

8060/2-1-WPH-60 Art. No. 254885



- Large temperature range of use
- 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 8060B



Position switches are used to position, control and monitor the moving parts on machines and systems. Because they meet the requirements of the EN 50 047 and IEC 60947-5-1 product standards, they can also be used as a position switch with a safety function. Series 8060/2 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  $\ominus$  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 16.0066                                                                                               |
| IECEX gas explosion protection  | Ex db eb IIC T6 Gb                                                                                              |
| IECEX dust certificate          | IECEX BVS 16.0066                                                                                               |
| IECEX dust explosion protection | Ex tb IIIC T80 °C Db                                                                                            |
| ATEX gas certificate            | BVS 16 ATEX E 100                                                                                               |
| ATEX gas explosion protection   |  II 2 G Ex db eb IIC T6 Gb   |
| ATEX dust certificate           | BVS 16 ATEX E 100                                                                                               |
| ATEX dust explosion protection  |  II 2 D Ex tb IIIC T80 °C Db |
| Certificates                    | ATEX (BVS), Canada (CSA), China (CQST), IECEX (BVS), India (PESO), Korea (KGS), USA (CSA)                       |
| Declaration of conformity       | ATEX (EUK), ATEX (Simple apparatus), Declaration of Conformity (ATEX)                                           |

### 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) |

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**Electrical Data**

|                               |                                       |
|-------------------------------|---------------------------------------|
| Electrical service life       | Max. 10 <sup>6</sup> operating cycles |
| Mechanical service life       | Max. 10 <sup>6</sup> operating cycles |
| Rated surge voltage           | 6 kV                                  |
| Max. short-circuit protection | 6 A                                   |
| Tripping characteristic       | gL/gG                                 |
| Maximum operating frequency   | 1800 operating cycles/h               |
| Switching function            | Slow-action contact                   |

**Ambient Conditions**

|                     |                                                              |
|---------------------|--------------------------------------------------------------|
| 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                                  | Parallel roller lever                             |
| 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                                    | 102 g                                             |
| Weight                                    | 0.22 lb                                           |

**Mounting / Installation**

|                   |                                                                                                                                |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Connection        | Cable entry 8161 1xM20x1.5                                                                                                     |
| Tightening torque | Screw terminals: Max. 0.4 Nm; cover screws: 0.4 to 0.45 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 |

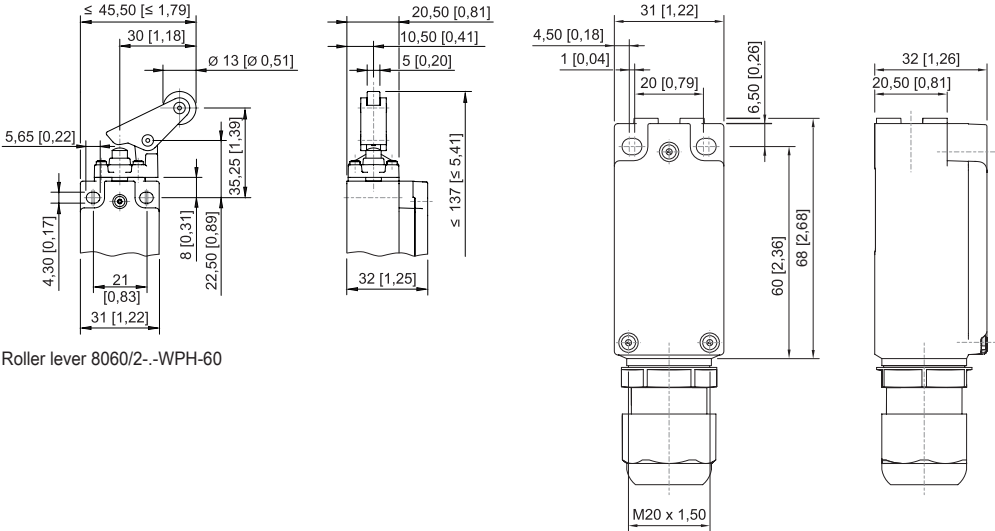
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Technical Drawings – Subject to Alterations



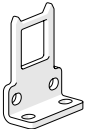
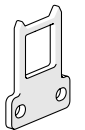
Slow-action contact, 1 NC + 1 NO  
8060/-1; 807./2-1

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

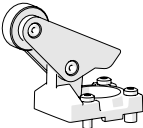


Roller lever 8060/2-1-WPH-60

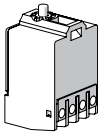
Accessories

| Actuator                                                                           |                                                                                                    | Art. No. |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------|
|  | Bent actuator, for 8060/2-1-AZ                                                                     | 257053   |
|  | Straight actuator, for 8060/2-1-AZ                                                                 | 257052   |
| Plastic cable gland                                                                |                                                                                                    | Art. No. |
|  | 8161/7-M20-1307, Ex e<br>Plastic, M20 x 1.5, cable outer diameter 7 to 13 mm<br>Lot size 50 pieces | 239172   |

Spare Parts

| Actuator                                                                           |                         | Art. No. |
|------------------------------------------------------------------------------------|-------------------------|----------|
|  | Parallel lever actuator | 257056   |

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| Contact element                                                                  |                                          | Art. No. |
|----------------------------------------------------------------------------------|------------------------------------------|----------|
|  | 1 NC + 1 NO slow-action contact 8080/1-1 | 132529   |

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.