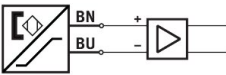


Proximity switch  
SDBT-MS-20NL-ZN-E-20-LE-EX6  
Part number: 8185111



Data sheet

| Feature                                      | Value                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Design                                       | For T-slot                                                                                                                                                                                                                                                                                                                                                                |
| Based on standard                            | EN 60947-5-6                                                                                                                                                                                                                                                                                                                                                              |
| Approval                                     | RCM trademark<br>c UL us listed (OL)<br>c UL us - listed (HazLoc)                                                                                                                                                                                                                                                                                                         |
| CE mark (see declaration of conformity)      | To EU EMC Directive<br>To EU Explosion Protection Directive (ATEX)<br>In accordance with EU RoHS Directive                                                                                                                                                                                                                                                                |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC<br>To UK EX instructions<br>To UK RoHS instructions                                                                                                                                                                                                                                                                                            |
| Explosion protection                         | Zone 0 (ATEX)<br>Zone 0 (BR)<br>Zone 0 (CA)<br>Zone 0 (CN)<br>Zone 0 (IEC-EX)<br>Zone 0 (KR)<br>Zone 0 (TW)<br>Zone 0 (UKEX)<br>Zone 0 (US)<br>Zone 1 (ATEX)<br>Zone 2 (ATEX)<br>Zone 20 (ATEX)<br>Zone 20 (BR)<br>Zone 20 (CA)<br>Zone 20 (CN)<br>Zone 20 (IEC-EX)<br>Zone 20 (KR)<br>Zone 20 (TW)<br>Zone 20 (UKEX)<br>Zone 20 (US)<br>Zone 21 (ATEX)<br>Zone 22 (ATEX) |

| Feature                                              | Value                                                                                                                                                                                                                                               |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Explosion protection certification outside the EU    | EPL Da (BR)<br>EPL Da (CA)<br>EPL Da (CN)<br>EPL Da (GB)<br>EPL Da (IECEX)<br>EPL Da (KR)<br>EPL Da (TW)<br>EPL Da (US)<br>EPL Ga (BR)<br>EPL Ga (CA)<br>EPL Ga (CN)<br>EPL Ga (GB)<br>EPL Ga (IEC-EX)<br>EPL Ga (KR)<br>EPL Ga (TW)<br>EPL Ga (US) |
| Max. input voltage $U_i$                             | 28 V                                                                                                                                                                                                                                                |
| Max. input current $I_i$                             | 0.25 A                                                                                                                                                                                                                                              |
| Max. input power $P_i$                               | T4: 350 mW<br>T6: 72 mW                                                                                                                                                                                                                             |
| Effective internal inductivity $L_i$                 | 30 $\mu$ H                                                                                                                                                                                                                                          |
| Effective internal capacitance $C_i$                 | 79 nF                                                                                                                                                                                                                                               |
| Special characteristics                              | Oil resistant                                                                                                                                                                                                                                       |
| 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                                  | Magneto-resistive                                                                                                                                                                                                                                   |
| Ambient temperature                                  | -40 °C...85 °C                                                                                                                                                                                                                                      |
| Repetition accuracy                                  | 0.2 mm                                                                                                                                                                                                                                              |
| Switching output                                     | NAMUR                                                                                                                                                                                                                                               |
| Switching element function                           | NAMUR                                                                                                                                                                                                                                               |
| Switch-on time                                       | 1 ms                                                                                                                                                                                                                                                |
| Switch-off time                                      | 1 ms                                                                                                                                                                                                                                                |
| Max. switching frequency                             | 330 Hz                                                                                                                                                                                                                                              |
| Off-state current                                    | 0.4 mA...1 mA                                                                                                                                                                                                                                       |
| Rated operational voltage DC                         | 8.2 V                                                                                                                                                                                                                                               |
| Operational voltage range DC                         | 7.5 V...18 V                                                                                                                                                                                                                                        |
| Residual ripple                                      | 10 %                                                                                                                                                                                                                                                |
| Reverse polarity protection                          | For all electrical connections                                                                                                                                                                                                                      |
| Electrical connection 1, connection type             | Cable                                                                                                                                                                                                                                               |
| Electrical connection 1, connector system            | Open end                                                                                                                                                                                                                                            |
| Electrical connection 1, number of connections/cores | 2                                                                                                                                                                                                                                                   |
| Test conditions cable                                | Bending strength: to Festo standard<br>Test conditions on request                                                                                                                                                                                   |
| Cable length                                         | 20 m                                                                                                                                                                                                                                                |
| Cable characteristic                                 | Suitable for energy chains<br>Suitable for robot applications                                                                                                                                                                                       |
| Cable sheath colour                                  | Blue                                                                                                                                                                                                                                                |
| Material cable sheath                                | TPE-U(PUR)                                                                                                                                                                                                                                          |
| Material insulating sheath                           | PP                                                                                                                                                                                                                                                  |
| Wire ends                                            | Wire ferrule                                                                                                                                                                                                                                        |
| Type of mounting                                     | Screw-clamped<br>Insertable in the slot from above                                                                                                                                                                                                  |
| Tightening torque                                    | 0.1 Nm...0.6 Nm                                                                                                                                                                                                                                     |
| Max. tightening torque                               | 0.6 Nm                                                                                                                                                                                                                                              |
| Mounting position                                    | optional                                                                                                                                                                                                                                            |
| Product weight                                       | 206 g                                                                                                                                                                                                                                               |

| Feature                               | Value                                       |
|---------------------------------------|---------------------------------------------|
| Housing colour                        | Black                                       |
| Material housing                      | PA-reinforced<br>High-alloy stainless steel |
| Switching status indication           | Yellow LED                                  |
| Ambient temperature with moving cable | -20 °C...85 °C                              |
| Degree of protection                  | IP65<br>IP68                                |
| LABS (PWIS) conformity                | VDMA24364-B2-L                              |