

Datasheet - EX-TR 335-12Z-3G/D



Position switches with safety function / EX-335 Metal enclosure with Actuator / EX-335 Roller plunger



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

- Explosion protection for ATEX Zones 2 and 22
- Metal enclosure
- Wide range of alternative actuators
- Good resistance to oil and petroleum spirit
- 40,5 mm x 76 mm x 38 mm
- Actuator heads can be repositioned by 4 x 90°
- Ex-certified screwed cable gland
- Mounting details to EN 50041
- 1 Cable entry M 20 x 1.5
- Ex certified

Ordering details

| | |
|--------------------------|--------------------|
| Product type description | EX-TR 335-12Z-3G/D |
| Article number | 101187072 |
| EAN Code | 4030661334417 |
| eCl@ss | 27-27-26-01 |

Approval

| | |
|----------|------|
| Approval | ATEX |
|----------|------|

Classification

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

Global Properties

| | |
|--------------------------------------|---|
| Permanent light | EX-T 335 Druckbolzen R |
| Standards | EN 60079-0, EN 60079-15, EN 60079-31, EN 60947-5-1, BG-GS-ET-15 |
| Compliance with the Directives (Y/N) | Yes |

| | |
|-------------------------------------|--------------------------|
| Suitable for safety functions (Y/N) | Yes |
| Actuator type | C to EN 50041 |
| Materials | |
| - Material of the housings | Aluminium |
| - Material of the contacts | Silver |
| Housing coating | painted |
| Housing construction form | Norm construction design |
| Weight | 235 |


Mechanical data

| | |
|---|---|
| Design of electrical connection | Screw connection |
| Cable cross-section of the cable glands | |
| - Min. Cable cross-section of the cable glands | 7 |
| - 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 | 30.000.000 operations |
| Switching frequency | max. 5000 /h |
| notice | All indications about the cable section are including the conductor ferrules. |
| Design of actuating element | Roller plunger |
| Actuating force | min. 17 N |
| Bounce duration | < 2 |
| Switchover time | in accordance with actuating speed |
| Impact energy | max. 4 J |
| Actuating speed with actuating angle 30° to switch axis | |
| - Min. Actuating speed | |
| - Max. Actuating speed | 0,5 m/s |

Ambient conditions

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

Electrical data

| | |
|---|--|
| Design of control element | Normally open contact (NO), Opener (NC) |
| Switching principle | Slow action |
| - positive break NC contact  | |
| Number of auxiliary contacts | 1 |
| Number of safety contacts | 2 |
| Rated impulse withstand voltage U_{imp} | 4 kV |
| Rated insulation voltage U_i | 250 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

| | |
|---|--|
| EX-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 |

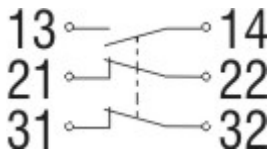
Dimensions

| | |
|--------------------------|-------|
| Dimensions of the sensor | |
| - Width of sensor | 40.5 |
| - Height of sensor | 116.6 |
| - Length of sensor | 38 |

Keywords

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

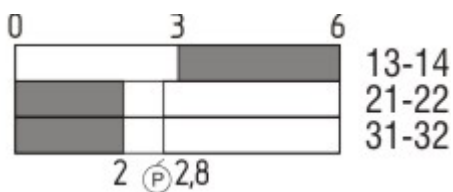
Diagram



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 suffix

The applicable ordering suffix is added at the end of the part number of the safety switch.
Order example: EX-TR 335-12Z-3G/D-1297

....-1297 Enclosure with transverse slotted holes

....-1637 0,3 µm gold-plated contacts

Ordering code

EX-(1)(2) 335-(3)Z(4)-(5)-(6)-(7)-3G/D

(1)

Z Snap action
T Slow action

(2)

S Plunger S
R Roller plunger R
H Roller lever H
10H Rod lever 10H
7H Roller lever 7H
7H-2138 Roller lever 7H for Position switches with safety function
1K Offset roller lever 1K
3K Angle roller lever 3K

(3)

11 1 Normally open contact (NO) / 1 Opener (NC)
02 2 Opener (NC)
20 2 Normally open contact (NO) (*Switch with 2 NO contacts are not for security tasks*)
01/01 1 Opener (NC) left / 1 Opener (NC) right
12 1 Normally open contact (NO) / 2 Opener (NC)
03 3 Opener (NC)

