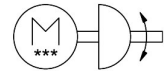
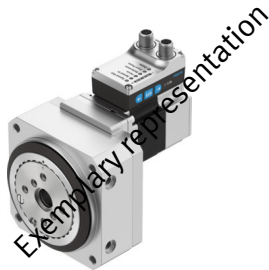


# Rotary drive unit ERMS-32-

Part number: 8087809

FESTO



[PDF](#) General operating condition

## Data sheet

Overall data sheet – Individual values depend upon your configuration.

| Feature                                | Value                                                                                 |
|----------------------------------------|---------------------------------------------------------------------------------------|
| Size                                   | 32                                                                                    |
| Structural design                      | Electromechanical rotary actuator<br>With integrated drive<br>with integrated gearbox |
| Mounting position                      | Any                                                                                   |
| Type of mounting                       | With internal thread                                                                  |
| Rotation angle                         | 90°<br>180°                                                                           |
| Gear ratio                             | 7:1                                                                                   |
| Max. rotational speed                  | 100 rpm                                                                               |
| Max. speed at 90°                      | 100 rpm                                                                               |
| Torsional backlash                     | 0.2 deg                                                                               |
| Repetition accuracy                    | ±0.1 °                                                                                |
| Position sensing                       | Motor encoder                                                                         |
| Max. axial force                       | 450 N                                                                                 |
| Max. radial force                      | 550 N                                                                                 |
| Permissible mass moment of inertia     | 0.0164 kgm <sup>2</sup>                                                               |
| Product weight                         | 2304 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                        | 5.3 A                                                                                 |
| Motor nominal current                  | 5 A                                                                                   |
| Max. current consumption               | 5300 mA                                                                               |

| Feature                                      | Value                                                                                                   |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Permissible voltage fluctuations             | +/- 15 %                                                                                                |
| Number of digital logic inputs               | 2                                                                                                       |
| 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                        | NPN (negative switching)<br>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                   | NPN (negative switching)<br>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           | Move in 1 bit<br>Move out 1 bit<br>Quit Error 1 bit<br>Move Intermediate 1 bit                          |
| IO-Link®, process data width IN              | 2 Byte                                                                                                  |
| IO-Link®, process data content IN            | State Device 1 bit<br>State In 1 bit<br>State Intermediate 1 bit<br>State Move 1 bit<br>State Out 1 bit |
| 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                                                 |
| Protective function                          | Temperature monitoring                                                                                  |
| Additional functions                         | User interface<br>Integrated end-position sensing                                                       |
| Display                                      | LED                                                                                                     |
| Ready status indication                      | LED                                                                                                     |
| Symbol                                       | 00997295                                                                                                |
| Angular acceleration                         | ≤140 rad/s²                                                                                             |
| 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                                                   |

| Feature                        | Value                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------|
| Peak torque                    | 5.6 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                                                                       |
| 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                                                     |
| Speed "Speed Press"            | 2 m/s                                                                                |
| Logic max. current consumption | 0.3 A                                                                                |
| Maintenance interval           | Life-time lubrication                                                                |