



## EX-ZV1H 235-11Z-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-ZV1H 235-11Z-3D
Article number (order number)	101213242
EAN (European Article Number)	4030661395623
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
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### Explosion protection

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

## General data

Standards	BG-GS-ET-15 EN IEC 60947-5-1
Housing construction form	Norm construction design
Actuator type to EN 50047	A
Housing material	Metal, zinc die-cast
Housing coating material	painted
Lever material	Plastic
Gross weight	237 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
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## Mechanical data

Actuating element	Roller lever
Roller material	Plastic
Mechanical life, minimum	20,000,000 Operations
Actuating speed, minimum	92 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	6 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	42.5 mm
Width of sensor	30 mm
Height of sensor	111 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

## 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)**



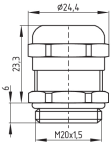
ID: k235hf01

| 814.6 kB | .jpg | 352.778 x 843.139 mm - 1000 x 2390 px - 72 dpi

| 85.5 kB | .png | 74.083 x 177.094 mm - 210 x 502 px - 72 dpi

| 27.6 kB | .jpg | 51.506 x 123.472 mm - 146 x 350 px - 72 dpi

## Dimensional drawing basic component

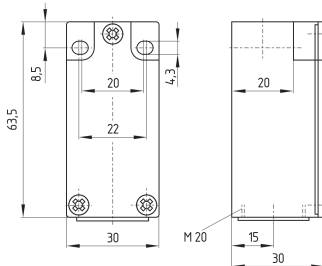


ID: 1xzm1g07

| 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



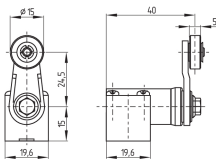
ID: k-235g01

| 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



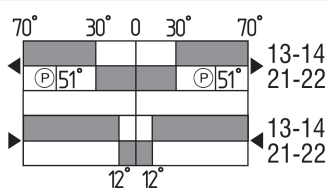
ID: 1h236g01

| 87.7 kB | .cdr |

| 7.8 kB | .png | 74.083 x 51.153 mm - 210 x 145 px - 72 dpi

| 85.2 kB | .jpg | 352.778 x 244.475 mm - 1000 x 693 px - 72 dpi

## Switch travel diagram



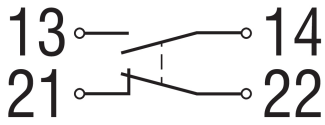
ID: kh235s06

| 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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