

Servo motor EMMT-AS-60-S-HS-RM

Part number: 5242201

FESTO



 General operating condition

Data sheet

| Feature | Value |
|---|--|
| Ambient temperature | -40 °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 | -40 °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 | IP40 |
| 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 | 60P |
| 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 | Transport application test with severity level 2 as per FN 942017-4 and EN 60068-2-6 |
| Shock resistance | Shock test with severity level 2 as per FN 942017-5 and 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 |

| Feature | Value |
|--|--|
| 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 | 0.7 Nm |
| Nominal torque | 0.64 Nm |
| Peak torque | 1.6 Nm |
| Nominal rotary speed | 3000 rpm |
| Max. rotational speed | 15000 rpm |
| Max. mechanical speed | 16000 rpm |
| Angular acceleration | $\leq 100000 \text{ rad/s}^2$ |
| Motor nominal power | 200 W |
| Continuous stall current | 1.7 A |
| Motor nominal current | 1.6 A |
| Peak current | 5.4 A |
| Motor constants | 0.41 Nm/A |
| Standstill torque constant | 0.49 Nm/A |
| Voltage constant, phase-to-phase | 29.9 mV/min |
| Phase-phase winding resistance | 11.7 Ohm |
| Winding inductance phase-phase | 38 mH |
| Winding longitudinal inductivity Ld (phase) | 15.5 mH |
| Cross inductivity Lq (phase) | 19 mH |
| Electric time constant | 2.1 ms |
| Thermal time constant | 40 min |
| Thermal resistance | 1.3 K/W |
| Measuring flange | 250 x 250 x 15 mm, steel |
| Total output inertia moment | 0.169 kgcm ² |
| Product weight | 1180 g |
| Permissible axial shaft load | 70 N |
| Permissible radial shaft load | 350 N |
| Rotor position sensor | Absolute multi-turn encoder |
| Rotor position sensor for manufacturer designation | EQI 1131 |
| 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 | -120 arcsec ... 120 arcsec |
| MTTF, subcomponent | 190 years, rotor position encoder |