PRODUCT DATASHEET

ES-FM-U01-OD132-TTBDNM-001

132 mm Frameless Torque Motor

Ultra Thin Frameless Torque Motors | ES-FM-U01-OD132 Ultra-Thin 132 mm Frameless Torque Motor Series

Product Overview

132 mm outer diameter, 43 mm rotor bore, 24 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	3200	rpm
Continuous Rated Output Power	1180	W
DC link voltage	48	V DC
Body Outer Diameter	132	mm
Rotor Inner Diameter	43	mm
Axial Stack Length	24	mm
Lead Wire Configuration	100 mm lead, no connector	
Motor Version	K version	
Number of Poles	16	

Technical Specifications

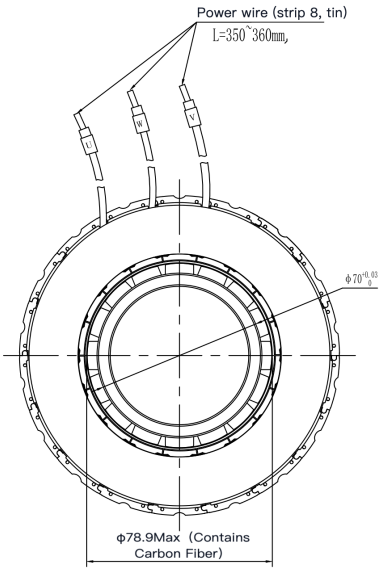
PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Speed	3200	rpm
Continuous Rated Output Power	1180	W
ELECTRICAL		
DC link voltage	48	V DC
Rated Current	29.2	A
THERMAL		
Temperature Sensor	None	
MECHANICAL		
Body Outer Diameter	132	mm
Rotor Inner Diameter	43	mm
Axial Stack Length	24	mm
INTEGRATION		
Lead Wire Configuration	100 mm lead, no connector	
Number of Pole Pairs	8 pole pairs / 8	
CONFIGURATION		
Motor Version	K version	
ADDITIONAL SPECIFICATIONS		
Number of Poles	16	
Line-to-Line Resistance	20	Ω

Dimensional & Integration Overview

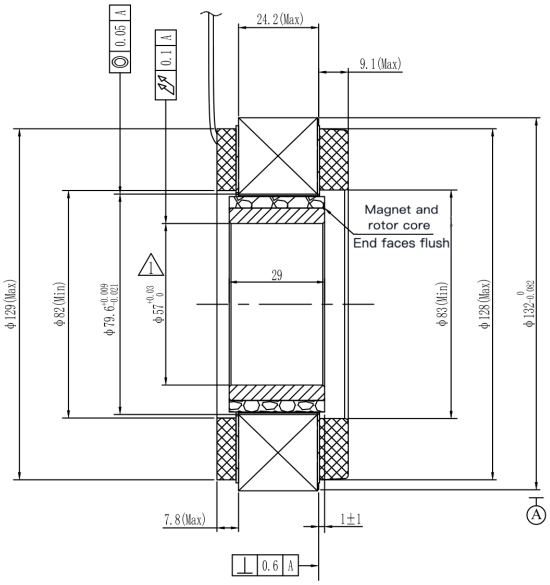
Mechanical Overview

PARAMETER	VALUE	UNIT
Body Outer Diameter	132	mm
Rotor Inner Diameter	43	mm
Axial Stack Length	24	mm

Dimensional Drawings



Mechanical View 1



Mechanical View 2

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Mounting hole diameter	Φ70 +0.03/0
	Maximum outer diameter (including carbon fiber)	Φ78.9 Max (including carbon fiber)
	Label P	P

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 2	Concentricity tolerance relative to datum A	Concentricity 0.05 A
	Angularity tolerance relative to datum A	Angularity 0.1 A
	Upper envelope width maximum	24.2 Max
	Right side envelope width maximum	9.1 Max
	Rotor assembly note	Magnet and rotor core end faces flush
	Rotor core length	29
	Left outer diameter maximum	Φ129 Max
	Left inner diameter minimum	Φ82 Min
	Rotor shaft outer diameter with tolerance	Φ79.6 +0.009/-0.021
	Center bore diameter with tolerance	Φ57 +0.03/0
	Right inner diameter minimum	Φ83 Min
	Right outer diameter maximum	Φ128 Max
	Maximum outer diameter with tolerance	Φ132 -0.082/0
	Lower envelope width maximum	7.8 Max
	Center offset tolerance	1±1
	Perpendicularity tolerance relative to datum A	Perpendicularity 0.6 A

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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.