PRODUCT DATASHEET

ES-SM-L01-130D-V48-TTBDNM-3000W-002

Low-Voltage Servo Motors

Low-Voltage Servo Motors | ES-SM-L01-130D 48V 130 mm Low-Voltage Servo Motor Series

Product Overview

Low-Voltage Servo Motors with rated Torque 14.33 N·m, instantaneous Maximum Torque 43 N·m and rated Speed 2000 rpm.

Configuration Context	DC link: 48 V

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	14.33	N·m
Instantaneous Maximum Torque	43	N·m
Rated Speed	2000	rpm
Continuous Rated Output Power	3000	W
DC link voltage	48	V
Rated Voltage	48	V DC
Instantaneous Maximum Current	240	A
Flange Size	130	mm
Bearing Axial Force	450	N

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	14.33	N·m
Instantaneous Maximum Torque	43	N·m
Rated Speed	2000	rpm
Continuous Rated Output Power	3000	W
Bearing Axial Force	450	N
Continuous static torque	15.76	N·m
Bearing Radial Force	900	N
Torque Constant	0.2	N·m/A
ELECTRICAL		
DC link voltage	48	V
Rated Voltage	48	V DC

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Instantaneous Maximum Current	240	A
Back EMF Constant	12	V/krpm
Continuous static current	85.5	A
Electrical Time Constant	6.12	ms
Position Feedback Device	Incremental 2500pprMagnetic Encoder	
Insulation Class	F	
Motor Outlet Mode	Three-row 15-pin metal-shell encoder connector	
Number of Poles	8	
Pole Pairs	4	
Rated Current	77.7	A

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Line-to-line inductance	0.09	mH
Line-to-line resistance	0.0147	Ω
MECHANICAL		
Flange Size	130	mm
Inertia Level	Medium inertia	
Mechanical Time Constant	2.32	ms
Rotor Inertia	35.9	kg·cm²
Static friction torque	15	N·m
Holding Brake Available	With holding brake	
ENVIRONMENTAL		
Protection Rating	IP65, shaft sealing IP54	
CONFIGURATION		
Output Shaft Type	Keyed shaft	

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Flange Size	130	mm
Inertia Level	Medium inertia	
Mechanical Time Constant	2.32	ms
Rotor Inertia	35.9	kg·cm²
Static friction torque	15	N·m
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.