

Safety Switches with Separate Actuator, Plastic Housing **EUCHNER**

Selection table for safety switches STP with guard locking and guard lock monitoring

Version																			
Standard		One actuating head made of metal																	
TW		TWIN, 2 actuating heads made of metal																	
BI		BiState, with additional safety function																	
Release feature																			
HE		Mechanical release on the front																	
FE		Escape release on the rear side																	
Door monitoring																			
STP3/4		With door monitoring contact																	
STP1/2		Without door monitoring contact																	
Connection																			
M		Thread M20x1.5 for cable glands																	
SR11		Plug connector; 11-pin+PE																	
Standard		TW		BI		HE		FE		STP3/4		STP1/2		M		SR11		Page	
●				●		●				●				●	●			56 - 57	
●				●								●		●				58	
●				●	●					●				●				59	
			●	●						●					●			60	
	●			●						●				●				61	



Safety switch STP with guard locking and guard lock monitoring

- ▶ Actuating head made of metal
- ▶ Mechanical release on the front
- ▶ With door monitoring contact



Approach direction



Horizontal and vertical
Can be adjusted in 90° steps

Mechanical release

Is used for releasing the guard locking with the aid of a tool. The mechanical release is sealed with sealing lacquer to prevent tampering.

Solenoid operating voltage

- ▶ AC/DC 24 V +10%, -15%
- ▶ AC 110 V +10%, -15%
- ▶ AC 230 V +10%, -15%

LED function display (optional)

A function display (2 LEDs, red and green) is available for the following voltage ranges:

- ▶ AC/DC 24 V +10%, -15%

Guard locking types

STP3 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the interlocking solenoid.

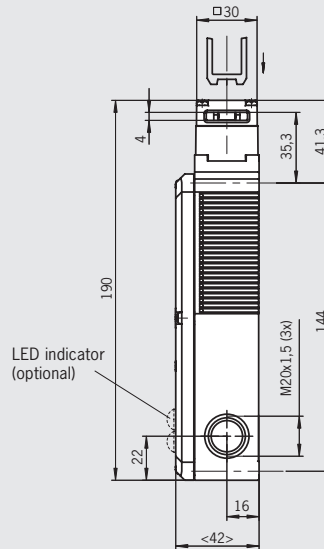
STP4 Open-circuit current principle, guard locking by applying voltage to the interlocking solenoid. Release by spring force.

Switching elements

- ▶ **537** Slow-action switching element
1 NC ⊖ + 1 NC (door monitoring contact)
- ▶ **2131** Slow-action switching element
2 NC ⊖ + 1 NO + 1 NC (door monit. contact)
- ▶ **4121** Slow-action switching element
2 NC ⊖ + 1 NC / 1 NO (door monit. contact)
- ▶ **4131** Slow-action switching element
2 NC ⊖ + 1 NO + 1 NO (door monit. contact)
- ▶ **4141** Slow-action switching element
2 NC ⊖ + 2 NC ⊖ (door monit. contacts)

Cable entry M20 x 1.5

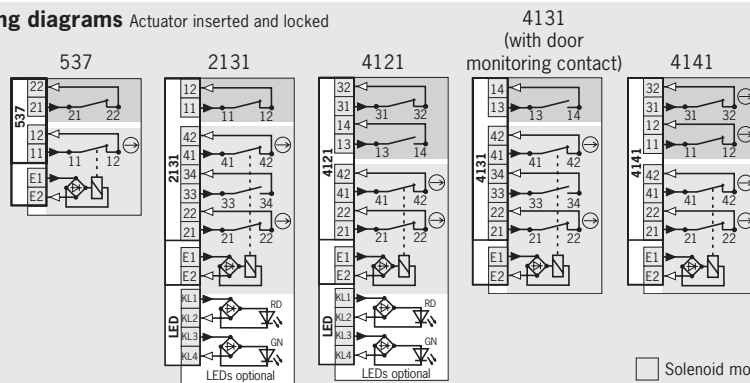
Dimension drawing



Please order actuator separately (see pages 80-82)

