

PRODUCT DATASHEET

ES-DC-SL06-M003

Slotted Series

Slotted Series | ES-DC-SL06 57 mm Slotted Brushless DC Motor Series

Product Overview

Slotted Series with rated Torque 0.33 N·m, rated Speed 3000 rpm and continuous Rated Output Power 103.7 W.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	0.33	N·m
Rated Speed	3000	rpm
Continuous Rated Output Power	103.7	W
Rated Voltage	24	V
Continuous Rated Current	6	A
Instantaneous Maximum Current	18	A
Body Length	75	mm
Dielectric strength	500VAC/1KHz/1mA/1s	
Duty Cycle	S1	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	0.33	Nm
Rated Speed	3000	rpm
Continuous Rated Output Power	103.7	W
No-Load Rotational Speed	4000	rpm
Motor efficiency	82	%
ELECTRICAL		
Rated Voltage	24	V
Continuous Rated Current	6	A
Instantaneous Maximum Current	18	A
Dielectric strength	500VAC/1KHz/1mA/1s	
Insulation Resistance	100 MOhm 20C	
Duty Cycle	S1	
Rotational Back-EMF Constant	5.66	V/krpm
No-load Current	0.75	A

Technical Specifications

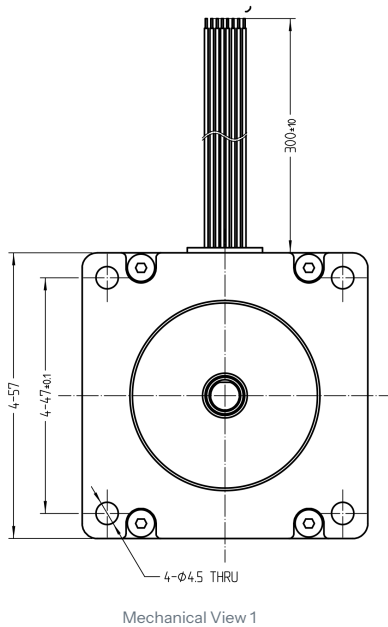
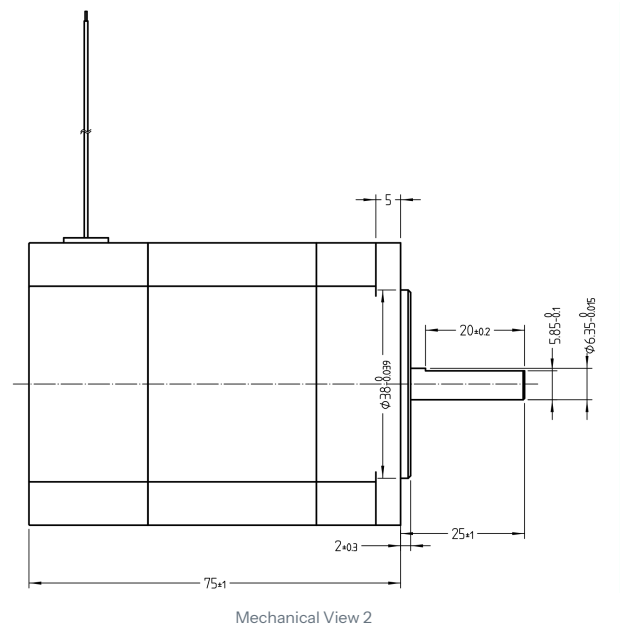
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Line resistance	0.301	Ω
Line inductance	0.205	mH
THERMAL		
Housing-to-Ambient Thermal Resistance	0.18	K/W
Maximum Winding Temperature	77.4	$^{\circ}\text{C}$
MECHANICAL		
Body Length	75	mm
Housing Type	No housing	
Frame size	57	mm
Housing shape	Square	
Commutation angle	120	$^{\circ}$
Motor Weight	0.87	g
ENVIRONMENTAL		
Noise	≤ 50	dB
Ambient temperature	29	$^{\circ}\text{C}$

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Body Length	75	mm
Housing Type	No housing	
Frame size	57	mm
Housing shape	Square	
Commutation angle	120	°
Motor Weight	0.87	g

Dimensional Drawings



2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall Length	300±10
	Mounting Hole Center Distance (4 Places)	47±0.1 (4 places)
	Envelope Dimension Reference	57 (4 places, reference)
	Mounting Hole Diameter (4 Places, Through)	Φ4.5 THRU (4 places)
Mechanical View 2	Shaft boss height	5
	Shaft boss width	20±0.2
	Shaft extension length	5.85 0/-0.1
	Shaft diameter	Φ6.35 0/-0.015
	Shaft boss diameter	Φ38 0/-0.039
	Total shaft boss length	25±1
	Shaft end retaining ring thickness	2±0.3
	Motor side view total length	75±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.