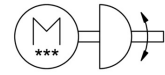


# Rotary drive unit ERMS-25-180-ST-M-H1-PLK-AA

Part number: 8087820

FESTO



## Data sheet

| Feature                                | Value   |
|--|---|
| Size                                   | 25  |
| Structural design                      | Electromechanical rotary actuator<br>With integrated drive<br>with integrated gearbox |
| Mounting position                      | Any   |
| Type of mounting                       | With internal thread  |
| Rotation angle                         | 180°  |
| Gear ratio                             | 9:1   |
| Max. rotational speed                  | 150 1/min   |
| Torsional backlash                     | 0.2 deg   |
| Repetition accuracy                    | ±0.05 °   |
| Position sensing                       | Motor encoder   |
| Max. axial force                       | 350 N   |
| Max. radial force                      | 450 N   |
| Permissible mass moment of inertia     | 0.0065 kgm <sup>2</sup>   |
| Product weight                         | 1472 g  |
| Step angle with full step              | 1.8 deg   |
| Step angle tolerance                   | ±5%   |
| Duty cycle                             | 100%  |
| Power supply, type of connection       | Plug  |
| Power supply, connection technology    | M12x1, T-coded as per EN 61076-2-111  |
| Power supply, number of pins/wires     | 4   |
| Power supply, connection pattern       | 00995989  |
| Logic interface, connection type       | Plug  |
| Logic interface, connection technology | M12x1, A-coded as per EN 61076-2-101  |
| Logic interface, number of poles/wires | 8   |
| Logic interface, connection pattern    | 00992264  |
| Max. cable length                      | 15 m outputs<br>15 m inputs<br>20 m for IO-Link® operation                            |
| DC nominal voltage                     | 24 V  |
| Nominal current                        | 3 A   |
| Motor nominal current                  | 3 A   |
| Max. current consumption               | 3000 mA   |
| Permissible voltage fluctuations       | +/- 15 %  |
| Number of digital logic inputs         | 2   |

| Feature                                      | Value   |
|--|---|
| Characteristics of logic input               | Configurable<br>Not galvanically isolated   |
| Logic input specification                    | Based on IEC 61131-2, type 1  |
| Work range of logic input                    | 24 V  |
| Input switching logic                        | PNP (positive switching)  |
| Number of digital logic outputs 24 V DC      | 2   |
| Characteristics of digital logic outputs     | Configurable<br>Not galvanically isolated   |
| Max. current of digital logic outputs        | 100 mA  |
| Switching logic at outputs                   | PNP (positive switching)  |
| IO-Link®, SIO mode support                   | Yes   |
| IO-Link®, protocol version                   | Device V 1.1  |
| IO-Link®, communication mode                 | COM3 (230.4 kBd)  |
| IO-Link®, port class                         | A   |
| IO-Link®, number of ports                    | 1   |
| IO-Link®, process data width OUT             | 2 Byte  |
| IO-Link®, process data content OUT           | 1 bit (move in)<br>1 bit (move out)<br>1 bit (quit error)                           |
| IO-Link®, process data width IN              | 2 Byte  |
| IO-Link®, process data content IN            | 1 bit (state device)<br>1 bit (state move)<br>1 bit (state in)<br>1 bit (state out) |
| IO-Link®, service data contents IN           | 32 bit force<br>32 bit position<br>32 bit speed                                     |
| IO-Link®, minimum cycle time                 | 1 ms  |
| IO-Link®, data memory required               | 500 byte  |
| IO-Link®, Connection technology              | Plug  |
| Parameterization interface                   | IO-Link®<br>User interface  |
| Insulation protection class                  | B   |
| Motor type                                   | Stepper motor   |
| Rotor position sensor                        | Absolute encoder, single-turn   |
| Rotor position sensor measuring principle    | Magnetic  |
| Rotor position sensor resolution             | 16 bit  |
| Homing                                       | Fixed stop block positive<br>Fixed stop block, negative                             |
| Additional functions                         | User interface<br>Integrated end-position sensing                                   |
| Display                                      | LED   |
| Ready status indication                      | LED   |
| Symbol                                       | 00997295  |
| Angular acceleration                         | ≤140 rad/s <sup>2</sup>   |
| Certification                                | RCM compliance mark   |
| KC characters                                | KC EMC  |
| 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                               |
| Peak torque                                  | 2.7 Nm  |
| Interface code, base                         | E8-55   |
| Degree of protection                         | IP40  |
| Protection class                             | III   |
| Storage temperature                          | -20 °C ... 60 °C  |
| Ambient temperature                          | 0 °C ... 50 °C  |

| <b>Feature</b>              | <b>Value</b>   |
|-----------------------------|--|
| Note on ambient temperature | Above an ambient temperature of 30°C, the power must be reduced by 2% per K.         |
| Relative air humidity       | 0 - 85 %   |
| Vibration resistance        | Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6 |
| Shock resistance            | Shock test with severity level 1 as per FN 942017-5 and EN 60068-2-27                |
| LABS (PWIS) conformity      | VDMA24364 zone III   |
| Note on materials           | RoHS-compliant   |
| Material of flange          | Wrought aluminum alloy, anodized   |
| Housing material            | Wrought aluminum alloy, anodized   |