

## Datasheet - EX-TS335-11Y



Position switches with safety function / EX-T335 Metal enclosure with Actuator / EX-T 335  
Plunger S



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

- Explosion protection for ATEX Zones 1 and 21
- 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-TS335-11Y |
| Article number           | 101211813    |
| Strobe lamp              |              |
| 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                      | 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-T335 Druckbolzen S                                                      |
| Standards       | EN 60079-0, EN 60079-1, EN 60079-7, 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                                                                                                         | B to EN 50041            |
| Materials                                                                                                             |                          |
| - Material of the housings                                                                                            | zinc die-cast            |
| - Material of the contacts                                                                                            | Silver                   |
| Housing coating                                                                                                       | painted                  |
| Housing construction form                                                                                             | Norm construction design |
| Weight                                                                                                                | 320                      |

## Mechanical data

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|                                                |                                                                               |
|------------------------------------------------|-------------------------------------------------------------------------------|
| 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                           | 1                                                                             |
| - Max. Cable section                           | 2.5                                                                           |
| AWG-Number                                     | 13                                                                            |
| Mechanical life                                | > 1.000.000 operations                                                        |
| Switching frequency                            | 1800                                                                          |
| notice                                         | All indications about the cable section are including the conductor ferrules. |
| Design of actuating element                    | Plunger                                                                       |
| Actuating force                                | 17                                                                            |
| Bounce duration                                | < 3                                                                           |
| Switchover time                                | in accordance with actuating speed                                            |
| Impact energy                                  | 7                                                                             |
| Actuating speed for vertical actuation         |                                                                               |
| - Min. Actuating speed                         |                                                                               |
| - Max. Actuating speed                         | 0,5                                                                           |

## Ambient conditions

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|                                  |                                                          |
|----------------------------------|----------------------------------------------------------|
| Ambient temperature              |                                                          |
| - Min. environmental temperature | -20                                                      |
| - Max. environmental temperature | +55<br>at Cable section 2.5<br>+50<br>at Cable section 1 |
| Protection class                 | IP65                                                     |

## Electrical data

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|                                                                                                                 |                                         |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 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                                                                                       | 1                                       |
| Rated impulse withstand voltage                                                                                 | 4                                       |
| Rated insulation voltage                                                                                        | 250                                     |
| Thermal test current                                                                                            | 5 A                                     |
| Utilisation category                                                                                            | AC-1                                    |
| Max. fuse rating                                                                                                | 6 A gG D-fuse                           |

ATEX

|                                           |                                                           |
|-------------------------------------------|-----------------------------------------------------------|
| EX-marking                                | EX II 2D Ex tb IIIC T80°C Db<br>EX II 2G Ex d e IIC T6 Gb |
| Explosion protection categories for gases | 2G                                                        |
| Explosion protection Zones for gases      | 1                                                         |
| Explosion protected category for dusts    | 2D                                                        |
| Explosion protection Zones for dusts      | 21                                                        |

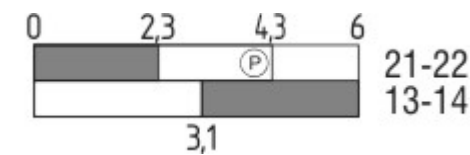
Dimensions

|                          |       |
|--------------------------|-------|
| Dimensions of the sensor |       |
| - Width of sensor        | 40.5  |
| - Height of sensor       | 103.5 |
| - Length of sensor       | 38    |

Keywords

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

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-T(1) 335-(2)Y(3)-(4)-(5) |                                                                     |
| (1)                         |                                                                     |
| 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                                               |
| (2)                         |                                                                     |
| 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)*

(3)

UE

*without*

Slow action with overlapping contacts

Slow action with staggered contacts

(4)

2138

Roller lever 7H for Position switches with safety function

(5)

RMS

Castor aus Brass

## Documents

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**Operating instructions and Declaration of conformity** (pl) 399 kB, 23.01.2018

