

PRODUCT DATASHEET

ES-SM-A03-080D-T3P18NM-1000W-004

AC Servo Motors

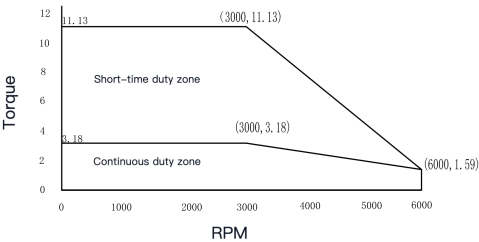
AC Servo Motors | ES-SM-A03-080D Compact 80 mm AC Servo Motor Series

Product Overview

AC Servo Motors with rated Torque 3.18 N·m, instantaneous Maximum Torque 9.54 N·m and rated Speed 3000 rpm.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	3.18	N·m
Instantaneous Maximum Torque	9.54	N·m
Rated Speed	3000	rpm
Continuous Rated Output Power	1000	W
Rated Voltage	220	VAC
Continuous Rated Current	5.5	A
Instantaneous Maximum Current	16.9	A
Flange Size	80	mm
Torque Constant	0.64	N·m/A



Torque-Speed Curve

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	3.18	Nm
Instantaneous Maximum Torque	9.54	Nm
Rated Speed	3000	rpm
Continuous Rated Output Power	1000	W
Torque Constant	0.64	Nm/A
ELECTRICAL		
Rated Voltage	220	VAC
Continuous Rated Current	5.5	A
Instantaneous Maximum Current	16.9	A
Pole Pairs	5	
Rotational Back-EMF Constant	39	V/krpm
Electrical Time Constant	3.6	ms
Insulation Class	F	
Position Feedback Device	23-bit multi-turn communication optical absolute encoder	
Motor Outlet Mode	Standard socket	
MECHANICAL		
Flange Size	80	mm
Mechanical Time Constant	0.87	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 height dimension	15.5 0/-0.1
	Unspecified parameter	2
	Center hole diameter	Ø90
	Mounting holes	4-Ø6.5
	Square flange side length	□80

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 4	Key slot identifier	KEY
	Mounting threaded hole	M6 thread, 20mm depth
	Datum A	
	Shaft diameter with tolerance	Ø70h7 (0/-0.03)
	Position tolerance	Position Ø0.04
	Shaft section length with lower deviation	21.5 -0.2
	Overall length reference dimension	(95.5)
	Chamfer or radius reference dimension	(0.5)
	Feature count or dimension	8
	Shaft section diameter with tolerance	Ø19h6 (0/-0.013)
	Shaft section width or feature dimension	3±0.3
	Perpendicularity tolerance	⊥0.06 A
	Axial distance 1	35±1
	Total axial length	143±1
	Runout tolerance	Runout 0.02 A

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 5	Shaft tolerance (left view)	6h8 (-0.018)
	Shaft tolerance (right view)	
	Keyway length	25
	Keyway designation	KEY
	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.