PRODUCT DATASHEET

ES-SM-L01-080S-V48-TTBDNM-1000W-003

Low-Voltage Servo Motors

Low-Voltage Servo Motors | ES-SM-L01-080S 48V 80 mm Low-Voltage Servo Motor Series

Product Overview

Low-Voltage Servo Motors with rated Torque 3.18 N·m, rated Speed 3000 rpm and continuous Rated Output Power 1000 W.

Configuration Context	DC link: 48 V

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	3.18	N·m
Rated Speed	3000	rpm
Continuous Rated Output Power	1000	W
Rated Voltage	48	V DC
Instantaneous Maximum Current	88	A
Flange Size	80	mm
Instantaneous Maximum Torque	9.54	N·m
DC link voltage	48	V
Bearing Axial Force	167.5	N

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	3.18	N·m
Instantaneous Maximum Torque	9.54	N·m
Rated Speed	3000	rpm
Continuous Rated Output Power	1000	W
Bearing Axial Force	167.5	N
Maximum speed	3900	rpm
Bearing Radial Force	335	N
Stall Torque	3.5	N·m
Torque Constant	0.13	N·m/A
ELECTRICAL		
DC link voltage	48	V

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Rated Voltage	48	V DC
Instantaneous Maximum Current	88	A
Back EMF Constant	7.8	V/krpm
Electrical Time Constant	4.13	ms
Number of Poles	10	
Pole Pairs	5	
Rated Current	26.4	A
Stall Current	29	A
Line-to-line inductance	0.215	mH
Line-to-line resistance	0.057	Ω

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Motor Outlet Mode	Dual-encoder connector	
MECHANICAL		
Flange Size	80	mm
Inertia Level	Low inertia	
Mechanical Time Constant	0.6	ms
Rotor Inertia	1.099	kg·cm²
Holding Brake Available	With holding brake	
CONFIGURATION		
Output Shaft Type	Keyed shaft	
Motor Version	Ultra-short version	
ADDITIONAL SPECIFICATIONS		
Holding Brake	1	
Brake engagement time	80	ms

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Flange Size	80	mm
Inertia Level	Low inertia	
Mechanical Time Constant	0.6	ms
Rotor Inertia	1.099	kg·cm²
Holding Brake Available	With holding brake	

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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.