

# Servo motor EMMT-AS-80-S-LS-RMB

Part number: 5255428

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	EQI 1131
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	250 x 250 x 15 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	0.37 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	1000 mH
Brake coil resistance	48 Ohm
Brake current consumption	0.5 A
Max. mechanical speed	14000 1/min
Brake stopping current	0.37 A
Number of pole pairs	5
Storage lifetime, under nominal conditions	20000 h

Feature	Value
Brake closing time	≤15 ms
Max. brake friction work	8200 J
Brake separation time	≤55 ms
Electric time constant	4.9 ms
DC brake response delay	≤3 ms
Cross inductivity L <sub>q</sub> (phase)	12.2 mH
Winding longitudinal inductivity L <sub>d</sub> (phase)	10.2 mH
Rotor position encoder for DC operating voltage range	3.6 V ... 14 V
Standstill torque constant	0.57 Nm/A
Rotor position encoder for absolutely detectable revolutions	4096
Rotor position encoder system accuracy angle measurement	-120 arcsec ... 120 arcsec
Thermal resistance	0.95 K/W
Rotor position encoder for positional values per revolution	524288
Thermal time constant	42 min
Type code	EMMT-AS
Rotor position sensor	Absolute encoder, multi-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	6700 1/min
Nominal rotary speed	3000 1/min
Brake DC operating voltage	24 V
Continuous stall current	3.1 A
Brake power consumption	12 W
Motor constants	0.48 Nm/A
Nominal operating voltage DC	325 V
Motor nominal power	408 W
Motor nominal current	2.7 A
Rotor position sensor resolution	19 bit
Phase-phase winding resistance	4.93 Ohm
Winding inductance phase-phase	16.3 mH
Type of winding switch	Star inside
Peak current	8.4 A
Voltage constant, phase-to-phase	34.3 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	1.64 kgcm <sup>2</sup>
Brake holding torque	4.5 Nm
Brake mass moment of inertia	0.249 kgcm <sup>2</sup>
Nominal torque	1.3 Nm
Peak torque	2.8 Nm
Stall torque	1.46 Nm
Permissible axial shaft load	120 N
Permissible radial shaft load	620 N

<b>Feature</b>	<b>Value</b>
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	2720 g
Interface code, motor out	80P
Note on materials	Contains paint-wetting impairment substances RoHS-compliant
Conforms to standard	IEC 60034