PRODUCT DATASHEET

ES-CM-BL03-M001

Coreless Brushless Miniature And Standard Series

Product Overview

Coreless Brushless Miniature And Standard Series with peak torque 7.15 mN·m, rated Speed 28500 rpm and continuous Rated Output Power 5 W.

Key Specifications

PARAMETER	VALUE	UNIT
Peak torque	7.15	mN·m
Rated Speed	28500	rpm
Continuous Rated Output Power	5	W
Rated Voltage	12	V
Continuous Rated Current	0.56	A
Peak Current	3	A
Dielectric strength	300VAC/1KHz/1mA/1s	
Insulation Resistance	100 MΩ/300VDC	
Duty Cycle	S2	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Peak torque	7.15	mN·m
Rated Speed	28500	rpm
Continuous Rated Output Power	5	W
No-Load Rotational Speed	35000	rpm
Motor efficiency	67	%
ELECTRICAL		
Rated Voltage	12	V
Continuous Rated Current	0.56	A
Peak Current	3	A
Dielectric strength	300VAC/1KHz/1mA/1s	
Insulation Resistance	100 MΩ/300VDC	
Duty Cycle	S2	
Pole Pairs	1	
Insulation Class	B	

Technical Specifications

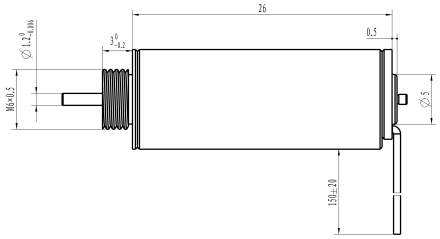
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
No-load Current	0.065	A
Back-EMF Constant (Peak)	0.46	V/Krpm
Back-EMF constant (RMS)	0.28	V/Krpm
Line resistance	4.5	Ω
Line inductance	0.15	mH
THERMAL		
Housing-to-Ambient Thermal Resistance	10.6	K/W
Maximum Winding Temperature	70	°C
MECHANICAL		
Housing Type	T	
Mechanical Time Constant	1.63	ms
Motor Body Length	26	mm
Commutation angle	120	°
Motor diameter	10	mm
ENVIRONMENTAL		
Ambient temperature	22.3	°C

Dimensional & Integration Overview

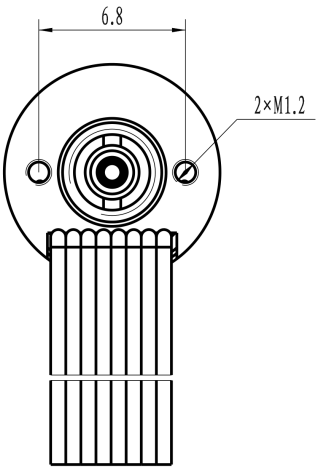
Mechanical Overview

PARAMETER	VALUE	UNIT
Housing Type	T	
Mechanical Time Constant	1.63	ms
Motor Body Length	26	mm
Commutation angle	120	°
Motor diameter	10	mm

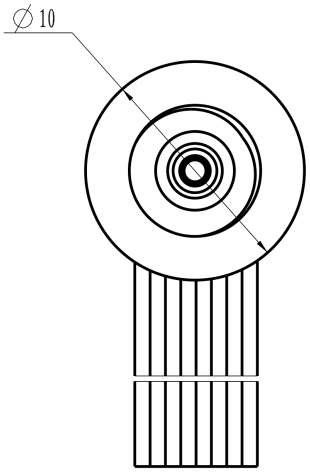
Dimensional Drawings



Mechanical View 1



Mechanical View 2



Mechanical View 3

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall length	26 mm
	Shaft diameter with tolerance	Φ1.2 -0.006 mm
	Threaded section length with tolerance	3 +0/-0.2 mm
	Right boss height	0.5 mm
	Thread specification	M6×0.5
	Right hole diameter	Φ5 mm
	Main body height with tolerance	150±20 mm
Mechanical View 2	Housing maximum width	6.8 mm
	Mounting hole specification and quantity	2 × M1.2 threaded holes
Mechanical View 3	Hole diameter	Φ10

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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.