

# Stepper motor EMMS-ST-28-L-SEB

Part number: 1451382

FESTO



 General operating condition

## Data sheet

| Feature  | Value   |
|--|---|
| Ambient temperature                                | -10 °C ... 50 °C  |
| Storage temperature                                | -20 °C ... 70 °C  |
| Relative air humidity                              | 0 - 85%   |
| Conforms to standard                               | IEC 60034   |
| Insulation protection class                        | B   |
| Temperature class as per EN 60034-1                | B   |
| Rating class as per EN 60034-1                     | S1  |
| Degree of protection                               | IP65  |
| Electrical connector system                        | Plug  |
| Note on materials                                  | RoHS compliant  |
| Corrosion resistance class CRC                     | 1 - Low corrosion stress                                    |
| LABS (PWIS) conformity                             | VDMA24364-B2-L  |
| Approval   | RCM<br>c UL us - Recognised (Oil)                           |
| CE mark (see declaration of conformity)            | To EU EMC Directive<br>In accordance with EU RoHS Directive |
| UKCA marking (see declaration of conformity)       | To UK RoHS instructions                                     |
| Nominal operating voltage DC                       | 48 V  |
| Motor holding torque                               | 0.09 Nm   |
| Max. rotational speed                              | 6000 rpm  |
| Stepper angle for complete step                    | 1.8 deg   |
| Stepping angle tolerance                           | ±5%   |
| Nominal motor current                              | 1.4 A   |
| Voltage constant, phase                            | 6 mVmin   |
| Phase winding resistance                           | 2.3 Ohm   |
| Phase winding inductance                           | 1.4 mH  |
| Mass moment of inertia of rotor                    | 0.018 kgcm <sup>2</sup>                                     |
| Total mass moment of inertia of output             | 0.025 kgcm <sup>2</sup>                                     |
| Product weight                                     | 383 g   |
| Permissible axial shaft load                       | 7 N   |
| Permissible radial shaft load                      | 20 N  |
| Rotor position sensor                              | Incremental encoder   |
| Rotor position encoder interface                   | RS422 TTL AB channels + zero index                          |
| Rotor position sensor, encoder measuring principle | Optical   |
| Brake holding torque                               | 0.2 Nm  |
| Operating voltage DC for brake                     | 24 V  |

| <b>Feature</b>                  | <b>Value</b>            |
|---------------------------------|-------------------------|
| Power consumption, brake        | 8 W                     |
| Mass moment of inertia of brake | 0.007 kgcm <sup>2</sup> |