

PRODUCT DATASHEET

ES-DC-SL08-M001

Slotted Series

Slotted Series | ES-DC-SL08 86 mm Slotted Brushless DC Motor Series

Product Overview

Slotted Series with rated Torque 0.5 Nm, rated Speed 3000 rpm and continuous Rated Output Power 157.1 W.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	0.5	N·m
Rated Speed	3000	rpm
Continuous Rated Output Power	157.1	W
Rated Voltage	48	V
Continuous Rated Current	4.7	A
Instantaneous Maximum Current	14.1	A
Body Length	61	mm
Dielectric strength	500VAC/1KHz/1mA/1s	
Duty Cycle	S1	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	0.5	Nm
Rated Speed	3000	rpm
Continuous Rated Output Power	157.1	W
No-Load Rotational Speed	3600	rpm
Motor efficiency	86.5	%
ELECTRICAL		
Rated Voltage	48	V
Continuous Rated Current	4.7	A
Instantaneous Maximum Current	14.1	A
Dielectric strength	500VAC/1KHz/1mA/1s	
Insulation Resistance	100 MOhm 20C	
Duty Cycle	S1	
Rotational Back-EMF Constant	11.1	V/krpm
No-load Current	0.35	A

Technical Specifications

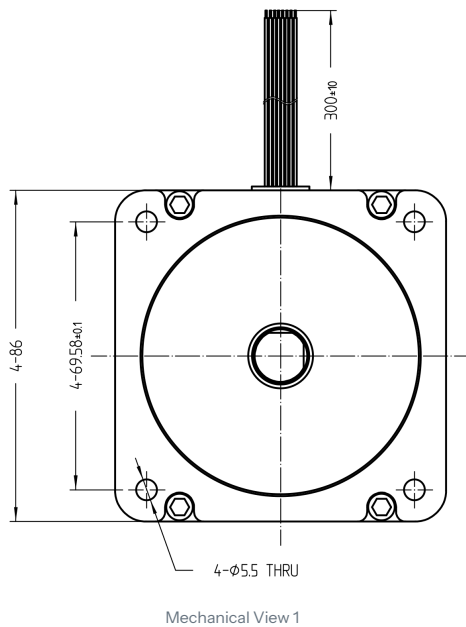
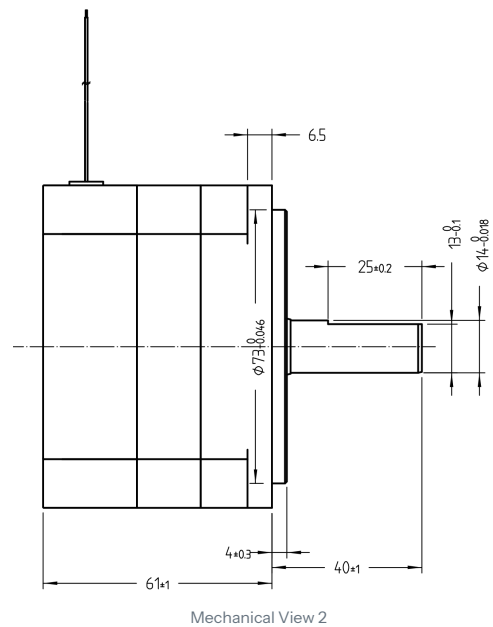
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Line resistance	0.492	Ω
Line inductance	1.139	mH
THERMAL		
Housing-to-Ambient Thermal Resistance	0.61	K/W
Maximum Winding Temperature	90	$^{\circ}\text{C}$
MECHANICAL		
Body Length	61	mm
Housing Type	No housing	
Frame size	86	mm
Housing shape	Square	
Commutation angle	120	$^{\circ}$
Motor Weight	1.38	g
ENVIRONMENTAL		
Noise	≤ 50	dB
Ambient temperature	30	$^{\circ}\text{C}$

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Body Length	61	mm
Housing Type	No housing	
Frame size	86	mm
Housing shape	Square	
Commutation angle	120	°
Motor Weight	1.38	g

Dimensional Drawings



2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Shaft extension length tolerance	300 ±10 mm
	Mounting hole pitch circle diameter	4 holes on 69.58 ±0.1 mm PCD
	Motor flange face dimension	86 mm square flange
	Mounting hole diameter	4 holes × Φ5.5 mm
	Mounting hole type	Through hole
Mechanical View 2	Output shaft protrusion length	6.5 mm
	Motor flange outer diameter	Φ73 +0.046/0 mm
	Output shaft shoulder length	25±0.2 mm
	Output shaft diameter	Φ14 0/-0.018 mm
	Output shaft total length	13 0/-0.1 mm
	Mounting face depth or groove width	4±0.3 mm
	Motor body depth	40±1 mm
	Motor overall width	61±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.