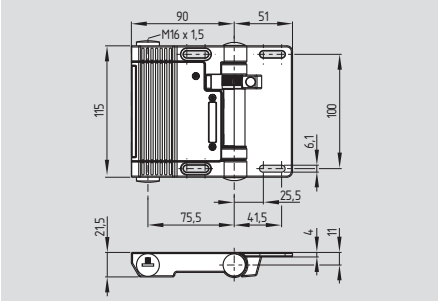
TVS 410





- Metal enclosure
- Adjustable switching angle
- Opening angle 180°
- Mountable on the inside and the outside of the safety guard
- Screw terminals, cage clamps or connector
- Simple mounting, for all common profile systems (30 … 60 mm)
- Oil and petroleum resistant
- 2 cable entries M16 x 1.5
- For left or right hinged doors

Approvals

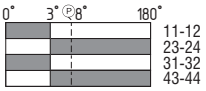
cULus in preparation CE

Technical data

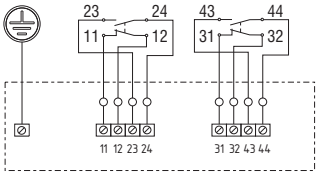
Standards:	IEC/EN 60947-5-1 BG-GS-ET-15
Enclosure:	light-alloy diecast
Protection class:	IP 65 to EN 60529
Contact material:	AgNi10
Contact type:	2x change-over contact with double break, type Zb
Switching system:	⊖ IEC 60947-5-1 slow action, NC contact with positive break
Connection:	Screw terminals or Cage clamps or connector
Cable section:	max. 1 mm² (incl. conductor ferrules)
Cable entry:	2 x M16 x 1.5
U_{imp}:	2.5 kV
U_i:	250 V
I_{the}:	2.5 A
Utilisation category:	DC-13
I_e/U_e:	1 A / 24 VDC
Max. fuse rating:	2 A gG D-fuse to DIN EN 60269-1
Ambient temperature:	– 25 °C … + 65 °C
Mechanical life:	> 1 million operations
Switching frequency:	1200/h
Positive break angle:	min. 5°, max. 8°

Contact variants

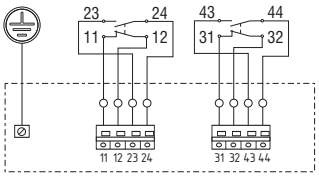
2 NO/2 NC



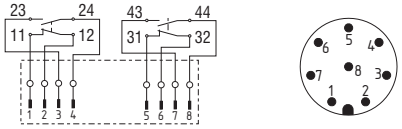
Screw terminals



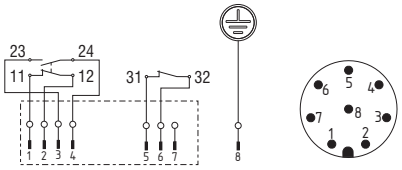
Cage clamps



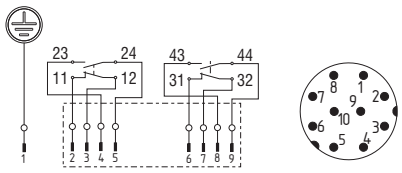
Connector ST1 or ST2
Version 11/11



Version 11/01



Connector ST4 or ST5



Ordering details

TVS 410 ①-②③④

No.	Replace	Description
①	SK	Screw terminals
	CC	Cage clamps
	ST1	Connector M12 bottom
	ST2	Connector M12 top
	ST4	Connector M16 bottom
	ST5	Connector M16 top
②	11/11	2NC/2NO versions ST1, ST2 only for PELV circuits
	11/01	2NC/1NO versions ST1, ST2 with PIN 8 as PE

Ordering details

No.	Replace	Description
③	U	Adjustable switching angle (incl. adjustment tool)
	I	Inside installation (with fixed switching angle) *
	A	Outside installation (with fixed switching angle) *
④		Without alignment aid
	N	With alignment aid

Note

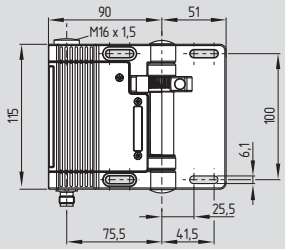
Contact switch travel diagrams: 0° = safety guard closed.

Caution! The versions ST1 and ST2 11/11 may only be used in PELV circuits to EN 60204-1.

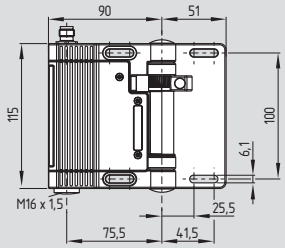
* **The factory-set switching angle is 3°.**
The positive break angle is 5°.
Until the limit of the mechanical life has been reached the angle can increase up to 8° under normal wear-out conditions.

Safety switch for hinged guards

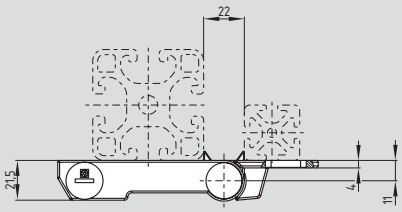
System components



Bottom connector ST1, ST4

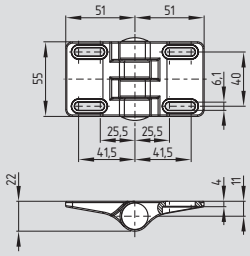


Top connector ST2, ST5

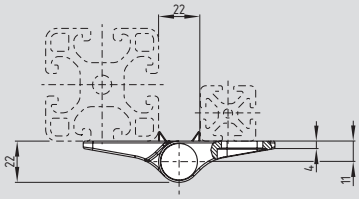


With alignment aid, ordering suffix N

System components



Additional hinge Z 410



Additional hinge Z 410-N



Adjustment tool K 410

Ordering details

Connector M12, 8 pins, 24 VDC,	
bottom	**ST1**
top	**ST2**
Connector M16, 10 pins, 250 VAC,	
bottom	**ST4**
top	**ST5**

With alignment aid **ordering suffix N**

Ordering details

Additional hinge	
without alignment aid	**Z 410**
with alignment aid	**Z 410-N**
Adjustment tool	**K 410**

Further information can be found:
List TESF/05 ELAN, Wettenberg