

# Safety Switch



*STP.* ■



More than safety.



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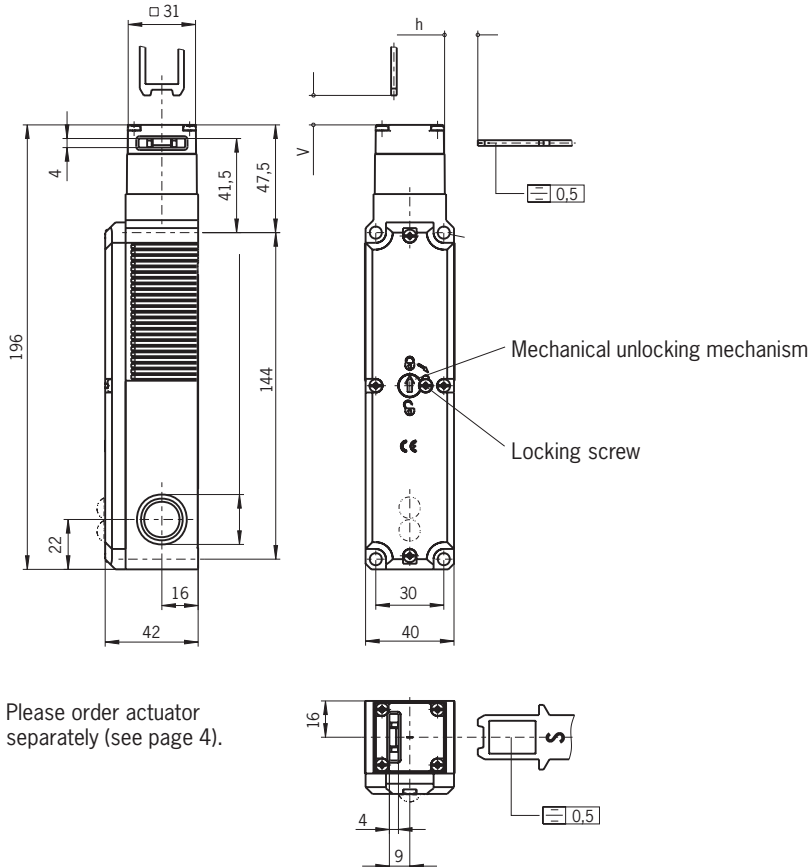
## STP... safety switch with guard locking

- ▶ Actuating head made of metal
- ▶ With 4 contact elements
- ▶ Cable entry M20x1.5



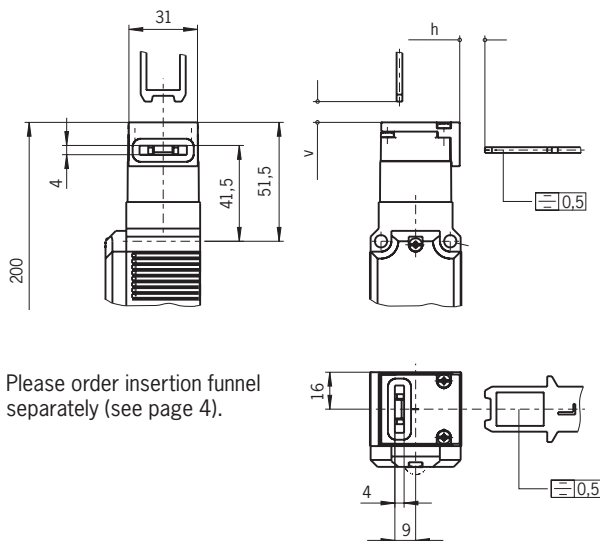
\* Approvals pending

### Dimension drawing STP... (without insertion funnel)



Please order actuator separately (see page 4).

