

Datasheet - EX-ZV7H 235-02Z-2138-3D



Position switches with safety function / EX-235 Metal enclosure with Actuator / EX-235 Roller lever 7H-2138



(Minor differences between the printed image and the original product may exist!)

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

Ordering details

| | |
|--------------------------|-------------------------|
| Product type description | EX-ZV7H 235-02Z-2138-3D |
| Article number | EX-ZV7H 235-02Z-2138-3D |
| EAN Code | |
| eCl@ss | 27-27-26-01 |

Approval

Approval




EEX

Classification

| | |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Standards | EN ISO 13849-1 |
| B10d Normally-closed contact (NC) | 20.000.000 |
| Mission time | 20 Years |
| notice | $MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$ |

Global Properties

| | |
|-----------------|-----------------------------------------------------------------|
| Permanent light | EX-Z 235 Rollenschwenkhebel 7H-2138 |
| Standards | EN 60947-5-1, EN 60079-0, EN 60079-15, EN 60079-31, BG-GS-ET-15 |

| | |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------|
| Compliance with the Directives (Y/N)  | Yes |
| Suitable for safety functions (Y/N) | Yes |
| Materials | |
| - Material of the housings | Zink |
| - Lever material | Metal film |
| - Roller material | Plastic |
| - Material of the contacts | Silver |
| Housing coating | painted |
| Housing construction form | Norm construction design |
| Weight | |

Mechanical data

| | |
|---------------------------------------------------------|-------------------------------------------------------------------------------|
| Design of electrical connection | Screw connection |
| Cable cross-section of the cable glands | |
| - Min. Cable cross-section of the cable glands | 6 |
| - Max. Cable cross-section of the cable glands | 12 |
| Cable section | |
| - Min. Cable section | 0,75 |
| - Max. Cable section | 2.5 |
| AWG-Number | 13 |
| Mechanical life | 20.000.000 operations |
| Switching frequency | max. 5000 /h |
| notice | All indications about the cable section are including the conductor ferrules. |
| Design of actuating element | Roller lever |
| actuating torque | min. 15 Ncm |
| Bounce duration | < 3 |
| Switchover time | < 5.5 |
| Positive break torque | 18.5 |
| Actuating speed with actuating angle 30° to switch axis | |
| - Min. Actuating speed | 240 mm/min |
| - Max. Actuating speed | 1 m/s |

Ambient conditions

| | |
|----------------------------------|------|
| Ambient temperature | |
| - Min. environmental temperature | -20 |
| - Max. environmental temperature | +60 |
| Protection class | IP67 |

Electrical data

| | |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Design of control element | Opener (NC) |
| Switching principle | Snap switch element |
| - positive break NC contact  | |
| Number of auxiliary contacts | 0 |
| Number of safety contacts | 2 |
| Rated impulse withstand voltage U_{imp} | 6 kV |
| Rated insulation voltage U_i | 500 V |
| Thermal test current I_{the} | 10 A |
| Utilisation category | AC-15: 230 V / 4 A, DC-13: 24 V / 1 A |
| Max. fuse rating | 6 A gG D-fuse |

ATEX

| | |
|-------------------------------------------|--------------------------------------------------------------|
| Marking | EX II 3D Ex tc IIIC T90°C Dc X EX II 3G Ex nC IIC T5 Gc X |
| Explosion protection categories for gases | 3G |
| Explosion protection Zones for gases | 2 |
| Explosion protected category for dusts | 3D |
| Explosion protection Zones for dusts | 22 |

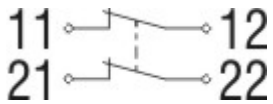
Dimensions

| | |
|--------------------------|-------|
| Dimensions of the sensor | |
| - Width of sensor | 30 |
| - Height of sensor | 160.5 |
| - Length of sensor | 49 |

Keywords

| | |
|----------|---------------------------------------------------------------|
| Keywords | Ex, EEx, ATEX, Ex 235, Ex 235, 235 Ex, 235ex, 235ex, ATEX 235 |
|----------|---------------------------------------------------------------|

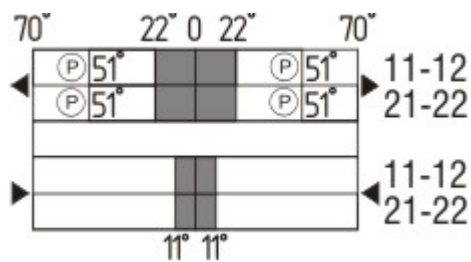
Diagram



Note Diagram

- positive break NC contact
- active
- no active
- Normally-open contact
- Normally-closed contact

Switch travel diagram



Notes Switch travel diagram

- Contact closed
- Contact open
- Setting range
- Break point
- Positive opening sequence/- angle
- VS** adjustable range of NO contact
- VÖ** adjustable range of NC contact
- N** after travel

Ordering code

EX-(1)(2) 235-(3)Z-(4)-(5)-(6)-(7)-3D

(1)

Z Snap action

T Slow action

(2)

S Plunger S

R Roller plunger R

4S Plunger 4S

4R Roller plunger 4R

1R Offset roller lever 1R

K Offset roller lever K

3K Angle roller lever 3K

4K Angle roller lever 4K

K4 Angle roller lever K4

1H Roller lever 1H

7H Roller lever 7H

10H Rod lever 10H

12H Roller lever 12H

14H Roller lever 14H

(3)

02 2 Opener (NC)

11 1 Normally open contact (NO) / 1 Opener (NC)

