

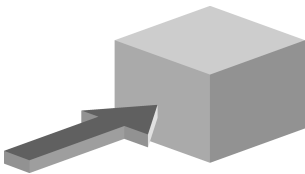
## TZ1RE024BHA-C1903 (Order no. 082096)

### Safety switch TZ, plug connector MR10, auxiliary release

- ▶ Emergency release on the front
- ▶ Two LED displays, red and green
- ▶ Plug connector MR10
- ▶ Actuating head fitted right



### Approach direction



Horizontal

Can be adjusted in 90° steps

### Solenoid operating voltage and LED function display

- ▶ 24 V AC/DC -15%, +10%

### Guard locking type

TZ1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

### Switching element

SK For monitoring the door/actuator position

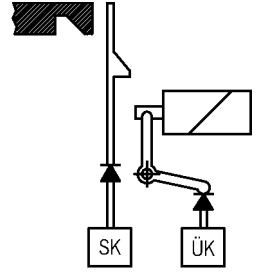
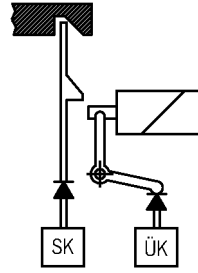
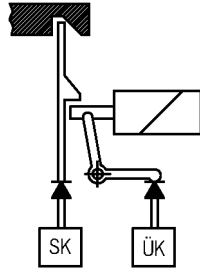
ÜK For monitoring the guard locking (built-in solenoid)

2121H Slow-action switching contact 4 NC

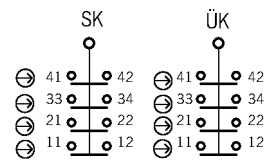
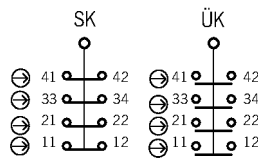
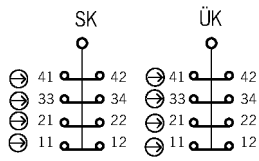
### Auxiliary release

This is used for releasing the guard locking with the aid of a tool.

