Datasheet - TVS 400-12/B-M20

Safety switch for hinged guards (Archive) / TVS 400

☒ Preferred typ



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

- 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

Ordering details

Product type description	TVS 400-12/B-M20
Article number	101155809
EAN code	4030661176680
eCl@ss	27-27-26-01

Approval

Approval	BG USA/CAN CCC

Classification

Standards	EN ISO 13849-1
B_{10d} Normally-closed contact (NC)	2.000.000
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600\ s/h}{t_{cycle}}$

Global Properties

Product name	TVS 400
Standards	EN 60947-5-1, BG-GS-ET-15
Compliance with the Directives (Y/N) CE	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 mm²
- Max. Cable section	1 mm²
Mechanical life	> 1.000.000 operations
Switching frequency	max. 120/h
notice	All indications about the cable section are including the conductor ferrules.
Positive break angle	4 °
Positive break force	1 N
additional hinge (Y/N)	No
additional hinge (Y/N)	No
mounting hinge (Y/N)	Yes

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
Switching of low voltages	1 mA / 5 VDC

ATEX

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

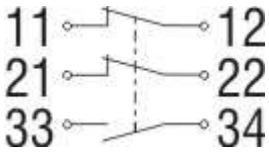
Dimensions

Dimensions of the sensor	
- Width of sensor	111.5 mm
- Height of sensor	92 mm
- Length of sensor	36 mm

notice

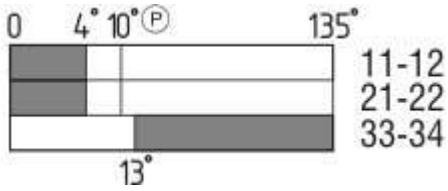
The additional hinge including mounting accessories is also available separately, part number Z 400
Plug connection and mounting kits for profile sections of the most common makes on request
The opening angle has been set to 10° in factory.
Until the limit of the mechanical life has been reached the 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 (fr) 328 kB, 07.08.2012
Code: mrl_tvs400_fr

Operating instructions and Declaration of conformity (es) 327 kB, 07.08.2012
Code: mrl_tvs400_es

Operating instructions and Declaration of conformity (cs) 326 kB, 06.08.2012
Code: mrl_tvs400_cs

Operating instructions and Declaration of conformity (sv) 330 kB, 24.08.2012
Code: mrl_tvs400_sv

Operating instructions and Declaration of conformity (da) 325 kB, 07.08.2012
Code: mrl_tvs400_da

Operating instructions and Declaration of conformity (pl) 308 kB, 05.02.2015
Code: mrl_tvs400_pl

Operating instructions and Declaration of conformity (pt) 328 kB, 07.08.2012
Code: mrl_tvs400_pt

Operating instructions and Declaration of conformity (it) 325 kB, 07.08.2012
Code: mrl_tvs400_it

Operating instructions and Declaration of conformity (en) 331 kB, 29.05.2012
Code: mrl_tvs400_en

Operating instructions and Declaration of conformity (jp) 399 kB, 07.08.2012
Code: mrl_tvs400_jp

Operating instructions and Declaration of conformity (de) 331 kB, 29.02.2012
Code: mrl_tvs400_de

Operating instructions and Declaration of conformity (nl) 327 kB, 07.08.2012
Code: mrl_tvs400_nl

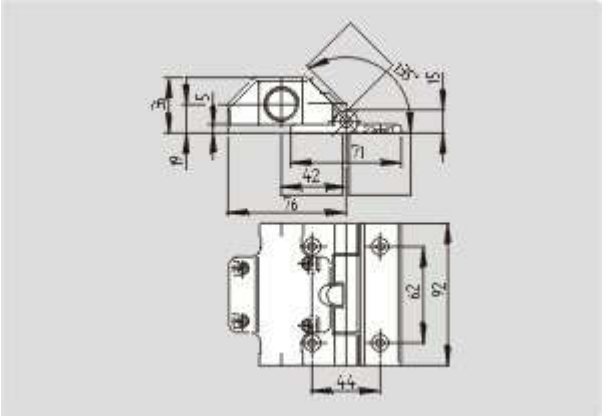
BG-test certificate (de) 267 kB, 07.11.2005
Code: z_tv4p01

CCC certification (en) 577 kB, 12.12.2006
Code: q_349p02

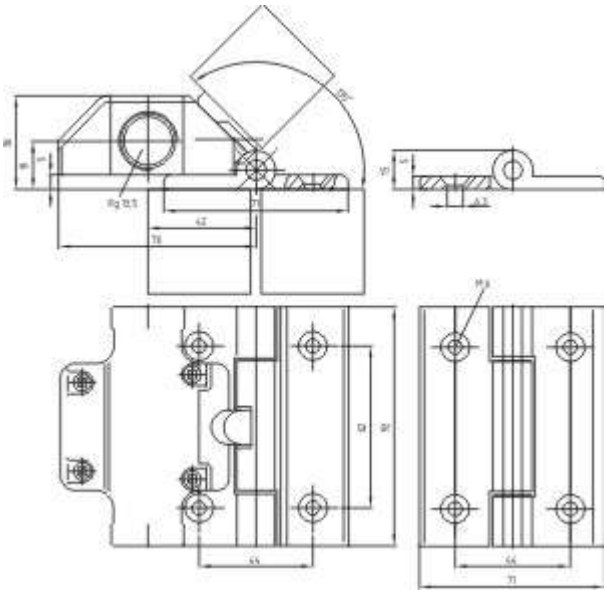
CCC certification (cn) 609 kB, 12.12.2006
Code: q_349p03

EAC certification (ru) 844 kB, 05.10.2015
Code: q_6037p17_ru

Images



Dimensional drawing (basic component)


Dimensional drawing (basic component)

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