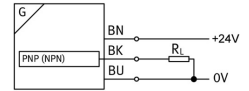


# Proximity sensors

## SDBT-MSX-1L-PU-E-2.5-N-LE

Part number: 8059121

**FESTO**



[General operating condition](#)

## Data sheet

| Feature                                      | Value                                                                                                 |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Design                                       | for T-slot                                                                                            |
| Based on norm                                | EN 60947-5-2                                                                                          |
| Symbol                                       | 00995964                                                                                              |
| Certification                                | RCM compliance mark<br>c UL us - Listed (OL)                                                          |
| 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                                                 |
| Certificate issuing authority                | UL E232949                                                                                            |
| 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                                                                                         |
| Ambient temperature                          | -40 °C ... 85 °C                                                                                      |
| Max. travel speed                            | 3 m/s                                                                                                 |
| Repetition accuracy                          | 0.1 mm                                                                                                |
| Switching output                             | PNP/NPN switchable                                                                                    |
| Switching element function                   | N/C contact/N/O contact switchable                                                                    |
| Hysteresis                                   | 0.2 mm                                                                                                |
| On time                                      | ≤2 ms                                                                                                 |
| Switch-off time                              | ≤2 ms                                                                                                 |
| Max. switching frequency                     | 200 Hz                                                                                                |
| Max. output current                          | 100 mA                                                                                                |
| Max. output current in mounting kits         | 100 mA                                                                                                |
| Max. switching capacity DC                   | 2.8 W                                                                                                 |
| Max. switching capacity DC in mounting kits  | 2.8 W                                                                                                 |
| Voltage drop                                 | <1.5 V                                                                                                |
| Minimum load current                         | 0.15 mA                                                                                               |
| Residual current                             | <0.2 mA                                                                                               |
| Short-circuit protection                     | yes                                                                                                   |
| Overload protection                          | Available                                                                                             |
| Rated operating voltage DC                   | 24 V                                                                                                  |
| DC operating voltage range                   | 10 V ... 30 V                                                                                         |
| Reverse polarity protection                  | for all electrical connections                                                                        |
| Electrical connection 1, connection type     | Cable                                                                                                 |

| Feature                                              | Value                                                                                                                                                                                                                  |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical connection 1, connection technology       | Open end                                                                                                                                                                                                               |
| Electrical connection 1, number of pins/wires        | 3                                                                                                                                                                                                                      |
| Connection outlet orientation                        | Longitudinal                                                                                                                                                                                                           |
| Connector cable test conditions                      | Flexural strength: as per Festo standard<br>Test conditions on request<br>Torsional resistance: > 300 000 cycles, $\pm 270^\circ/0.1$ m<br>Energy chain > 5 million cycles, bending radius 28 mm                       |
| Cable length                                         | 2.5 m                                                                                                                                                                                                                  |
| Cable characteristic                                 | Suitable for energy chains/robot applications                                                                                                                                                                          |
| Color cable sheath                                   | Gray                                                                                                                                                                                                                   |
| Material of cable sheath                             | TPE-U(PUR)                                                                                                                                                                                                             |
| Wire ends                                            | Cable end sleeve                                                                                                                                                                                                       |
| Type of mounting                                     | Screwed tightly<br>Can be inserted in slot from above                                                                                                                                                                  |
| Max. tightening torque                               | 0.6 Nm                                                                                                                                                                                                                 |
| Mounting position                                    | Any                                                                                                                                                                                                                    |
| Product weight                                       | 29 g                                                                                                                                                                                                                   |
| Housing colour                                       | Black                                                                                                                                                                                                                  |
| Housing material                                     | PA-reinforced<br>High-alloy stainless steel                                                                                                                                                                            |
| Switching status indication                          | LED yellow                                                                                                                                                                                                             |
| Status indicator                                     | LED green                                                                                                                                                                                                              |
| Setting options                                      | Auto teach-in<br>Capacitive pushbutton                                                                                                                                                                                 |
| Ambient temperature with flexible cable installation | -20 °C ... 85 °C                                                                                                                                                                                                       |
| Degree of protection                                 | IP68                                                                                                                                                                                                                   |
| LABS (PWIS) conformity                               | VDMA24364-B2-L                                                                                                                                                                                                         |
| Suitability for the production of Li-ion batteries   | Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils |
| Cleanroom class                                      | Class 4 according to ISO 14644-1                                                                                                                                                                                       |