

PRODUCT DATASHEET

ES-CM-BR04-M001

Coreless Brushed Miniature And Standard Series

Coreless Brushed Miniature And Standard Series | ES-CM-BR04 40 mm Coreless Brushed Motor Series

Product Overview

Coreless Brushed Miniature And Standard Series with rated Voltage 48 V, instantaneous Maximum Current 16 A and brush type Graphite brush.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Voltage	48	V
Instantaneous Maximum Current	16	A
Brush type	Graphite brush	
Commutator segment count	13	
Insulation Class	F/155 °C	
Loaded Speed	5500	rpm
Maximum efficiency	85	%
Maximum Continuous Current	3.8	A
Maximum Winding Temperature	155	°C

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
No-Load Rotational Speed	6600	rpm
Speed Constant	6.36	rpm/mNm
Maximum efficiency	85	%
Loaded Speed	5500	rpm
ELECTRICAL		
Rated Voltage	48	V
Instantaneous Maximum Current	16	A
Maximum Continuous Current	3.8	A
Motor Speed Constant per Volt	143	rpm/V
Insulation Class	F/155 °C	
No-load Current	0.15	A

Technical Specifications

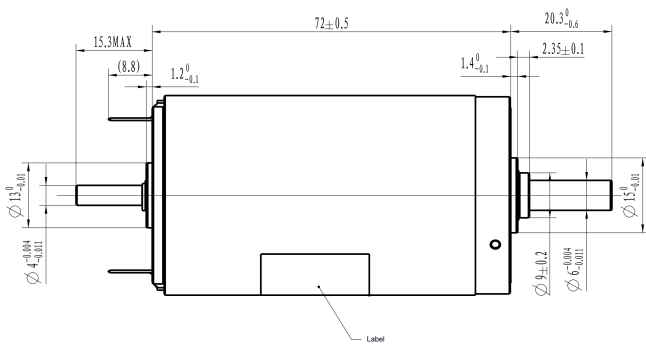
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Line-to-line inductance	0.98	mH
Line-to-line resistance	2.94	Ω
THERMAL		
Housing-to-Ambient Thermal Resistance	15	K/W
Maximum Winding Temperature	155	$^{\circ}\text{C}$
MECHANICAL		
Mechanical Time Constant	9.6	ms
Motor length	72	mm
Commutator segment count	13	
Brush type	Graphite brush	
Motor diameter	40	mm
ENVIRONMENTAL		
Operating Temperature	-20 to 65	$^{\circ}\text{C}$

Dimensional & Integration Overview

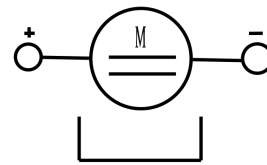
Mechanical Overview

PARAMETER	VALUE	UNIT
Mechanical Time Constant	9.6	ms
Motor length	72	mm
Commutator segment count	13	
Brush type	Graphite brush	
Motor diameter	40	mm

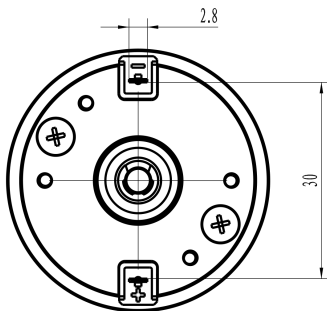
Dimensional Drawings



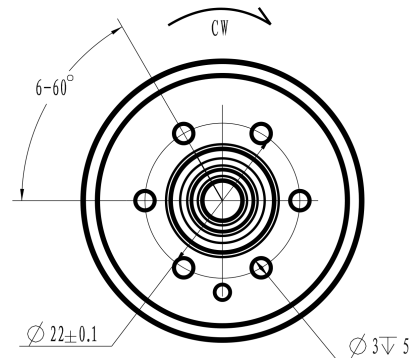
Mechanical View 1



Power Connector Pinout



Mechanical View 3



Mechanical View 4

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Motor body length	72 ±0.5
	Left shaft extension maximum length	15.3 max
	Left reference length	8.8 reference
	Left shoulder step length	1.2 +0/-0.1
	Left outer shaft diameter	Diameter 13 +0/-0.01
	Left small shaft diameter	Diameter 4 -0.004/-0.011
	Right shaft extension length	20.3 +0/-0.6
	Right shoulder step length	1.4 +0/-0.1
	Right end step length	2.35 ±0.1
	Right outer shaft diameter	Diameter 15 +0/-0.01
	Right intermediate shaft diameter	Diameter 9 ±0.2
	Right small shaft diameter	Diameter 6 -0.004/-0.011
	Label indication	Label
Mechanical View 3	Disk outer diameter	30
Mechanical View 4	Rotation direction	Clockwise rotation
	Equally spaced hole angular pitch	6 positions at 60 degrees spacing
	Bolt circle diameter	Diameter 22 ±0.1

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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.