

PRODUCT DATASHEET

ES-SM-L01-060S-V48-T1P27NM-400W-007

Low-Voltage Servo Motors

Low-Voltage Servo Motors | ES-SM-L01-060S 48V 60 mm Low-Voltage Servo Motor Series

Product Overview

Low-Voltage Servo Motors with rated Torque 1.27 Nm, rated Speed 3000 rpm and continuous Rated Output Power 400 W.

Configuration Context

DC link: 48 V

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	1.27	N·m
Rated Speed	3000	rpm
Continuous Rated Output Power	400	W
Rated Voltage	48	V DC
Rated Line Voltage	48	V
Instantaneous Maximum Current	21.2	A
Flange Size	60	mm
Instantaneous Maximum Torque	2.54 N·m / 2.54 Nm	
DC link voltage	48	V

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	1.27	N·m
Instantaneous Maximum Torque	2.54 N·m / 2.54 N·m	
Rated Speed	3000	rpm
Continuous Rated Output Power	400	W
Maximum speed	3900	rpm
Stall Torque	1.4	N·m
Torque Constant	0.132 N·m/A / 0.132 N·m/A	
ELECTRICAL		
DC link voltage	48	V
Rated Voltage	48	V DC
Rated Line Voltage	48	V

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Instantaneous Maximum Current	21.2	A
Back EMF Constant	8	V/krpm
Electrical Time Constant	1.71	ms
Insulation Class	F	
Number of Poles	10	
Pole Pairs	5	
Rated Current	10.6	A
Stall Current	11.7	A
Line-to-line inductance	0.44	mH
Line-to-line resistance	0.258	Ω

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
ELECTRICAL			
Rotational Back-EMF Constant	8 V/krpm		
Motor Outlet Mode	Dual-encoder connector		
MECHANICAL			
Flange Size	60	mm	
Weight	1.4	kg	
Inertia Level	Low inertia		
Mechanical Time Constant	0.68 / 0.68 (With brake)	ms	Brake Configuration: with_brake
Mechanical Time Constant, With Brake	0.68	ms	
Rotor Inertia	0.264 (With brake) Kg·cm ² / 0.264 kgcm ² / 0.264 Kg·cm ²		Brake Configuration: with_brake
Rotor Inertia, With Brake	0.264	Kg·cm ²	
Allowable Radial Force	40	N	

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Flange Size	60	mm
Weight	1.4	kg
Inertia Level	Low inertia	
Mechanical Time Constant	0.68 / 0.68 (With brake)	ms
Mechanical Time Constant, With Brake	0.68	ms
Rotor Inertia	0.264 (With brake) Kg·cm ² / 0.264 kg·cm ² / 0.264 Kg·cm ²	

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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.