

PRODUCT DATASHEET

ES-SM-A01-130D-T9P55NM-2000W-002

AC Servo Motors

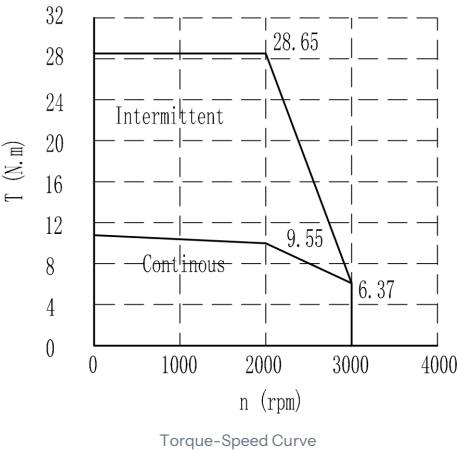
AC Servo Motors | ES-SM-A01-130D Standard 130 mm AC Servo Motor Series

Product Overview

AC Servo Motors with rated Torque 9.55 N·m, instantaneous Maximum Torque 28.65 N·m and rated Speed 2000 rpm.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	9.55	N·m
Instantaneous Maximum Torque	28.65	N·m
Rated Speed	2000	rpm
Continuous Rated Output Power	2000	W
Instantaneous Maximum Current	30 ref.)	A
Flange Size	130	mm
Torque Constant	1.16	N·m/A
Rated Voltage	320	V AC
Rated Line Voltage	320	V



Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	9.55	Nm
Instantaneous Maximum Torque	28.65	Nm
Rated Speed	2000	rpm
Continuous Rated Output Power	2000	W
Torque Constant	1.16	Nm/A
Bearing Axial Force	392	N
Bearing Radial Force	980	N
Rated Power	2000	W
ELECTRICAL		
Rated Voltage	320	V AC
Rated Line Voltage	320	V
Instantaneous Maximum Current	30 ref.)	A
Back EMF Constant	70.35 ref.)	V/krpm
Insulation Class	F	
Motor Outlet Mode	HFO21 + HFO18 aviation connectors	
Pole Pairs	5	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
ELECTRICAL			
Rated Current	9.5 ref.)	A	
Maximum Allowed Voltage Slew Rate	9	KV/ μ s	
Rotational Back-EMF Constant	70.35 ref.)	V/krpm	
Electrical Time Constant	12.08	ms	
Position Feedback Device	Single-turn communication magnetic encoder		
MECHANICAL			
Flange Size	130	mm	
Inertia Level	Medium inertia		
Holding Brake Available	Without holding brake		
Mechanical Time Constant	1.24	ms	Brake Configuration: without_brake
Rotor Inertia	20.25 kgcm ² / 20.25 Kg·cm ²		Brake Configuration: without_brake
Bearing Radial Force Capacity	980	N	
Bearing Axial Force Capacity	392	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		

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Key length	40 mm
	Key width	6 mm
	Key depth	
	Key label	KEY
	Position marker 2	2
	Position marker 1	1
	Shaft length with negative tolerance	24.5 0/-0.2 mm
	Key depth	5 mm
	Shaft diameter with negative tolerance	Φ22 0/-0.013 mm
	Motor outer diameter with negative tolerance	Φ110 0/-0.035 mm
	Front end reference dimension	5.5 mm (reference)
	Connector mounting reference dimension	13.5 mm (reference)
	Front section total length	55±1 mm
	Motor total length	179.5±1.5 mm

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 3	Mounting hole bolt circle diameter	$\Phi 145 \pm 0.2$ mm
	Mounting hole quantity and diameter	4 holes $\times$ $\Phi 9$ mm
	Mounting hole angular position	45° (from horizontal centerline)
		45° (from horizontal centerline, opposite side)
	Envelope square dimension	130 $\times$ 130 mm square

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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.