### Dimension drawing STP... (with insertion funnel)



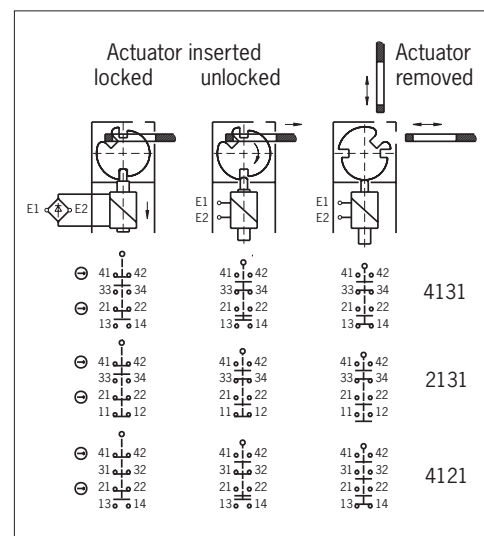
Please order insertion funnel separately (see page 4).

### Assembly instructions

The safety switch and actuator must be installed properly. The actuator must be positively connected with the mounting surface, e.g. by using safety screws or by welding, riveting, pinning. The safety switch must not be used as an end stop.

### Switching elements

Switching element	Solenoid monitoring	Door monitoring
4131	2 positively driven NC contacts 1 NO contact	1 NO contact
2131	2 positively driven NC contacts 1 NO contact	1 NC contact
4121	2 positively driven NC contacts	1 NC contact 1 NO contact



### Locking methods

**STP3...:** Actuator inserted, mechanically locked, unlock by applying voltage.

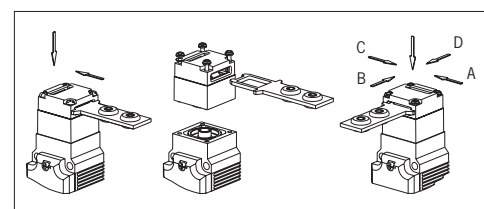
**STP4...:** Lock by applying voltage.

### Mechanical unlocking mechanism

Safety switches can be unlocked by means of the mechanical unlocking mechanism in the event of power failure, for example. The mechanical unlocking mechanism must be sealed to prevent tampering (for example with sealing lacquer).

### Changing the approach direction

Upon removal of the actuating head fixing screws, the approach direction can be changed to any 90° increment. The standard setting is approach direction A.



⚠ In the event of faults, the complete safety switch must be replaced.

## Technical data

Parameters		Value		Unit
Material	Housing	Reinforced thermoplastic		
	Actuating head	Die-cast aluminum		
	Cam (in the actuating head)	Stainless steel		
Degree of protection according to IEC 60529		IP 67		
Installation position		Any		
Mechanical life		1 x 10 <sup>6</sup> operating cycles		
Ambient temperature		- 20 to + 55		°C
Approach speed, max.		20		m/min
Insertion/extraction force (not locked)		Approx. 20		N
Locking force, max. (locked)	Straight actuator	2500		N
	Bent actuator	1200		
Weight		Approx. 0.5		kg
Switching element		4131	2131	4121
Contact elements		2 NC ⊖ + 1 NO + 1 NO	2 NC ⊖ + 1 NO + 1 NC	2 NC ⊖ + 1 NC + 1 NO
Switching principle		Slow-action contact element		
Contact material		Silver alloy, gold flashed		
Rated impulse withstand voltage U <sub>imp</sub>		2.5		kV
Rated insulation voltage U <sub>i</sub>		250		V <sub>≅</sub>
Utilization category according to IEC 947-5-1		AC-15 I <sub>e</sub> 4 A U <sub>e</sub> 230 V / DC-13 I <sub>e</sub> 4 A U <sub>e</sub> 24 V		
Switching voltage, min. at 10 mA		12		V
Switching current, min. at 24 V		1		mA
Conventional thermal current I <sub>th</sub>		4		A
Short circuit protection (control circuit fuse)		According to IEC 60269-1: 4 A gG		
Connection type		Screw terminal, M20x1.5		
Connection to switching element		Screw terminals, max. cross-section of a single connector 1.5		mm <sup>2</sup>
<b>Solenoid</b>				
Connection		Reverse polarity protected, integrated bridge rectifier		
Solenoid operating voltage		24 V AC/DC (-15% / +10%)		
Duty cycle		100		%
Power consumption		8		W
<b>Insertion depth</b> (necessary minimum travel + permissible overtravel)		Standard actuators (083 930/083932)	Actuator for insertion funnel (083931/083933)	
Approach direction side (h)		24.5 + 2	28.5 + 2	
Approach direction from top (v)		24.5 + 2	28.5 + 2	