For cable glands see page 89

Wiring diagrams Actuator inserted and locked



- Solenoid monitoring
- Door monitoring

For switching functions see technical data on page 112

Ordering table

Series	Connection	Guard locking	Switching element	Version	Solenoid operating voltage		
					AC/DC 24 V	AC 110 V	AC 230 V
STP	M Cable entry 3 x M20x1.5	3 Mechanical	2131 2 NC ⊖ + 1 NO + 1 NC		091 493 STP3A-2131A024M	099 326 STP3A-2131A110M	On request
				024L LED display AC/DC 24 V	091 748 STP3A-2131A024L024M	On request	On request
			4121 2 NC ⊖ + 1 NC / 1 NO		096 890 STP3A-4121A024M	On request	094 792 STP3A-4121A230M
				024L LED display AC/DC 24 V	091 776 STP3A-4131A024M	On request	On request
			4131 2 NC ⊖ + 1 NO + 1 NO		099 272 STP3A-4141A024M	On request	On request
				024L LED display AC/DC 24 V	092 259 STP4A-537A024M	On request	On request
		4 Electrical	2131 2 NC ⊖ + 1 NO + 1 NC		091 494 STP4A-2131A024M	097 754 STP4A-2131A110M	On request
				024L LED display AC/DC 24 V	091 749 STP4A-2131A024L024M	On request	On request
			4121 2 NC ⊖ + 1 NC / 1 NO		093 159 STP4A-4121A024M	094 793 STP4A-4121A110M	094 794 STP4A-4121A230M
				024L LED display AC/DC 24 V	100 026 STP4A-4121A024L024M		
			4131 2 NC ⊖ + 1 NO + 1 NO		093 158 STP4A-4131A024M	On request	On request
				024L LED display AC/DC 24 V	099 314 STP4A-4141A024M	On request	On request

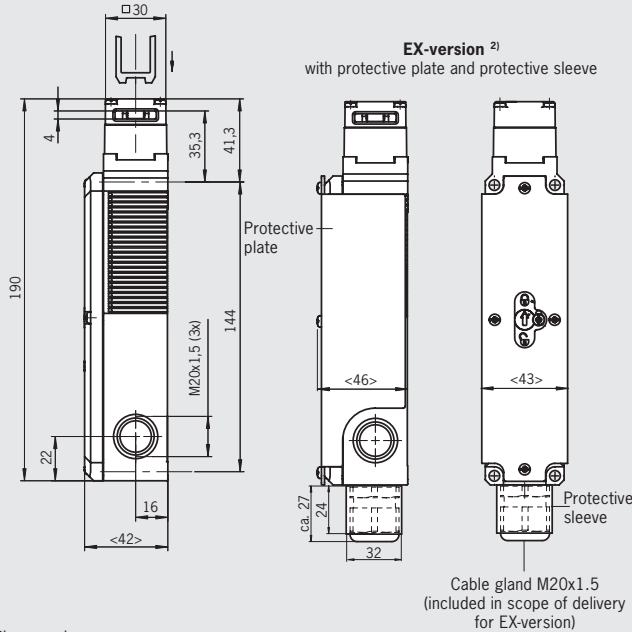
1) With cable entry M, DC 24 V / AC 110 V

Safety Switches with Separate Actuator, Plastic Housing **EUCHNER**



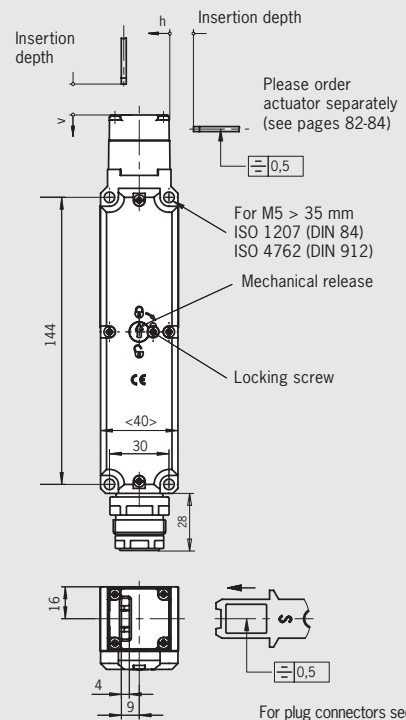
Cable entry M20 x 1.5

Dimension drawing



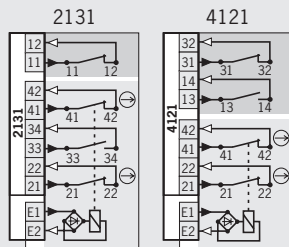
Please order actuator separately (see pages 80-82)

