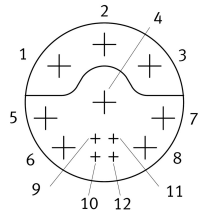
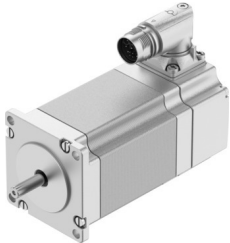


# Stepper motor EMMT-ST-57-L-R

Part number: 8156179

FESTO



## 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                                                                                                |
| Information on max. installation height        | with 1,000 m and longer only with derating of -1.0% per 100 m                                         |
| Storage temperature                            | -20 °C...70 °C                                                                                        |
| Relative air humidity                          | 0 - 90 %<br>Non-condensing                                                                            |
| Conforms to standard                           | IEC 60034                                                                                             |
| Thermal class according to EN 60034-1          | B                                                                                                     |
| Max. winding temperature                       | 130 °C                                                                                                |
| Rating class according to EN 60034-1           | S1                                                                                                    |
| Motor type as per EN 60034-7                   | IM B5<br>IM V1<br>IM V3                                                                               |
| Mounting position                              | Any                                                                                                   |
| Degree of protection                           | IP40                                                                                                  |
| Note on degree of protection                   | IP40 for motor shaft without rotary shaft seal<br>IP65 for motor housing, incl. connection technology |
| Interface code, motor out                      | 57A                                                                                                   |
| Electrical connection 1, connection type       | Hybrid plug                                                                                           |
| Electrical connection 1, connection technology | M17x0.75                                                                                              |
| Electrical connection 1, number of pins/wires  | 12                                                                                                    |
| 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<br>c UL us - Recognized (OL)                                                      |

| Feature                                      | Value                                                 |
|----------------------------------------------|-------------------------------------------------------|
| CE marking (see declaration of conformity)   | As per EU EMC directive<br>As per EU RoHS directive   |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC<br>To UK RoHS instructions |
| Certificate issuing authority                | UL E342973                                            |
| Nominal operating voltage DC                 | 48 V                                                  |
| Number of pole pairs                         | 50                                                    |
| Motor holding torque                         | 1860 Nm                                               |
| Peak torque                                  | 2100 Nm                                               |
| Max. rotational speed                        | 1500 rpm                                              |
| Max. mechanical speed                        | 8000 rpm                                              |
| Step angle with full step                    | 1.8 deg                                               |
| Step angle tolerance                         | ±5%                                                   |
| Continuous stall current                     | 6100 A                                                |
| Motor nominal current                        | 5200 A                                                |
| Peak current                                 | 8 A                                                   |
| Motor constants                              | 320 Nm/A                                              |
| Voltage constant, phase                      | 22600 mVmin                                           |
| Phase winding resistance                     | 260 Ohm                                               |
| Winding inductance phase                     | 950 mH                                                |
| Winding longitudinal inductivity Ld (phase)  | 1750 mH                                               |
| Cross inductivity Lq (phase)                 | 950 mH                                                |
| Electric time constant                       | 3700 ms                                               |
| Thermal time constant                        | 30 min                                                |
| Thermal resistance                           | 1300 K/W                                              |
| Measuring flange                             | 200 x 200 x 15 mm, steel                              |
| Total output inertia moment                  | 0.48 kgcm <sup>2</sup>                                |
| Product weight                               | 1260 g                                                |
| Permissible axial shaft load                 | 15 N                                                  |
| Permissible radial shaft load                | 75 N                                                  |