## Functional drawings

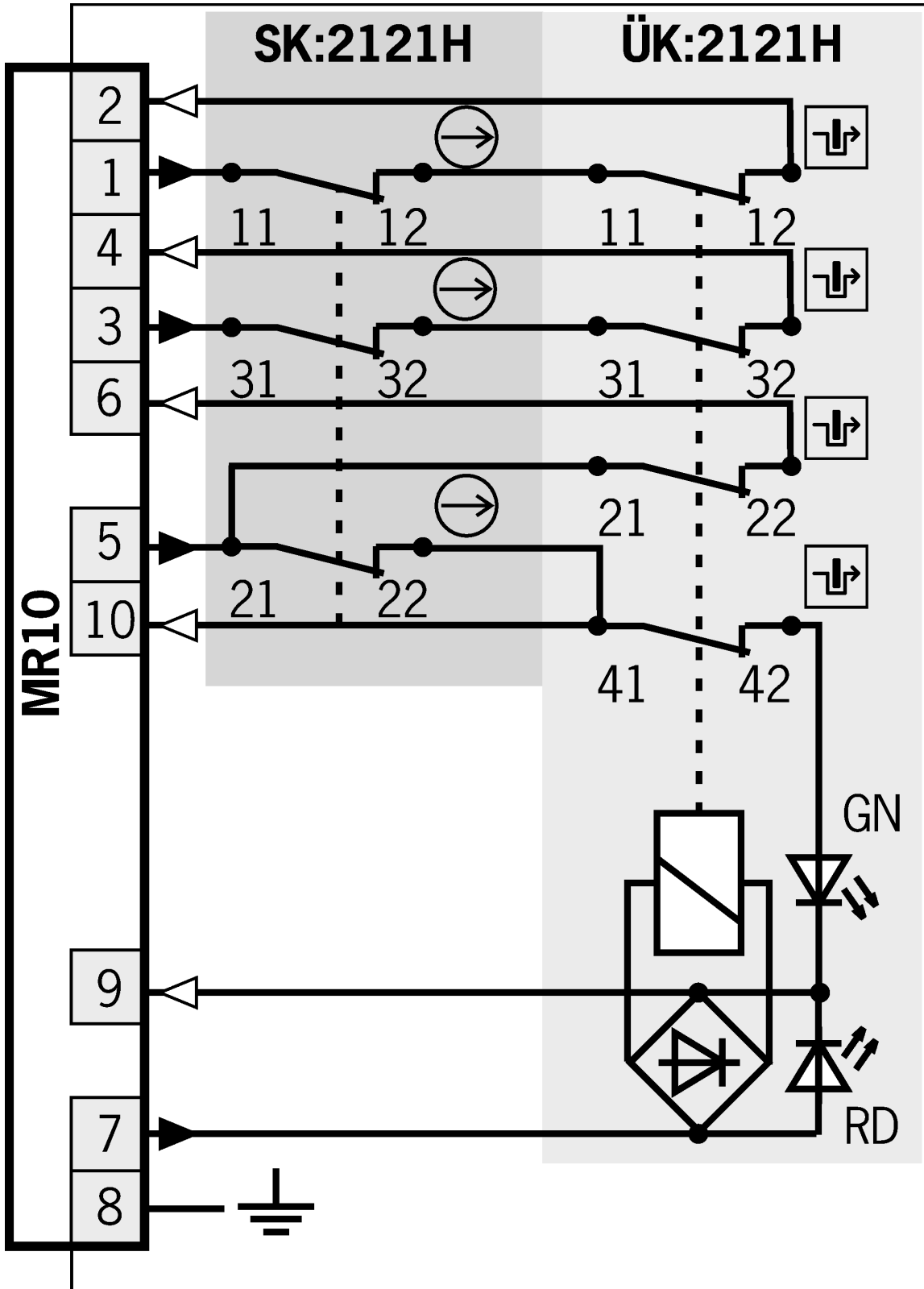



SK 2121H  
ÜK 2121H






## Connection examples

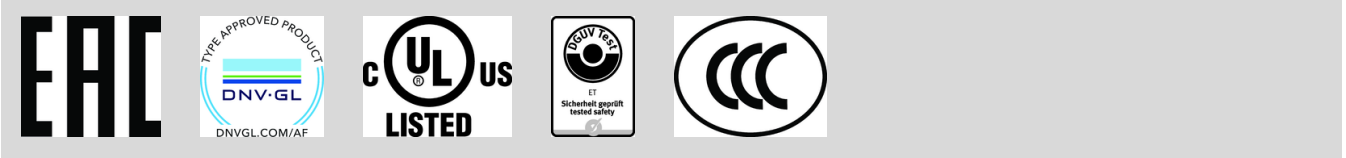


 Door monitoring

 Solenoid monitoring

## Technical data

### Approvals



### Operating and display elements

LED display

Operating voltage corresponds to the solenoid voltage  
(2 LEDs; green, red)

### Electrical connection values

Power consumption	10 W
Rated insulation voltage $U_i$	250 V
Rated impulse withstand voltage $U_{imp}$	1.5 kV
Utilization category	
	AC-15 4 A 230 V ( $>70\text{ °C} \Rightarrow 2\text{ A}$ )
	DC-13 4 A 24 V ( $>70\text{ °C} \Rightarrow 2\text{ A}$ )
Short circuit protection according to IEC 60269-1	4A gG ( $>70\text{ °C} \Rightarrow 2\text{ A gG}$ )
Solenoid operating voltage	
	AC/DC 24 V -15% ... +10%
Solenoid duty cycle	100 %
Switching voltage	
	min. at 10 mA 12 V
Switching current	
	min. at 24 V 1 mA
thermal rated current $I_{th}$	4 A ( $>70\text{ °C} \Rightarrow 2\text{ A}$ )

### Mechanical values and environment

Approach speed	max. 20 m/min
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Approach direction

Actuating head on the right A

Connection type	
1 x	Plug connector BHA10 (9-pin + PE; positively driven contact for the door position and positively driven contact for guard lock monitoring connected in series, NC contact for the door position and NC contact for guard lock monitoring connected in series)
Number of door position positively driven contacts	3
Number of guard lock monitoring positively driven contacts	4
Extraction force	30 N
Actuation frequency	max. 1200 1/h
Actuating force	35 N
Lid	Red
Installation orientation	any
Insertion depth	52 mm
Mechanical life	1 x 10 <sup>6</sup>
Retention force	10 N
Switching principle	Slow-action switching contact
Degree of protection	IP65
Ambient temperature	-25 ... +80 °C
Material	
Contact	Silver alloy, gold flashed
Housing	Anodized die-cast alloy
Locking force $F_{max}$	2000 N
Locking force $F_{Zh}$	1500 N
Guard locking principle	Closed-circuit current principle

### Characteristic values according to EN ISO 13849-1 and EN IEC 62061

	B10 <sub>D</sub>	Mission time
Monitoring of the guard position	3x10 <sup>6</sup>	20 y

	Important! Values valid at DC-13 100 mA/24V	
Monitoring of guard locking	3x10 <sup>6</sup>	20 y
	Important! Values valid at DC-13 100 mA/24V	

	PL	Maximum SIL	Category	Mission time
Control of guard locking	Depending on external control of guard locking			20 y

## Miscellaneous

C number	C1903 with auxiliary release ((for screwdriver, latching))
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## In combination with actuator ACTUATOR-Z-GN