Plug connector SR11 11-pin + PE



Please order actuator separately (see pages 80-82)

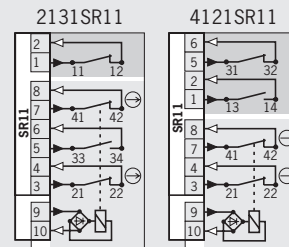
Wiring diagrams Actuator inserted and locked



Solenoid monitoring
 Door monitoring

For switching functions see technical data on page 112

Wiring diagrams Actuator inserted and locked



Solenoid monitoring
 Door monitoring

For switching functions see technical data on page 112

Ordering table

Series	Connection	Guard locking	Switching element	Version	Solenoid operating voltage		
					AC/DC 24 V	AC 110 V	AC 230 V
STP	M Cable entry 3 x M20x1.5	3 Mechanical	2131 2 NC ⊖ + 1 NO + 1 NC	ATEX Incl. cable gland	093 794 ²⁾ STP3A-2131A024M-EX	On request	On request
			4121 2 NC ⊖ + 1 NC / 1 NO	ATEX Incl. cable gland	097 626 ²⁾ STP3A-4121A024M-EX	On request	On request
		4 Electrical	2131 2 NC ⊖ + 1 NO + 1 NC	ATEX Incl. cable gland	093 795 ²⁾ STP4A-2131A024M-EX	On request	On request
	SR11 Plug connector	3 Mechanical	2131 2 NC ⊖ + 1 NC / 1 NO		096 318 STP3A-4121A024SR11	-	-
			4121 2 NC ⊖ + 1 NO + 1 NC		097 565 STP4A-2131A024SR11	-	-
		4 Electrical	4121 2 NC ⊖ + 1 NC / 1 NO		099 301 STP4A-4121A024SR11	-	-

1) With cable entry M, DC 24 V/AC 110 V 2) II 3 G Ex n IIC T4 / 3 D Ex tD A22 T110°C X

For safety precautions see page 136
For technical data see page 99





Safety switch STP with guard locking and guard lock monitoring

- ▶ Actuating head made of metal
- ▶ Mechanical release on the front
- ▶ Without door monitoring contact



Approach direction



Horizontal and vertical
Can be adjusted in 90° steps

Mechanical release

Is used for releasing the guard locking with the aid of a tool. The mechanical release is sealed with sealing lacquer to prevent tampering.

Solenoid operating voltage

- ▶ AC/DC 24 V +10%, -15%
- ▶ AC 110 V +10%, -15%
- ▶ AC 230 V +10%, -15%

LED function display (optional)

A function display (2 LEDs, red and green) is available for the following voltage ranges:

