

Datasheet - TVS 400-12/B-M20



Safety switch for hinged guards / Hinge safety switch / TVS 400 / TESZ



- thermoplastic enclosure
- Double-insulated
- Good resistance to oil and petroleum spirit
- 111,5 mm x 92 mm x 36 mm
- Simple fitting, especially on 40 mm profiles
- Universal fitting on guards hinged on left or right-hand side
- Fixing holes for M6 countersunk screws to DIN 965
- 2 cable entries M 20 x 1.5

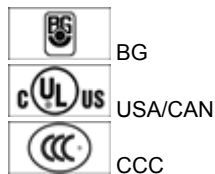
(Minor differences between the printed image and the original product may exist!)

Ordering details

Product type description	TVS 400-12/B-M20
Article number	1155809
EAN code	4030661176680

Approval

Approval




Classification

Standards	EN ISO 13849-1
B _{10d} Opener (NC)	20.000.000
Mission time notice	20 Years
	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{zyklus}}$

Global Properties

Product name	TVS 400
Standards	EN 60947-5-1, BG-GS-ET-15

Compliance with the Directives (Y/N) 	Yes
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
- Material of the contacts	Silver
- Material of the hinge	Aluminium
Housing coating	None
Weight	265 g

Mechanical data

Design of electrical connection	Screw connection
Cable entry M 20 x 1.5	2
Cable section	
- Min. Cable section	0,5 mm ²
- Max. Cable section	1 mm ²
Mechanical life	> 1.000.000 operations
Switching frequency	max. 120/h
Positive break angle	4°
Positive break force	1 N
additional hinge (Y/N)	No
additional hinge (Y/N)	No
mounting hinge (Y/N)	Yes
notice	All indications about the cable section are including the conductor ferrules.

Ambient conditions

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

Electrical data

Design of control element	Normally open contact (NO), Opener (NC)
Switching principle	Creep circuit element
Number of auxiliary contacts	1 piece
Number of safety contacts	2 piece
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

ATEX

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

Dimensions

Dimensions of the sensor	
- Width of sensor	111.5 mm
- Height of sensor	92 mm

notice

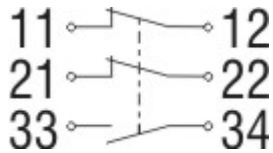
The additional hinge including mounting accessories is also available separately, part number Z 400

Plug connection and mounting kits for profile sections of the most common makes on request

The opening angle has been set to 10° in factory.

Until the limit of the mechanical life has been reached the angle can increase up to 6° under normal wear-out conditions.

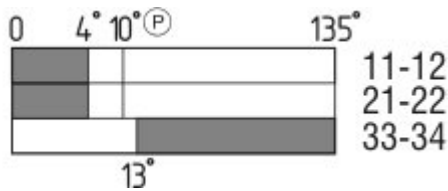
Diagram



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

TVS 400-(1)/(2)

(1)

12 1 Normally open contact (NO) / 2 Opener (NC)

03 3 Opener (NC)

(2)

B with mounting hinge

BZ with mounting and additional hinge

Documents

Operating instructions and Declaration of conformity (jp) 1 MB, 10.12.2010
http://127.0.0.1/Bilddata/Drehbar/Pdf/Tvs400/bedien/JP/mrl_tvs400_jp.pdf

Operating instructions and Declaration of conformity (it) 418 kB, 17.02.2011
http://127.0.0.1/Bilddata/Drehbar/Pdf/Tvs400/bedien/IT/mrl_tvs400_it.pdf

Operating instructions and Declaration of conformity (fr) 420 kB, 17.02.2011
http://127.0.0.1/Bilddata/Drehbar/Pdf/Tvs400/bedien/FR/mrl_tvs400_fr.pdf

Operating instructions and Declaration of conformity (es) 420 kB, 17.02.2011
http://127.0.0.1/Bilddata/Drehbar/Pdf/Tvs400/bedien/ES/mrl_tvs400_es.pdf

Operating instructions and Declaration of conformity (nl) 419 kB, 17.02.2011
http://127.0.0.1/Bilddata/Drehbar/Pdf/Tvs400/bedien/NL/mrl_tvs400_nl.pdf

Operating instructions and Declaration of conformity (de) 415 kB, 15.02.2011
http://127.0.0.1/Bilddata/Drehbar/Pdf/Tvs400/bedien/DE/mrl_tvs400_de.pdf

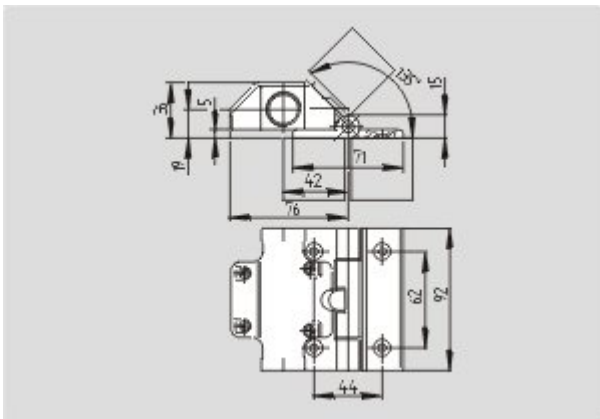
Operating instructions and Declaration of conformity (en) 417 kB, 17.02.2011
http://127.0.0.1/Bilddata/Drehbar/Pdf/Tvs400/bedien/EN/mrl_tvs400_en.pdf

BG-test certificate (de) 267 kB, 07.11.2005
http://127.0.0.1/Bilddata/Drehbar/Pdf/Tvs400/baumuste/z_tv4p01.pdf

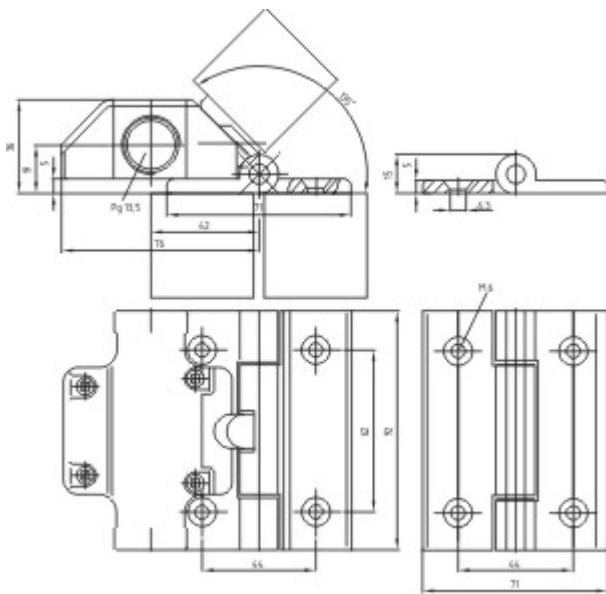
CCC certification (en) 577 kB, 12.12.2006
http://127.0.0.1/Bilddata/Drehbar/Pdf/Tv335_55/zertifikat/q_349p02.pdf

CCC certification (cn) 609 kB, 12.12.2006
http://127.0.0.1/Bilddata/Drehbar/Pdf/Tv335_55/zertifikat/q_349p03.pdf

Images



Dimensional drawing (basic component)



Dimensional drawing (basic component)

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