

PRODUCT DATASHEET

ES-DC-SL01-M001

Slotted Series

Slotted Series | ES-DC-SL01 16 mm Slotted Brushless DC Motor Series

Product Overview

Slotted Series with rated Torque 0.007 N·m, rated Speed 12600 rpm and continuous Rated Output Power 9.2 W.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	0.007	N·m
Rated Speed	12600	rpm
Continuous Rated Output Power	9.2	W
Rated Voltage	24	V
Continuous Rated Current	0.65	A
Instantaneous Maximum Current	1.95	A
Body Length	32	mm
Dielectric strength	500VAC/1KHz/1mA/1s	
Duty Cycle	S2	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	0.007	Nm
Rated Speed	12600	rpm
Continuous Rated Output Power	9.2	W
No-Load Rotational Speed	16300	rpm
Cogging Torque	4.5	Nm
Motor efficiency	71.6	%
ELECTRICAL		
Rated Voltage	24	V
Continuous Rated Current	0.65	A
Instantaneous Maximum Current	1.95	A
Dielectric strength	500VAC/1KHz/1mA/1s	
Insulation Resistance	100 MOhm 20C	
Duty Cycle	S2	
Rotational Back-EMF Constant	1.25	V/krpm

Technical Specifications

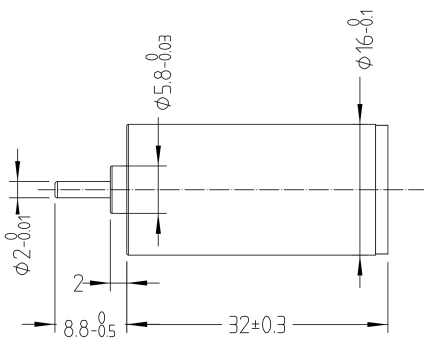
PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
No-load Current	0.22	A
Line resistance	6.5	Ω
Line inductance	0.78	mH
THERMAL		
Housing-to-Ambient Thermal Resistance	0.9	K/W
Maximum Winding Temperature	68.5	$^{\circ}\text{C}$
MECHANICAL		
Body Length	32	mm
Housing Type	Aluminum housing	
Frame size	16	mm
Housing shape	Round	
Commutation angle	120	$^{\circ}$
Motor Weight	25.5	g
ENVIRONMENTAL		
Noise	≤ 50	dB
Ambient temperature	25	$^{\circ}\text{C}$

Dimensional & Integration Overview

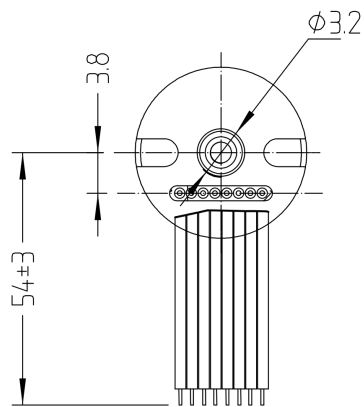
Mechanical Overview

PARAMETER	VALUE	UNIT
Body Length	32	mm
Housing Type	Aluminum housing	
Frame size	16	mm
Housing shape	Round	
Commutation angle	120	°
Motor Weight	25.5	g

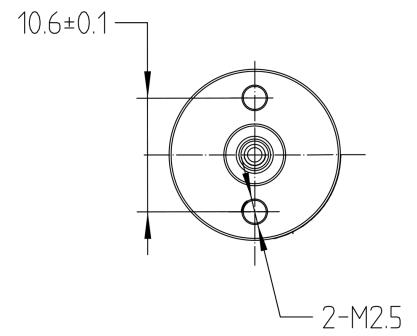
Dimensional Drawings



Mechanical View 1



Mechanical View 2



Mechanical View 3

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Shaft diameter (left small section)	$\Phi 5.8 +0/-0.03$ mm
	Main shaft diameter (right side)	$\Phi 16 +0/-0.1$ mm
	Shaft diameter (leftmost small section)	$\Phi 2 +0/-0.01$ mm
	Shaft section length	2 mm
	Mounting flange extension length	$8.8 +0/-0.5$ mm
	Motor overall length	32 ± 0.3 mm
Mechanical View 2	Hole diameter	$\phi 3.2$
	Horizontal positioning dimension	3.8
	Overall length	54 ± 3
Mechanical View 3	Mounting hole center distance	10.6 ± 0.1
	Mounting hole specification	2×M2.5 threaded holes

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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.