- ▶ AC/DC 24 V +10%, -15%

Guard locking types

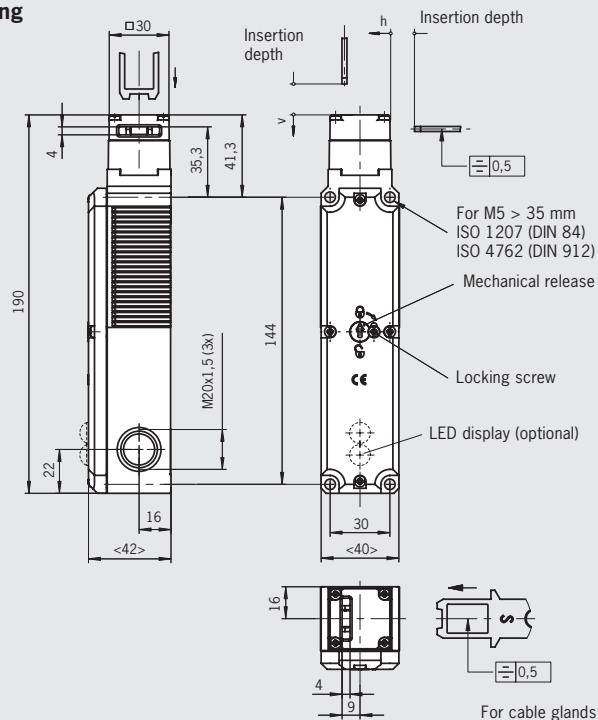
- STP1** Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the interlocking solenoid.
- STP2** Open-circuit current principle, guard locking by applying voltage to the interlocking solenoid. Release by spring force.

Switching elements

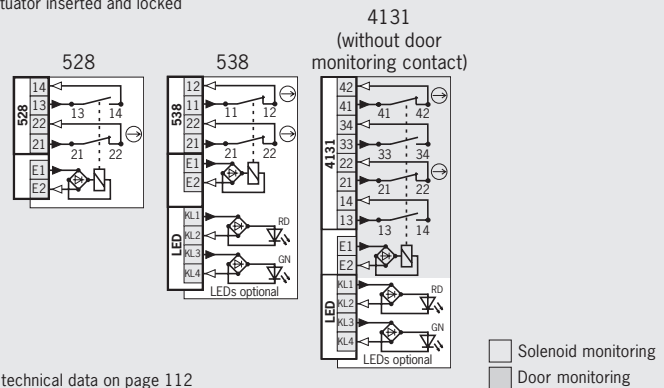
- ▶ **528** Slow-action switching element
1 NC ⊖ + 1 NO
- ▶ **538** Slow-action switching element
2 NC ⊖
- ▶ **4131** Slow-action switching element
2 NC ⊖ + 2 NO

Cable entry M20 x 1.5

Dimension drawing



Wiring diagrams Actuator inserted and locked



For switching functions see technical data on page 112

Ordering table

Series	Connection	Guard locking	Switching element	Version	Solenoid operating voltage		
					AC/DC 24 V	AC 110 V	AC 230 V
STP	M Cable entry 3 x M20 x 1.5	1 Mechanical	528 1 NC ⊖ + 1 NO		092 266 STP1A-528A024M	On request	On request
					092 258 STP1A-538A024M	On request	On request
			538 2 NC ⊖	024L LED display AC/DC 24 V with pre-assembled insertion funnel	092 489 STP1D-538A024L024M	On request	On request
					091 491 STP1A-4131A024M	On request	On request
		2 Electrical	4131 2 NC ⊖ + 2 NO		091 746 LED display AC/DC 24 V STP1A-4131A024L024M	On request	On request
					092 260 STP2A-538A024M	On request	On request
			538 2 NC ⊖	024L LED display AC/DC 24 V	092 490 STP2A-538A024L024M	On request	On request
					091 492 STP2A-4131A024M	On request	On request
	4131 2 NC ⊖ + 2 NO	024L LED display AC/DC 24 V	091 747 STP2A-4131A024L024M	On request	On request		



Safety switch STP with guard locking and guard lock monitoring

- ▶ Escape release on the rear side
- ▶ With door monitoring contact
- ▶ Increased horizontal overtravel



Approach direction



Horizontal and vertical
Can be adjusted in 90° steps

Escape release

Is used for the manual release of the guard locking from within the danger area without tools. With identification of On/Off position.

