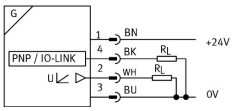
# Position transmitter
# SDAT-MHS-M125-1L-SV-E-0.3-M8

Part number: 8115397






## Data sheet

| Feature | Value |
|---|---|
| Design | For T-slot |
| 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 | https://www.festo.com/Drive-Sensor-Overview |
| Measured variable | Position |
| Measuring principle | Magnetic Hall |
| Sensing range | 0 mm...125 mm |
| 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 | 1 kHz |
| Max. output current | 100 mA |
| Max. switching capacity DC | 2.7 W |
| Voltage drop | 2.5 V |
| Analog output | 0 - 10 V |
| Sensitivity | 0.072 V/mm |
| Typical linearity error | ±0.25 mm |
| Min. load resistance of voltage output | 20 kOhm |
| Short-circuit protection | Yes |
| Overload protection | Available |
| Protocol | I-Port<br>IO-Link® |

| Feature | Value |
|---|---|
| IO-Link®, protocol version | Device V 1.1 |
| IO-Link®, profile | Smart sensor profile |
| 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 |
| 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 | Screwed on<br>Can be inserted in slot from above |
| Mounting position | Any |
| Product weight | 30 g |
| Housing material | Brass, nickel-plated<br>PA-reinforced<br>Polyester<br>high-alloy stainless steel |
| Material of union nut | Brass, nickel-plated |
| Film material | Polyester |
| Ready status indication | Green LED |
| Switching status indication | Yellow LED |
| Status indicator | Red LED |
| Setting options | IO-Link®<br>Key |
| 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 suitability, measured according to ISO 14644-14 | Class 4 according to ISO 14644-1 |