

PRODUCT DATASHEET

ES-CM-BL06-M001

Coreless Brushless Miniature And Standard Series

Coreless Brushless Miniature And Standard Series | ES-CM-BL06 14 mm Coreless Brushless Motor Series

Product Overview

Coreless Brushless Miniature And Standard Series with peak torque 22.07 mNm, rated Speed 12000 rpm and continuous Rated Output Power 5 W.

Key Specifications

PARAMETER	VALUE	UNIT
Peak torque	22.07	mNm
Rated Speed	12000	rpm
Continuous Rated Output Power	5	W
Rated Voltage	6	V
Continuous Rated Current	1.25	A
Peak Current	7	A
Phase Resistance	0.87	Ω
Dielectric strength	500VAC/1KHz/1mA/1s	
Duty Cycle	S1	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Peak torque	22.07	mNm
Rated Speed	12000	rpm
Continuous Rated Output Power	5	W
No-Load Rotational Speed	15000	rpm
Motor efficiency	68	%
ELECTRICAL		
Rated Voltage	6	V
Continuous Rated Current	1.25	A
Peak Current	7	A
Phase Resistance	0.87	Ω
Dielectric strength	500VAC/1KHz/1mA/1s	
Insulation Resistance	100 M Ω /500VDC	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Duty Cycle	S1	
Pole Pairs	1	
Insulation Class	B	
No-load Current	0.16	A
Back-EMF Constant (Peak)	0.47	V/Krpm
Back-EMF constant (RMS)	0.34	V/Krpm
MECHANICAL		
Housing Type	T	
Mechanical Time Constant	2.55	ms
Motor Body Length	36	mm
Motor diameter	14	mm

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Left section length	12 mm
	Main body length	36 mm
	Shaft extension length	3 mm
	Left shaft diameter with tolerance	$\Phi 7.4\ 0/-0.015\ \text{mm}$
	Shaft section diameter with tolerance	$\Phi 20/-0.01\ \text{mm}$
	Shaft section height or thickness	$4\pm 0.1\ \text{mm}$
	Shaft dimension with tolerance	$1.2\ 0/-0.05\ \text{mm}$
	Overall height	$150\pm 20\ \text{mm}$
Mechanical View 2	Mounting flange outer diameter	$\Phi 14$
	Center bore diameter	$\Phi 10.7$
	Mounting threaded hole specification	4× M1.6 through holes, equally spaced
Mechanical View 3	Central bore diameter	$\Phi 10$
	Through-hole thread specification and quantity	3×M1.6 countersink thru
	Hole pattern distribution	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.