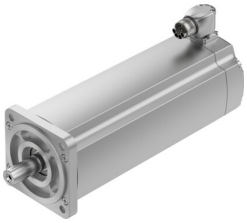
Servo motor
EMMT-AS-100-L-HS-RMB

Part number: 5255537



General operating condition

Data sheet

Feature	Value
Ambient temperature	-40 °C ... 40 °C
Note on ambient temperature	Up to 80 °C with derating of -2.25% per degree Celsius
Max. installation height	4000 m
Information on max. installation height	with 1,000 m and longer only with derating of -1.0% per 100 m
Storage temperature	-40 °C ... 70 °C
Relative air humidity	0 - 90 %
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 V1 IM V3
Mounting position	Any
Degree of protection	IP40
Note on degree of protection	IP67 for motor housing, incl. connection technology
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	100A
Electrical connection 1, connection type	Hybrid plug
Electrical connection 1, connection technology	M23x1
Electrical connection 1, number of pins/wires	15
Electrical connection for input 1, connection pattern	00995913
Contamination level	2
Note on materials	RoHS-compliant
Corrosion resistance class (CRC)	0 - No corrosion stress
LABS (PWIS) conformity	VDMA24364 zone III
Vibration resistance	Transport application test with severity level 2 as per FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 2 as per FN 942017-5 and EN 60068-2-27
Certification	RCM compliance mark c UL us - Recognized (OL)
CE marking (see declaration of conformity)	As per EU EMC directive As per EU low voltage directive As per EU RoHS directive

Feature	Value
UKCA marking (see declaration of conformity)	To UK RoHS instructions To UK instructions for electrical equipment
Certificate issuing authority	UL E342973
Nominal operating voltage DC	680 V
Type of winding switch	Star inside
Number of pole pairs	5
Stall torque	10.4 Nm
Nominal torque	6.6 Nm
Peak torque	30.5 Nm
Nominal rotary speed	2700 rpm
Max. rotational speed	4530 rpm
Max. mechanical speed	13000 rpm
Angular acceleration	≤100000 rad/s²
Motor nominal power	1870 W
Continuous stall current	6.7 A
Motor nominal current	4.3 A
Peak current	28.6 A
Motor constants	1.54 Nm/A
Standstill torque constant	1.75 Nm/A
Voltage constant, phase-to-phase	106 mVmin
Phase-phase winding resistance	1.49 Ohm
Winding inductance phase-phase	15.7 mH
Winding longitudinal inductivity Ld (phase)	8.7 mH
Cross inductivity Lq (phase)	11.8 mH
Electric time constant	15.8 ms
Thermal time constant	71 min
Thermal resistance	0.46 K/W
Measuring flange	300 x 300 x 20 mm, steel
Total output inertia moment	8.06 kgcm²
Product weight	10100 g
Permissible axial shaft load	200 N
Permissible radial shaft load	1110 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	18 Nm
Brake DC operating voltage	24 V
Brake current consumption	1 A
Brake power consumption	24 W
Brake coil resistance	24 Ohm
Brake coil inductivity	900 mH
Brake separation time	≤80 ms
Brake closing time	≤40 ms
DC brake response delay	≤5 ms
Max. brake no-load speed	10000 rpm
Max. friction work per braking operation	15000 J

Feature	Value
Number of emergency stops per hour	1
Total brake friction work	3600 kJ
Brake mass moment of inertia	2.15 kgcm²
Switching cycles, holding brake	10 million idle actuations (without friction work!)
MTTF, subcomponent	190 years, rotor position sensor
Energy efficiency	ENEFF (CN) / Class 2