

PRODUCT DATASHEET

ES-DC-IC04-M001

Iron Core Brushed Series

Iron Core Brushed Series | ES-DC-IC04 80 mm Iron-Core Brushed DC Motor Series

Product Overview

Iron Core Brushed Series with rated Torque 0.25 N·m, rated Speed 2500 RPM and continuous Rated Output Power 65 W.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	0.25	N·m
Rated Speed	2500	RPM
Continuous Rated Output Power	65	W
Rated Voltage	24	VDC
Continuous Rated Current	4.5	A
Body Length	102	mm
Insulation Class	B/130°C	
Insulation Resistance	100MΩ/250V	MΩ
Frame Size	80	mm

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	0.25	Nm
Rated Speed	2500	RPM
Continuous Rated Output Power	65	W
Torque Constant	61	mNm/A
No-Load Rotational Speed	3200	RPM
Loaded Torque	0.25	Nm
Loaded Speed	2500±10%	RPM
Starting Torque	0.052	Nm
Stall Torque	1.2	Nm
ELECTRICAL		
Rated Voltage	24	VDC

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
ELECTRICAL			
Continuous Rated Current	4.5	A	
Rotational Back-EMF Constant	6.4	V/Krpm	
Phase Inductance	1.8	mH	
Insulation Class	B/130°C		
Insulation Resistance	100MΩ/250V	MΩ	Test Voltage: 250 V
No-load Current	0.6	A	
Loaded Current	<4.5	A	
Loaded Power	65	W	
Line-to-line resistance	1.3	Ω	
Withstand Voltage	800V AC/50HZ/2mA/1S		Test Temperature: 25 °C

Technical Specifications

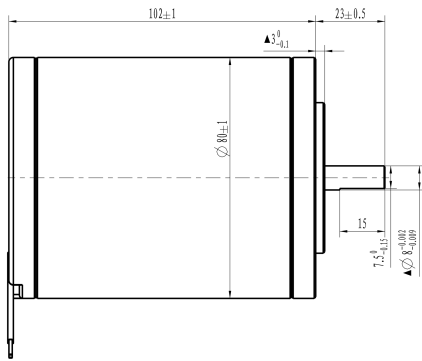
PARAMETER	SPECIFICATION	UNIT	NOTES
ELECTRICAL			
Duty Cycle	S1		
Stall Current	19	A	
MECHANICAL			
Body Length	102	mm	
Frame Size	80	mm	
Housing shape	Round		
Housing Type	Stainless steel / iron housing		
Rotor Inertia	1.6	kgcm ²	
Motor Body Length	102±1	mm	Drawing Parameter: Overall length; Drawing Region: R001
Shaft Outer Diameter	Ø50 -0.05/-0.10	mm	Drawing Parameter: Shaft outer diameter; Drawing Region: R002
Output Shaft Diameter	Ø8 -0.002/-0.009	mm	Drawing Parameter: Output shaft diameter; Drawing Region: R001

Dimensional & Integration Overview

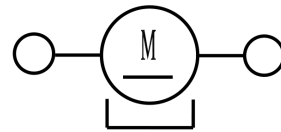
Mechanical Overview

PARAMETER	VALUE	UNIT
Body Length	102	mm
Frame Size	80	mm
Housing shape	Round	
Housing Type	Stainless steel / iron housing	
Rotor Inertia	1.6	kgcm ²
Motor Body Length	102±1	mm

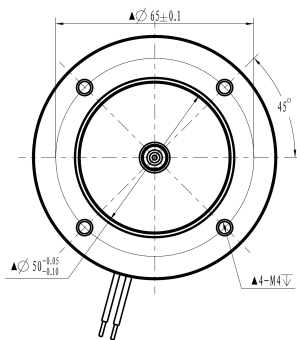
Dimensional Drawings



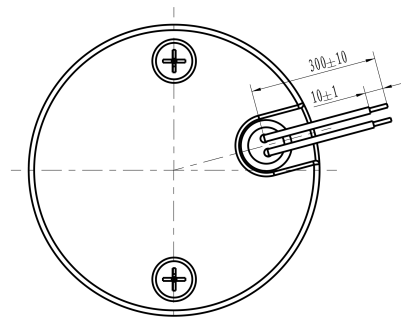
Mechanical View 1



Power Connector Pinout



Mechanical View 3



Mechanical View 4

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall length	102±1 mm
	End section width	23±0.5 mm
	Flatness tolerance	Flatness 3 with deviation 0/-0.1
	Main shaft outer diameter	Φ80±1 mm
	Output shaft length	15 mm
	Output shaft diameter	Φ8 -0.002/-0.009 mm
	Keyway width	7.5 -0/-0.15 mm
Mechanical View 3	Outer diameter	Φ65±0.1
	Mounting hole angular position	45°
	Shaft outer diameter	Φ50 -0.05/-0.10
	Mounting threaded holes	4×M4 threaded holes
Mechanical View 4	Angular range	300±10
	Thickness or depth	10±1

[View Product Online](#) [Request Engineering Data](#) [Request a Quote](#)

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.