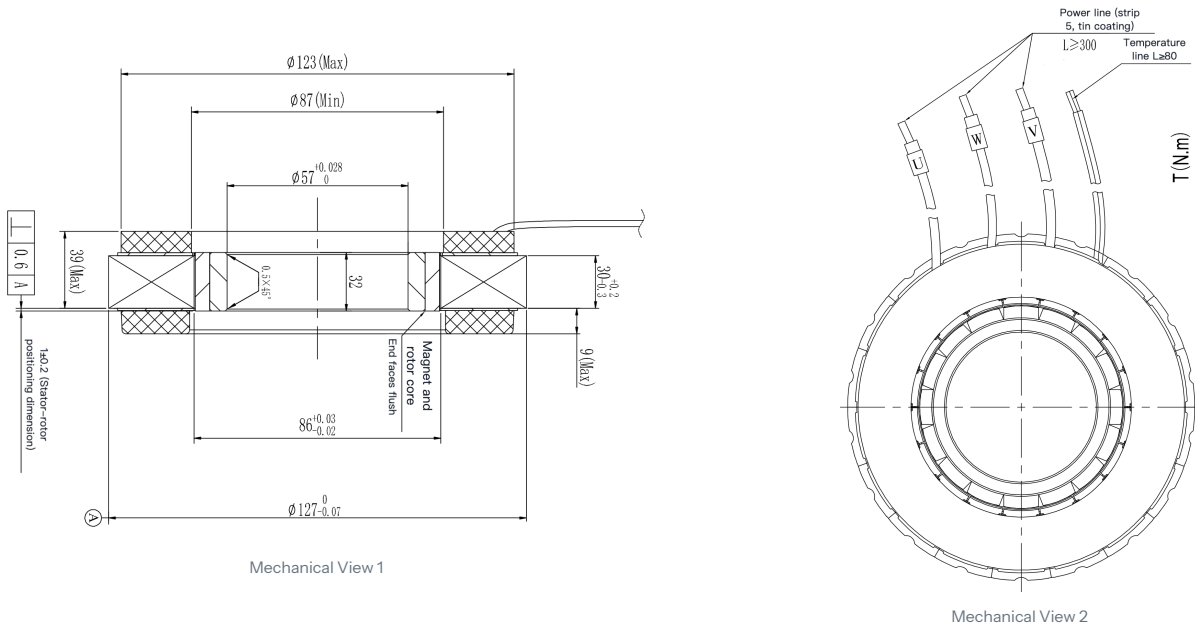
PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Speed	2400	rpm
Continuous Rated Output Power	1600	W
ELECTRICAL		
DC link voltage	48	V DC
Rated Current	35.5	A
THERMAL		
Temperature Sensor	None	
MECHANICAL		
Body Outer Diameter	127	mm
Rotor Inner Diameter	57	mm
Axial Stack Length	30	mm
INTEGRATION		
Lead 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	

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Body Outer Diameter	127	mm
Rotor Inner Diameter	57	mm
Axial Stack Length	30	mm

Dimensional Drawings



2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Maximum Outer Diameter	φ123 Max
	Minimum Inner Diameter	φ87 Min
	Shaft Diameter	φ57 +0.028/0
	Chamfer	0.5×45°
	Maximum Height	39 Max
	Stator-Rotor Positioning Dimension	1±0.2
	Magnet and Rotor Core End Faces Flush	Flush
	Axial Length	86 +0.03/-0.02
	Housing Diameter	φ127 0/-0.07
	End Length	30 +0.2/-0.3
	Maximum Boss Height	9 Max
	Internal Dimension	32
	Perpendicularity Tolerance	⊥0.6 A
Mechanical View 2	Torque specification	Torque in Nm

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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.