

PRODUCT DATASHEET

ES-CM-BL01-M001

Coreless Brushless Miniature And Standard Series

Coreless Brushless Miniature And Standard Series | ES-CM-BL01 6 mm Coreless Brushless Motor Series

Product Overview

Coreless Brushless Miniature And Standard Series with peak torque 0.66 mNm, rated Speed 32000 rpm and continuous Rated Output Power 1 W.

Key Specifications

PARAMETER	VALUE	UNIT
Peak torque	0.66	mNm
Rated Speed	32000	rpm
Continuous Rated Output Power	1	W
Rated Voltage	6	V
Continuous Rated Current	0.46	A
Peak Current	1	A
Dielectric strength	300VAC/1KHz/1mA/1s	
Insulation Resistance	100 M Ω /300VDC	
Duty Cycle	S2	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Peak torque	0.66	mNm
Rated Speed	32000	rpm
Continuous Rated Output Power	1	W
No-Load Rotational Speed	48500	rpm
Motor efficiency	37	%
ELECTRICAL		
Rated Voltage	6	V
Continuous Rated Current	0.46	A
Peak Current	1	A
Dielectric strength	300VAC/1KHz/1mA/1s	
Insulation Resistance	100 MΩ/300VDC	
Duty Cycle	S2	
Pole Pairs	1	
Insulation Class	B	

Technical Specifications

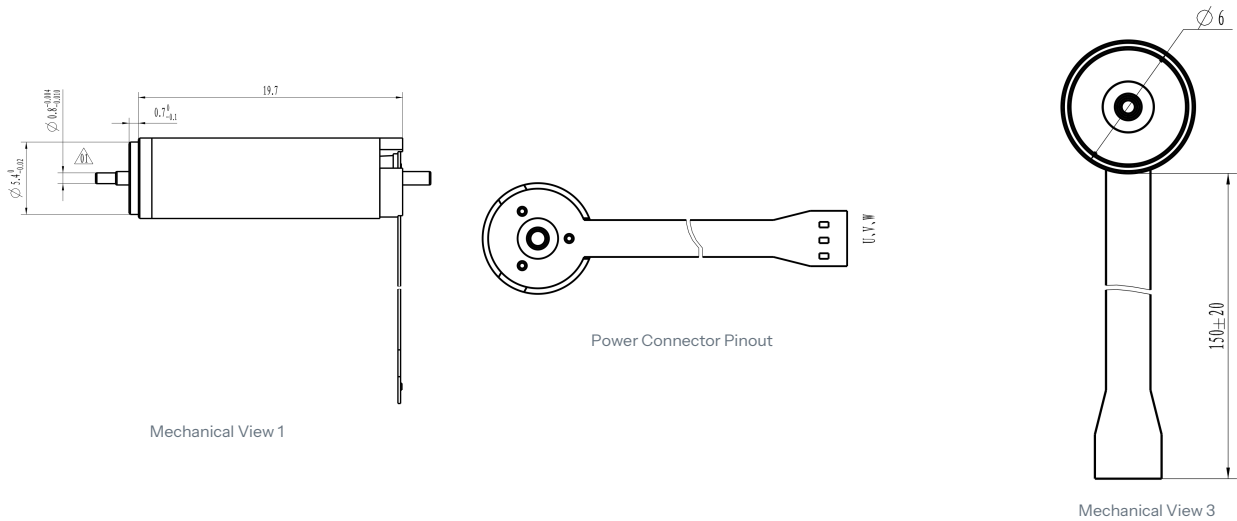
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
No-load Current	0.09	A
Back-EMF Constant (Peak)	0.1	V/Krpm
Back-EMF constant (RMS)	0.07	V/Krpm
Line resistance	5.9	Ω
Line inductance	0.04	mH
THERMAL		
Housing-to-Ambient Thermal Resistance	39.9	K/W
Maximum Winding Temperature	63	$^{\circ}\text{C}$
MECHANICAL		
Housing Type	T	
Mechanical Time Constant	6.92	ms
Motor Body Length	20	mm
Motor diameter	6	mm
ENVIRONMENTAL		
Ambient temperature	22.3	$^{\circ}\text{C}$

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Housing Type	T	
Mechanical Time Constant	6.92	ms
Motor Body Length	20	mm
Motor diameter	6	mm

Dimensional Drawings



2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall length	19.7 mm
	Hole diameter with tolerance	Ø0.8 -0.004/-0.010 mm
	Groove width or feature width	0.7 0/-0.1 mm
	Hole diameter	Ø1 mm
	Mounting hole diameter with tolerance	Ø5.4 0/-0.02 mm
Mechanical View 3	Central hole diameter	Φ6
	Overall length	150±20

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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.