

# Servo motor EMMT-AS-190-L-HT-R3S

Part number: 8148390

FESTO



 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
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
Electrical connection for input 1, connection pattern	00997380
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)
CE marking (see declaration of conformity)	As per EU EMC directive As per EU low voltage directive As per EU RoHS directive

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UKCA marking (see declaration of conformity)	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	$\leq 100000 \text{ rad/s}^2$
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	145 kgcm <sup>2</sup>
Product weight	53000 g
Permissible axial shaft load	520 N
Permissible radial shaft load	2620 N
Rotor position sensor	Absolute single-turn encoder
Rotor position sensor for manufacturer designation	ECl 1319
Rotor position encoder for absolutely detectable revolutions	1
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
MTTF, subcomponent	190 years, rotor position encoder
Energy efficiency	ENEFF (CN) / Class 1