

8070/2-2-W-U60 Art. No. 258227



- Large temperature range of use
- Large inner connection chamber
- Plastic Ex e enclosure
- Degree of protection IP66/67
- Five different contact versions
- Different actuator versions which can be repositioned by 4 x 90°
- Can also be used as simple apparatus

MY R. STAHL 8070C



Position switches are used to position, control and monitor the moving parts on machines and systems. Because they meet the requirements of the EN 50 041 and IEC 60947-5-1 product standards, they can also be used as a position switch with a safety function. Series 8070/2 position switches are approved for use in hazardous areas of Zones 1, 2, 21 and 22.

In conjunction with a safety door guard and the corresponding circuitry, the PL position switches fulfil the requirements of “e” in accordance with EN ISO 13849-1, or up to SIL 3 in accordance with EN 62061. They are identified with the ⊖ character to signify positive opening. There are snap- and slow-action versions with different types of contacts as well as with a variety of different actuating elements.

### Technical Data

#### Explosion Protection

|                                 |  |
|---------------------------------|--|
| Area of application             | European Union (ATEX)<br>IECEX                                   |
| Application range (zones)       | 1, 2, 21, 22   |
| IECEX gas certificate           | IECEX BVS 17.0011X   |
| IECEX gas explosion protection  | Ex db eb IIC T6 Gb   |
| IECEX dust certificate          | IECEX BVS 17.0011X   |
| IECEX dust explosion protection | Ex tb IIIC T80 °C Db   |
| ATEX gas certificate            | BVS 17 ATEX E 021X   |
| ATEX gas explosion protection   | ⊖ II 2 G Ex db eb IIC T6 Gb                                      |
| ATEX dust certificate           | BVS 17 ATEX E 021X   |
| ATEX dust explosion protection  | ⊖ II 2 D Ex tb IIIC T80 °C Db                                    |
| Certificates                    | ATEX (BVS), China (CQST), IECEX (BVS), India (PESO), Korea (KGS) |
| Declaration of conformity       | ATEX (EUK), ATEX (Simple apparatus), China (CCC)                 |

#### Electrical Data

|  |   |
|--|---|
| DC rated operational voltage             | 125 V   |
| AC operating voltage (equal potential)   | 500 V   |
| AC operating voltage (unequal potential) | 250 V   |
| Rated insulation voltage                 | 500 V   |
| Rated insulation voltage note            | (for simple apparatus: 40 V)  |
| Rated operational current max.           | 4 A   |
| Rated operational current note           | (for simple apparatus: 200 mA; inductance $L_i$ and capacitance $C_i$ are negligible) |
| Electrical service life                  | Max. 10 <sup>6</sup> operating cycles   |

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### Electrical Data

|                               |   |
|-------------------------------|---|
| Mechanical service life       | Max. 10 <sup>6</sup> operating cycles                                       |
| Rated surge voltage           | 6 kV  |
| Switching capacity AC-12      | max. 250 V<br>max. 500 V bei gleichem Potential<br>max. 4 A<br>max. 5000 VA |
| Switching capacity AC-15      | max. 250 V<br>max. 500 V bei gleichem Potential<br>max. 4 A<br>max. 1000 VA |
| Switching capacity DC-12      | max. 125 V<br>max. 4 A<br>max. 400 W  |
| Max. short-circuit protection | 6 A   |
| Tripping characteristic       | gL/gG   |
| Maximum operating frequency   | 1800 operating cycles/h   |
| Switching function            | Snap-action contact   |

### Ambient Conditions

|                     |  |
|---------------------|--|
| Ambient temperature | -60 °C ... +55 °C (Max. 4 A)<br>-20 °C ... +60 °C (IP67 (EN 60529)) (Max. 2 A)<br>-60 °C ... +60 °C (Max. 2 A) |
| Ambient temperature | -60 °C ... +55 °C (Max. 4 A)<br>-60 °C ... +60 °C (Max. 2 A)   |

### Mechanical Data

|  |   |
|--|---|
| Version                                  | 2nd generation                                    |
| Degree of protection (IP)                | IP66  |
| Degree of protection (IP) IEC 60529 note | down to -20 °C                                    |
| Degree of protection (IP) (IEC 60529)    | IP67  |
| Enclosure material                       | Thermoplast GF, impact resistant                  |
| Enclosure colour                         | Black   |
| Cover material                           | Duroplast GF, impact resistant                    |
| Contact material                         | Silver-nickel                                     |
| Solid connection cross section           | 0.75 – 1.5 mm <sup>2</sup>                        |
| Finely stranded connection cross section | 0.75 – 1.5 mm <sup>2</sup>                        |
| Number of NCs                            | 1   |
| Positive opening operation               | Yes   |
| Number of NOs                            | 1   |
| Actuator                                 | Plunger   |
| Clamping range                           | 7 ... 13 mm                                       |
| Type of connection cable                 | Finely stranded                                   |
| Contacts                                 | 1 NC + 1 NO                                       |
| Contact system                           | 2-pole, galvanically separated, with double break |
| Contact opening                          | ≥ 1.5 mm (isolating distance ≥ 3 mm)              |
| Seal                                     | Silicone  |
| Packaging unit                           | 1   |
| Weight                                   | 167 g   |

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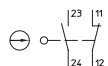
### Mounting / Installation

|                   |   |
|-------------------|---|
| Connection        | Cable entry 8161 1xM20x1.5  |
| Tightening torque | Screw terminals: Max. 0.4 Nm; cover screws: 1.5 to 2 Nm; cable entries: See installation note (included, but not installed) |

### Components

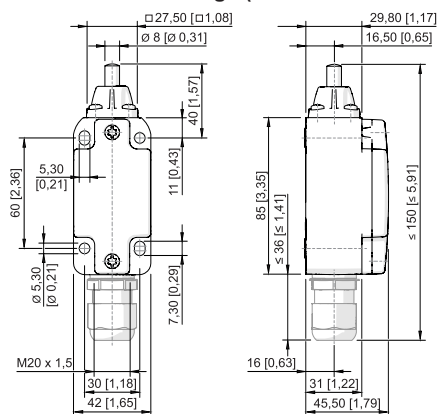
|                          |                                   |
|--------------------------|-----------------------------------|
| Cable glands and entries | 1 x M20 Ø 7 ... 13 mm             |
| Material cable gland     | Polyamide, Glass fibre reinforced |

### Technical Drawings – Subject to Alterations



Snap-action contact, 1 NC + 1 NO  
8060/-2; 807./2-2

### Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



Domed plunger 8070/2.-W-U60

### Accessories

#### Plastic cable gland



8161/7-M20-1304, Ex e  
Polyamide, M20 x 1,5 mm, 4 – 13 mm  
Lot size 50 pieces

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### Spare Parts

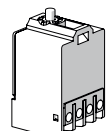
#### Actuator

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**Attention:** Actuators and switches are factory-matched. Only the identical actuator of the original switch may be selected from the spare parts table. If a different actuator is used, a new switch is required.

#### Contact element

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1 NC + 1 NO snap-action contact 8080/1-2

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We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.