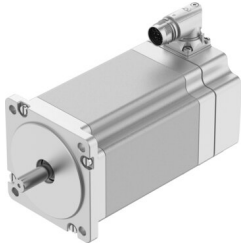


Stepper motor EMMT-ST-87-L-R

Part number: 8156197

FESTO



 General operating condition

Data sheet

| Feature | Value |
|--|--|
| Ambient temperature | -15 °C ... 40 °C |
| Note on ambient temperature | Up to 80°C with derating -2%/°C |
| Max. installation height | 4000 m |
| Note on max. installation height | As of 1,000 m: only with derating of -1.0% per 100 m |
| Storage temperature | -20 °C ... 70 °C |
| Relative air humidity | Non-condensing |
| Conforms to standard | IEC 60034 |
| Temperature class as per EN 60034-1 | B |
| Max. winding temperature | 130 °C |
| Rating class as per EN 60034-1 | S1 |
| Motor type to EN 60034-7 | IM V1 IM V3 |
| Mounting position | optional |
| Degree of protection | IP40 |
| Note on degree of protection | IP40 Motor shaft IP65 for motor housing, incl. connection technology |
| Interface code, motor out | 87A |
| Electrical connection 1, connection type | Hybrid plug |
| Electrical connection 1, connector system | M17x0.75 |
| Electrical connection 1, number of connections/cores | 12 |
| Electrical connection 1, connection pattern | 00997532 |
| 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 to FN 942017-4 and EN 60068-2-6 |
| Shock resistance | Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27 |
| Approval | RCM trademark c UL us - Recognized (OL) |
| CE mark (see declaration of conformity) | To EU EMC Directive In accordance with EU RoHS Directive |
| UKCA marking (see declaration of conformity) | To UK RoHS instructions |
| Certificate issuing authority | UL E342973 |
| Nominal operating voltage DC | 48 V |
| Number of pole pairs | 50 |
| Motor holding torque | 9.4 Nm |
| Peak torque | 9.4 Nm |

| Feature | Value |
|---|--------------------------|
| Max. rotational speed | 430 rpm |
| Max. mechanical speed | 7000 rpm |
| Stepper angle for complete step | 1.8 deg |
| Stepping angle tolerance | ±5% |
| Continuous stall current | 10 A |
| Nominal motor current | 8.4 A |
| Peak current | 10 A |
| Motor constant | 1.06 Nm/A |
| Voltage constant, phase | 78.9 mVmin |
| Phase winding resistance | 0.3 Ohm |
| Phase winding inductance | 2.7 mH |
| Winding longitudinal inductivity Ld (phase) | 4.1 mH |
| Winding cross inductivity Lq (phase) | 2.7 mH |
| Electric time constant | 9 ms |
| Thermal time constant | 37 min |
| Thermal resistance | 0.75 K/W |
| Measuring flange | 250 x 250 x 15 mm, steel |
| Total mass moment of inertia of output | 3 kgcm ² |
| Product weight | 4660 g |
| Permissible axial shaft load | 60 N |
| Permissible radial shaft load | 220 N |