Servo motor EMMT-AS-150-M-HS-R2MYB

Part number: 8148275
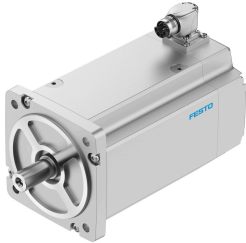
Data sheet

Feature	Value
Ambient temperature	-15 ºC...40 ºC
Note on ambient temperature	Up to 80ºC 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 ºC...70 ºC
Relative air humidity	0 - 90%
Conforms to standard	IEC 60034
Temperature class as per EN 60034-1	F
Max. winding temperature	155 ºC
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 B5 IM V1 IM V3
Mounting position	optional
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 including connection components
Concentricity, coaxiality, axial runout to DIN SPEC 42955	N
Balance quality	G 2.5
Detent torque	‹1.0% of the 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	M23x1
Electrical connection 1, number of connections/cores	15
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

Feature	Value
Shock resistance	As per EN 60068-2-29 15 g/11 ms to EN 60068-2-27
Approval	RCM trademark c UL us - Recognized (OL)
CE mark (see declaration of conformity)	To EU EMC Directive To EU Low Voltage Directive In accordance with EU RoHS Directive
CE marking (see declaration of conformity)	To UK instructions for EMC To UK RoHS instructions To UK regulations for electrical equipment
Certificate issuing authority	TÜV 968/FSP 2317.00/21 UL E342973
Nominal operating voltage DC	680 V
Type of winding switch	Star inside
Number of pole pairs	5
Standstill 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
Nominal power rating of motor	4257 W
Continuous stall current	11.4 A
Nominal motor current	9.5 A
Peak current	24 A
Motor constant	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
Phase-phase winding inductance	14.6 mH
Winding longitudinal inductivity Ld (phase)	7.2 mH
Winding 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 mass moment of inertia of output	46.9 kgcm²
Product weight	22200 g
Permissible axial shaft load	294 N
Permissible radial shaft load	1470 N
Rotor position sensor	Absolute multi-turn safety encoder
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	45 Nm
Operating voltage DC for brake	24 V
Brake current consumption	1.08 A
Power consumption, brake	26 W
Brake separation time	230 ms

Feature	Value
Brake closing time	45 ms
DC brake response delay	6 ms
Max. brake no-load speed	10000 rpm
Mass moment of inertia of brake	8.2 kgcm²
Switching cycles holding brake	5 million idle actuations (without friction work!)
Safety Integrity Level (SIL), subcomponent	SIL 2, Encoder
Performance Level, subcomponent	Cat. 3, PLd, encoder
PFHd, subcomponent	15 x 10E-9, encoder
Duration of use Tm, subcomponent	20 years, rotor position sensor
Mean time to failure (MTTF), subcomponent	190 years, rotor position sensor
Energy efficiency	ENEFF (CN) / Class 1