(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 (jp) 614 kB, 18.08.2017

Code: mrl_ex-zt335-3gd_jp

Operating instructions and Declaration of conformity (de) 303 kB, 16.08.2018

Code: mrl_ex-zt335-3gd_de

Operating instructions and Declaration of conformity (it) 339 kB, 27.08.2018

Code: mrl_ex-zt335-3gd_it

Operating instructions and Declaration of conformity (en) 354 kB, 16.08.2018

Code: mrl_ex-zt335-3gd_en

Operating instructions and Declaration of conformity (pt) 361 kB, 27.08.2018

Code: mrl_ex-zt335-3gd_pt

Operating instructions and Declaration of conformity (fr) 359 kB, 27.08.2018

Code: mrl_ex-zt335-3gd_fr

Operating instructions and Declaration of conformity (pl) 394 kB, 27.08.2018

Code: mrl_ex-zt335-3gd_pl

Operating instructions and Declaration of conformity (es) 357 kB, 27.08.2018

Code: mrl_ex-zt335-3gd_es

Operating instructions and Declaration of conformity (nl) 356 kB, 27.08.2018

Code: mrl_ex-zt335-3gd_nl

Brochure (de) 7 MB, 19.10.2016

Code: b_atep01_de

Brochure (en) 7 MB, 19.10.2016

Code: b_atep01_en

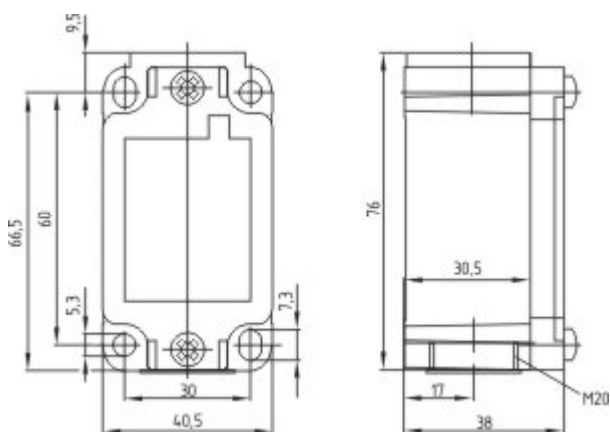
Brochure (it) 3 MB, 20.07.2007

Code: b_atep05

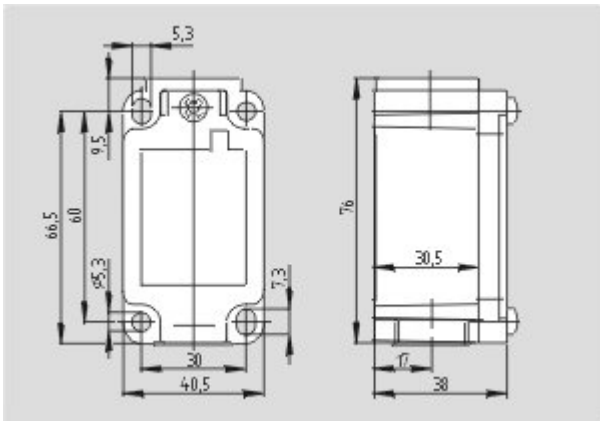
Brochure (es) 5 MB, 18.08.2009

Code: b_atep09

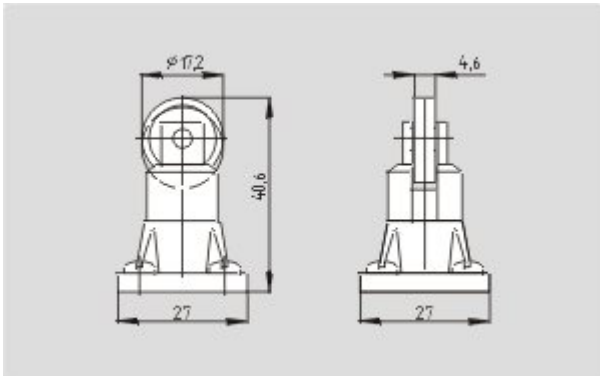
Images



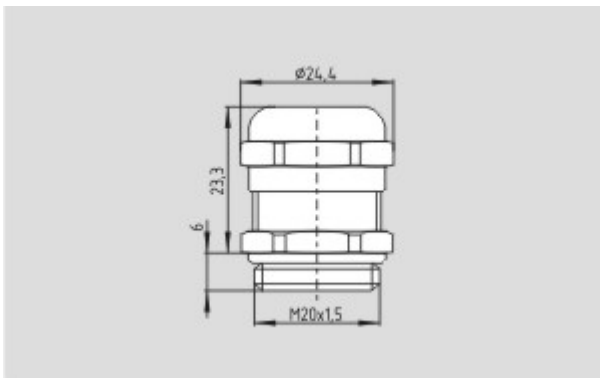
Dimensional drawing (basic component)



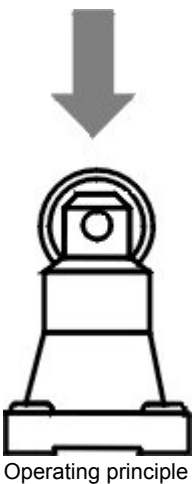
Dimensional drawing (basic component)



Dimensional drawing (actuator)



Dimensional drawing (miscellaneous)



Operating principle