Solenoid operating voltage

- ▶ AC/DC 24 V +10%, -15%

Guard locking types

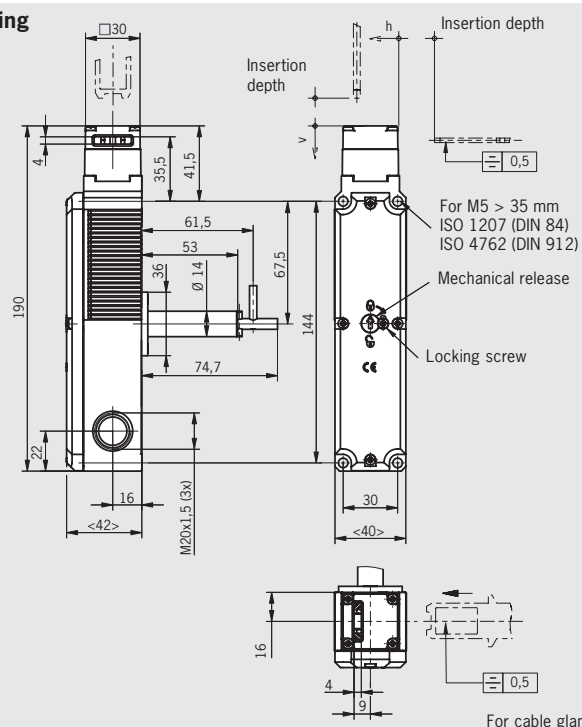
STP3 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the interlocking solenoid.

Switching elements

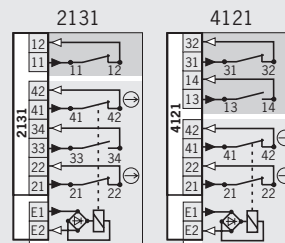
- ▶ **4121** Slow-action switching element
2 NC ⊖ + 1 NC / 1 NO
(door monitoring contact)

Cable entry M20 x 1.5

Dimension drawing



Wiring diagrams Actuator inserted and locked



- Solenoid monitoring
- Door monitoring

For switching functions see technical data on page 112

Ordering table

Series	Connection	Guard locking	Switching element	Version	Solenoid operating voltage	
					AC/DC 24 V	
STP	M Cable entry 3 x M20 x 1.5	3 Mechanical	2131 2 NC ⊖ + 1 NO + 1 NC	C1993 Long actuator shaft	102 267	STP3A-2131A024MC1993
			4121 2 NC ⊖ + 1 NC / 1 NO	C1993 Long actuator shaft	096 885	STP3A-4121A024MC1993





Safety switch STP-BI with guard locking and guard lock monitoring

- ▶ Actuating head made of metal
- ▶ Mechanical release on the front
- ▶ Additional safety function
- ▶ With door monitoring contact



Approach direction

Horizontal and vertical
Can be adjusted in 90° steps

Mechanical release

Is used for releasing the guard locking with the aid of a tool. The mechanical release is sealed with sealing lacquer to prevent tampering.

Safety function

The STP-BI additionally features a safety function that prevents

- ▶ persons unintentionally locking themselves inside if the safety guard is open in the event of a power failure or when the machine is switched off
- ▶ the activated guard locking being deactivated in the event of a power failure.

Solenoid operating voltage

- ▶ AC/DC 24 V +10%, -15%

Guard locking types

STP3 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the interlocking solenoid.

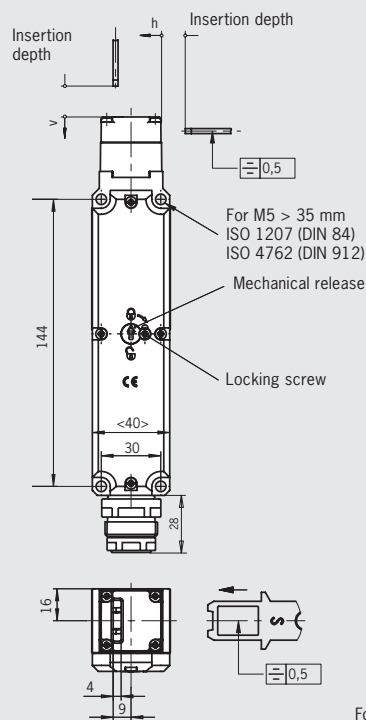
Switching elements

- ▶ **2131** Slow-action switching element
2 NC ⊖ + 1 NO + 1 NC (door monit. contact)