Code: mrl\_ext335\_pl

**Operating instructions and Declaration of conformity** (jp) 493 kB, 23.01.2018

Code: mrl\_ext335\_jp

**Operating instructions and Declaration of conformity** (en) 347 kB, 24.03.2014

Code: mrl\_ext335\_en

**Operating instructions and Declaration of conformity** (en) 481 kB, 16.11.2011

Code: mrl\_ext335\_en

**Operating instructions and Declaration of conformity** (en) 348 kB, 19.01.2018

Code: mrl\_ext335\_en

**Operating instructions and Declaration of conformity** (pt) 386 kB, 23.01.2018

Code: mrl\_ext335\_pt

**Operating instructions and Declaration of conformity** (it) 381 kB, 23.01.2018

Code: mrl\_ext335\_it

**Operating instructions and Declaration of conformity** (fr) 385 kB, 23.01.2018

Code: mrl\_ext335\_fr

**Operating instructions and Declaration of conformity** (de) 347 kB, 19.01.2018

Code: mrl\_ext335\_de

**Operating instructions and Declaration of conformity** (de) 481 kB, 10.11.2011

Code: mrl\_ext335\_de

**Operating instructions and Declaration of conformity** (es) 383 kB, 19.01.2018

Code: mrl\_ext335\_es

**Operating instructions and Declaration of conformity** (nl) 382 kB, 19.01.2018

Code: mrl\_ext335\_nl

**Operating instructions and Declaration of conformity** (sv) 386 kB, 23.01.2018

Code: mrl\_ext335\_pt

**BG-test certificate** (en) 2 MB, 02.08.2016

Code: z\_ex-p02

**BG-test certificate** (de) 633 kB, 11.06.2014

Code: z\_ex-p01

**INMETRO certification** (br) 533 kB, 24.07.2017

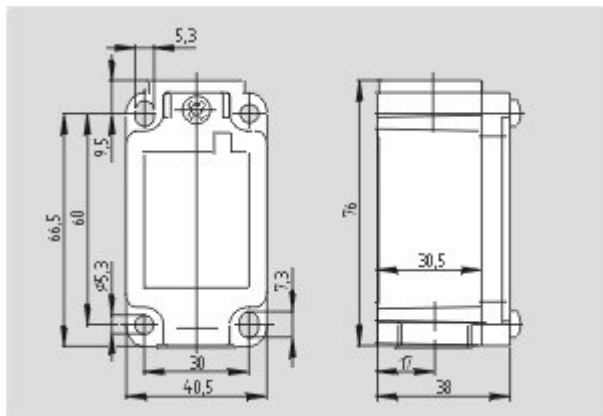
Code: q\_ex-p04

**IECEx certification** (en) 353 kB, 11.06.2014

Code: p\_exp01

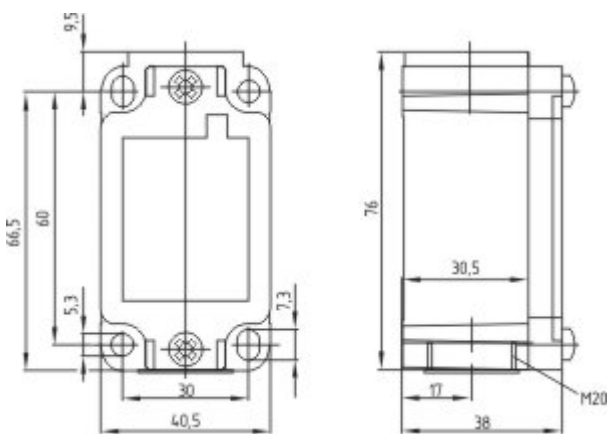
## Images

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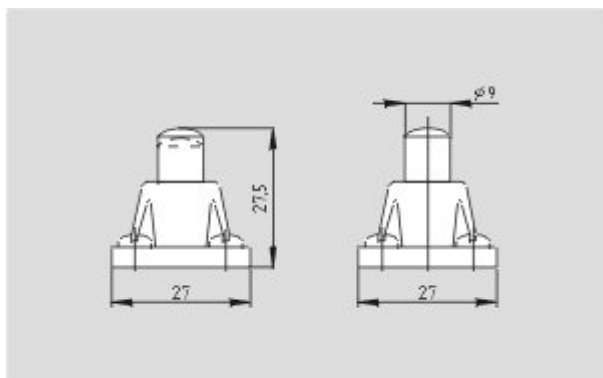
Dimensional drawing (basic component)

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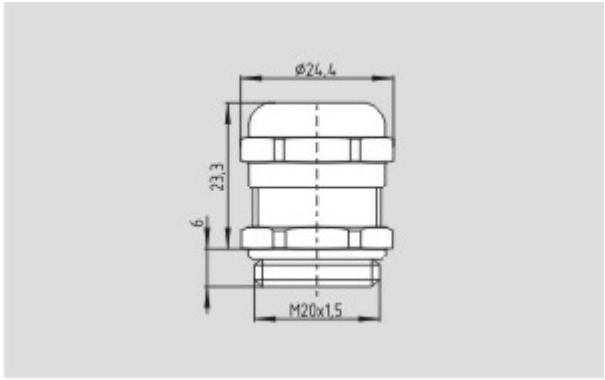
Dimensional drawing (basic component)

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Dimensional drawing (actuator)

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Dimensional drawing (miscellaneous)