

PRODUCT DATASHEET

ES-DC-SL05-M001

Slotted Series

Slotted Series | ES-DC-SL05 42 mm Slotted Brushless DC Motor Series

Product Overview

Slotted Series with rated Torque 0.2 Nm, rated Speed 10000 rpm and continuous Rated Output Power 209.4 W.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	0.2	N·m
Rated Speed	10000	rpm
Continuous Rated Output Power	209.4	W
Rated Voltage	48	V
Continuous Rated Current	5.5	A
Instantaneous Maximum Current	16.5	A
Body Length	75	mm
Dielectric strength	500VAC/1KHz/1mA/1s	
Duty Cycle	S2	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	0.2	Nm
Rated Speed	10000	rpm
Continuous Rated Output Power	209.4	W
No-Load Rotational Speed	12000	rpm
Motor efficiency	80	%
ELECTRICAL		
Rated Voltage	48	V
Continuous Rated Current	5.5	A
Instantaneous Maximum Current	16.5	A
Dielectric strength	500VAC/1KHz/1mA/1s	
Insulation Resistance	100 MOhm 20C	
Duty Cycle	S2	
Rotational Back-EMF Constant	3.77	V/krpm
No-load Current	0.86	A

Technical Specifications

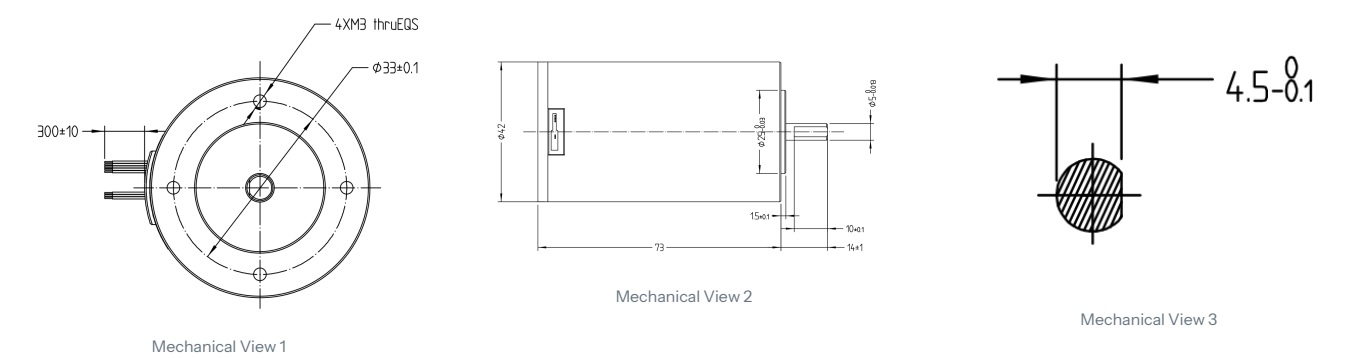
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Line resistance	0.24	Ω
Line inductance	0.15	mH
THERMAL		
Housing-to-Ambient Thermal Resistance	0.085	K/W
Maximum Winding Temperature	75	$^{\circ}\text{C}$
MECHANICAL		
Body Length	75	mm
Housing Type	Aluminum housing	
Frame size	42	mm
Housing shape	Round	
Commutation angle	120	$^{\circ}$
Motor Weight	425.8	g
ENVIRONMENTAL		
Noise	≤ 50	dB
Ambient temperature	25	$^{\circ}\text{C}$

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Body Length	75	mm
Housing Type	Aluminum housing	
Frame size	42	mm
Housing shape	Round	
Commutation angle	120	°
Motor Weight	425.8	g

Dimensional Drawings



2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	M3 threaded hole	4 × M3 through holes, equally spaced
	Bolt circle diameter	Φ33±0.1
Mechanical View 2	Shaft end diameter with tolerance	Ø5 0/-0.013 mm
	Motor flange outer diameter	Ø42 mm
	Main output shaft diameter with tolerance	Ø25 0/-0.03 mm
	Shaft extension length	1.5±0.1 mm
	Main shaft protrusion length	10±0.1 mm
	Overall motor length	73 mm
	Total output shaft length	14±1 mm
Mechanical View 3	Local section hole diameter	4.5 0/-0.1

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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.