

servo motor EMMT-AS-190-MK-HS-R3MYB

Part number: 8148377

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 | 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 | TÜV 968/FSP 2317.00/21 UL E342973 |
| Nominal operating voltage DC | 680 V |

| Feature | Value |
|---|---|
| Type of winding switch | Star inside |
| Number of pole pairs | 5 |
| Standstill torque | 76.7 Nm |
| Nominal torque | 59.1 Nm |
| Peak torque | 118.3 Nm |
| Nominal rotary speed | 1,200 1/min |
| Max. speed | 2,163 1/min |
| Max. mechanical speed | 8,000 1/min |
| Nominal motor power | 7,427 W |
| Continuous open-circuit current | 25 A |
| Nominal motor current | 19.2 A |
| Peak current | 41.5 A |
| Motor constant | 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 |
| Phase-phase winding inductance | 12.3 mH |
| Winding longitudinal inductivity Ld (phase) | 5.65 mH |
| Winding 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, steel |
| Overall mass moment of inertia at power take-off | 160 kgcm ² |
| Product weight | 50,600 g |
| Permissible axial shaft load | 500 N |
| Permissible radial shaft load | 2,530 N |
| Rotor position sensor | Safety Enc. absolut multi turn |
| 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 |
| Brake holding torque | 115 Nm |
| Operating voltage DC for brake | 24 V |
| Brake current consumption | 2.08 A |
| Power consumption, brake | 50 W |
| Brake separation time | 190 ms |
| Brake closing time | 65 ms |
| DC brake response delay | 12 ms |
| Max. brake no-load speed | 8,000 1/min |
| Mass moment of inertia of brake | 50 kgcm ² |
| Switching cycles, holding brake | 5 million idle actuations (without work of friction!) |
| Safety Integrity Level (SIL), component parts | SIL 2, encoder |
| Performance Level (PL), component parts | Category 3, Performance Level d, encoder |
| PFHd, component parts | 15 x 10E-9, encoder |
| Duration of use Tm, component parts | 20 years, rotor position encoder |
| MTTF, subcomponent | 190 years, rotor position sensor |
| Energy efficiency | ENEFF (CN) / Class 1 |