

## Datasheet - T3C 235-11Z



Safety switch for hinged guards / Flap safety switches / T.C 235 / T.C 235 left-hand model

Preferred typ



- Metal enclosure
- Good resistance to oil and petroleum spirit
- 30 mm x 88,5 mm x 30 mm
- Actuator heads can be repositioned by 4 x 90°
- 1 Cable entry M 20 x 1.5

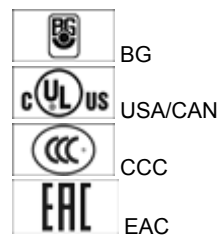
(Minor differences between the printed image and the original product may exist!)

### Ordering details

|                          |               |
|--------------------------|---------------|
| Product type description | T3C 235-11Z   |
| Article number           | 101154218     |
| EAN Code                 | 4030661171555 |
| eCl@ss                   | 27-27-26-01   |

### Approval

Approval



### Classification


|                                   |                |
|-----------------------------------|----------------|
| Standards                         | EN ISO 13849-1 |
| B10d Normally-closed contact (NC) | 20.000.000     |
| Mission time                      | 20 Years       |

notice

$$MTTF_d = \frac{B_{rod}}{0,1 \times n_{op}}$$
$$n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$$

## Global Properties

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|  |                           |
|--|---------------------------|
| Permanent light  | T.C 235 Linksausführung   |
| Standards  | EN 60947-5-1, BG-GS-ET-15 |
| Compliance with the Directives (Y/N)  | Yes                       |
| Materials  |                           |
| - Material of the housings   | zinc die-cast             |
| - Lever material   | Stainless steel           |
| - Material of the contacts   | Silver                    |
| Housing coating  | painted                   |
| Weight   | 190                       |

## Mechanical data

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|                                 |   |
|---------------------------------|---|
| Design of electrical connection | Screw connection  |
| Cable section                   |   |
| - Min. Cable section            | 1 x 0,75  |
| - Max. Cable section            | 1 x 2.5   |
| Mechanical life                 | > 1.000.000 operations  |
| Switching frequency             | max. 5000 /h  |
| notice                          | All indications about the cable section are including the conductor ferrules. |
| Design of actuating element     | Swivel lever  |
| Opening angle                   | 180 °   |
| Positive break angle            | 12.5 °  |
| Positive break torque           | 18.5 Ncm  |
| actuator                        | 78 mm   |

## Ambient conditions

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|                                  |        |
|----------------------------------|--------|
| Ambient temperature              |        |
| - Min. environmental temperature | -30 °C |
| - Max. environmental temperature | +80 °C |
| Protection class                 | IP67   |

## Electrical data

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|   |   |
|---|---|
| Design of control element                 | Normally open contact (NO), Opener (NC)   |
| Switching principle                       | Creep circuit element   |
| Number of auxiliary contacts              | 1   |
| Number of safety contacts                 | 1   |
| 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,<br>DC-13: 24 V / 1 A  |
| Max. fuse rating                          | 6 A gG D-fuse   |
| notice                                    | Caution! The versions with connector may only be used in PELV circuits to EN 60204-1. |

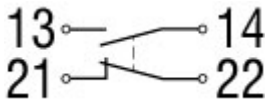
|   |      |
|---|------|
| Explosion protection categories for gases | None |
| Explosion protected category for dusts    | None |

## Dimensions

### Dimensions of the sensor

|                    |      |
|--------------------|------|
| - Width of sensor  | 93   |
| - Height of sensor | 94.5 |
| - Length of sensor | 30   |

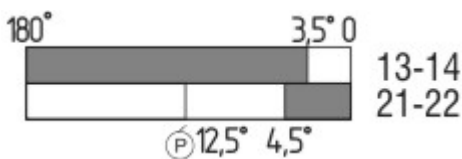
## Diagram



### Note Diagram

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

## Switch travel diagram



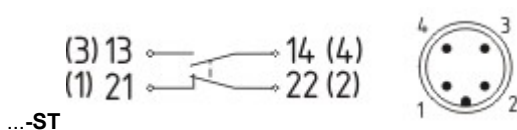
### Notes Switch travel diagram

- 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: T3C 235-11Z-ST



...-ST

M12 connector with A-coding

Rated impulse withstand voltage  $U_{imp}$ : 0,8 kV

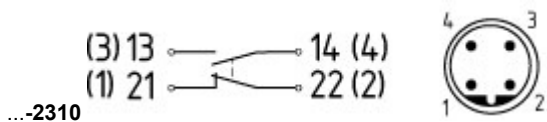
Rated insulation voltage  $U_i$ : 50 V

Rated operating voltage  $U_e$ : 50 V

Operating current  $I_e$ : 4 A

Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.

M12 connector with B-coding



Rated impulse withstand voltage  $U_{imp}$ : 0,8 kV  
 Rated insulation voltage  $U_i$ : 50 V  
 Rated operating voltage  $U_e$ : 50 V  
 Operating current  $I_e$ : 4 A  
 Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.

