



## EX-ZV7H 235-11Z-2138-3D

- Snap action with constant contact pressure up to switching point
- Metal enclosure
- Wide range of alternative actuators
- Good resistance to oil and petroleum spirit
- 30 mm x 63,5 mm x 30 mm
- Actuator heads can be repositioned by 4 x 90°
- Mounting details to EN 50047
- 1 Cable entry M 20 x 1.5
- Lever angle adjustable in 10° steps

## Data

### Ordering data

|                               |                         |
|-------------------------------|-------------------------|
| Product type description      | EX-ZV7H 235-11Z-2138-3D |
| Article number (order number) | 101193015               |
| EAN (European Article Number) | 4030661354491           |
| eCl@ss number, version 12.0   | 27-27-26-01             |
| eCl@ss number, version 11.0   | 27-27-26-01             |
| eCl@ss number, version 9.0    | 27-27-26-01             |
| ETIM number, version 7.0      | EC000030                |
| ETIM number, version 6.0      | EC000030                |

### Approvals - Standards

|              |         |
|--------------|---------|
| Certificates | INMETRO |
|--------------|---------|

### Explosion protection

|                                   |  |
|-----------------------------------|--|
| Explosion protection: regulations | EN IEC 60079-0<br>EN IEC 60079-15<br>EN 60079-31           |
| Explosion protection zones        | 2<br>22  |
| Explosion protection category     | 3G<br>3D   |
| Explosion protection designation  | ⊕ II 3G Ex nC IIC T5 Gc X<br>⊕ II 3D Ex tc IIIC T90°C Dc X |
| Manufacturer declaration          | ATEX Zone 2 and 22   |

## General data

|                           |                                 |
|---------------------------|---------------------------------|
| Standards                 | BG-GS-ET-15<br>EN IEC 60947-5-1 |
| Housing construction form | Norm construction design        |
| Housing material          | Metal, zinc die-cast            |
| Housing coating material  | painted                         |
| Lever material            | Metal film                      |
| Gross weight              | 496 g                           |

## General data - Features

|                              |     |
|------------------------------|-----|
| Safety functions             | Yes |
| Number of auxiliary contacts | 1   |
| Number of safety contacts    | 1   |

## Safety classification

|              |                |
|--------------|----------------|
| Standards    | EN ISO 13849-1 |
| Mission time | 20 Year(s)     |

## Safety classification - Safety outputs

|   |                       |
|---|-----------------------|
| B <sub>10D</sub> Normally-closed contact (NC) | 20,000,000 Operations |
|---|-----------------------|

## Mechanical data

|                           |   |
|---------------------------|---|
| Actuating element         | Roller lever  |
| Roller material           | Plastic   |
| Mechanical life, minimum  | 20,000,000 Operations                                   |
| Actuating speed, minimum  | 240 mm/min  |
| Actuating speed, maximum  | 1 m/s   |
| Note (Actuating speed)    | Actuating speed with actuating angle 30° to switch axis |
| Actuating torque, minimum | 0.2 Nm  |
| Positive break torque     | 0.2 Nm  |

## Mechanical data - Connection technique

|  |   |
|--|---|
| Termination                                      | Screw terminals M20 x 1.5                         |
| Cable cross-section of the cable glands, minimum | 7 mm  |
| Cable cross-section of the cable glands, maximum | 12 mm   |
| Cable section, minimum                           | 0.75 mm <sup>2</sup>                              |
| Cable section, maximum                           | 2.5 mm <sup>2</sup>                               |
| Note (Cable section)                             | All indications including the conductor ferrules. |
| Wire cross-section                               | 13 AWG  |

## Mechanical data - Dimensions

|                  |          |
|------------------|----------|
| Length of sensor | 49 mm    |
| Width of sensor  | 30 mm    |
| Height of sensor | 160.5 mm |

## Ambient conditions

|                      |                |
|----------------------|----------------|
| Degree of protection | IP67           |
| Ambient temperature  | -20 ... +60 °C |

## Ambient conditions - Insulation values

|   |       |
|---|-------|
| Rated insulation voltage $U_i$            | 500 V |
| Rated impulse withstand voltage $U_{imp}$ | 6 kV  |

## Electrical data

|                                      |                        |
|--------------------------------------|------------------------|
| Thermal test current                 | 10 A                   |
| Utilisation category AC-15           | 230 VAC                |
| Utilisation category AC-15           | 4 A                    |
| Utilisation category DC-13           | 24 VDC                 |
| Utilisation category DC-13           | 1 A                    |
| Switching element                    | NO contact, NC contact |
| Switching principle                  | Snap action            |
| Bounce duration, maximum             | 3 ms                   |
| Switching frequency                  | 5,000 /h               |
| Switchover time, maximum             | 5.5 ms                 |
| Material of the contacts, electrical | Silver                 |

