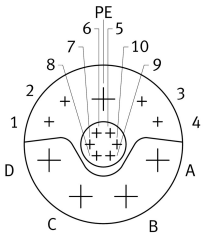
Servo motor
EMMT-AS-190-MR-HS-R3MY

Part number: 8148380





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
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
Note on materials	RoHS compliant
Corrosion resistance class (CRC)	0 - No corrosion stress

Feature	Value
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	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	TÜV 968/FSP 2317.01/25 UL E342973
Nominal operating voltage DC	680 V
Type of winding switch	Star inside
Number of pole pairs	5
Stall torque	76.7 Nm
Nominal torque	59.1 Nm
Peak torque	118.3 Nm
Nominal rotary speed	1200 rpm
Max. rotational speed	2163 rpm
Max. mechanical speed	8000 rpm
Angular acceleration	100000 rad/s²
Motor nominal power	7427 W
Continuous stall current	25 A
Motor nominal current	19.2 A
Peak current	41.5 A
Motor constants	3.08 Nm/A
Standstill torque constant	3.56 Nm/A
Voltage constant, phase-to-phase	215.2 mVmin
Phase-phase winding resistance	0.285 Ohm
Winding inductance phase-phase	12.3 mH
Winding longitudinal inductivity Ld (phase)	5.65 mH
Cross inductivity Lq (phase)	6.15 mH
Electric time constant	39.6 ms
Thermal time constant	70 min
Thermal resistance	0.31 K/W
Measuring flange	450 x 450 x 30 mm, steel
Total output inertia moment	110 kgcm²
Product weight	42200 g
Permissible axial shaft load	500 N
Permissible radial shaft load	2530 N
Rotor position sensor	Safety encoder, absolute 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
	Safety device
Maximum SIL	Security integrity level 3 See user documentation

Feature	Value
Safety sub-functions up to SIL2	Reliable acquisition and transmission of single-turn position data
Safety sub-functions up to SIL3	Reliable recording and transmission of single-turn position data, only with additional software function in the servo drive
Maximum PL and category	Performance level e, category 3 See user documentation
Safety sub-function up to PL d, Cat. 3	Reliable acquisition and transmission of single-turn position data
Safety sub-function up to PL e, Cat. 3	Reliable recording and transmission of single-turn position data, only with additional software function in the servo drive
PFHd, subcomponent	15 x 10E-9, encoder
Duration of use Tm, subcomponent	20 years, rotor position encoder
MTTF, subcomponent	190 years, rotor position encoder
Energy efficiency	ENEFF (CN) / Class 1