

Servo motor EMMH-AS-138-MKA-HS-S1MB-T

Part number: 8215368

FESTO



Data sheet

Feature	Value
Ambient temperature	-30 °C...40 °C
Note on ambient temperature	up to 80°C with derating -2%/°C
Max. installation height	3000 m
Information on max. installation height	with 1,000 m and longer only with derating of -1.0% per 100 m
Storage temperature	-20 °C...70 °C
Relative air humidity	0 - 100 %
Conforms to standard	IEC 60034
Thermal class according to EN 60034-1	F
Max. winding temperature	155 °C
Rating class according to EN 60034-1	S1
Temperature monitoring	Digital motor temperature transmission via EnDat® 2.2
Motor type as per EN 60034-7	IM B14 IM V18
Mounting position	Any
Degree of protection	IP69K
Concentricity, coaxiality, axial runout according to DIN SPEC 42955	N
Balancing quality	G 2.5
Detent torque	<1.0% of peak torque
Bearing lifetime, under nominal conditions	20000 h
Interface code, motor out	138C
Electrical connection 1, connection type	Hybrid plug
Electrical connection 1, connection technology	M17x0.75
Electrical connection 1, number of pins/wires	15
Contamination level	2
Note on materials	RoHS-compliant
Corrosion resistance class (CRC)	4 - Particularly high corrosion stress (except laser marking)
LABS (PWIS) conformity	VDMA24364 zone III
For use in the food industry	Approved for direct food contact
Vibration resistance	as per EN 60068-2-6

Feature	Value
Shock resistance	as per EN 60068-2-29 15 g/11 ms as per EN 60068-2-27
Certification	RCM compliance mark
CE marking (see declaration of conformity)	As per EU EMC directive As per EU low voltage directive As per EU RoHS directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC To UK RoHS instructions To UK instructions for electrical equipment
Nominal operating voltage DC	680 V
Type of winding switch	Star inside
Number of pole pairs	5
Stall torque	11 Nm
Nominal torque	6.2 Nm
Peak torque	33.3 Nm
Nominal rotary speed	2000 rpm
Max. rotational speed	4590 rpm
Max. mechanical speed	5000 rpm
Angular acceleration	100000 rad/s ²
Motor nominal power	1300 W
Continuous stall current	7.4 A
Motor nominal current	4.3 A
Peak current	23.1 A
Motor constants	1.47 Nm/A
Standstill torque constant	1.51 Nm/A
Voltage constant, phase-to-phase	97.6 mVmin
Phase-phase winding resistance	0.89 Ohm
Winding inductance phase-phase	8.8 mH
Winding longitudinal inductivity Ld (phase)	3.9 mH
Cross inductivity Lq (phase)	4.4 mH
Electric time constant	9.8 ms
Thermal time constant	100 min
Thermal resistance	0.68 K/W
Measuring flange	300 x 300 x 30 mm, steel
Rotor mass moment of inertia	9.78 kgcm ²
Total output inertia moment	12.1 kgcm ²
Product weight	14400 g
Permissible axial shaft load	227 N
Permissible radial shaft load	1135 N
Rotor position sensor	Absolute encoder, multi-turn
Rotor position sensor for manufacturer designation	EQI 1331
Rotor position encoder for absolutely detectable revolutions	4096
Rotor position sensor interface	EnDat® 22
Rotor position sensor measuring principle	Inductive
Rotor position encoder for DC operating voltage	5 V
Rotor position encoder for DC operating voltage range	3.6 V...14 V
Rotor position encoder for positional values per revolution	524288
Rotor position sensor resolution	19 bit
Rotor position encoder system accuracy angle measurement	-65 arcsec...65 arcsec
Brake holding torque	20 Nm
Brake DC operating voltage	24 V
Brake current consumption	0.68 A
Brake power consumption	16.4 W
Brake coil resistance	35.3 Ohm

Feature	Value
Brake coil inductivity	3200 mH
Brake separation time	90 ms
Brake closing time	81 ms
DC brake response delay	10 ms
Max. brake no-load speed	10000 rpm
Max. friction work per braking operation	1980 J
Number of emergency stops per hour	1
Total brake friction work	1980 kJ
Brake mass moment of inertia	2.32 kgcm ²
Switching cycles, holding brake	10 million idle actuations (without friction work!)
MTTF, subcomponent	190 years, rotor position sensor