

PRODUCT DATASHEET

ES-SM-A01-130D-T9P55NM-2000W-007

AC Servo Motors

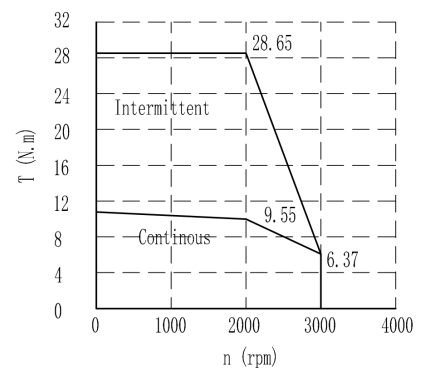
AC Servo Motors | ES-SM-A01-130D Standard 130 mm AC Servo Motor Series

Product Overview

AC Servo Motors with rated Torque 9.55 Nm, instantaneous Maximum Torque 28.65 Nm 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	15 ref.)	A
Flange Size	130	mm
Torque Constant	2.1	N·m/A
Rated Voltage	560	V AC
Rated Line Voltage	560	V



Torque-Speed Curve

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	2.1	Nm/A
Bearing Axial Force	392	N
Bearing Radial Force	980	N
Rated Power	2000	W
ELECTRICAL		
Rated Voltage	560	V AC
Rated Line Voltage	560	V
Instantaneous Maximum Current	15 ref.)	A
Back EMF Constant	126.5 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	4.75 ref.)	A	
Maximum Allowed Voltage Slew Rate	12	KV/ μ s	
Rotational Back-EMF Constant	126.5 ref.)	V/krpm	
Electrical Time Constant	9.69	ms	
Position Feedback Device	17-bit multi-turn communication magnetic absolute encoder		
MECHANICAL			
Flange Size	130	mm	
Inertia Level	Medium inertia		
Holding Brake Available	With holding brake		
Mechanical Time Constant	1.61 / 1.53	ms	Brake Configuration: without_brake
Rotor Inertia	21.25 kg $\cdot$ cm ² / 20.25 Kg $\cdot$ 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	$\leq$ 90% RH, non-condensing		

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Key length	40
	Key width	6
	Key height	
	Key label	KEY
	Item callout 1	Item 1
	Item callout 2	Item 2
	Shaft key label	KEY
	Shaft shoulder or key-related dimension	24.5 +0/-0.2
	Shaft keyway width	5
	Shaft diameter	Diameter 22 +0/-0.013
	Mounting register or flange diameter	Diameter 110 +0/-0.035
	Shaft end thread	CM6L18
	Reference axial dimension	5.5 reference
		13.5 reference
	Shaft extension length	55 ±1
	Motor body length	239.5 ±1.5

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 3	Mounting hole pitch circle diameter	Diameter 145 $\pm$ 0.2
	Mounting hole quantity and diameter	4 holes, diameter 9
	Left mounting hole angular position	45 degrees
	Right mounting hole angular position	
	Square flange outside size	Square 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.