

Technical data sheet Magnetically coded sensor

Part no.: 63001025

MC388-S2R10-A

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Circuit diagrams
- Notes



For illustration purposes only



Technical data

Basic data

| | |
|--------|-------|
| Series | MC388 |
|--------|-------|

Functions

| | |
|-----------|---|
| Functions | Integration in control circuits up to category 4 in accordance with EN ISO 13849-1 Safety system in combination with an evaluation unit such as the MSI-SR-LC21 safety relay or the MSI 400 safety controller. |
|-----------|---|

Characteristic parameters

| | |
|--------------------|--|
| Mission time T_M | 20 years, EN ISO 13849-1 |
| Category | Up to 4, depending on evaluation, 1 sensor connected, EN ISO 13849-1 |
| $B10_a$ | 20,000,000 number of cycles |

Electrical data

| | |
|--|--|
| Protective circuit | Current limitation Short circuit protected, Via e.g. MSI-MC311, MSI 400 |
| Contact allocation | 2NO |
| Contact type | Reed contacts (magnetically sensitive) |
| Requirement on the voltage supply when used acc. to cULus (UL 508) | Class 2 Circuits |

Outputs

| | |
|-------------------------|-----------------------------|
| Max. switching voltage | 27 V AC/DC |
| Switching current, max. | 100 mA |
| Built-in fuse | 100 mA (per safety contact) |

Time behavior

| | |
|---------------|------|
| Response time | 3 ms |
|---------------|------|

Connection

| | |
|-----------------------|------------|
| Number of connections | 1 Piece(s) |
|-----------------------|------------|

Connection 1

| | |
|----------------------|-----------------------------|
| Function | Contact connection |
| Type of connection | Cable with wire-end sleeves |
| Cable length | 10,000 mm |
| Sheathing material | PUR |
| Cable color | Black |
| Number of conductors | 4 -wire |
| Wire cross section | 0.35 mm ² |

Mechanical data

| | |
|---|--|
| Design | Cubic |
| Dimension (W x H x L) | 25 mm x 13 mm x 88 mm |
| Housing material | Plastic |
| Plastic housing | Glass fiber reinforced (PPS), self-extinguishing |
| Net weight | 550 g |
| Housing color | Red |
| Type of fastening | Through-hole mounting |
| Installation position | Arbitrary, provided housing markings are aligned |
| Switch type | Type 4 interlock device, contactless actuation, EN ISO 14119 |
| Approach actuation directions | 3-dimensional |
| Mechanical life time | 10,000,000 actuation cycles |
| External actuator | Magnetically coded |
| Cut-out point (OFF), min. | 19 mm |
| Assured cut-out distance (Sar), min. | 22 mm |
| Assured cut-in distance (Sao), max. | 9 mm |
| Switching tolerance (without ferromagnetic materials in immediate vicinity) | -1 ... 1 mm |
| Distance to other magnetic sensors, min. | 50 mm |
| Approach speed, min. | 0.05 m/s |

Environmental data

| | |
|-----------------------------------|---------------|
| Ambient temperature, operation | -20 ... 70 °C |
| Degree of contamination, external | 3, EN 60947-1 |

Certifications

| | |
|--|---|
| Degree of protection | IP 67 |
| Approvals | c UL US TÜV Süd (with suitable safety relay) |
| Test procedure for EMC in accordance with standard | EN 60947-5-3 EN 61000-6-2 EN 61000-6-3 |
| Test procedure for oscillation in accordance with standard | EN 60947-5-3 |
| Test procedure for shock in accordance with standard | EN 60947-5-3 |

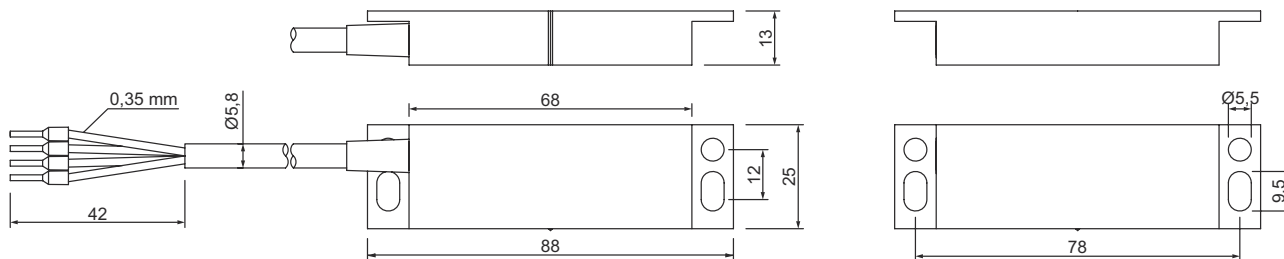
Classification

| | |
|-----------------------|----------|
| Customs tariff number | 90328900 |
| ECLASS 5.1.4 | 27272402 |
| ECLASS 8.0 | 27272402 |
| ECLASS 9.0 | 27272402 |
| ECLASS 10.0 | 27272402 |
| ECLASS 11.0 | 27272402 |
| ECLASS 12.0 | 27274401 |
| ECLASS 13.0 | 27274401 |
| ECLASS 14.0 | 27274401 |
| ECLASS 15.0 | 27274401 |
| ECLASS 16.0 | 27274401 |
| ETIM 5.0 | EC002544 |
| ETIM 6.0 | EC002544 |
| ETIM 7.0 | EC002544 |
| ETIM 8.0 | EC002544 |
| ETIM 9.0 | EC002544 |
| ETIM 10.0 | EC002544 |
| UNSPSC 26.08 | 39122205 |

Dimensioned drawings

All dimensions in millimeters

Dimensions of sensor and actuator



Electrical connection

Connection 1

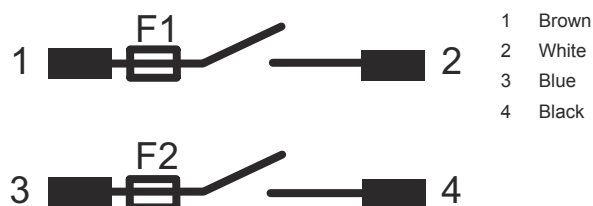
| | |
|----------------------|---|
| Function | Contact connection |
| Type of connection | Cable with wire-end sleeves |
| Cable length | 10,000 mm |
| Sheathing material | PUR |
| Cable color | Black |
| Number of conductors | 4 -wire |
| Wire cross section | 0.35 mm ² |
| Assignment | Representation of contacts without activation by actuator |

Conductor color

Conductor assignment

| | |
|-------|-------|
| Brown | NO(1) |
| White | NO(1) |
| Blue | NO(2) |
| Black | NO(2) |

Circuit diagrams



Notes



Observe intended use!



- ↪ The product may only be put into operation by competent persons.
- ↪ Only use the product in accordance with its intended use.

ATTENTION!



- ↪ The sensor has no internal error detection and cannot assume a safe state in the case of failure.
- ↪ To use the sensor in accordance with DIN EN 60947-5-3, a suitable evaluation unit must be connected.
- ↪ In combination with a suitable evaluation unit, the sensor can be integrated in the control technology of safety systems up to Cat. 4 / PL e in accordance with EN ISO 13849-1 and SIL CL3 in accordance with IEC 62061.