## Ordering table

Series / Locking method / Connection type	Switching element	Approach direction	Item	Order No.
				Solenoid operating voltage
				024
<b>STP3A-...M</b> mechanical locking, cable entry	<b>4131</b>	A	STP3A-4131A024M	091 776
	<b>2131</b>		STP3A-2131A024M	091 493
	<b>4121</b>		STP3A-4121A024M	093 054
<b>STP4A-...M</b> electrical locking, cable entry	<b>4131</b>		STP4A-4131A024M	093 158
	<b>2131</b>		STP4A-2131A024M	091 494
	<b>4121</b>		STP4A-4121A024M	093 159

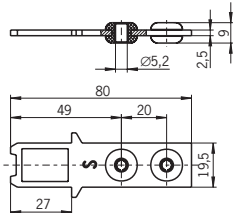
# STP Safety Switches

## Standard actuators

### Straight actuator

- ▶ With rubber bush
- ▶ Suitable for a max. tensile force of 2500 N
- ▶ Min. door radius 300 mm
- ▶ 2 safety screws M5x16 are supplied

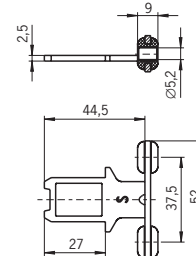
Item	Order No.
Actuator-S-GT-S	083 930



### Bent actuator

- ▶ With rubber bush
- ▶ Suitable for a max. tensile force of 1200 N
- ▶ Min. door radius 300 mm
- ▶ 2 safety screws M5x16 are supplied

Item	Order No.
Actuator-S-WQ-S	083 932

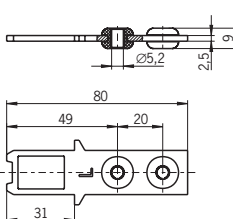


## Actuator for insertion funnel

### Straight actuator

- ▶ With rubber bush
- ▶ Must only be used with the insertion funnel 093 157
- ▶ Suitable for a max. tensile force of 2500 N
- ▶ Min. door radius 300 mm
- ▶ 2 safety screws M5x16 are supplied

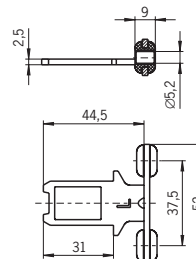
Item	Order No.
Actuator-S-GT-L	083 931



### Bent actuator

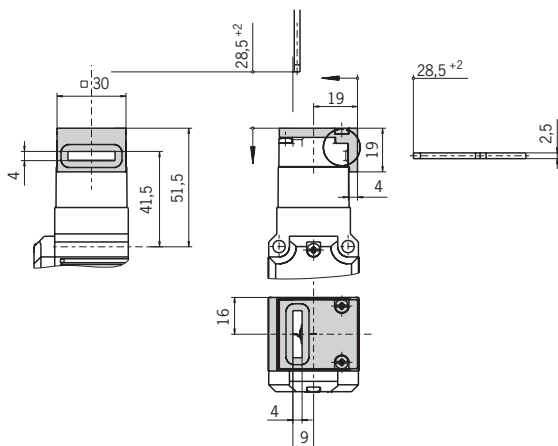
- ▶ With rubber bush
- ▶ Must only be used with the insertion funnel 093 157
- ▶ Suitable for a max. tensile force of 1200 N
- ▶ Min. door radius 300 mm
- ▶ 2 safety screws M5x16 are supplied

Item	Order No.
Actuator-S-WQ-L	083 933



## Insertion funnel STP

(for STP safety switches only)



The metal insertion funnel provides the actuator with a wider entry area into the safety switch. With the insertion funnel, the actuating head is better protected against damage. M3x38 Plastite screws (supplied) are used to secure the insertion funnel to the actuating head.

### Note

- ▶ Use in conjunction with actuators for insertion funnels with the identifier **L** only

Item	Order No.
Insertion funnel STP	093 157

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