20 2 Normally open contact (NO), (Switch with 2 NO contacts are not for security tasks)

(4)

H Slow action with staggered contacts

UE Slow action with overlapping contacts

(5)

1297 Enclosure with transverse slotted holes

(6)

2138 Roller lever 7H for Position switches with safety function

(7)

1637 gold-plated contacts

Documents

Operating instructions and Declaration of conformity (pt) 360 kB, 24.01.2018

Code: mrl_ex-zt235_pt

Operating instructions and Declaration of conformity (pl) 379 kB, 31.01.2018

Code: mrl_ex-zt235_pl

Operating instructions and Declaration of conformity (nl) 355 kB, 31.01.2018

Code: mrl_ex-zt235_nl

Operating instructions and Declaration of conformity (jp) 435 kB, 10.02.2015

Code: mrl_ex-zt235_jp

Operating instructions and Declaration of conformity (da) 359 kB, 31.01.2018

Code: mrl_ex-zt235_da

Operatina instructions and Declaration of conformitv (es) 355 kB, 24.01.2018

Code: mrl_ex-zt235_es

Operating instructions and Declaration of conformity (it) 355 kB, 31.01.2018

Code: mrl_ex-zt235_it

Operating instructions and Declaration of conformity (de) 303 kB, 13.11.2017

Code: mrl_ex-zt235_de

Operating instructions and Declaration of conformity (en) 351 kB, 13.11.2017

Code: mrl_ex-zt235_en

Operating instructions and Declaration of conformity (fr) 360 kB, 31.01.2018

Code: mrl_ex-zt235_fr

Brochure (de) 7 MB, 19.10.2016

Code: b_atep01_de

Brochure (en) 7 MB, 19.10.2016

Code: b_atep01_en

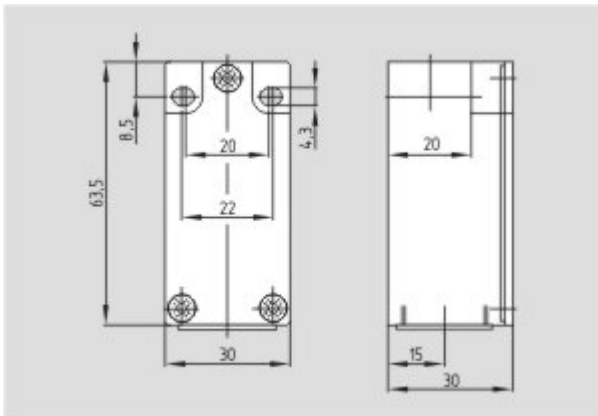
Brochure (it) 3 MB, 20.07.2007

Code: b_atep05

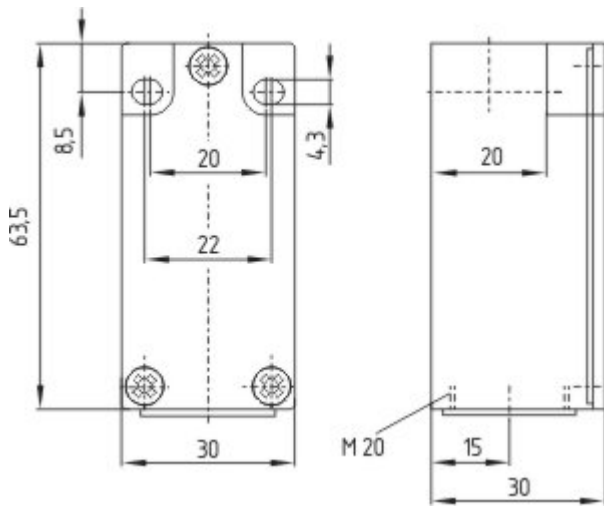
Brochure (es) 5 MB, 18.08.2009

Code: b_atep09

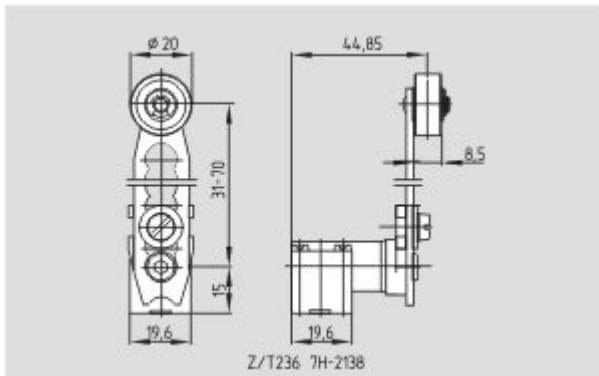
Images



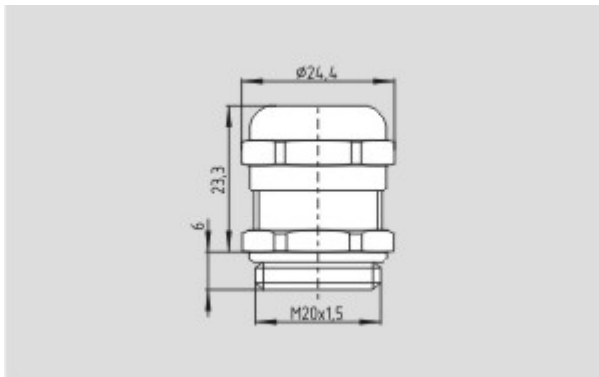
Dimensional drawing (basic component)



Dimensional drawing (basic component)



Dimensional drawing (actuator)



Dimensional drawing (miscellaneous)