PRODUCT DATASHEET

ES-FM-U01-OD068-T0P5NM-001

68 mm Frameless Torque Motor

Ultra Thin Frameless Torque Motors | ES-FM-U01-OD068 Ultra-Thin 68 mm Frameless Torque Motor Series

Product Overview

68 mm outer diameter, 34 mm rotor bore, 8 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	157	W
DC link voltage	48	V DC
Body Outer Diameter	68	mm
Rotor Inner Diameter	34	mm
Axial Stack Length	8	mm
Lead Wire Configuration	100 mm lead, no connector	
Maximum Rotational Speed	3900	rpm
Motor Version	S version	

Technical Specifications

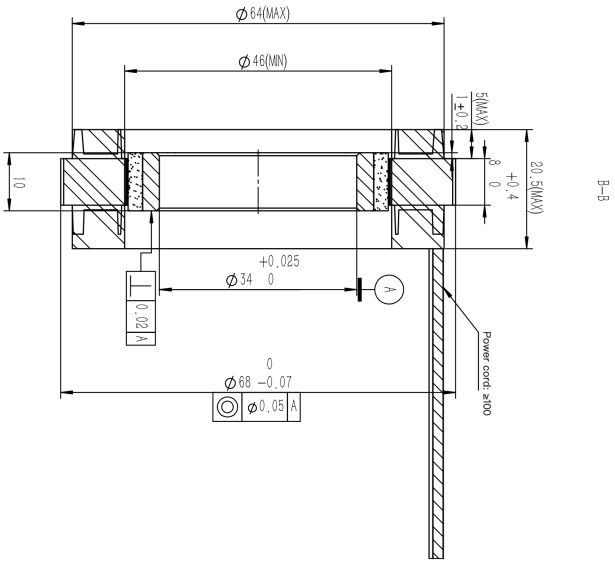
PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Speed	3000	rpm
Continuous Rated Output Power	157	W
Rated Power	157	W
Maximum Rotational Speed	3900	rpm
ELECTRICAL		
DC link voltage	48	V DC
Rated Current	4.5	A
THERMAL		
Temperature Sensor	None	
MECHANICAL		
Body Outer Diameter	68	mm
Rotor Inner Diameter	34	mm
Axial Stack Length	8	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

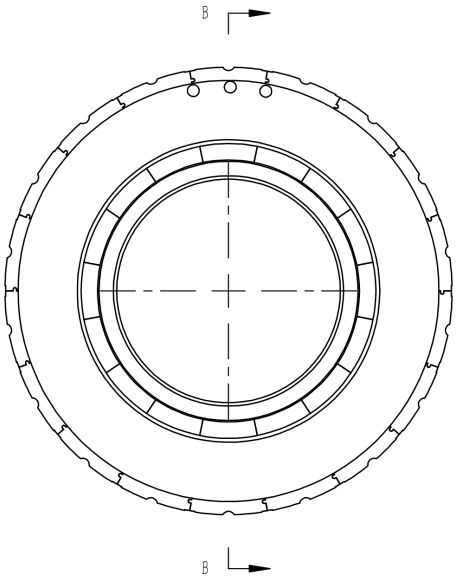
Mechanical Overview

PARAMETER	VALUE	UNIT
Body Outer Diameter	68	mm
Rotor Inner Diameter	34	mm
Axial Stack Length	8	mm

Dimensional Drawings



Mechanical View 1



Mechanical View 2

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Maximum outer diameter	Φ64 max
	Minimum inner diameter	Φ46 min
	Maximum flange protrusion height	5 max
	Flange step thickness	1±0.2
	Shaft end length	8 +0.4/0
	Maximum total length	20.5 max
	Flange radial width	10
	Shaft diameter (fit)	Φ34 +0.025/0
	Datum A	
	Perpendicularity tolerance	Perpendicularity 0.02 to datum A
	Housing outer diameter	Φ68 0/-0.07
	Circular runout tolerance	Circular runout 0.05 to datum A
Mechanical View 2	Section datum B (top)	Datum B
	Section datum B (bottom)	

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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.