

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

Safety switch STF with guard locking, guard lock monitoring and safety latch

Release feature			
HE	Mechanical release on the front		
Door monitoring			
	STF3	With door monitoring contact	
Connection			
		SR11	Plug connector; 11-pin + PE

Release feature	Door monitoring	Connection	Page
HE	STF3	SR11	66
●	●	●	

Safety switch STF with guard locking, guard lock monitoring and safety latch

- ▶ Actuating head made of metal
- ▶ Mechanical release on the front
- ▶ With safety latch



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 must be sealed to prevent tampering (for example with sealing lacquer).

Solenoid operating voltage

- ▶ AC/DC 24 V +10%, -15%

Guard locking types

STF3 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the interlocking solenoid.

Safety latch

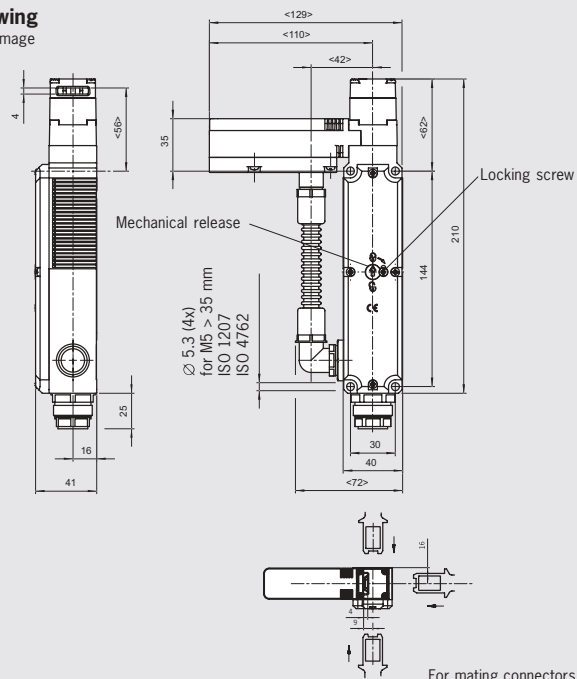
The switch also has a latch for the guard locking pin. The guard locking pin can only be moved if it has been released by the latch. This situation prevents persons unintentionally locking themselves inside if the safety door is open in case of a power failure or if the machine is switched off and that the guard locking is deactivated on a power failure.

Switching elements

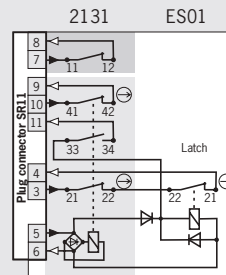
- ▶ **ES01** Slow-action switching element
1 NC ⊖ (latch)
- ▶ **2131** Slow-action switching element
2 NC ⊕ + 1 NO + 1 NC
(door monitoring contact)

Plug connector SR11 11-pin + PE

Dimension drawing Solenoid right mirror image



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	
STF	SR11 Plug connector	3 Mechanical	2131 2 NC ⊖ + 1 NO + 1 NC	Solenoid left	099 436	STF3A-L-2131A024SR11
				Solenoid right	099 437	STF3A-R-2131A024SR11







Safety switch STF... with guard locking, guard lock monitoring and safety latch




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
Parameter				
Housing material			Reinforced thermoplastic	
Mechanical life			1 x 10 ⁶ operating cycles	
Ambient temperature			- 5 ... + 55	°C
Weight			approx. 0.69	kg
Max. approach speed			20	m/min
Actuating force			18	N
Extraction force (not locked)			26	N
Retention force			26	N
Locking force, max.			Approach direction	
			From top (v)	Side (h)
			2500	2000
Locking force F _{Zn} in accordance with test principles GS-ET-19			Approach direction	
			From top (v)	Side (h)
			2000	1500
	Straight actuator		Actuator S standard	Actuator L for insertion funnel
Insertion depth (minimum required travel + permissible overtravel)			24.5 + 5	28.5 + 5
Approach direction side (h)			24.5 + 5	28.5 + 5
Approach direction from top (v)			24.5 + 5	28.5 + 5

Switching element				Value	Unit
Parameter					
Switching principle				Slow-action switching element	
Switching elements with 1 switching element				01 1 NC \ominus	
Switching elements with 4 switching elements				2131 2 NC \ominus + 1 NO + 1 NC	
Switching current, min., at 24 V DC				1	mA
Switching voltage, min., at 10 mA				12	V
Contact material				Silver alloy, gold flashed	

Guard locking				Value	Unit
Parameter					
Solenoid operating voltage				AC/DC 24 V +10/-15%	
Connection				Reverse polarity protected, integrated bridge rectifier	
Duty cycle ED				100	%
Guard locking solenoid power consumption				8	W
Latching solenoid power consumption				3.8	W

Plug connector SR11 connection			Value	Unit
Parameter				
Connection			Plug connector	
Version			11-pin + PE	
Degree of protection according to IEC 60529			IP 65 ¹⁾	
Rated impulse withstand voltage U _{imp}			15	kV
Rated insulation voltage U _i			50	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	AC-15		I _e 4 A U _e 50 V	
	DC-13		I _e 4 A U _e 24 V	

1) Screwed tight with the related plug connector (see page 88)

Switching functions STF3 with door monitoring contact and safety latch