## Scope of delivery

|                   |                                  |
|-------------------|----------------------------------|
| Scope of delivery | Ex-certified screwed cable gland |
|-------------------|----------------------------------|

## Ordering code

Product type description:  
EX-(1)(2) 235-(3)Z-(4)-(5)-(6)-(7)-3D

(1)

|          |                            |
|----------|----------------------------|
| <b>Z</b> | Snap action                |
| <b>T</b> | Slow action (not for AF/S) |

(2)

|           |                   |
|-----------|-------------------|
| <b>S</b>  | Plunger S         |
| <b>R</b>  | Roller plunger R  |
| <b>4S</b> | Plunger 4S        |
| <b>4R</b> | Roller plunger 4R |

|             |   |
|-------------|---|
| <b>1R</b>   | Offset roller lever 1R  |
| <b>K</b>    | Offset roller lever K   |
| <b>3K</b>   | Angle roller lever 3K   |
| <b>4K</b>   | Angle roller lever 4K   |
| <b>K4</b>   | Angle roller lever K4   |
| <b>1H</b>   | Roller lever 1H   |
| <b>7H</b>   | Roller lever 7H   |
| <b>10H</b>  | Rod lever 10H   |
| <b>12H</b>  | Roller lever 12H  |
| <b>14H</b>  | Roller lever 14H  |
| (3)         |   |
| <b>02</b>   | 2 NC contact  |
| <b>11</b>   | 1 NO contacts/1 NC contact  |
| <b>20</b>   | 2 NO contacts, (switches with 2 NO contacts are not suitable for safety applications) |
| (4)         |   |
| <b>H</b>    | Slow action with staggered contacts   |
| <b>UE</b>   | Slow action with overlapping contacts   |
| (5)         |   |
| <b>1297</b> | Enclosure with transverse slotted holes   |
| (6)         |   |
| <b>2138</b> | Roller lever 7H for position switches with safety function                            |
| (7)         |   |
| <b>1637</b> | Gold-plated contacts  |

## Pictures

**Product picture (catalogue individual photo)**



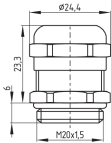
ID: k235hf02

| 344.5 kB | .jpg | 103.364 x 395.817 mm - 293 x 1122 px - 72 dpi

| 292.7 kB | .png | 74.083 x 283.633 mm - 210 x 804 px - 72 dpi

| 34.1 kB | .jpg | 32.103 x 123.472 mm - 91 x 350 px - 72 dpi

## Dimensional drawing basic component

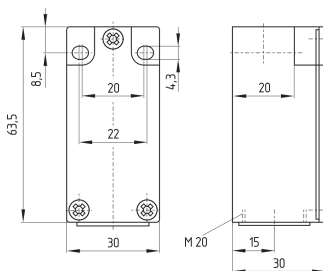


ID: 1xzm1g07

| 2.5 kB | .png | 74.083 x 51.153 mm - 210 x 145 px - 72 dpi

| 46.3 kB | .jpg | 352.778 x 243.769 mm - 1000 x 691 px - 72 dpi

## Dimensional drawing basic component



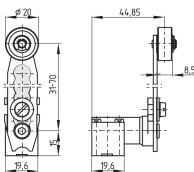
ID: k-235g01

| 24.5 kB | .cdr |

| 3.6 kB | .png | 74.083 x 61.736 mm - 210 x 175 px - 72 dpi

| 111.2 kB | .jpg | 352.778 x 293.511 mm - 1000 x 832 px - 72 dpi

## Dimensional drawing actuator



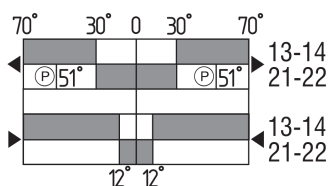
ID: 1h236g02

| 31.7 kB | .cdr |

| 9.1 kB | .png | 74.083 x 51.506 mm - 210 x 146 px - 72 dpi

| 89.0 kB | .jpg | 352.778 x 245.181 mm - 1000 x 695 px - 72 dpi

## Switch travel diagram



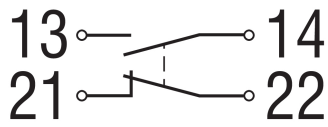
ID: kh235s06

| 27.0 kB | .cdr |

| 2.9 kB | .png | 74.083 x 40.217 mm - 210 x 114 px - 72 dpi

| 94.9 kB | .jpg | 352.778 x 191.911 mm - 1000 x 544 px - 72 dpi

## Diagram



ID: k1o1sk01

| 52.2 kB | .jpg | 352.778 x 143.581 mm - 1000 x 407 px - 72 dpi

| 2.6 kB | .png | 74.083 x 29.986 mm - 210 x 85 px - 72 dpi

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The details and data referred to have been carefully checked. Images may diverge from original. Further technical data can be found in the manual. Technical amendments and errors possible.

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