

## Technical data sheet

### Safety hinge switch

Part no.: 63000408

S410-M1CB2-T

#### Contents

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For illustration purposes only



## Technical data

### Basic data

|        |      |
|--------|------|
| Series | S400 |
|--------|------|

### Functions

|           |                                                                                                                                                                                                             |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Functions | Integration in control circuits up to category 4 in accordance with EN ISO 13849-1<br>Locking device without guard interlocking according to EN ISO 14119<br>Mechanical hinge with integrated safety switch |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Characteristic parameters

|                    |                            |
|--------------------|----------------------------|
| Mission time $T_M$ | 20 years, EN ISO 13849-1   |
| B10 <sub>d</sub>   | 2,000,000 number of cycles |

### Electrical data

|                         |                                  |
|-------------------------|----------------------------------|
| Usage category at DC 13 | Ue 24 V, Ie 2 A, EN 60947-5-1    |
| Usage category at AC 15 | Ue 24 V, Ie 2 A, EN 60947-5-1    |
| Contact allocation      | 2NC + 1NO                        |
| Contact opening         | Force-fit                        |
| Short circuit protected | 500 V, 2 A, type gG, IEC 60269-1 |

#### Performance data

|                                    |                  |
|------------------------------------|------------------|
| Rated insulation voltage           | 30 V AC, 36 V DC |
| Conventional thermal current, max. | 2 A              |

### Connection

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

#### Connection 1

|                      |                    |
|----------------------|--------------------|
| Function             | Contact connection |
| Type of connection   | Cable              |
| Cable length         | 2,000 mm           |
| Sheathing material   | PVC                |
| Number of conductors | 7 -wire            |

### Mechanical data

|                                               |                                                        |
|-----------------------------------------------|--------------------------------------------------------|
| Design                                        | Cubic                                                  |
| Dimension (W x H x L)                         | 79 mm x 22.5 mm x 100.6 mm                             |
| Housing material                              | Metal                                                  |
| Metal housing                                 | ZAMAK                                                  |
| Electrical contact material                   | Silver alloy                                           |
| Net weight                                    | 577 g                                                  |
| Housing color                                 | Silver                                                 |
| Type of fastening                             | Mounting plate                                         |
| Side of cable entry                           | From above (with left installation)                    |
| Switch type                                   | Interlock device without guard interlocking, ISO 14119 |
| Switching principle                           | Snap-action contact                                    |
| Axial stress                                  | 750 N·m                                                |
| Radial stress                                 | 500 N·m                                                |
| Torsional stress                              | 12 N·m                                                 |
| Mechanical life time                          | 1,000,000 actuation cycles, IEC 6047-5-1               |
| Actuation frequency, max.                     | 1,200 per hour, IEC 6047-5-1                           |
| Internal actuator                             | Safety switch in hinge, encapsulated                   |
| Actuating path (angle) with forced separation | 4 N                                                    |
| Actuation angle, max.                         | 180 °                                                  |
| Actuating path (angle) with forced separation | From set switching point                               |

### Environmental data

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -25 ... 80 °C |
| Degree of contamination        | 3, EN 60947-1 |

