

## Datasheet - TV10S 335-02z-ST

Safety switch for hinged guards / Hinge safety switch / TV.S 335



- 1 connector M12, 4-pole
- Metal enclosure
- Good resistance to oil and petroleum spirit
- Actuator heads can be repositioned by 4 x 90°
- 40,5 mm x 107 mm x 65,3 mm
- Actuator shaft can be turned 360°

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

### Ordering details

Product type description	TV10S 335-02Z-ST
Article number	10TV10S 335-02z-ST
EAN Code	
eCl@ss	27-27-26-01

### Approval

Approval

	BG
	USA/CAN
	CCC
	EAC

### 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

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Permanent light	TV.S 335
Standards	EN 60947-5-1, BG-GS-ET-15
Compliance with the Directives (Y/N) 	Yes
Materials	
- Material of the housings	Aluminium
- Material of the contacts	Silver
Housing coating	painted

## Mechanical data

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Design of electrical connection	Connector M12
Cable entry M 20 x 1.5	0
Mechanical life	> 1.000.000 operations
Switching frequency	max. 1000 /h
Design of actuating element	Other
Shaft bore	Ø 10
Positive break angle	7 °
Positive break torque	60 Ncm

## Ambient conditions

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Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+70 °C
Protection class	IP67

## Electrical data

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Design of control element	Opener (NC)
Switching principle	Creep circuit element
Number of auxiliary contacts	0
Number of safety contacts	2
Rated impulse withstand voltage $U_{imp}$	0,8 kV
Rated insulation voltage $U_i$	50 V
Thermal test current $I_{the}$	10 A
Utilisation category	AC-15: 50 V / 4 A, DC-13: 24 V / 4 A
Max. fuse rating	6 A gG D-fuse

## ATEX

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

## Dimensions

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Dimensions of the sensor

- Width of sensor	40.5 mm
- Height of sensor	107 mm
- Length of sensor	65.3 mm

**notice**

Setting assistance

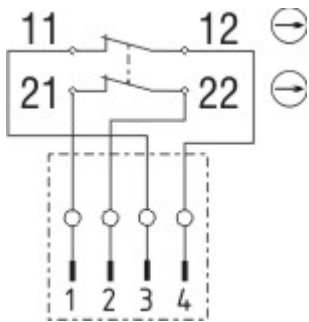
Grub screw for location, shaft pre-drilled for pin

Universal joint available to compensate for axial displacement (only for shaft bore 10 mm)

By turning the head in 90° steps, 8 actuating planes are possible. A Torx T10 screwdriver is needed for this purpose. Even when the screw is removed, the head is self-retaining. The switch can still not be tampered.

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

**Diagram**



Note Diagram

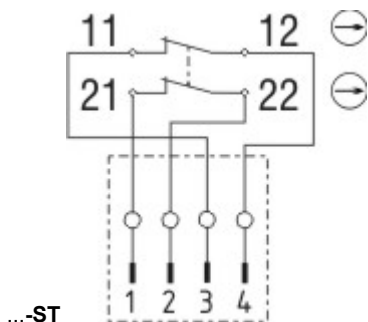
- positive break NC contact
- active
- no active
- Normally-open contact
- Normally-closed contact

**Ordering suffix**

The applicable ordering suffix is added at the end of the part number of the safety switch.

Order example: TV10S 335-02z-ST-NPT

...-NPT	Cable entry NPT 1/2"
...-2310	M12 connector with B-coding Caution! The versions with connector may only be used in PELV circuits to EN 60204-1.



...-ST	M12 connector with A-coding
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**Ordering code**

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TV(1)S 335-(2)Z-(3)

(1)

8 Shaft bore Ø 8 mm  
10 Shaft bore Ø 10 mm

(2)

02 2 Opener (NC)  
03 3 Opener (NC)  
11 1 Normally open contact (NO) / 1 Opener (NC)  
12 1 Normally open contact (NO) / 2 Opener (NC)

(3)

without Cable entry M20  
NPT cable entry NPT 1/2"  
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.*)  
G24 with LED (*only available for version with one NO and one NC contact.*)

## Documents

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**Operating instructions and Declaration of conformity** (de) 285 kB, 29.03.2017

