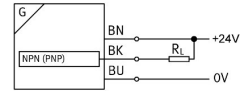


# Proximity sensors

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

Part number: 8059124

**FESTO**



## Data sheet

| Feature                                      | Value                                                                                                 |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Design                                       | For T-slot                                                                                            |
| Based on norm                                | EN 60947-5-2                                                                                          |
| 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/O-N/C 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                          | Yes                                                                                                   |

| Feature                                                   | Value                                                                                                                                                                                           |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                                                           |
| 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>Torsion 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                                                 | Wire ferrule                                                                                                                                                                                    |
| Type of mounting                                          | Screwed on<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                               | Yellow LED                                                                                                                                                                                      |
| Status indicator                                          | Green LED                                                                                                                                                                                       |
| Setting options                                           | Auto teach-in<br>Capacitive key                                                                                                                                                                 |
| Ambient temperature with flexible cable installation      | -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 | Statically installed element, no meaningful evaluation possible<br>according to ISO 14644-1                                                                                                     |