

servo motor EMMT-AS-80-L-LS-RSB

Part number: 5255443

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 | IP40 |
| Note on degree of protection | IP40 motor shaft without RWDR 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 |
| Interface code, motor out | 80P |
| Electrical connection 1, connection type | Hybrid plugs |
| Electrical connection 1, connection technology | M23x1 |
| 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 | Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 |
| Shock resistance | Shock test with severity level 2 in accordance with FN 942017-5 and 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 | 325 V |
| Type of winding switch | Star inside |

| Feature | Value |
|---|--|
| Number of pole pairs | 5 |
| Standstill torque | 3.5 Nm |
| Nominal torque | 2.9 Nm |
| Peak torque | 9.9 Nm |
| Nominal rotary speed | 3,000 1/min |
| Max. speed | 6,400 1/min |
| Max. mechanical speed | 14,000 1/min |
| Nominal motor power | 910 W |
| Continuous open-circuit current | 6.7 A |
| Nominal motor current | 5.5 A |
| Peak current | 27.3 A |
| Motor constant | 0.53 Nm/A |
| Standstill torque constant | 0.6 Nm/A |
| Voltage constant, phase-to-phase | 36 mVmin |
| Phase-phase winding resistance | 1.13 Ohm |
| Phase-phase winding inductance | 5.2 mH |
| Winding longitudinal inductivity Ld (phase) | 3.1 mH |
| Winding cross inductivity Lq (phase) | 3.9 mH |
| Electric time constant | 6.9 ms |
| Thermal time constant | 48 min |
| Thermal resistance | 0.68 K/W |
| Measuring flange | 250 x 250 x 15 mm, steel |
| Overall mass moment of inertia at power take-off | 1.993 kgcm ² |
| Product weight | 4,120 g |
| Permissible axial shaft load | 120 N |
| Permissible radial shaft load | 620 N |
| Rotor position sensor | Absolute single turn encoder |
| Rotor position sensor, manufacturer designation | ECl 1118 |
| Rotor position sensor, absolute detectable revolutions | 1 |
| 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 | 262,144 |
| Rotor position encoder resolution | 18 Bit |
| Rotor position sensor, system accuracy of angle measurement | -120 ... 120 arcsec |
| Brake holding torque | 7 Nm |
| Operating voltage DC for brake | 24 V |
| Brake current consumption | 0.63 A |
| Power consumption, brake | 15 W |
| Brake coil resistance | 38.4 Ohm |
| Brake coil inductivity | 900 mH |
| Brake separation time | ≤ 45 ms |
| Brake closing time | ≤ 30 ms |
| DC brake response delay | ≤ 4 ms |
| Max. brake no-load speed | 10,000 1/min |
| Max. brake friction work | 12,000 J |
| Mass moment of inertia of brake | 0.459 kgcm ² |
| Switching cycles, holding brake | 10 million idle actuations (without friction work) |
| MTTF, subcomponent | 190 years, rotor position sensor |
| Energy efficiency | ENEFF (CN) / Class 2 |