## Ordering code

T(1)C 235-(2)Z-(3)

(1)

3 left-hand model  
 4 Swing-door version  
 5 right-hand model

(2)

01 1 Opener (NC)  
 02 2 Opener (NC)  
 11 1 Normally open contact (NO) / 1 Opener (NC)

(3)

without Cable entry M20  
 ST M12 connector with A-coding (*Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.*)  
 ST-2310 M12 connector with B-coding (*Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.*)

## Documents

**Operating instructions and Declaration of conformity** (pl) 317 kB, 17.07.2017

Code: mrl\_tc235\_236\_pl

**Operating instructions and Declaration of conformity** (it) 263 kB, 10.05.2017

Code: mrl\_tc235\_236\_it

**Operating instructions and Declaration of conformity** (pt) 283 kB, 13.04.2017

Code: mrl\_tc235\_236\_pt

**Operating instructions and Declaration of conformity** (es) 282 kB, 03.05.2017

Code: mrl\_tc235\_236\_es

**Operating instructions and Declaration of conformity** (jp) 378 kB, 09.10.2017

Code: mrl\_tc235\_236\_jp

**Operating instructions and Declaration of conformity** (nl) 314 kB, 05.07.2018

Code: mrl\_tc235\_236\_nl

**Operating instructions and Declaration of conformity** (en) 279 kB, 28.03.2017

Code: mrl\_tc235\_236\_en

**Operating instructions and Declaration of conformity** (de) 267 kB, 28.03.2017

Code: mrl\_tc235\_236\_de

**Operating instructions and Declaration of conformity** (fr) 286 kB, 17.05.2017

Code: mrl\_tc235\_236\_fr

**BG-test certificate** (de) 140 kB, 02.10.2015

Code: z\_tc2p01

**BG-test certificate** (en) 140 kB, 02.10.2015

Code: z\_tc2p02

**CCC certification** (cn) 4 MB, 11.04.2018

Code: q\_235p02

**CCC certification** (en) 4 MB, 27.10.2017

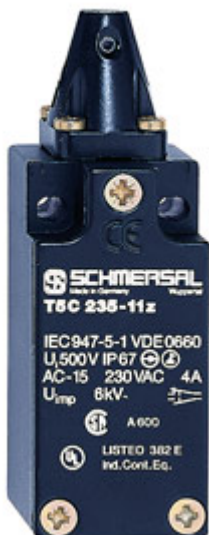
Code: q\_235p01

**EAC certification** (ru) 844 kB, 05.10.2015

Code: q\_6037p17\_ru

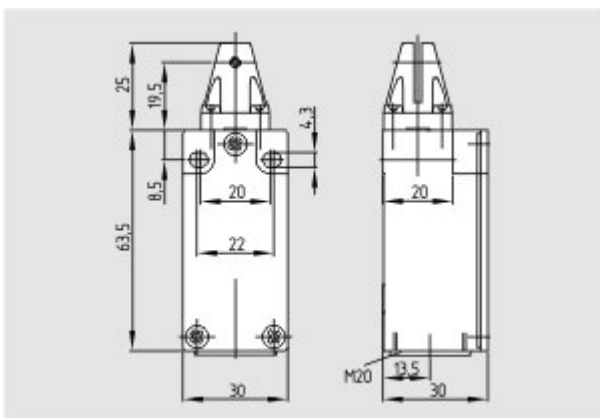
## Images

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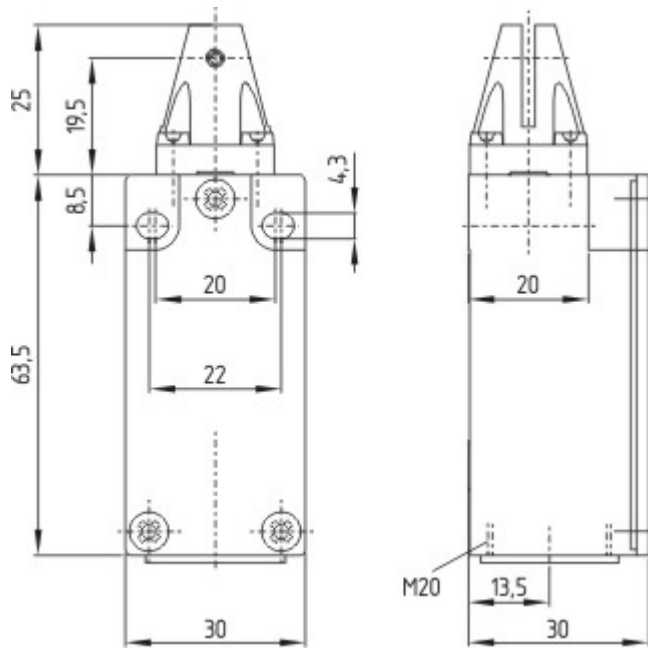
Product photo

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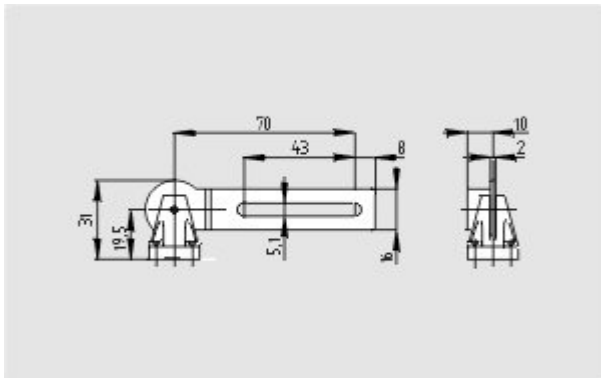


Dimensional drawing (basic component)

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Dimensional drawing (basic component)



Dimensional drawing (miscellaneous)

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The data and values have been checked thoroughly. Technical modifications and errors excepted.

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