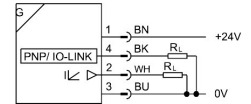


# Position transmitter SDAT-MHS-M50-1L-SA-E-0.3-M8

Part number: 1531265

**FESTO**



[General operating condition](#)

## Data sheet

| Feature                                      | Value                                                                                                 |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Design                                       | for T-slot                                                                                            |
| Symbol                                       | 00995389                                                                                              |
| Certification                                | RCM compliance mark<br>c UL us - Listed (OL)                                                          |
| CE marking (see declaration of conformity)   | As per EU EMC directive                                                                               |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC                                                                            |
| Note on materials                            | RoHS-compliant<br>Halogen-free                                                                        |
| Application note                             | <a href="https://www.festo.com/Drive-Sensor-Overview">https://www.festo.com/Drive-Sensor-Overview</a> |
| Measured variable                            | Position                                                                                              |
| Measuring principle                          | Magnetic Hall                                                                                         |
| Sensing range                                | 0 µm ... 50000 µm                                                                                     |
| Ambient temperature                          | -25 °C ... 70 °C                                                                                      |
| Typical sampling interval                    | 1 ms                                                                                                  |
| Max. travel speed                            | 3 m/s                                                                                                 |
| Displacement resolution                      | 0.05 mm                                                                                               |
| Repetition accuracy                          | 0.1 mm                                                                                                |
| Switching output                             | PNP                                                                                                   |
| Switching element function                   | N/C contact/N/O contact switchable                                                                    |
| On time                                      | <2 ms                                                                                                 |
| Switch-off time                              | <2 ms                                                                                                 |
| Max. switching frequency                     | 1000 Hz                                                                                               |
| Max. output current                          | 100 mA                                                                                                |
| Max. switching capacity DC                   | 2.7 W                                                                                                 |
| Voltage drop                                 | 2.5 V                                                                                                 |
| Analog output                                | 4 - 20 mA                                                                                             |
| Sensitivity                                  | 0.32 mA/mm                                                                                            |
| Typical linearity error                      | ±0.25 mm                                                                                              |
| Max. load resistance of current output       | 500 Ohm                                                                                               |
| Short-circuit protection                     | yes                                                                                                   |
| Overload protection                          | Available                                                                                             |
| Protocol                                     | I-Port<br>IO-Link®                                                                                    |
| IO-Link®, protocol version                   | Device V 1.1                                                                                          |
| IO-Link®, profile                            | Smart sensor profile                                                                                  |

| Feature                                               | Value                                                                                                                                                  |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| IO-Link®, function classes                            | Binary data channel (BDC)<br>Process data variable (PDV)<br>Identification<br>Diagnostics<br>Teach channel                                             |
| IO-Link®, communication mode                          | COM3 (230.4 kBd)                                                                                                                                       |
| IO-Link®, SIO mode support                            | Yes                                                                                                                                                    |
| IO-Link®, port class                                  | A                                                                                                                                                      |
| IO-Link®, process data width IN                       | 2 Byte                                                                                                                                                 |
| IO-Link®, process data content IN                     | 12 bit PDV (position measurement)<br>4 bit BDC (position monitoring)                                                                                   |
| IO-Link®, minimum cycle time                          | 1 ms                                                                                                                                                   |
| DC operating voltage range                            | 15 V ... 30 V                                                                                                                                          |
| Residual ripple                                       | 10 %                                                                                                                                                   |
| Reverse polarity protection                           | for all electrical connections                                                                                                                         |
| Electrical connection 1, connection type              | Cable with plug                                                                                                                                        |
| Electrical connection 1, connection technology        | M8x1 A-coded as per EN 61076-2-104                                                                                                                     |
| Electrical connection 1, number of pins/wires         | 4                                                                                                                                                      |
| Electrical connection 1, type of mounting             | Screw-type lock                                                                                                                                        |
| Electrical connection for input 1, connection pattern | 00991171                                                                                                                                               |
| Connection outlet orientation                         | Longitudinal                                                                                                                                           |
| Material of pin contacts                              | Copper alloy<br>Gold-plated                                                                                                                            |
| Connector cable test conditions                       | Flexural strength: as per Festo standard<br>Torsion resistance: > 300,000 cycles, ±270°/0.1 m<br>Energy chain > 5 million cycles, bending radius 28 mm |
| Cable length                                          | 0.3 m                                                                                                                                                  |
| Cable characteristic                                  | Suitable for energy chains/robot applications                                                                                                          |
| Color cable sheath                                    | Gray                                                                                                                                                   |
| Material of cable sheath                              | TPE-U(PUR)                                                                                                                                             |
| Type of mounting                                      | Can be inserted in slot from above                                                                                                                     |
| Mounting position                                     | Any                                                                                                                                                    |
| Product weight                                        | 19 g                                                                                                                                                   |
| Housing material                                      | Polyester<br>High-alloy stainless steel                                                                                                                |
| Material of union nut                                 | Brass, nickel-plated                                                                                                                                   |
| Film material                                         | Polyester                                                                                                                                              |
| Ready status indication                               | LED green                                                                                                                                              |
| Switching status indication                           | LED yellow                                                                                                                                             |
| Status indicator                                      | LED red                                                                                                                                                |
| Setting options                                       | IO-Link®<br>Pushbutton                                                                                                                                 |
| Ambient temperature with flexible cable installation  | -20 °C ... 70 °C                                                                                                                                       |
| Degree of protection                                  | IP65<br>IP68                                                                                                                                           |
| LABS (PWIS) conformity                                | VDMA24364-B2-L                                                                                                                                         |
| Suitability for the production of Li-ion batteries    | Suitable for battery production with reduced Cu/Zn/Ni values (F1a)                                                                                     |
| Cleanroom class                                       | Class 4 according to ISO 14644-1                                                                                                                       |