### Certifications

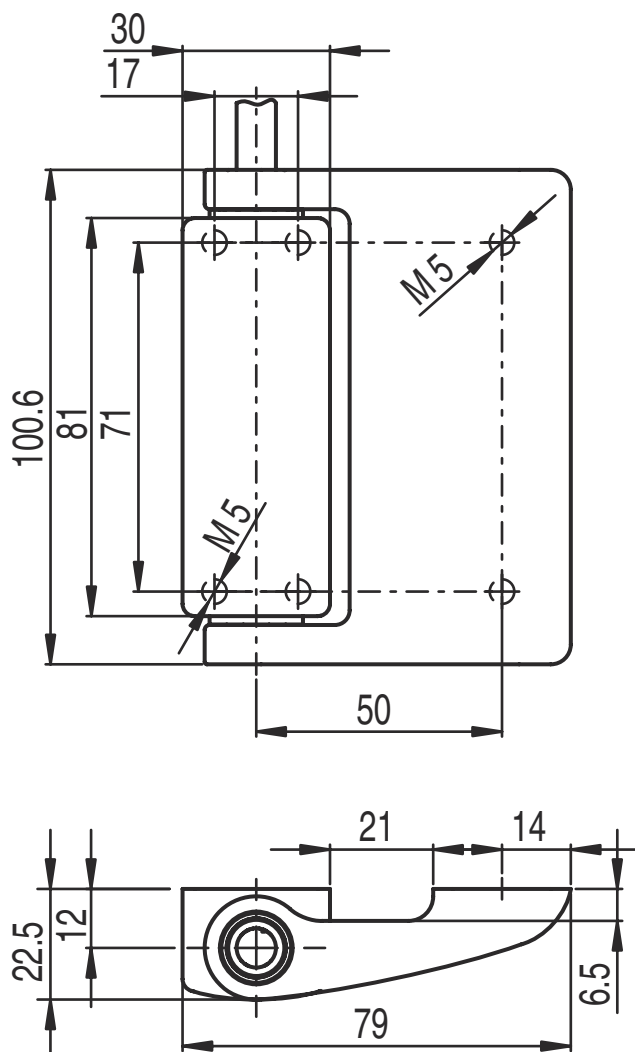
|                      |                 |
|----------------------|-----------------|
| Degree of protection | IP 67<br>IP 69K |
| Approvals            | c UL US<br>IMQ  |

### Classification

|                       |          |
|-----------------------|----------|
| Customs tariff number | 85369095 |
| ECLASS 5.1.4          | 27272690 |
| ECLASS 8.0            | 27270609 |
| ECLASS 9.0            | 27270609 |
| ECLASS 10.0           | 27270609 |
| ECLASS 11.0           | 27270609 |
| ECLASS 12.0           | 27272608 |
| ECLASS 13.0           | 27272608 |
| ECLASS 14.0           | 27272608 |
| ECLASS 15.0           | 27272608 |
| ECLASS 16.0           | 27272608 |
| ETIM 5.0              | EC002591 |
| ETIM 6.0              | EC002591 |
| ETIM 7.0              | EC002591 |
| ETIM 8.0              | EC002591 |
| ETIM 9.0              | EC002591 |
| ETIM 10.0             | EC002591 |

## Dimensioned drawings

All dimensions in millimeters



## Electrical connection

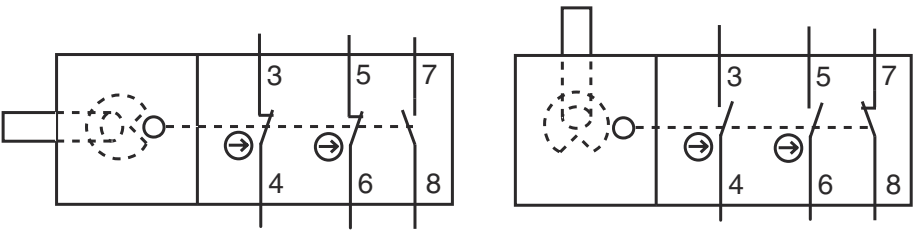
### Connection 1

|                      |                     |
|----------------------|---------------------|
| Function             | Contact connection  |
| Type of connection   | Cable               |
| Cable length         | 2,000 mm            |
| Sheathing material   | PVC                 |
| Cable color          | Black               |
| Number of conductors | 7 -wire             |
| Wire cross section   | 0.5 mm <sup>2</sup> |

Electrical connection

| Conductor color | Conductor assignment |
|-----------------|----------------------|
| Green / Yellow  | GND                  |
| Black           | NC(1)                |
| Black / White   | NC(1)                |
| Red             | NC(2)                |
| Red / White     | NC(2)                |
| Brown           | NO(1)                |
| Blue            | NO(1)                |

Circuit diagrams



- 3

Black
- 4

Black-white
- 5

Red
- 6

Red-white
- 7

Brown
- 8

Blue

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.