

## Datasheet - TESF/180

Safety switch for hinged guards / Hinge safety switch / TESF



- Metal enclosure
- Good resistance to oil and petroleum spirit
- For left or right hinged doors
- 141 mm x 115 mm x 21,5 mm
- Simple mounting, suitable for all conventional profile systems (30 ... 60 mm)
- 2 cable entries M 16 x 1.5
- with fixed switching angle

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

### Ordering details

Product type description	TESF/180
Article number	101182693
EAN Code	
eCl@ss	27-27-26-01

### Approval

Approval



### Classification

Standards	EN ISO 13849-1
B10d Normally-closed contact (NC)	2.000.000
B10d Normally open contact (NO)	1.000.000
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	TESF
Standards	EN 60947-5-1 / BG-GS-ET-15
Compliance with the Directives (Y/N) 	Yes
Materials	

- Material of the housings	zinc die-cast
- Material of the contacts	Silver-nickel alloy 10
Enclosure color	Black ■
Weight	840

## Mechanical data

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Design of electrical connection	Screw connection
Cable section	
- Min. Cable section	0,5
- Max. Cable section	1
Mechanical life	> 1.000.000 operations
Switching frequency	1200/h
notice	All indications about the cable section are including the conductor ferrules.
Opening angle	180°
Positive break angle	10°
additional hinge (Y/N)	Yes
Adjustable switching angle (Y/N)	No
Alignment aid (Y/N)	No
Mounting inside (Y/N)	Yes
Mounting outside (Y/N)	No

## Ambient conditions

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Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+65 °C
Protection class	IP65

## 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	2
Number of safety contacts	2
Rated impulse withstand voltage $U_{imp}$	2.5 kV
Rated insulation voltage $U_i$	250 V
Thermal test current $I_{the}$	2.5 A
Utilisation category	AC-15: 230 V / 2 A, DC-13: 24 V / 1 A
Max. fuse rating	2 A gG D-fuse
Switching of low voltages	1 / 5

## 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	141 mm
- Height of sensor	115 mm
- Length of sensor	21.5 mm

**notice**

Closed guard device = 0° in contact switch travel diagrams.

The factory-set switching angle is 3°.

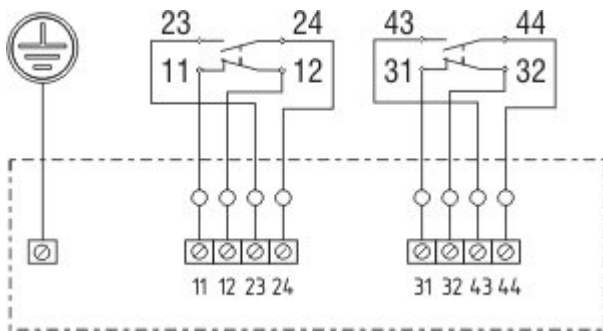
The positive break angle is 5°.

Until the limit of the mechanical life has been reached the angle can increase up to 8° under normal wear-out conditions.

**Included in delivery**

additional hinge

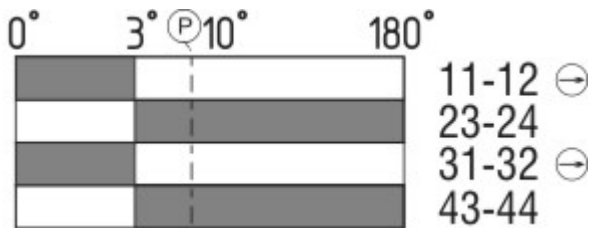
**Diagram**



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**

TESF (1)/(2)/(3)/(4)/(5)

(1)

<i>without</i>	without Alignment aid
<b>A</b>	with Alignment aid
<b>(2)</b>	
<i>without</i>	with additional hinge
<b>S</b>	without additional hinge
<b>(3)</b>	
<i>without</i>	Screw connection
<b>CC</b>	Enesion spring connection
<b>ST24</b>	Connector 24 V
<b>(4)</b>	
<b>.1</b>	male connector bottom
<b>.2</b>	Connector above
<b>(5)</b>	
<b>0</b>	Mounted head-on
<b>180</b>	Mounting inside
<b>U</b>	for setting by the customer

## Documents

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**Operating instructions and Declaration of conformity** (de) 699 kB, 09.10.2018

Code: mrl\_tesf\_de

**Operating instructions and Declaration of conformity** (cn) 648 kB, 09.10.2018

Code: mrl\_tesf\_cn

**Operating instructions and Declaration of conformity** (en) 565 kB, 09.10.2018

Code: mrl\_tesf\_en

**Operating instructions and Declaration of conformity** (nl) 538 kB, 09.10.2018

Code: mrl\_tesf\_nl

**Operating instructions and Declaration of conformity** (fr) 551 kB, 09.10.2018

Code: mrl\_tesf\_fr

**Operating instructions and Declaration of conformity** (it) 549 kB, 09.10.2018

Code: mrl\_tesf\_it

**Operating instructions and Declaration of conformity** (jp) 642 kB, 09.10.2018

Code: mrl\_tesf\_jp

**Operating instructions and Declaration of conformity** (da) 554 kB, 09.10.2018

Code: mrl\_tesf\_da

**Operating instructions and Declaration of conformity** (pl) 571 kB, 09.10.2018

Code: mrl\_tesf\_pl

**Operating instructions and Declaration of conformity** (es) 543 kB, 09.10.2018

Code: mrl\_tesf\_es

**BG-test certificate** (en) 173 kB, 07.03.2016

Code: z\_tesp02

**BG-test certificate** (de) 184 kB, 07.03.2016

Code: z\_tesp01

**CCC certification** (cn) 499 kB, 15.08.2016

Code: q\_tesfp02

**CCC certification** (en) 500 kB, 15.08.2016

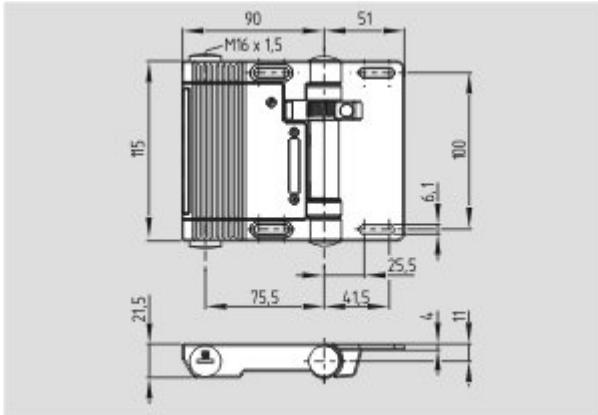
Code: q\_tesfp01

**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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## System components

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### Accessories

101180239 - Tooling reference TESF-14



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

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