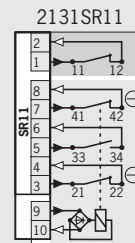
Plug connector SR11

11-pin + PE

Dimension drawing



Wiring diagrams Actuator inserted and locked



For switching functions see technical data on page 113

- Solenoid monitoring
- Door monitoring

Ordering table

Series	Connection	Guard locking	Switching element	Version	Solenoid operating voltage	
					AC/DC	24 V
STP-BI	SR11 Plug connector	3 Mechanical	2131 2 NC ⊖ + 1 NO + 1 NC		100	105
					STP-BI-3A-2131A024SR11	

Sicherheitsschalter STP-TW mit Zuhaltung und Zuhaltungsüberwachung

- ▶ Zwei Betätigungsköpfe aus Metall
- ▶ Gleichzeitige Überwachung von zwei Schutztüren
- ▶ Hilfsentriegelung an der Frontseite
- ▶ Schlüsselhilfsentriegelung optional
- ▶ Mit Türmeldekontakt



Approach direction

Horizontal and vertical
Can be adjusted in 90° steps

Mechanical release

Is used for releasing the guard locking with the aid of a tool. The mechanical release is sealed with sealing lacquer to prevent tampering.

Mechanical key release

If the switch has a mechanical key release, the drive's safety circuit can be opened and retained in this position. In this way unintentional starting of the system can be prevented. The lock function setting is indicated in the window. Two keys are included.

Solenoid operating voltage

- ▶ AC/DC 24 V +10%, -15%

Guard locking types

STP3 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the interlocking solenoid.

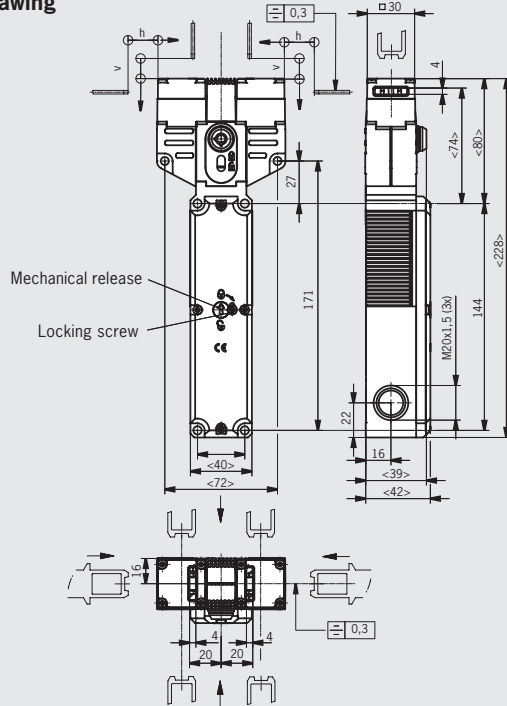
STP4 Open-circuit current principle, guard locking by applying voltage to the interlocking solenoid. Release by spring force.

Switching elements

- ▶ **2131** Slow-action switching element
2 NC ⊖ + 1 NO + 1 NC (door monit. contact)

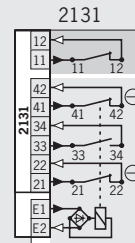
Cable entry M20 x 1.5

Dimension drawing



For cable glands see page 89

Wiring diagrams Actuator inserted and locked



- Solenoid monitoring
- Door monitoring

For switching functions see technical data on page 115

Ordering table

Series	Connection	Guard locking	Switching element	Version	Solenoid operating voltage
					AC/DC 24 V
STP-TW	M Cable entry M20x1.5	3 Mechanical	2131 2 Ö ⊖ + 1 S + 1 Ö	with mechanical key release (identical locking)	099 973 STP-TW-3A-2131AC024M
					098 827 STP-TW-3A-2131AC024M-S1
		4 Electrical	2131 2 Ö ⊖ + 1 S + 1 Ö	with mechanical key release (identical locking)	100 849 STP-TW-4A-2131AC024M
					100 850 STP-TW-4A-2131AC024M-S1

For safety precautions see page 136
For technical data see page 99