

PRODUCT DATASHEET

ES-SM-A02-180D-T28NM-4400W-002

AC Servo Motors

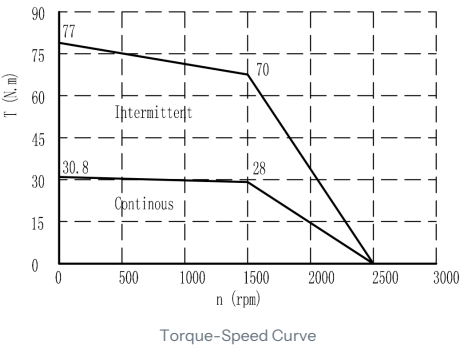
AC Servo Motors | ES-SM-A02-180D High-Response 180 mm AC Servo Motor Series

Product Overview

AC Servo Motors with rated Torque 28 N·m, instantaneous Maximum Torque 70 N·m and rated Speed 1500 rpm.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	28	N·m
Instantaneous Maximum Torque	70	N·m
Rated Speed	1500	rpm
Continuous Rated Output Power	4400	W
Instantaneous Maximum Current	29.75	A
Flange Size	180	mm
Torque Constant	2.48	N·m/A
Rated Voltage	380	V AC
Rated Line Voltage	380	V



Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	28	Nm
Instantaneous Maximum Torque	70	Nm
Rated Speed	1500	rpm
Continuous Rated Output Power	4400	W
Torque Constant	2.48	Nm/A
Rated Power	4400	W
ELECTRICAL		
Rated Voltage	380	V AC
Rated Line Voltage	380	V
Instantaneous Maximum Current	29.75	A
Back EMF Constant	150	V/krpm

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
ELECTRICAL		
Insulation Class	F	
Maximum Allowed Voltage Slew Rate	8	KV/ μ s
Motor Outlet Mode	YL-series aviation connector	
Pole Pairs	4	
Rated Current	11.9	A
Rotational Back-EMF Constant	150	V/krpm
Electrical Time Constant	13.37	ms
Position Feedback Device	2500 PPR incremental encoder	
MECHANICAL		
Flange Size	180	mm
Inertia Level	Medium inertia	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
MECHANICAL			
Holding Brake Available	With holding brake		
Mechanical Time Constant	2.23	ms	
Rotor Inertia	118.2 kgcm ² / 118 Kg·cm ²		Brake Configuration: without_brake
Bearing Radial Force Capacity	1600	N	
Bearing Axial Force Capacity	800	N	
ENVIRONMENTAL			
Altitude and Derating Rule	Maximum altitude 4000 m; above 1000 m, power derates 1.5% per 100 m		
Operating Environment	Keep away from corrosive or flammable gases, oil droplets and dust		
Operating Humidity	≤90% RH, non-condensing		
Operating Temperature	-20 to 40°C (no freezing)		
Protection Rating	IP65, shaft end IP54		

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 3	Flange outer diameter	Ø200±0.15
	Mounting face depth	12
	Keyway width	65
	Keyway depth	8
		6
	Maximum height	204 max
	Shaft diameter	Ø42 0/-0.016
	Mounting bore diameter	Ø114.3 0/-0.035
	Front face depth	79±0.1
	Threaded hole specification	M8
	Threaded hole depth	25 deep
	Axial distance	4
	Mounting hole specification and quantity	4 holes Ø13
	Dimension reference	17
	Hole position angle	45°
	Front section total length	84.5±1
	Motor overall length	370±1.5
	Hole pitch circle diameter	2-Ø180 PCD

[View Product Online](#) [Request Engineering Data](#) [Request a Quote](#)

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.