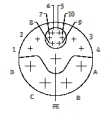
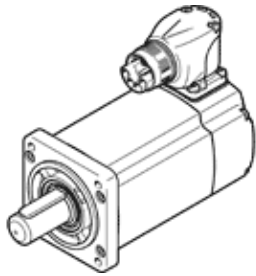


# Servomotor EMMT-AS-80-M-LS-RMB

Part number: 5255436

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 acc. to EN 60034-7                                       | IM B5<br>IM V1<br>IM V3  |
| Assembly position   | Any  |
| Protection class  | IP40   |
| Note on degree of protection  | IP40 motor shaft without RWDR<br>IP65 motor shaft with RWDR<br>IP67 for motor housing with connection technology |
| Concentricity, coaxiality, axial runout according 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                                |
| Authorization   | RCM Mark<br>c UL us - Recognized (OL)  |
| CE symbol (see declaration of conformity)                           | according to EU-EMV guideline<br>according to EU low voltage guideline<br>in accordance with EU RoHS directive   |
| UKCA marking (see declaration of conformity)                        | To UK instructions for electrical equipment<br>To UK instructions for EMC<br>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   | 2.6 Nm   |
| Nominal torque  | 2.2 Nm   |
| Peak torque   | 6.4 Nm   |
| Nominal rotary speed  | 3,000 1/min  |
| Max. speed  | 6,150 1/min  |
| Max. mechanical speed                                       | 14,000 1/min                                       |
| Nominal motor power   | 690 W  |
| Continuous open-circuit current                             | 4.9 A  |
| Nominal motor current                                       | 4.1 A  |
| Peak current  | 17.1 A   |
| Motor constant  | 0.54 Nm/A  |
| Standstill torque constant                                  | 0.62 Nm/A  |
| Voltage constant, phase-to-phase                            | 37.3 mVmin   |
| Phase-phase winding resistance                              | 2.04 Ohm   |
| Phase-phase winding inductance                              | 8.9 mH   |
| Winding longitudinal inductivity Ld (phase)                 | 5.4 mH   |
| Winding cross inductivity Lq (phase)                        | 6.6 mH   |
| Electric time constant                                      | 6.5 ms   |
| Thermal time constant                                       | 45 min   |
| Thermal resistance  | 0.78 K/W   |
| Measuring flange  | 250 x 250 x 15 mm, steel                           |
| Overall mass moment of inertia at power take-off            | 1.285 kgcm <sup>2</sup>                            |
| Product weight  | 3,360 g  |
| Permissible axial shaft load                                | 120 N  |
| Permissible radial shaft load                               | 620 N  |
| Rotor position sensor                                       | Absolute multi-turn encoder                        |
| Rotor position sensor, manufacturer designation             | EQI 1131   |
| 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 | -120 ... 120 arcsec                                |
| Brake holding torque  | 4.5 Nm   |
| Operating voltage DC for brake                              | 24 V   |
| Brake current consumption                                   | 0.5 A  |
| Power consumption, brake                                    | 12 W   |
| Brake coil resistance                                       | 48 Ohm   |
| Brake coil inductivity                                      | 1,000 mH   |
| Brake separation time                                       | ≤ 55 ms  |
| Brake closing time  | ≤ 15 ms  |
| DC brake response delay                                     | ≤ 3 ms   |
| Max. brake no-load speed                                    | 10,000 1/min                                       |
| Brake max. friction work                                    | 8,200 J  |
| Mass moment of inertia of brake                             | 0.249 kgcm <sup>2</sup>                            |
| Switching cycles, holding brake                             | 10 million idle actuations (without friction work) |
| MTTF, subcomponent  | 190 years, rotor position sensor                   |
| Energy efficiency   | ENEFF (CN) / Class 2                               |