Code: mrl\_tvs335-355\_de

**Operating instructions and Declaration of conformity** (fr) 285 kB, 11.05.2017

Code: mrl\_tvs335-355\_fr

**Operating instructions and Declaration of conformity** (es) 281 kB, 03.05.2017

Code: mrl\_tvs335-355\_es

**Operating instructions and Declaration of conformity** (jp) 420 kB, 29.11.2017

Code: mrl\_tvs335-355\_jp

**Operating instructions and Declaration of conformity** (nl) 312 kB, 05.07.2018

Code: mrl\_tvs335-355\_nl

**Operating instructions and Declaration of conformity** (it) 281 kB, 26.06.2017

Code: mrl\_tvs335-355\_it

**Operating instructions and Declaration of conformity** (en) 281 kB, 29.03.2017

Code: mrl\_tvs335-355\_en

**Operating instructions and Declaration of conformity** (da) 263 kB, 18.06.2013

Code: mrl\_tvs335-355\_da

**Operating instructions and Declaration of conformity** (pt) 283 kB, 10.05.2017

Code: mrl\_tvs335-355\_pt

**Operating instructions and Declaration of conformity** (pl) 313 kB, 17.07.2017

Code: mrl\_tvs335-355\_pl

**BG-test certificate** (en) 166 kB, 09.12.2015

Code: z\_tvsp02

**BG-test certificate** (de) 160 kB, 09.12.2015

Code: z\_tvsp01

**CCC certification** (en) 577 kB, 12.12.2006

Code: q\_349p02

**CCC certification** (cn) 609 kB, 12.12.2006

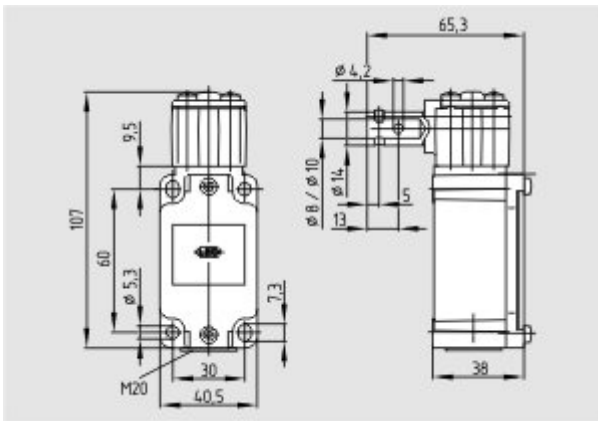
Code: q\_349p03

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

Code: q\_6037p17\_ru

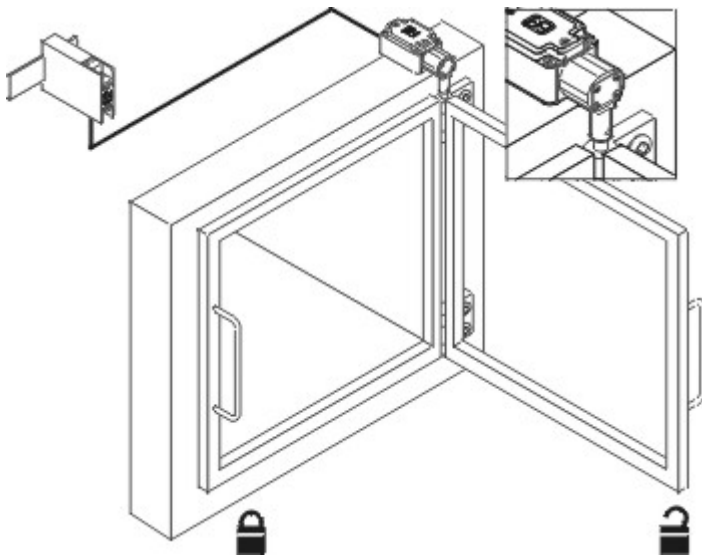
## Images

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Dimensional drawing (basic component)

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Application

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## System components

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### Connector

#### A-K4M12

- Pre-wired cable
- 4-pole



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#### **S-K4M12**

- Connector without cable
- 4-pole



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

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