

PRODUCT DATASHEET

ES-CM-BL04-M001

Coreless Brushless Miniature And Standard Series

Coreless Brushless Miniature And Standard Series | ES-CM-BL04 12 mm Coreless Brushless Motor Series

Product Overview

Coreless Brushless Miniature And Standard Series with peak torque 19.76 mNm, rated Speed 12000 rpm and continuous Rated Output Power 5 W.

Key Specifications

PARAMETER	VALUE	UNIT
Peak torque	19.76	mNm
Rated Speed	12000	rpm
Continuous Rated Output Power	5	W
Rated Voltage	6	V
Continuous Rated Current	1.21	A
Peak Current	6	A
Phase Resistance	1	Ω
Dielectric strength	660VAC/1KHz/1mA/1s	
Duty Cycle	S2	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Peak torque	19.76	mNm
Rated Speed	12000	rpm
Continuous Rated Output Power	5	W
No-Load Rotational Speed	15000	rpm
Motor efficiency	70	%
ELECTRICAL		
Rated Voltage	6	V
Continuous Rated Current	1.21	A
Peak Current	6	A
Phase Resistance	1	Ω
Dielectric strength	660VAC/1KHz/1mA/1s	
Insulation Resistance	100 M Ω /500VDC	

Technical Specifications

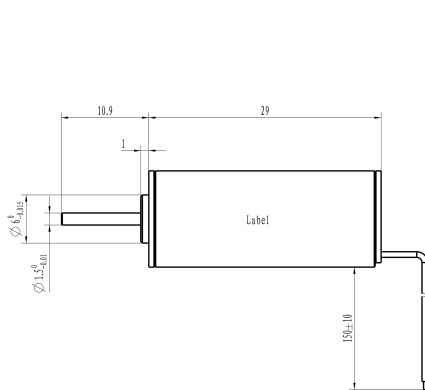
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Duty Cycle	S2	
Pole Pairs	2	
Insulation Class	B	
No-load Current	0.16	A
Back-EMF Constant (Peak)	0.49	V/Krpm
Back-EMF constant (RMS)	0.34	V/Krpm
MECHANICAL		
Housing Type	T	
Mechanical Time Constant	2.76	ms
Motor Body Length	29	mm
Motor diameter	12	mm

Dimensional & Integration Overview

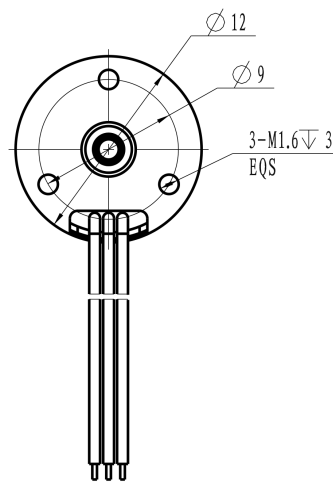
Mechanical Overview

PARAMETER	VALUE	UNIT
Housing Type	T	
Mechanical Time Constant	2.76	ms
Motor Body Length	29	mm
Motor diameter	12	mm

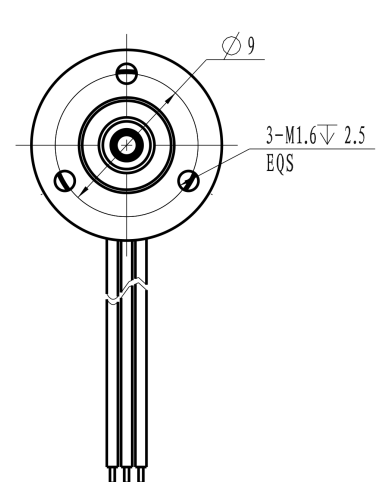
Dimensional Drawings



Mechanical View 1



Mechanical View 2



Mechanical View 3

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Shaft diameter with tolerance	Φ6 h7 (0/-0.015)
	Secondary shaft diameter with tolerance	Φ1.5 h6 (0/-0.01)
	Left mounting section length	10.9
	Overall body length	29
	Shaft face to step distance	1
	Cable length with tolerance	150±10
	Label area marking	Label area
Mechanical View 2	Mounting flange outer diameter	Φ12 mm
	Center hole diameter	Φ9 mm
	Mounting hole specification	3× M1.6 threaded holes, depth 3 mm, equally spaced
Mechanical View 3	Center hole diameter	Φ9
	Mounting thread specification	3-M1.6
	Mounting hole depth	2.5
	Equally spaced hole pattern	EQS (Equally Spaced)

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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.