PRODUCT DATASHEET

ES-DC-SL05-M004

Slotted Series

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

Product Overview

Slotted Series with rated Torque 0.185 N·m, rated Speed 3000 rpm and continuous Rated Output Power 58.1 W.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	0.185	N·m
Rated Speed	3000	rpm
Continuous Rated Output Power	58.1	W
Rated Voltage	24	V
Continuous Rated Current	3.6	A
Instantaneous Maximum Current	10.8	A
Body Length	75	mm
Dielectric strength	500VAC/1KHz/1mA/1s	
Duty Cycle	S2	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	0.185	N·m
Rated Speed	3000	rpm
Continuous Rated Output Power	58.1	W
No-Load Rotational Speed	4000	rpm
Motor efficiency	76	%
ELECTRICAL		
Rated Voltage	24	V
Continuous Rated Current	3.6	A
Instantaneous Maximum Current	10.8	A
Dielectric strength	500VAC/1KHz/1mA/1s	
Insulation Resistance	100 MOhm 20C	
Duty Cycle	S2	
Rotational Back-EMF Constant	5.44	V/krpm
No-load Current	0.45	A

Technical Specifications

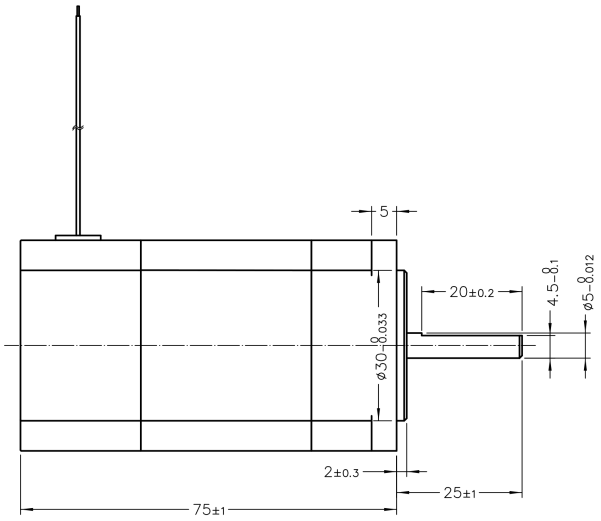
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Line resistance	0.987	Ω
Line inductance	0.434	mH
THERMAL		
Housing-to-Ambient Thermal Resistance	0.25	K/W
Maximum Winding Temperature	68.5	°C
MECHANICAL		
Body Length	75	mm
Housing Type	No housing	
Frame size	42	mm
Housing shape	Square	
Commutation angle	120	°
Motor Weight	500	g
ENVIRONMENTAL		
Noise	≤50	dB
Ambient temperature	31.3	°C

Dimensional & Integration Overview

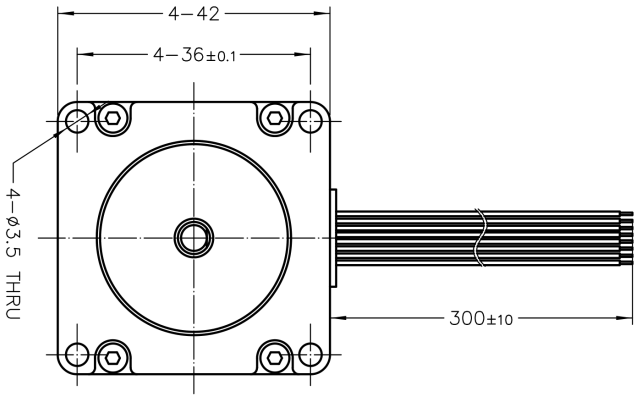
Mechanical Overview

PARAMETER	VALUE	UNIT
Body Length	75	mm
Housing Type	No housing	
Frame size	42	mm
Housing shape	Square	
Commutation angle	120	°
Motor Weight	500	g

Dimensional Drawings



Mechanical View 1



Mechanical View 2

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Shaft diameter with tolerance	Φ5 -0.012/-0.1
	Shaft shoulder diameter	Φ30 -0.033
	Shaft extension length	20±0.2
	Mounting boss height	2±0.3
	Mounting face width	25±1
	Motor overall length	75±1
	Local width dimension	5
	Shaft flat or keyway dimension	4.5 -0.1
Mechanical View 2	Mounting hole spacing (outer)	42 mm
	Mounting hole spacing (inner)	36±0.1 mm
	Mounting hole diameter	4×Φ3.5 mm through hole
	Shaft length	300±10 mm

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.