

PRODUCT DATASHEET

ES-CM-BL02-M001

Coreless Brushless Miniature And Standard Series

Coreless Brushless Miniature And Standard Series | ES-CM-BL02 8 mm Coreless Brushless Motor Series

Product Overview

Coreless Brushless Miniature And Standard Series with peak torque 3.49 mN·m, rated Speed 38200 rpm and continuous Rated Output Power 3.25 W.

Key Specifications

PARAMETER	VALUE	UNIT
Peak torque	3.49	mN·m
Rated Speed	38200	rpm
Continuous Rated Output Power	3.25	W
Rated Voltage	12	V
Continuous Rated Current	0.45	A
Peak Current	2	A
Dielectric strength	300VAC/1KHz/1mA/1s	
Insulation Resistance	100 MΩ/300VDC	
Duty Cycle	S2	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Peak torque	3.49	mNm
Rated Speed	38200	rpm
Continuous Rated Output Power	3.25	W
No-Load Rotational Speed	48000	rpm
Motor efficiency	60	%
ELECTRICAL		
Rated Voltage	12	V
Continuous Rated Current	0.45	A
Peak Current	2	A
Dielectric strength	300VAC/1KHz/1mA/1s	
Insulation Resistance	100 MΩ/300VDC	
Duty Cycle	S2	
Pole Pairs	1	
Insulation Class	B	

Technical Specifications

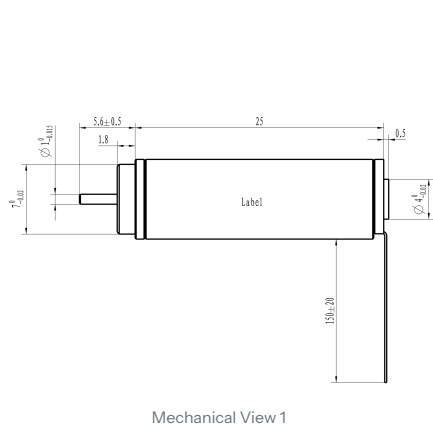
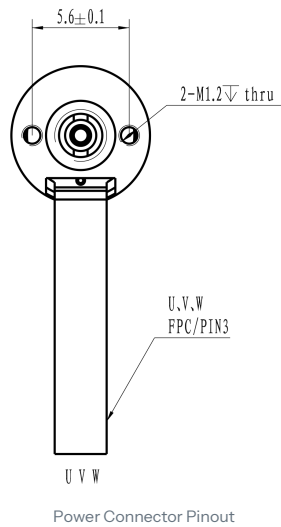
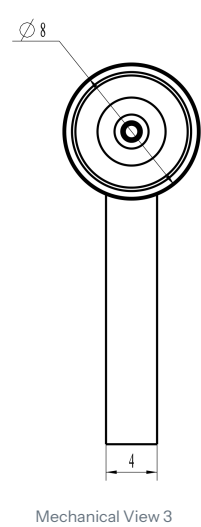
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
No-load Current	0.056	A
Back-EMF Constant (Peak)	0.26	V/Krpm
Back-EMF constant (RMS)	0.19	V/Krpm
Line resistance	6.1	Ω
Line inductance	0.085	mH
THERMAL		
Housing-to-Ambient Thermal Resistance	12.52	K/W
Maximum Winding Temperature	63	$^{\circ}\text{C}$
MECHANICAL		
Housing Type	T	
Mechanical Time Constant	3.11	ms
Motor Body Length	25	mm
Motor diameter	8	mm
ENVIRONMENTAL		
Ambient temperature	22.3	$^{\circ}\text{C}$

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Housing Type	T	
Mechanical Time Constant	3.11	ms
Motor Body Length	25	mm
Motor diameter	8	mm

Dimensional Drawings



2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Left mounting boss width	5.6±0.5 mm
	Overall length	25 mm
	Left step depth	1.8 mm
	Right end face length	0.5 mm
	Left shaft diameter	Φ10 0/-0.015 mm
	Left vertical dimension	7 0/-0.02 mm
	Right shaft diameter	Φ4 0/-0.02 mm
	Label area designation	Label
	Overall height	150±20 mm
Mechanical View 3	Center hole diameter	Φ8
	Shaft end diameter	4

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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.