

# servo motor EMMT-AS-190-LK-HT-R3M

Part number: 8148397

FESTO



## Data sheet

Feature	Value
Ambient temperature	-15 ... 40 °C
Note on ambient temperature	up to 80°C with derating -1.5%/°C
Max. installation height	4,000 m
Note on max. installation height	As of 1,000 m, only with derating of -1.0% per 100 m
Storage temperature	-20 ... 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 to EN 60034-7	IM B5 IM V1 IM V3
Assembly position	Any
Protection class	IP21
Note on degree of protection	IP21 for motor shaft without rotary shaft seal IP65 motor shaft with RWDR IP67 for motor housing with connection technology
Concentricity, coaxiality, axial runout to DIN SPEC 42955	N
Balance quality	G 2,5
Detent torque	<1.0% of peak torque
Storage lifetime under nominal conditions	20,000 h
Shaft design Featherkey	DIN 6885 A 10 x 8 x 45
Interface code, motor out	190B
Electrical connection 1, connection type	Hybrid plugs
Electrical connection 1, connection technology	M40x1
Electrical connection 1, number of pins/wires	15
Degree of contamination	2
Materials note	Conforms to RoHS
Corrosion resistance classification CRC	0 - No corrosion stress
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
Authorisation	RCM Mark c UL us - Recognized (OL)
CE mark (see declaration of conformity)	to EU directive for EMC to EU directive low-voltage devices in accordance with EU RoHS directive
UKCA marking (see declaration of conformity)	To UK instructions for electrical equipment To UK instructions for EMC To UK RoHS instructions
Certificate issuing department	UL E342973
Nominal operating voltage DC	680 V

Feature	Value
Type of winding switch	Star inside
Number of pole pairs	5
Standstill torque	93.7 Nm
Nominal torque	82.4 Nm
Peak torque	183.3 Nm
Nominal rotary speed	1,000 1/min
Max. speed	1,654 1/min
Max. mechanical speed	8,000 1/min
Nominal motor power	8,629 W
Continuous open-circuit current	22.8 A
Nominal motor current	20 A
Peak current	49.7 A
Motor constant	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
Phase-phase winding inductance	13.8 mH
Winding longitudinal inductivity Ld (phase)	6.95 mH
Winding 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, steel
Overall mass moment of inertia at power take-off	145 kgcm <sup>2</sup>
Product weight	53,000 g
Permissible axial shaft load	520 N
Permissible radial shaft load	2,620 N
Rotor position sensor	Absolute multi-turn encoder
Rotor position sensor, manufacturer designation	EQI 1331
Rotor position sensor, absolute detectable revolutions	4,096
Rotary position encoder interface	EnDat 22
Rotary position encoder measuring principle	Inductive
Rotor position sensor, DC operating voltage	5 V
Rotor position sensor, DC operating voltage range	3.6 ... 14 V
Rotor position sensor, position values per revolution	524,288
Rotor position encoder resolution	19 Bit
Rotor position sensor, system accuracy of angle measurement	-65 ... 65 arcsec
MTTF, subcomponent	190 years, rotor position sensor
Energy efficiency	ENEFF (CN) / Class 1