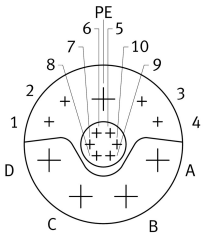
Servo motor
EMMT-AS-190-LK-HT-R3MB

Part number: 8148400





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
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 - 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 B5 IM V1 IM V3
Mounting position	Any
Degree of protection	IP21
Note on degree of protection	IP21 for motor shaft without rotary shaft seal IP65 for motor shaft with rotary shaft seal 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
Featherkey shaft design	DIN 6885 A 10 x 8 x 45
Interface code, motor out	190B
Electrical connection 1, connection type	Hybrid plug
Electrical connection 1, connection technology	M40x1
Electrical connection 1, number of pins/wires	15
Contamination level	2

Feature	Value
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 as per 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
UKCA marking (see declaration of conformity)	To UK instructions for EMC 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	93.7 Nm
Nominal torque	82.4 Nm
Peak torque	183.3 Nm
Nominal rotary speed	1000 rpm
Max. rotational speed	1654 rpm
Max. mechanical speed	8000 rpm
Angular acceleration	100000 rad/s²
Motor nominal power	8629 W
Continuous stall current	22.8 A
Motor nominal current	20 A
Peak current	49.7 A
Motor constants	4.12 Nm/A
Standstill torque constant	4.79 Nm/A
Voltage constant, phase-to-phase	289.7 mVmin
Phase-phase winding resistance	0.358 Ohm
Winding inductance phase-phase	13.8 mH
Winding longitudinal inductivity Ld (phase)	6.95 mH
Cross inductivity Lq (phase)	6.9 mH
Electric time constant	38.8 ms
Thermal time constant	80 min
Thermal resistance	0.3 K/W
Measuring flange	450 x 450 x 30 mm, steel
Total output inertia moment	195 kgcm²
Product weight	61500 g
Permissible axial shaft load	520 N
Permissible radial shaft load	2620 N
Rotor position sensor	Absolute multi-turn encoder
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

Feature	Value
Brake holding torque	115 Nm
Brake DC operating voltage	24 V
Brake current consumption	2.08 A
Brake power consumption	50 W
Brake separation time	190 ms
Brake closing time	65 ms
DC brake response delay	12 ms
Max. brake no-load speed	8000 rpm
Max. friction work per braking operation	62000 J
Number of emergency stops per hour	1
Total brake friction work	13000 kJ
Brake mass moment of inertia	50 kgcm²
Switching cycles, holding brake	5 million idle actuations (without friction work!)
MTTF, subcomponent	190 years, rotor position encoder
Energy efficiency	ENEFF (CN) / Class 1