

# Proximity sensor SMT-8M-A

Part number: 574333

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                                                                                            |
| 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                               | NPN<br>PNP<br>Non-contacting, 2-wire                                                                  |
| Switching element function                     | N/C contact<br>N/O contact                                                                            |
| Switch-on time                                 | 1.3 ms                                                                                                |
| Switch-off time                                | 7.3 ms                                                                                                |
| Max. switching frequency                       | 130 Hz                                                                                                |
| Max. output current                            | 100 mA                                                                                                |
| Max. output current using mounting kits        | 100 mA                                                                                                |
| Max. switching capacity DC                     | 1.9 W...2.8 W                                                                                         |
| Max. switching capacity DC using mounting kits | 1.5 W...2.8 W                                                                                         |
| Voltage drop                                   | 6 V                                                                                                   |
| Short circuit current rating                   | yes                                                                                                   |
| Overload protection                            | Yes                                                                                                   |
| Rated operational voltage DC                   | 24 V                                                                                                  |

| Feature                                                   | Value                                                                                                                                                                                                         |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational voltage range DC                              | 5 V...30 V                                                                                                                                                                                                    |
| Reverse polarity protection                               | For all electrical connections                                                                                                                                                                                |
| Electrical connection 1, connection type                  | Cable<br>Cable with plug                                                                                                                                                                                      |
| Electrical connection 1, connector system                 | M12x1, A-coded to EN 61076-2-101<br>M8x1, A-coded, to EN 61076-2-104<br>Open end                                                                                                                              |
| Electrical connection 1, number of connections/cores      | 2<br>3<br>4                                                                                                                                                                                                   |
| Electrical connection 1, type of mounting                 | Snap-locking<br>Screw-type lock<br>Rotatable<br>Not rotatable                                                                                                                                                 |
| Electrical connection 1, compatible type of mounting      | Compatible with latching lock<br>Compatible with rotatable screw-type lock<br>Compatible with rotatable/non-rotatable screw-type lock                                                                         |
| Connection outlet orientation                             | In-line                                                                                                                                                                                                       |
| Material electrical contact                               | Gold-plated copper alloy                                                                                                                                                                                      |
| Material connector housing                                | TPE-U(PU)                                                                                                                                                                                                     |
| Material screw-type lock                                  | Nickel-plated brass                                                                                                                                                                                           |
| Test conditions cable                                     | Test conditions on request<br>Torsional strength: > 300,000 cycles, $\pm 270^\circ/0.1$ m<br>Flexural strength: > 50000 cycles, bending radius 5 mm<br>Energy chain: > 5 million cycles, bending radius 28 mm |
| Cable length                                              | 0.1 m...30 m                                                                                                                                                                                                  |
| Cable characteristic                                      | Suitable for energy chains/robot applications                                                                                                                                                                 |
| Cable sheath colour                                       | Grey                                                                                                                                                                                                          |
| Material cable sheath                                     | TPE-U(PUR)                                                                                                                                                                                                    |
| Material insulating sheath                                | PP                                                                                                                                                                                                            |
| Type of mounting                                          | Screw-clamped<br>Insertable in the slot from above                                                                                                                                                            |
| Max. tightening torque                                    | 0.6 Nm                                                                                                                                                                                                        |
| Mounting position                                         | optional                                                                                                                                                                                                      |
| Housing colour                                            | Black                                                                                                                                                                                                         |
| Material housing                                          | PA-reinforced<br>High-alloy stainless steel                                                                                                                                                                   |
| Switching status indication                               | Yellow LED                                                                                                                                                                                                    |
| Function reserve indication                               | Orange LED                                                                                                                                                                                                    |
| 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                                                                                                                      |