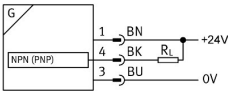


# Proximity sensor

## SDBT-MSX-1L-NU-E-0.3-N-M8

Part number: 8059123

FESTO



## Data sheet

| Feature                                        | Value                                                                                                 |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Design                                         | For T-slot                                                                                            |
| Based on standard                              | EN 60947-5-2                                                                                          |
| Approval                                       | RCM trademark<br>c UL us listed (OL)                                                                  |
| CE mark (see declaration of conformity)        | To EU EMC Directive<br>In accordance with 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>Free of halogen                                                                     |
| Instructions on use                            | <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/O or N/C contact, switchable                                                                        |
| Hysteresis                                     | 0.2 mm                                                                                                |
| Switch-on time                                 | 2 ms                                                                                                  |
| Switch-off time                                | 2 ms                                                                                                  |
| Max. switching frequency                       | 200 Hz                                                                                                |
| Max. output current                            | 100 mA                                                                                                |
| Max. output current using mounting kits        | 100 mA                                                                                                |
| Max. switching capacity DC                     | 2.8 W                                                                                                 |
| Max. switching capacity DC using mounting kits | 2.8 W                                                                                                 |
| Voltage drop                                   | 1.5 V                                                                                                 |
| Min. load current                              | 0.15 mA                                                                                               |
| Off-state current                              | 0.2 mA                                                                                                |
| Short circuit current rating                   | yes                                                                                                   |
| Overload protection                            | Yes                                                                                                   |

| Feature                                                   | Value                                                                                                                                                                                      |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated operational voltage DC                              | 24 V                                                                                                                                                                                       |
| Operational voltage range DC                              | 10 V...30 V                                                                                                                                                                                |
| Reverse polarity protection                               | For all electrical connections                                                                                                                                                             |
| Electrical connection 1, connection type                  | Cable with plug                                                                                                                                                                            |
| Electrical connection 1, connector system                 | M8x1, A-coded, to EN 61076-2-104                                                                                                                                                           |
| Electrical connection 1, number of connections/cores      | 3                                                                                                                                                                                          |
| Electrical connection 1, type of mounting                 | Screw-type lock<br>Rotatable                                                                                                                                                               |
| Electrical connection 1, compatible type of mounting      | Compatible with rotatable/non-rotatable screw-type lock                                                                                                                                    |
| Connection outlet orientation                             | In-line                                                                                                                                                                                    |
| Material screw-type lock                                  | Nickel-plated brass                                                                                                                                                                        |
| Test conditions cable                                     | Bending strength: to Festo standard<br>Test conditions on request<br>Torsional strength: > 300,000 cycles, $\pm 270^\circ/0.1$ m<br>Energy chain: > 5 million cycles, bending radius 28 mm |
| Cable length                                              | 0.3 m                                                                                                                                                                                      |
| Cable characteristic                                      | Suitable for energy chains/robot applications                                                                                                                                              |
| Cable sheath colour                                       | Grey                                                                                                                                                                                       |
| Material cable sheath                                     | TPE-U(PUR)                                                                                                                                                                                 |
| Type of mounting                                          | Screw-clamped<br>Insertable in the slot from above                                                                                                                                         |
| Max. tightening torque                                    | 0.6 Nm                                                                                                                                                                                     |
| Mounting position                                         | optional                                                                                                                                                                                   |
| Product weight                                            | 10 g                                                                                                                                                                                       |
| Housing colour                                            | Black                                                                                                                                                                                      |
| Material housing                                          | PA-reinforced<br>High-alloy stainless steel                                                                                                                                                |
| Switching status indication                               | Yellow LED                                                                                                                                                                                 |
| Status indication                                         | Green LED                                                                                                                                                                                  |
| Setting options                                           | Auto teach-in<br>Capacitive pushbutton                                                                                                                                                     |
| Ambient temperature with moving cable                     | -20 °C...85 °C                                                                                                                                                                             |
| Degree of protection                                      | IP65<br>IP68<br>IP69K                                                                                                                                                                      |
| 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 | Element installed statically, no meaningful evaluation possible according to ISO 14644-1                                                                                                   |