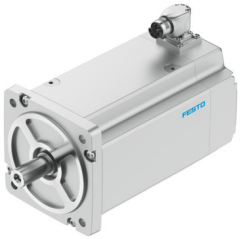
Servo motor
EMMT-AS-150-MKR-HS-R2MY

Part number: 8148308



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
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 V1 IM V3
Mounting position	Any
Degree of protection	IP21
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
Featherkey shaft design	DIN 6885 A 8 x 7 x 36
Interface code, motor out	150A
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	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)

Feature	Value
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 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	33 Nm
Nominal torque	27.1 Nm
Peak torque	64 Nm
Nominal rotary speed	1500 rpm
Max. rotational speed	2368 rpm
Max. mechanical speed	10000 rpm
Angular acceleration	≤100000 rad/s²
Motor nominal power	4257 W
Continuous stall current	11.4 A
Motor nominal current	9.5 A
Peak current	24 A
Motor constants	2.85 Nm/A
Standstill torque constant	3.3 Nm/A
Voltage constant, phase-to-phase	199.4 mVmin
Phase-phase winding resistance	0.935 Ohm
Winding inductance phase-phase	14.6 mH
Winding longitudinal inductivity Ld (phase)	7.2 mH
Cross inductivity Lq (phase)	7.3 mH
Electric time constant	15.4 ms
Thermal time constant	45 min
Thermal resistance	0.45 K/W
Measuring flange	450 x 450 x 30 mm, steel
Total output inertia moment	38.7 kgcm²
Product weight	18700 g
Permissible axial shaft load	294 N
Permissible radial shaft load	1470 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	Safety device
Maximum SIL	Security integrity level 3 See user documentation
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

Feature	Value
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