

PRODUCT DATASHEET

ES-SM-A03-130G-T8P27NM-1300W-002

AC Servo Motors

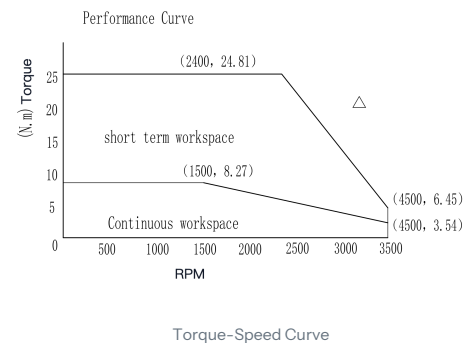
AC Servo Motors | ES-SM-A03-130G Compact 130 mm AC Servo Motor Series

Product Overview

AC Servo Motors with rated Torque 8.27 N·m, instantaneous Maximum Torque 24.81 N·m and rated Speed 1500 rpm.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	8.27	N·m
Instantaneous Maximum Torque	24.81	N·m
Rated Speed	1500	rpm
Continuous Rated Output Power	1300	W
Rated Voltage	220	V AC
Instantaneous Maximum Current	22.8	A
Flange Size	130	mm
Torque Constant	1.197	N·m/A
Altitude and Derating Rule	highest altitude2000m(1000mfor each increase above100m,Power drop1.5%)	



Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	8.27	Nm
Instantaneous Maximum Torque	24.81	Nm
Rated Speed	1500	rpm
Continuous Rated Output Power	1300	W
Torque Constant	1.197	Nm/A
Rated Power	1300	W
ELECTRICAL		
Rated Voltage	220	V AC
Instantaneous Maximum Current	22.8	A
Back EMF Constant	53.8	V/krpm
Insulation Class	F	
Motor Outlet Mode	Standard socket	
Pole Pairs	5	
Rated Current	7.5	A
Rotational Back-EMF Constant	53.8	V/krpm
Electrical Time Constant	4.61	ms

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
ELECTRICAL			
Position Feedback Device	17-bit multi-turn communication magnetic absolute encoder		
MECHANICAL			
Flange Size	130	mm	
Inertia Level	High inertia		
Holding Brake Available	With holding brake		
Mechanical Time Constant	2.12 / 1.97	ms	Brake Configuration: without_brake
Rotor Inertia	18.47 / 17.17	Kg-cm ²	Brake Configuration: without_brake
Bearing Radial Force Capacity	686	N	
Bearing Axial Force Capacity	196	N	
ENVIRONMENTAL			
Altitude and Derating Rule	highest altitude 2000m (1000m for each increase above 100m, Power drop 1.5%)		
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 (Note: with shaft-end oil seal IP54, without oil seal IP50)		
CONFIGURATION			
Output Shaft Type	Keyed shaft		
ADDITIONAL SPECIFICATIONS			
Holding Brake	1		

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Key length	Key length 36
	Keyway width	Keyway width 7
	Key height or keyway depth	Key height/depth 8
	Aviation plug convex point orientation note	Aviation plug convex point shall be near the front output shaft
	Item balloon 1	Item reference 1
	Item balloon 2	Item reference 2
	Geometric tolerance relative to datum A	Geometric tolerance 0.08 relative to datum A
	Mounting pilot diameter	Diameter 110 with tolerance +0/-0.035
	Shaft axial length	Length 25 with tolerance +0/-0.2
	Output shaft diameter	Diameter 22 with tolerance +0/-0.013
	Datum A	Datum feature A
	Geometric tolerance	Geometric tolerance 0.04
	End step dimension	Step dimension 5
		Step dimension 13.5
	Key feature label	

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 3	Mounting hole pitch circle diameter	Pitch circle diameter $\varnothing 145 \pm 0.2$
	Mounting hole quantity and diameter	4 holes, $\varnothing 9$
	Mounting hole angular position	45 degree angular offset
	Square flange outer size	Square flange 130

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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.