Servo motor
EMMT-AS-150-L-HS-R3MB

Part number: 8148328

General operating condition

Data sheet

Feature	Value
Ambient temperature	-15 °C ... 40 °C
Note on ambient temperature	Up to 80°C with derating of -1.5% per degree Celsius
Max. installation height	4000 m
Note on max. installation height	As of 1,000 m: only with derating of -1.0% per 100 m
Storage temperature	-20 °C ... 70 °C
Relative air humidity	0 - 90%
Conforms to standard	IEC 60034
Temperature class as per EN 60034-1	F
Max. winding temperature	155 °C
Rating class as per EN 60034-1	S1
Temperature monitoring	Digital motor temperature transmission via EnDat® 2.2
Motor type to EN 60034-7	IM V1 IM V3
Mounting position	Any
Degree of protection	IP21
Note on degree of protection	IP67 for motor housing including connection components
Concentricity, coaxiality, axial runout to DIN SPEC 42955	N
Balance quality	G 2.5
Detent torque	‹1.0% of peak torque
Bearing lifetime under nominal conditions	20000 h
Interface code, motor out	150A
Electrical connection 1, connection type	Hybrid plug
Electrical connection 1, connector system	M40x1
Electrical connection 1, number of connections/cores	15
Electrical connection 1, connection pattern	00997380
Pollution degree	2
Note on materials	RoHS compliant
Corrosion resistance class CRC	0 - No corrosion stress
LABS (PWIS) conformity	VDMA24364 zone III
Vibration resistance	As per EN 60068-2-6
Shock resistance	As per EN 60068-2-29 15 g/11 ms to EN 60068-2-27
Approval	RCM c UL us - Recognised (Oil)
CE mark (see declaration of conformity)	To EU EMC Directive To EU Low Voltage Directive In accordance with EU RoHS Directive

Feature	Value
UKCA marking (see declaration of conformity)	To UK RoHS instructions To UK regulations 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
Standstill torque	45.5 Nm
Nominal torque	29 Nm
Peak torque	87 Nm
Nominal rotary speed	2100 rpm
Max. rotational speed	3495 rpm
Max. mechanical speed	8000 rpm
Angular acceleration	≤100000 rad/s²
Nominal power rating of motor	6377 W
Continuous stall current	23.6 A
Nominal motor current	15.4 A
Peak current	49.5 A
Motor constant	1.88 Nm/A
Standstill torque constant	2.23 Nm/A
Voltage constant, phase-to-phase	135.1 mVmin
Phase-phase winding resistance	0.25 Ohm
Phase-phase winding inductance	4.4 mH
Winding longitudinal inductivity Ld (phase)	2.15 mH
Winding cross inductivity Lq (phase)	2.2 mH
Electric time constant	17.1 ms
Thermal time constant	55 min
Thermal resistance	0.39 K/W
Measuring flange	450 x 450 x 30 mm, steel
Total mass moment of inertia of output	70.1 kgcm²
Product weight	29700 g
Permissible axial shaft load	274 N
Permissible radial shaft load	1370 N
Rotor position sensor	Absolute encoder, multi-turn
rotor position sensor, manufacturer designation	EQI 1331
rotor position sensor, absolute detectable revolutions	4096
Rotor position encoder interface	EnDat 22
Rotor position sensor, encoder measuring principle	Inductive
rotor position sensor, DC operating voltage	5 V
rotor position sensor, DC operating voltage range	3.6 V ... 14 V
rotor position sensor, position values per revolution	524288
Rotor position transducer resolution	19 bit
rotor position sensor, system accuracy of angle measurement	-65 arcsec ... 65 arcsec
Brake holding torque	65 Nm
Operating voltage DC for brake	24 V
Brake current consumption	1.08 A
Power consumption, brake	26 W
Brake separation time	200 ms
Brake closing time	40 ms
DC brake response delay	10 ms
Max. brake no-load speed	8000 rpm
Max. friction per braking process	40000 J
Number of emergency stops per hour	1
Total brake friction	4500 kJ

Feature	Value
Mass moment of inertia of brake	12.5 kgcm²
Switching cycles holding brake	5 million idle actuations (without friction work!)
Mean time to failure (MTTF), subcomponent	190 years, rotor position encoder
Energy efficiency	ENEFF (CN) / Class 1