

PRODUCT DATASHEET

ES-SM-A03-080D-T2P39NM-750W-002

AC Servo Motors

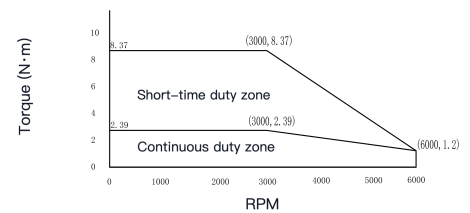
AC Servo Motors | ES-SM-A03-080D Compact 80 mm AC Servo Motor Series

Product Overview

AC Servo Motors with rated Torque 2.39 N·m, instantaneous Maximum Torque 7.17 N·m and rated Speed 3000 rpm.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	2.39	N·m
Instantaneous Maximum Torque	7.17	N·m
Rated Speed	3000	rpm
Continuous Rated Output Power	750	W
Rated Voltage	220	VAC
Continuous Rated Current	4	A
Instantaneous Maximum Current	12.7	A
Flange Size	80	mm
Torque Constant	0.64	N·m/A



Torque-Speed Curve

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	2.39	Nm
Instantaneous Maximum Torque	7.17	Nm
Rated Speed	3000	rpm
Continuous Rated Output Power	750	W
Torque Constant	0.64	Nm/A
ELECTRICAL		
Rated Voltage	220	VAC
Continuous Rated Current	4	A
Instantaneous Maximum Current	12.7	A
Pole Pairs	5	
Rotational Back-EMF Constant	39	V/krpm
Electrical Time Constant	3.59	ms
Insulation Class	F	
Position Feedback Device	17-bit multi-turn communication magnetic absolute encoder	
Motor Outlet Mode	Standard socket	
MECHANICAL		
Flange Size	80	mm
Mechanical Time Constant	0.96	ms
Bearing Radial Force Capacity	392	N
Bearing Axial Force Capacity	147	N
CONFIGURATION		
Output Shaft Type	Keyed shaft	

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Mounting face offset dimension	15.5 mm with upper deviation 0 mm and lower deviation -0.1 mm
	Mounting hole angular spacing	45 degrees
	Mounting hole pitch circle diameter	Diameter 90 mm
	Mounting hole quantity and diameter	4 holes, diameter 6.5 mm
	Square mounting flange envelope size	Square 80 mm

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 3	Keyway label	Keyway feature indicated
	Threaded hole specification	M6 thread, length/depth 20
	Front flange pilot diameter	Diameter 70 h7, tolerance +0/-0.03
	Front flange geometric tolerance relative to datum A	Geometric tolerance diameter 0.04 relative to datum A
	Shaft extension length	21.5 with tolerance +0/-0.2
	Datum A	Datum A assigned to shaft/front reference feature
	Reference clearance or step dimension	Reference dimension 0.5
	End face step or offset dimension	8
	Output shaft diameter	Diameter 19 h6, tolerance +0/-0.013
	Axial clearance or locating dimension	3 ±0.3
	Perpendicularity tolerance	Perpendicularity 0.06 relative to datum A
	Front end to body reference length	35 ±1
	Main body length	128 ±1
	Shaft geometric tolerance relative to datum A	Geometric tolerance 0.02 relative to datum A
	Reference overall height	Reference dimension 95.5

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 4	Key width tolerance	Nominal key width 6 mm, h8 tolerance, upper deviation 0 mm, lower deviation -0.018 mm
	Key length	Key length 25 mm
	Key feature label	Key feature
	M3 through hole	

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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.