

PRODUCT DATASHEET

ES-CM-BL05-M001

Coreless Brushless Miniature And Standard Series

Coreless Brushless Miniature And Standard Series | ES-CM-BL05 13 mm Coreless Brushless Motor Series

Product Overview

Coreless Brushless Miniature And Standard Series with peak torque 26.73 mNm, rated Speed 43500 rpm and continuous Rated Output Power 11 W.

Key Specifications

PARAMETER	VALUE	UNIT
Peak torque	26.73	mNm
Rated Speed	43500	rpm
Continuous Rated Output Power	11	W
Rated Voltage	24	V
Continuous Rated Current	0.66	A
Peak Current	7	A
Dielectric strength	300VAC/1KHz/1mA/1s	
Insulation Resistance	100 MΩ/300VDC	
Duty Cycle	S2	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Peak torque	26.73	mNm
Rated Speed	43500	rpm
Continuous Rated Output Power	11	W
No-Load Rotational Speed	46800	rpm
Motor efficiency	69	%
ELECTRICAL		
Rated Voltage	24	V
Continuous Rated Current	0.66	A
Peak Current	7	A
Dielectric strength	300VAC/1KHz/1mA/1s	
Insulation Resistance	100 MΩ/300VDC	
Duty Cycle	S2	
Pole Pairs	1	
Insulation Class	B	

Technical Specifications

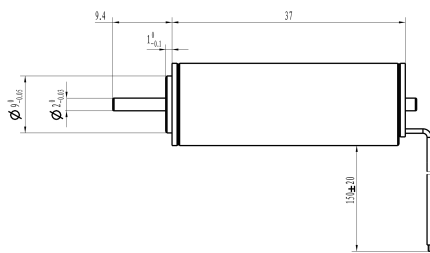
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
No-load Current	0.086	A
Back-EMF Constant (Peak)	0.6	V/Krpm
Back-EMF constant (RMS)	0.43	V/Krpm
Line resistance	3.65	Ω
Line inductance	0.113	mH
THERMAL		
Housing-to-Ambient Thermal Resistance	3.7	K/W
Maximum Winding Temperature	63	$^{\circ}\text{C}$
MECHANICAL		
Housing Type	T	
Mechanical Time Constant	3.09	ms
Motor Body Length	37	mm
Commutation angle	120	$^{\circ}$
Motor diameter	13	mm
ENVIRONMENTAL		
Ambient temperature	22.3	$^{\circ}\text{C}$

Dimensional & Integration Overview

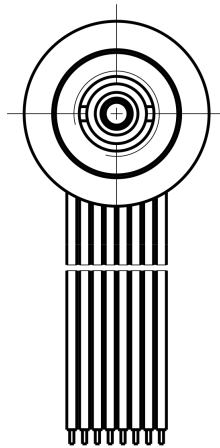
Mechanical Overview

PARAMETER	VALUE	UNIT
Housing Type	T	
Mechanical Time Constant	3.09	ms
Motor Body Length	37	mm
Commutation angle	120	°
Motor diameter	13	mm

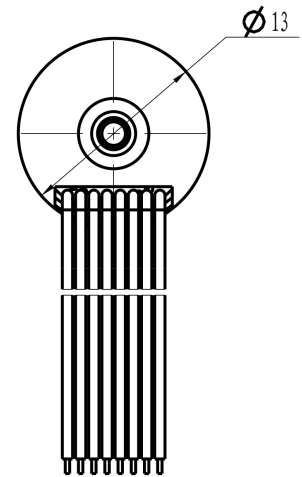
Dimensional Drawings



Mechanical View 1



Mechanical View 2



Mechanical View 3

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Motor housing axial protrusion length	9.4 mm
	Motor housing total length	37 mm
	Shaft protrusion length	1 mm -0.1 mm
	Outer shaft diameter	Φ9 mm -0.05 mm
	Inner shaft diameter	Φ2 mm -0.03 mm
	Right mounting interface length	150 mm ±20 mm
Mechanical View 3	Shaft diameter	Ø13

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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.