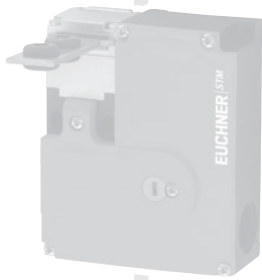


Safety Switches with Separate Actuator, Plastic Housing **EUCHNER**

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

Release feature, front			
HE	Mechanical release on the front		
Connection			
	M	Thread M20x1.5 for cable glands	
Switching element			
1 NC \ominus (ÜK) + 2 NC \ominus (SK) or			
1 NC \ominus (ÜK) + 1 NC \ominus (SK) + 1 NO (SK)			
Manual release HE	Connection M	Switching element three contacts	Page
●	●	●	70



Safety switch STM with guard locking and guard lock monitoring



- ▶ Actuating head optionally made of metal or plastic
- ▶ Mechanical release on the front

Cable entry M20 x 1.5



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

STM1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the interlocking solenoid.

STM2 Open-circuit current principle, guard locking by applying voltage to the interlocking solenoid. Release by spring force.

Switching elements

ÜK For monitoring the guard locking (built-in solenoid)

Slow-action switching element 1 NC ⊖

SK For monitoring the door/actuator position

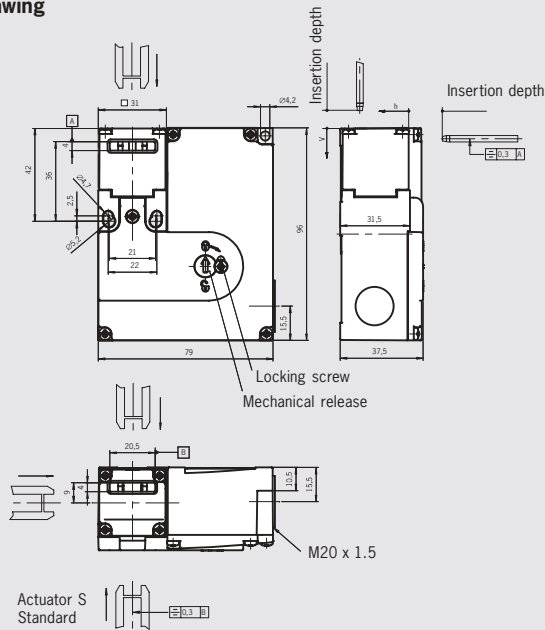
222 Slow-action switching element

2 NC ⊖

242 Slow-action switching element

1 NC ⊖ +1 NO

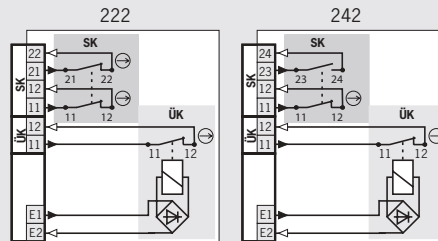
Dimension drawing



Please order actuator separately (see pages 82-84)

For cable glands see page 89

Wiring diagrams Actuator inserted and locked



□ Solenoid monitoring
■ Door monitoring

For switching functions see technical data on page 117

Ordering table

Series	Connection	Guard locking	Actuating head	Switching element	Solenoid operating voltage		
					AC/DC 24 V	AC 110 V	AC 230 V
STM	Cable entry 1 x M20 x 1.5	1 Mechanical	N Plastic	ÜK: 1 NC ⊖ SK: 222 2 NC ⊖	091 865 STM1N-222B024-M	On request	On request
				ÜK: 1 NC ⊖ SK: 242 1 NC ⊖ + 1 NO	092 031 STM1N-242B024-M	On request	On request
				ÜK: 1 NC ⊖ SK: 222 2 NC ⊖	095 396 STM1A-222B024-M	On request	On request
			A Metal	ÜK: 1 NC ⊖ SK: 242 1 NC ⊖ + 1 NO	095 397 STM1A-242B024-M	On request	098 036 STM1A-242B230-M
				ÜK: 1 NC ⊖ SK: 222 2 NC ⊖	092 048 STM2N-222B024-M	On request	On request
				ÜK: 1 NC ⊖ SK: 242 1 NC ⊖ + 1 NO	092 050 STM2N-242B024-M	On request	On request
		2 Electrical	N Plastic	ÜK: 1 NC ⊖ SK: 222 2 NC ⊖	095 398 STM2A-222B024-M	On request	On request
				ÜK: 1 NC ⊖ SK: 222 2 NC ⊖	095 399 STM2A-242B024-M	On request	On request
				ÜK: 1 NC ⊖ SK: 242 1 NC ⊖ + 1 NO	On request	On request	
			A Metal	ÜK: 1 NC ⊖ SK: 222 2 NC ⊖	On request	On request	
				ÜK: 1 NC ⊖ SK: 222 2 NC ⊖	On request	On request	
				ÜK: 1 NC ⊖ SK: 242 1 NC ⊖ + 1 NO	On request	On request	

Safety switch STM 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			
Parameter	Value	Unit	
Housing material	Reinforced thermoplastic		
Mechanical life	2 x 10 ⁶ operating cycles		
Ambient temperature	- 20 ... + 55	°C	
Weight	approx. 0.4	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)	
	STM.A... (metal head)	2000	N
	STM.N... (plastic head)	1000	
	Approach direction		
Locking force F _{Zh} in accordance with test principles GS-ET-19	From top (v)	Side (h)	
	STM.A... (metal head)	1500	N
	STM.N... (plastic head)	700	
	Actuator S standard		
Insertion depth (minimum required travel + permissible overtravel)	24.5 + 5	mm	
Approach direction side (h)	24.5 + 5	mm	
Approach direction from top (v)	24.5 + 5	mm	

Switching element		
Parameter	Value	Unit
Switching principle	Slow-action switching element	
Switching elements	ÜK: 1 NC ⊖ SK: 222 2 NC ⊖	ÜK: 1 NC ⊖ SK: 242 1 NC ⊖ + 1 NO
Switching current, min., at 24 V	1	mA
Switching voltage, min., at 10 mA	12	V
Contact material	Silver alloy, gold flashed	

Guard locking		
Parameter	Value	Unit
Solenoid operating voltage	AC/DC 24 V +10/-15%	
Connection	Reverse polarity protected, integrated bridge rectifier	
Duty cycle ED	100	%
Power consumption	6	W

Connection, cable entry M20 x 1.5		
Parameter	Value	Unit
Connection	Screw terminal	
Version	M20 x 1.5	
Conductor cross-section max.	0.34 ... 1.5	mm ²
Degree of protection acc. to IEC 60529	IP 67	
Rated insulation voltage U _i	250	V AC/DC
Rated impulse withstand voltage U _{imp}	1.5	kV
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 STM

