PRODUCT DATASHEET

ES-SM-A03-180G-T22P3NM-3500W-002

AC Servo Motors

Product Overview

AC Servo Motors with rated Torque 22.3 N·m, instantaneous Maximum Torque 66.9 N·m and rated Speed 1500 rpm.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	22.3	N·m
Instantaneous Maximum Torque	66.9	N·m
Rated Speed	1500	rpm
Continuous Rated Output Power	3500	W
Rated Voltage	380	VAC
Continuous Rated Current	12.9	A
Instantaneous Maximum Current	38.7	A
Flange Size	180	mm
Torque Constant	1.9	N·m/A

Technical Specifications

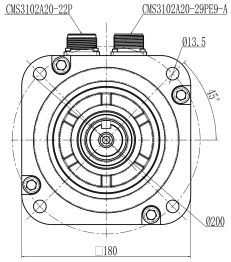
PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	22.3	N·m
Instantaneous Maximum Torque	66.9	N·m
Rated Speed	1500	rpm
Continuous Rated Output Power	3500	W
Torque Constant	1.9	N·m/A
ELECTRICAL		
Rated Voltage	380	VAC
Continuous Rated Current	12.9	A
Instantaneous Maximum Current	38.7	A
Pole Pairs	5	
Rotational Back-EMF Constant	115	V/krpm
Electrical Time Constant	13.8	ms
Insulation Class	F	
Position Feedback Device	17-bit multi-turn communication magnetic absolute encoder	
Motor Outlet Mode	Standard socket	
MECHANICAL		
Flange Size	180	mm
Mechanical Time Constant	1.11	ms
Bearing Radial Force Capacity	1470	N
Bearing Axial Force Capacity	490	N
CONFIGURATION		
Output Shaft Type	Keyed shaft	

Dimensional & Integration Overview

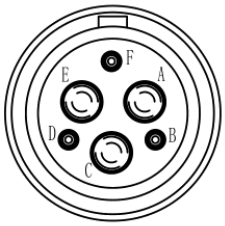
Mechanical Overview

PARAMETER	VALUE	UNIT
Flange Size	180	mm
Mechanical Time Constant	1.11	ms
Bearing Radial Force Capacity	1470	N
Bearing Axial Force Capacity	490	N

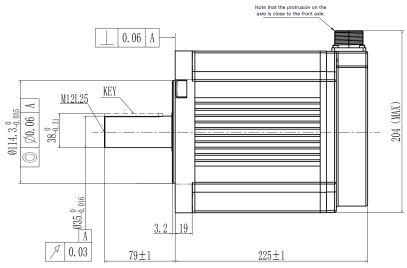
Dimensional Drawings



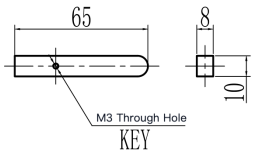
Mechanical View 1



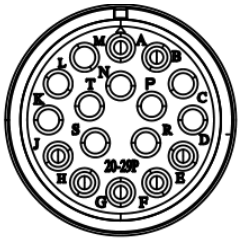
Power Connector Pinout



Mechanical View 3



Mechanical View 4



Feedback Connector Pinout

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Connector mounting hole diameter	Ø13.5
	Angle marking	45°
	Flange bolt circle diameter	Ø200
	Flange overall dimension	□180

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 3	Installation note	Note that the protrusion on the axle is close to the front axle
	Perpendicularity tolerance to datum A	Perpendicularity 0.06 A
	Keyway indicator	KEY
	Mounting bolt specification	M12×25
	Datum A	
	Outer diameter with lower deviation	Φ114.3 -0.035/0
	Shaft length with lower deviation	38 -0.31/0
	Circular runout tolerance	Circular runout 0.06
	Maximum height	204 MAX
	Shaft diameter with lower deviation	Φ35 -0.016/0
	Connection dimension	19
		3.2
	Position tolerance to datum A	Position 0.03 A
	Overall length with tolerance	79±1
		225±1

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 4	Keyway length	65 mm
	Keyway width	8 mm
	Keyway depth	10 mm
	Through hole specification	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.