

# Toothed belt axis unit ELGE-TB-35-500-0H-ST-M-H1-PLK-AA-AT-FR

Part number: 8083935

FESTO



 General operating condition

## Data sheet

| Feature                                   | Value                                                                                                        |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Drive pinion effective diameter           | 18.46 mm                                                                                                     |
| Working stroke                            | 500 mm                                                                                                       |
| Size                                      | 35                                                                                                           |
| Toothed belt elongation                   | 0.094 %                                                                                                      |
| Toothed belt pitch                        | 2 mm                                                                                                         |
| Mounting position                         | Horizontal                                                                                                   |
| Guide                                     | Recirculating ball bearing guide                                                                             |
| Structural design                         | with toothed belt<br>With integrated drive                                                                   |
| Motor type                                | Stepper motor                                                                                                |
| Symbol                                    | 00997293                                                                                                     |
| Position sensing                          | Motor encoder<br>For proximity sensor                                                                        |
| Homing                                    | Fixed stop block positive<br>Fixed stop block, negative                                                      |
| Rotor position sensor                     | Absolute encoder, single-turn                                                                                |
| Rotor position sensor measuring principle | Magnetic                                                                                                     |
| Temperature monitoring                    | Shutdown in the event of over temperature<br>Integrated precise CMOS temperature sensor with analogue output |
| Additional functions                      | User interface<br>Integrated end-position sensing                                                            |
| Display                                   | LED                                                                                                          |
| Ready status indication                   | LED                                                                                                          |
| Max. acceleration                         | 8.5 m/s <sup>2</sup>                                                                                         |
| Max. speed                                | 1.2 m/s                                                                                                      |
| Speed "Speed Press"                       | 0.024 m/s                                                                                                    |
| Repetition accuracy                       | ±0.1 mm                                                                                                      |
| Characteristics of digital logic outputs  | Configurable<br>Not galvanically isolated                                                                    |
| Duty cycle                                | 100%                                                                                                         |
| Insulation protection class               | B                                                                                                            |
| Max. current of digital logic outputs     | 100 mA                                                                                                       |
| Max. current consumption                  | 5300 mA                                                                                                      |
| Logic max. current consumption            | 0.3 A                                                                                                        |
| DC nominal voltage                        | 24 V                                                                                                         |
| Nominal current                           | 5.3 A                                                                                                        |
| Parameterization interface                | IO-Link®<br>User interface                                                                                   |

| Feature                                      | Value                                                                                |
|----------------------------------------------|--------------------------------------------------------------------------------------|
| Rotor position sensor resolution             | 16 bit                                                                               |
| Permissible voltage fluctuations             | +/- 15 %                                                                             |
| 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                                                                             |
| 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                                |
| 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                |
| LABS (PWIS) conformity                       | VDMA24364 zone III                                                                   |
| Storage temperature                          | -20 °C ... 60 °C                                                                     |
| Relative air humidity                        | 0 - 90 %                                                                             |
| Degree of protection                         | IP20                                                                                 |
| Protection class                             | III                                                                                  |
| 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.         |
| 2nd moment of area Iy                        | 3770 mm <sup>4</sup>                                                                 |
| 2nd moment of area Iz                        | 4190 mm <sup>4</sup>                                                                 |
| Max. force Fy                                | 50 N                                                                                 |
| Max. force Fz                                | 50 N                                                                                 |
| Max. torque Mx                               | 2.5 Nm                                                                               |
| Max. torque My                               | 8 Nm                                                                                 |
| Max. torque Mz                               | 8 Nm                                                                                 |
| Max. feed force Fx                           | 50 N                                                                                 |
| Guide value for payload, horizontal          | 2.8 kg                                                                               |
| Feed constant                                | 58 mm/U                                                                              |
| Reference service life                       | 5000 km                                                                              |
| Maintenance interval                         | Life-time lubrication                                                                |
| Additional moving mass per 10 mm stroke      | 0.31 g                                                                               |
| Product weight                               | 3740 g                                                                               |
| Number of digital logic outputs 24 V DC      | 2                                                                                    |
| Number of digital logic inputs               | 2                                                                                    |
| Logic input specification                    | Based on IEC 61131-2, type 1                                                         |
| Work range of logic input                    | 24 V                                                                                 |
| IO-Link®, SIO mode support                   | Yes                                                                                  |
| Characteristics of logic input               | Configurable<br>Not galvanically isolated                                            |
| 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                    | Device 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                                                                               |

| Feature                                  | Value                                                                                                   |
|------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 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                                                                                                |
| Max. cable length                        | 15 m outputs<br>15 m inputs<br>20 m for IO-Link® operation                                              |
| Switching logic at outputs               | PNP (positive switching)                                                                                |
| Input switching logic                    | PNP (positive switching)                                                                                |
| IO-Link®, Connection technology          | Plug                                                                                                    |
| 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                                                                                                |
| Type of mounting                         | Profile mounting                                                                                        |
| Profile material                         | Wrought aluminum alloy, anodized                                                                        |
| Note on materials                        | RoHS-compliant                                                                                          |
| Drive cover material                     | Wrought aluminum alloy, anodized                                                                        |
| Belt pulley material                     | High-alloy stainless steel                                                                              |
| Slide material                           | Wrought aluminum alloy, anodized                                                                        |
| Toothed belt clamping component material | Beryllium bronze                                                                                        |
| Toothed belt material                    | Polychloroprene with glass cord and nylon coating                                                       |