

PRODUCT DATASHEET

ES-DC-SL02-M001

Slotted Series

Slotted Series | ES-DC-SL02 22 mm Slotted Brushless DC Motor Series

Product Overview

Slotted Series with rated Torque 0.019 N·m, rated Speed 10000 rpm and continuous Rated Output Power 19.9 W.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	0.019	N·m
Rated Speed	10000	rpm
Continuous Rated Output Power	19.9	W
Rated Voltage	24	V
Continuous Rated Current	1.2	A
Instantaneous Maximum Current	3.6	A
Body Length	48	mm
Dielectric strength	500VAC/1KHz/1mA/1s	
Duty Cycle	S2	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	0.019	Nm
Rated Speed	10000	rpm
Continuous Rated Output Power	19.9	W
No-Load Rotational Speed	12000	rpm
Cogging Torque	3.42	Nm
Motor efficiency	70	%
ELECTRICAL		
Rated Voltage	24	V
Continuous Rated Current	1.2	A
Instantaneous Maximum Current	3.6	A
Dielectric strength	500VAC/1KHz/1mA/1s	
Insulation Resistance	100 MOhm 20C	
Duty Cycle	S2	
Rotational Back-EMF Constant	1.67	V/krpm

Technical Specifications

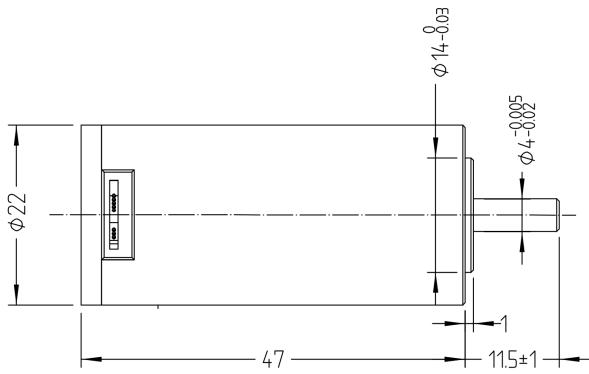
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
No-load Current	0.24	A
Line resistance	3.053	Ω
Line inductance	0.54	mH
THERMAL		
Housing-to-Ambient Thermal Resistance	0.85	K/W
Maximum Winding Temperature	75	$^{\circ}\text{C}$
MECHANICAL		
Body Length	48	mm
Housing Type	Aluminum housing	
Frame size	22	mm
Housing shape	Round	
Commutation angle	120	$^{\circ}$
Motor Weight	67.7	g
ENVIRONMENTAL		
Noise	≤ 50	dB
Ambient temperature	25	$^{\circ}\text{C}$

Dimensional & Integration Overview

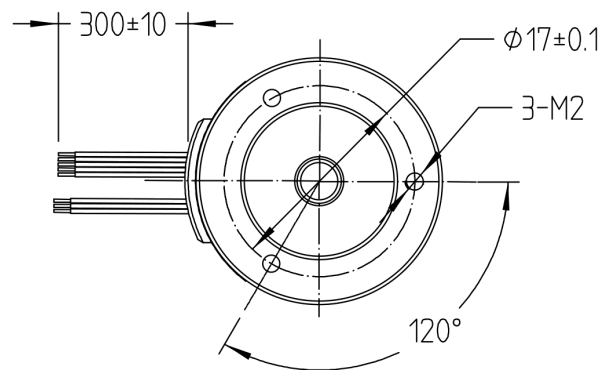
Mechanical Overview

PARAMETER	VALUE	UNIT
Body Length	48	mm
Housing Type	Aluminum housing	
Frame size	22	mm
Housing shape	Round	
Commutation angle	120	°
Motor Weight	67.7	g

Dimensional Drawings



Mechanical View 1



Mechanical View 2

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Shaft shoulder diameter	Diameter 14 mm, upper deviation 0 mm, lower deviation -0.03 mm
	Output shaft diameter	Diameter 4 mm, upper deviation -0.005 mm, lower deviation -0.02 mm
	Motor body diameter	Diameter 22 mm
	Motor body length	47 mm
	Output shaft protrusion length	11.5 mm $\pm$ 1 mm
Mechanical View 2	Motor front mounting flange length	300 $\pm$ 10 mm
	Front flange mounting hole circle diameter	Φ 17 $\pm$ 0.1 mm
	Front flange mounting hole specification and quantity	3 $\times$ M2 threaded holes
	Mounting hole angular distribution	120° angular spacing

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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.