PRODUCT DATASHEET

ES-CM-BR03-M001

Coreless Brushed Miniature And Standard Series

Coreless Brushed Miniature And Standard Series | ES-CM-BR03 25 mm Coreless Brushed Motor Series

Product Overview

Coreless Brushed Miniature And Standard Series with rated Voltage 24 V, instantaneous Maximum Current 13 A and brush type Graphite brush.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Voltage	24	V
Instantaneous Maximum Current	13	A
Brush type	Graphite brush	
Commutator segment count	11	
Insulation Class	F/155 °C	
Loaded Speed	10000	rpm
Maximum efficiency	88	%
Maximum Continuous Current	1.8	A
Maximum Winding Temperature	155	°C

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
No-Load Rotational Speed	11000	rpm
Speed Constant	41.75	rpm/mN·m
Maximum efficiency	88	%
Loaded Speed	10000	rpm
ELECTRICAL		
Rated Voltage	24	V
Instantaneous Maximum Current	13	A
Maximum Continuous Current	1.8	A
Motor Speed Constant per Volt	473	rpm/V
Insulation Class	F/155 °C	
No-load Current	0.18	A

Technical Specifications

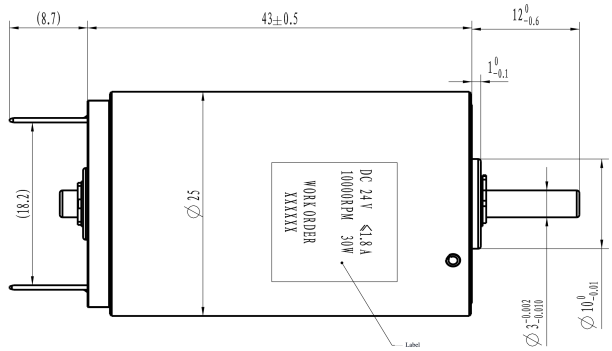
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Line-to-line inductance	0.22	mH
Line-to-line resistance	1.8	Ω
THERMAL		
Housing-to-Ambient Thermal Resistance	15	K/W
Maximum Winding Temperature	155	°C
MECHANICAL		
Mechanical Time Constant	6.5	ms
Motor length	43	mm
Commutator segment count	11	
Brush type	Graphite brush	
Motor diameter	25	mm
ENVIRONMENTAL		
Operating Temperature	-20 to 65	°C

Dimensional & Integration Overview

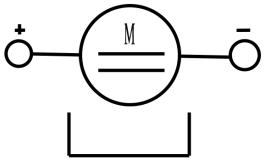
Mechanical Overview

PARAMETER	VALUE	UNIT
Mechanical Time Constant	6.5	ms
Motor length	43	mm
Commutator segment count	11	
Brush type	Graphite brush	
Motor diameter	25	mm

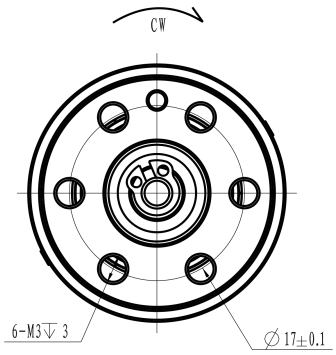
Dimensional Drawings



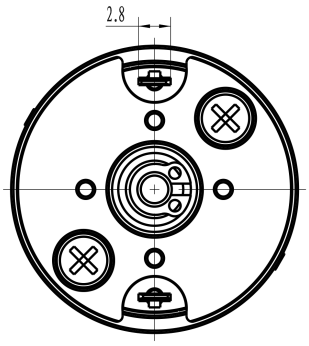
Mechanical View 1



Power Connector Pinout



Mechanical View 3



Mechanical View 4

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Left boss length (reference)	(8.7)
	Overall length	43±0.5
	Shaft length	12 +0/-0.6
	Shaft flat depth	1 +0/-0.1
	Right boss length (reference)	(18.2)
	Body diameter	Ø25
	Output shaft diameter	Ø10 +0.01/-0.01
	Shaft tip diameter	Ø3.5 +0.002/0
	Rated voltage	DC 24V
	Rated current	≤1.8A
	Rated speed	10000RPM
	Rated power	30W
Mechanical View 3	Rotation direction	Clockwise
	Mounting hole thread specification	6 × M3 threaded holes
	Mounting hole depth	3 mm depth
	Mounting hole pitch circle diameter	Φ17±0.1 mm
Mechanical View 4	Top feature width	2.8 mm

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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.