

PRODUCT DATASHEET

ES-DC-SL07-M003

Slotted Series

Slotted Series | ES-DC-SL07 60 mm Slotted Brushless DC Motor Series

Product Overview

Slotted Series with rated Torque 0.46 Nm, rated Speed 3500 rpm and continuous Rated Output Power 144.5 W.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	0.46	N·m
Rated Speed	3500	rpm
Continuous Rated Output Power	144.5	W
Rated Voltage	24	V
Continuous Rated Current	8.2	A
Instantaneous Maximum Current	24.6	A
Body Length	75	mm
Dielectric strength	500VAC/1KHz/1mA/1s	
Duty Cycle	S1	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	0.46	Nm
Rated Speed	3500	rpm
Continuous Rated Output Power	144.5	W
No-Load Rotational Speed	3000	rpm
Motor efficiency	83	%
ELECTRICAL		
Rated Voltage	24	V
Continuous Rated Current	8.2	A
Instantaneous Maximum Current	24.6	A
Dielectric strength	500VAC/1KHz/1mA/1s	
Insulation Resistance	100 MOhm 20C	
Duty Cycle	S1	
Rotational Back-EMF Constant	5.87	V/krpm
No-load Current	0.87	A

Technical Specifications

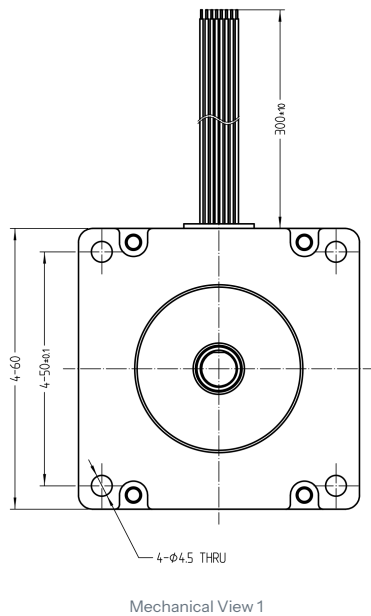
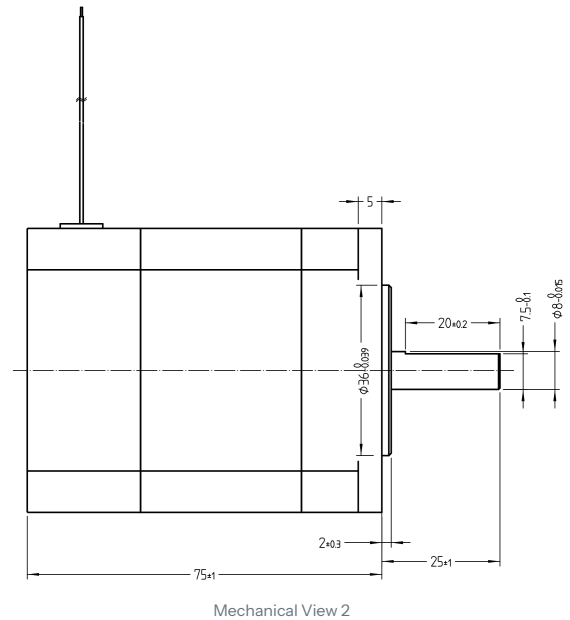
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Line resistance	0.233	Ω
Line inductance	0.183	mH
THERMAL		
Housing-to-Ambient Thermal Resistance	0.19	K/W
Maximum Winding Temperature	87	$^{\circ}\text{C}$
MECHANICAL		
Body Length	75	mm
Housing Type	No housing	
Frame size	60	mm
Housing shape	Square	
Commutation angle	120	$^{\circ}$
Motor Weight	1	g
ENVIRONMENTAL		
Noise	≤ 50	dB
Ambient temperature	30	$^{\circ}\text{C}$

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Body Length	75	mm
Housing Type	No housing	
Frame size	60	mm
Housing shape	Square	
Commutation angle	120	°
Motor Weight	1	g

Dimensional Drawings



2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Overall height	300±10
	Mounting hole pitch circle diameter	4-60 (PCD)
	Mounting base square side dimension	4-50±0.1
	Mounting through hole diameter	4- ϕ 4.5 THRU
Mechanical View 2	Shaft extension length	5 mm
	Shaft diameter	Φ 8 -0.015/0 mm
	Shaft shoulder diameter	Φ 36 0/-0.039 mm
	Shaft shoulder width	7.5 -0.1/0 mm
	Mounting face width	20±0.2 mm
	Front boss height	2±0.3 mm
	Motor body depth	25±1 mm
	Overall width	75±1 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.