PRODUCT DATASHEET

ES-SM-A03-180G-T35NM-5500W-001

AC Servo Motors

Product Overview

AC Servo Motors with rated Torque 35 N·m, instantaneous Maximum Torque 87.5 N·m and rated Speed 1500 rpm.

Key Specifications

PARAMETER	VALUE	UNIT
Rated Torque	35	N·m
Instantaneous Maximum Torque	87.5	N·m
Rated Speed	1500	rpm
Continuous Rated Output Power	5500	W
Rated Voltage	380	V AC
Instantaneous Maximum Current	50.75	A
Flange Size	180	mm
Torque Constant	1.9	N·m/A
Altitude and Derating Rule	highest altitude2000m,1000mabove,every rise100m,Power drop1.5%	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Torque	35	N·m
Instantaneous Maximum Torque	87.5	N·m
Rated Speed	1500	rpm
Continuous Rated Output Power	5500	W
Torque Constant	1.9	N·m/A
Rated Power	5500	W
ELECTRICAL		
Rated Voltage	380	V AC
Instantaneous Maximum Current	50.75	A
Back EMF Constant	115	V/krpm
Insulation Class	F	
Motor Outlet Mode	Standard socket	
Pole Pairs	5	
Rated Current	20.3	A
Rotational Back-EMF Constant	115	V/krpm
Electrical Time Constant	15.5	ms

Technical Specifications

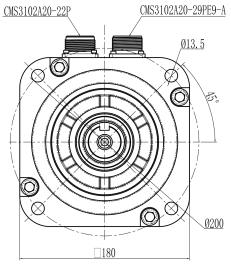
PARAMETER	SPECIFICATION	UNIT	NOTES
ELECTRICAL			
Position Feedback Device	17-bit multi-turn communication magnetic absolute encoder		
MECHANICAL			
Flange Size	180	mm	
Inertia Level	High inertia		
Holding Brake Available	Without holding brake		
Mechanical Time Constant	0.86	ms	Brake Configuration: without_brake
Rotor Inertia	104.43 / 98	Kg·cm 2	Brake Configuration: without_brake
Bearing Radial Force Capacity	1470	N	
Bearing Axial Force Capacity	490	N	
ENVIRONMENTAL			
Altitude and Derating Rule	highest altitude2000m,1000mabove,every rise100m,Power drop1.5%		
Operating Environment	Keep away from corrosive or flammable gases, oil droplets and dust		
Operating Humidity	≤90% RH, non-condensing		
Operating Temperature	-20 to 40°C (no freezing)		
Protection Rating	IP65, shaft end IP54 (Note: with shaft-end oil seal IP54, without oil seal IP50)		
CONFIGURATION			
Output Shaft Type	Keyed shaft		
ADDITIONAL SPECIFICATIONS			
Holding Brake	false		

Dimensional & Integration Overview

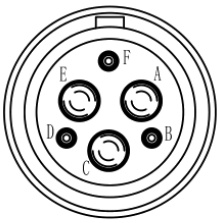
Mechanical Overview

PARAMETER	VALUE	UNIT
Flange Size	180	mm
Inertia Level	High inertia	
Holding Brake Available	Without holding brake	
Mechanical Time Constant	0.86	ms
Rotor Inertia	104.43 / 98	Kg·cm2
Bearing Radial Force Capacity	1470	N

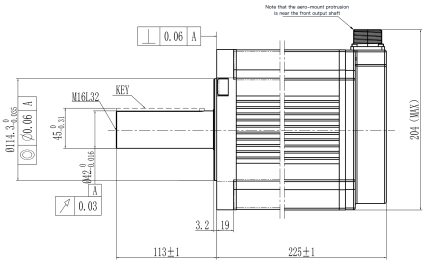
Dimensional Drawings



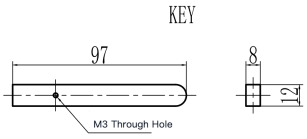
Mechanical View 1



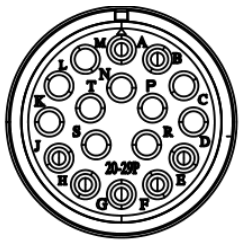
Power Connector Pinout



Mechanical View 3



Mechanical View 4



Feedback Connector Pinout

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Mounting hole diameter	Ø13.5
	Mounting hole angular position	45°
	Flange outer diameter	Ø200
	Square flange side length	□180
Mechanical View 3	Shaft diameter	Ø114.3 -0.035 mm
	Circular runout tolerance	Circular runout Ø0.06 mm
	Axial dimension	45±0.31 mm
	Keyway designation	Keyway present
	Threaded hole specification	M16 thread, 32mm depth
	Datum A	
	Perpendicularity tolerance	Perpendicularity 0.06 mm relative to datum A
	Maximum envelope height	204 mm maximum
	Secondary shaft diameter	Ø42 -0.016 mm
	Positional tolerance	Position tolerance 0.03 mm
	Mounting slot width	3.2 mm
	Mounting slot length	19 mm
	Overall length 1	113±1 mm
	Overall length 2	225±1 mm

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 4	Key length	97 mm
	Key width	8 mm
	Key height	12 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.