

Servo motor EMMT-AS-100-S-HS-RSB

Part number: 5255528

FESTO



Data sheet

Feature	Value
Electrical connection 1, connection technology	M23x1
Electrical connection 1, connection type	Hybrid plug
Detent torque	< 1.0% of peak torque
Electrical connection for input 1, connection pattern	00995913
Concentricity, coaxiality, axial runout according to DIN SPEC 42955	N
Rotor position sensor for manufacturer designation	ECI 1319
Mounting position	Any
Shock resistance	Shock test with severity level 2 as per FN 942017-5 and EN 60068-2-27
Information on max. installation height	with 1,000 m and longer only with derating of -1.0% per 100 m
Note on degree of protection	IP40 for motor shaft without rotary shaft seal IP65 for motor shaft with rotary shaft seal IP67 for motor housing, incl. connection technology
Contamination level	2
Note on ambient temperature	Up to 80 °C with derating of -1.5% per degree Celsius
Vibration resistance	Transport application test with severity level 2 as per FN 942017-4 and EN 60068-2-6
Measuring flange	300 x 300 x 20 mm, steel
Motor type as per EN 60034-7	IM B5 IM V1 IM V3
Balancing quality	G 2.5
Certificate issuing authority	UL E342973
Electrical connection 1, number of pins/wires	15
Max. winding temperature	155 °C
Brake airflow	0.54 A
Max. brake no-load speed	10000 1/min
Max. installation height	4000 m
Rotor position encoder for DC operating voltage	5 V
Brake coil inductivity	900 mH
Brake coil resistance	32 Ohm
Brake current consumption	0.75 A
Max. mechanical speed	13000 1/min
Brake stopping current	0.54 A
Number of pole pairs	5
Storage lifetime, under nominal conditions	20000 h

Feature	Value
Brake closing time	≤20 ms
Max. brake friction work	12000 J
Brake separation time	≤80 ms
Electric time constant	14.5 ms
DC brake response delay	≤4 ms
Cross inductivity L _q (phase)	24.3 mH
Winding longitudinal inductivity L _d (phase)	17.8 mH
Rotor position encoder for DC operating voltage range	3.6 V ... 14 V
Standstill torque constant	1.67 Nm/A
Rotor position encoder for absolutely detectable revolutions	1
Rotor position encoder system accuracy angle measurement	-65 arcsec ... 65 arcsec
Thermal resistance	0.6 K/W
Rotor position encoder for positional values per revolution	524288
Thermal time constant	74 min
Type code	EMMT-AS
Rotor position sensor	Absolute encoder, single-turn
Rotor position sensor interface	EnDat® 22
Rotor position sensor measuring principle	Inductive
Temperature monitoring	Digital motor temperature transmission via EnDat® 2.2
Max. rotational speed	3970 1/min
Nominal rotary speed	2700 1/min
Brake DC operating voltage	24 V
Continuous stall current	4.4 A
Brake power consumption	18 W
Motor constants	1.45 Nm/A
Nominal operating voltage DC	565 V
Motor nominal power	1450 W
Motor nominal current	3.5 A
Rotor position sensor resolution	19 bit
Phase-phase winding resistance	3.35 Ohm
Winding inductance phase-phase	32.4 mH
Type of winding switch	Star inside
Peak current	13.7 A
Voltage constant, phase-to-phase	101 mV/min
Rating class according to EN 60034-1	S1
CE marking (see declaration of conformity)	As per EU EMC directive As per EU low voltage directive As per EU RoHS directive
Corrosion resistance class (CRC)	0 - No corrosion stress
Storage temperature	-20 °C ... 70 °C
Relative air humidity	0 - 90 %
Degree of protection	IP40
Ambient temperature	-15 °C ... 40 °C
Thermal class according to EN 60034-1	F
Certification	RCM compliance mark c UL us - Recognized (OL)
Total output inertia moment	4.04 kgcm ²
Brake holding torque	11 Nm
Brake mass moment of inertia	0.74 kgcm ²
Nominal torque	5.1 Nm
Peak torque	13.7 Nm
Stall torque	6.3 Nm
Permissible axial shaft load	200 N
Permissible radial shaft load	1110 N

Feature	Value
MTTF, subcomponent	190 years, rotor position sensor
MTTFd, subcomponent	380 years, rotor position sensor
Switching cycles, holding brake	10 million idle actuations (without friction work!)
Product weight	6700 g
Interface code, motor out	100A
Note on materials	Contains paint-wetting impairment substances RoHS-compliant
Conforms to standard	IEC 60034