

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

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

Version									
Standard									
TW									
BI									
Release feature									
HE									
FE									
Door monitoring									
STP3/4									
STP1/2									
Connection									
M									
SR11									
Standard	TW	BI	HE	FE	STP3/4	STP1/2	M	SR11	Page
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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.

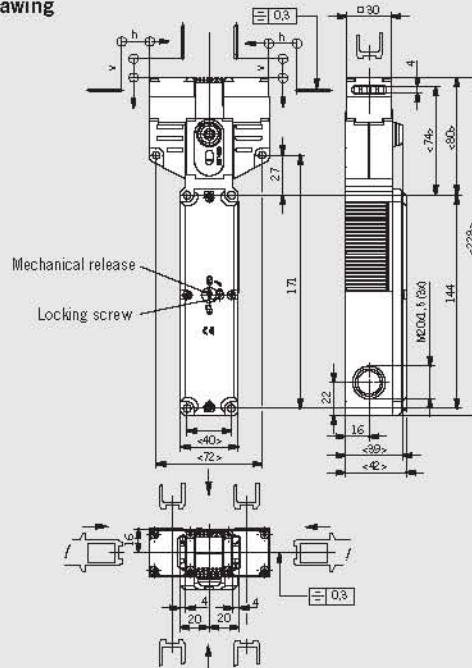
STP4 Open-circuit current principle, guard locking by applying voltage to the interlocking solenoid. Release by spring force.

Switching elements

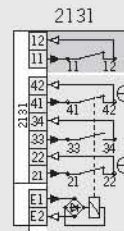
▶ **2131** Slow-action switching element
2 NC ⊖ + 1 NO + 1 NC (door monit. contact)

Cable entry M20 x 1.5

Dimension drawing



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 0 ⊖ + 1 S + 1 0		099 973 STP-TW-3A-21 31 AC024M
				with mechanical key release (identical locking)	098 827 STP-TW-3A-21 31 AC024M-S1
		4 Electrical	2131 2 0 ⊖ + 1 S + 1 0		100 849 STP-TW-4A-21 31 AC024M
				with mechanical key release (identical locking)	100 850 STP-TW-4A-21 31 AC024M-S1


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




The technical data on switches, switching elements and guard locking apply to all connections. Further technical data are given for the connection selected.

Switch			Value	Unit
Material	Housing		Reinforced thermoplastic	
	Actuating head		Die-cast aluminum	
	Cam in actuating head		Stainless steel	
Mechanical life			1 x 10 ⁶ operating cycles	
Ambient temperature			- 20 ... + 55	°C
Weight			approx. 0.65	kg
Max. approach speed			20	m/min
Actuating force			35	N
Extraction force (not locked)			30	N
Retention force			20	N
Locking force, max.			Approach direction	
		From top (v)	Side (h)	N
		2500	2500	
Locking force F ₂₀ in accordance with test principles GSET-19			Approach direction	
		From top (v)	Side (h)	N
		2000	2000	
Insertion depth (minimum required travel + permissible overtravel)			Actuator S standard	
Approach direction side (h)			24.5 + 5	mm
Approach direction from top (v)			24.5 + 5	mm

Switching element			Value	Unit
Switching principle			Slow-action switching element	
Switching elements with 4 switching elements			21 31 2 NC \ominus + 1 NO + 1 NC	
Switching current, min., at DC 24 V			1	mA
Switching voltage, min., at 10 mA			12	V
Contact material			Silver alloy, gold flashed	

Guard locking			Value	Unit
Solenoid operating voltage			AC/DC 24 V +10/-15%	
Connection			Reverse polarity protected, integrated bridge rectifier	
Duty cycle ED			100	%
Power consumption			8	W

Connection, cable entry M20 x 1.5			Value	Unit
Connection			Screw terminal	
Version			M20 x 1.5	
Conductor cross-section max.			0.34 ... 1.5	mm ²
Degree of protection according to IEC 60529			IP 67	
Rated impulse withstand voltage U _{imp}			2.5	kV
Rated insulation voltage U _i			250	V AC/DC
Conventional thermal current I _{th}			4	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)			4	A gG
Utilization category to IEC 60947-5-1	AC15		I _e 4 A U _e 230 V	
	DC13		I _e 4 A U _e 24 V	

Switching functions STP-TW

