

Servo motor EMMT-AS-100-S-HS-RMYB

Part number: 8160655

FESTO



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 |
| 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 | 0 - 90% |
| Conforms to standard | IEC 60034 |
| Temperature class as per EN 60034-1 | F |
| Max. winding temperature | 155 °C |
| Rating class as per 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 |
| Mounting position | optional |
| Degree of protection | IP40 |
| Note on degree of protection | IP40 for motor shaft without rotary shaft seal IP65 for motor shaft with rotary shaft seal IP67 for motor housing including connection components |
| Concentricity, coaxiality, axial runout to DIN SPEC 42955 | N |
| Balance quality | G 2.5 |
| Detent torque | <1.0% of peak torque |
| Bearing lifetime under nominal conditions | 20000 h |
| Interface code, motor out | 100A |
| Electrical connection 1, connection type | Hybrid plug |
| Electrical connection 1, connector system | M23x1 |
| Electrical connection 1, number of connections/cores | 15 |
| Pollution degree | 2 |
| Note on materials | RoHS-compliant |
| Corrosion resistance class CRC | 0 - No corrosion stress |

| Feature | Value |
|--|---|
| 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 German Technical Control Board (TÜV) c UL us - Recognized (OL) |
| CE mark (see declaration of conformity) | To EU EMC Directive To EU Low Voltage Directive In accordance with EU RoHS Directive |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC To UK RoHS instructions To UK regulations for electrical equipment |
| Certificate issuing authority | TÜV 968/INS 464.00/24 UL E342973 |
| Nominal operating voltage DC | 680 V |
| Type of winding switch | Star inside |
| Number of pole pairs | 5 |
| Standstill torque | 6.3 Nm |
| Nominal torque | 5.1 Nm |
| Peak torque | 13.7 Nm |
| Nominal rotary speed | 2700 rpm |
| Max. rotational speed | 4770 rpm |
| Angular acceleration | 100000 rad/s ² |
| Nominal power rating of motor | 1450 W |
| Continuous stall current | 4.4 A |
| Nominal motor current | 3.5 A |
| Peak current | 13.7 A |
| Motor constant | 1.45 Nm/A |
| Standstill torque constant | 1.67 Nm/A |
| Voltage constant, phase-to-phase | 101 mVmin |
| Phase-phase winding resistance | 3.35 Ohm |
| Phase-phase winding inductance | 32.4 mH |
| Winding longitudinal inductivity Ld (phase) | 17.8 mH |
| Winding cross inductivity Lq (phase) | 24.3 mH |
| Electric time constant | 14.5 ms |
| Thermal time constant | 74 min |
| Thermal resistance | 0.6 K/W |
| Measuring flange | 300 x 300 x 20 mm, steel |
| Total mass moment of inertia of output | 4.04 kgcm ² |
| Product weight | 6700 g |
| Permissible axial shaft load | 200 N |
| Permissible radial shaft load | 1110 N |
| Rotor position sensor | Absolute multi-turn safety encoder |
| rotor position sensor, manufacturer designation | EQI 1331 |
| rotor position sensor, absolute detectable revolutions | 4096 |
| Rotor position encoder interface | EnDat® 22 |
| Rotor position sensor, encoder measuring principle | Inductive |
| rotor position sensor, DC operating voltage | 5 V |
| rotor position sensor, DC operating voltage range | 3.6 V...14 V |
| rotor position sensor, position values per revolution | 524288 |
| Rotor position transducer resolution | 19 bit |
| Brake holding torque | 11 Nm |
| Operating voltage DC for brake | 24 V |
| Power consumption, brake | 18 W |

| Feature | Value |
|--|---|
| Number of emergency stops per hour | 1 |
| Mass moment of inertia of brake | 0.74 kgcm ² |
| Switching cycles holding brake | 10 million idle actuations (without friction work!) |
| Safety device | Safety device |
| Maximum SIL | Safety integrity level 3 See user documentation |
| Safety sub-functions up to SIL2 | Reliable recording and transmission of single-turn position data |
| Safety sub-functions up to SIL3 | Reliable recording and transmission of single-turn position data, only with additional software function in the servo drive |
| Maximum PL and category | Performance Level e, Category 3 See user documentation |
| Safety sub-function up to PL d, Cat. 3 | Reliable recording and transmission of single-turn position data |
| Safety sub-function up to PL e, Cat. 3 | Reliable recording and transmission of single-turn position data, only with additional software function in the servo drive |
| PFHd, subcomponent | 15 x 10E-9, encoder |
| Duration of use Tm, subcomponent | 20 years, rotor position sensor |
| Energy efficiency | ENEFF (CN) / Class 2 |