Overtravel	16 mm
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## In combination with actuator ACTUATOR-Z-G

Overtravel	4 mm
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## Downloads

All documentation for this material can be found on our website:

<https://www.euchner.de/en-us/a/082096/?#downloads-tab>

**Ordering data**

Ordernumber	082096
Item designation	TZ1RE024BHA-C1903
Gross weight	1,304kg
Customs tariff number	85365019000
ECLASS	27-27-26-03 Safety switch with guard control

## Accessories

### Actuator

#### Actuator for safety switches NZ.VZ, NZ.VZ.VS and TZ



**016849**

BETAETIGER-Z-G

- ▶ Two stainless-steel safety screws per actuator



**074411**

BETAETIGER-Z-G/V25

- ▶ Two stainless-steel safety screws per actuator
- ▶ Packaging unit 25 pieces



**072251**

BETAETIGER-Z-GN

- ▶ Two stainless-steel safety screws per actuator



**097436**

BETAETIGER-Z-GME

- ▶ Made of solid stainless steel
- ▶ Two stainless-steel safety screws per actuator

#### Hinged actuator, bottom, for safety switches NZ.VZ, NZ.VZ.VS and TZ



**048850**

RADIUSBETAETIGER-Z-U

- ▶ Two stainless-steel safety screws per actuator



**074414**

RADIUSBETAETIGER-Z-U/V25

- ▶ Two stainless-steel safety screws per actuator
- ▶ Packaging unit 25 pieces

#### Hinged actuator, left, for safety switches NZ.VZ, NZ.VZ.VS and TZ



**024298**

RADIUSBETAETIGER-Z-L

- ▶ Two stainless-steel safety screws per actuator



**074413**

RADIUSBETAETIGER-Z-L/V25

- ▶ Two stainless-steel safety screws per actuator
- ▶ Packaging unit 25 pieces



**100407**

RADIUSBETAETIGER-Z-L-C2194

- ▶ Two stainless-steel safety screws per actuator
- ▶ Smaller door radii

#### Hinged actuator, right, for safety switches NZ.VZ, NZ.VZ.VS and TZ



**024299**

RADIUSBETAETIGER-Z-R

- ▶ Two stainless-steel safety screws per actuator



**074412**

RADIUSBETAETIGER-Z-R/V25

- ▶ Two stainless-steel safety screws per actuator
- ▶ Packaging unit 25 pieces



**100406**  
RADIUSBETAETIGER-Z-R-C2194

- ▶ Two stainless-steel safety screws per actuator
- ▶ Smaller door radii

## Hinged actuator, top, for safety switches NZ.VZ, NZ.VZ.VS and TZ



**057950**  
RADIUSBETAETIGER-Z-O

- ▶ Two stainless-steel safety screws per actuator



**074415**  
RADIUSBETAETIGER-Z-O/N25

- ▶ Two stainless-steel safety screws per actuator
- ▶ Packaging unit 25 pieces

## Bolt

### Bolt BTC-TZ00... without escape release for safety switch TZ



**106278**  
BTC-TZ00-A-TH-00-X

- ▶ Aluminum bolt
- ▶ For doors hinged on the right
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included

### Bolt TZ-A... for safety switch TZ



**057736**  
RIEGEL TZ-A

- ▶ Steel bolt
- ▶ For doors hinged on the right
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included



**096057**  
RIEGEL TZ-A-NIRO-C2101

- ▶ Stainless steel bolt
- ▶ For doors hinged on the right
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included



**117193**  
RIEGEL TZ-A-NIRO-C2392

- ▶ Stainless steel bolt
- ▶ For doors hinged on the right
- ▶ Can be locked in open position with padlocks
- ▶ Actuator and switch bracket included

### Bolt for safety switch TZ



**079798**  
RIEGEL TZ-A-NIRO

- ▶ Stainless steel bolt
- ▶ For doors hinged on the right
- ▶ Suitable for a door gap of approx. 15 mm

### Bolts NZ/TZ-S1 and NZ/TZ-S2 for safety switches NZ.VZ, NZ.VZ.VS and TZ



**028357**  
RIEGEL NZ/TZ-S1

- ▶ Aluminum bolt
- ▶ For doors hinged on the left or right. Cone grip bottom.
- ▶ Spring catch in open position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included



**028359**  
RIEGEL NZ/TZ-S2

- ▶ Aluminum bolt
- ▶ For doors hinged on the left or right. Cone grip top.
- ▶ Spring catch in open position
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included

## Connection accessories

### Connecting cable with plug connector MR10, 10-pin, 1.8 m



**100949**  
C-MINF10-10X1,0PV01,8-MA-100949

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 1.8 m
- ▶ With flying lead



**102516**  
C-MINF10-10X1,0PU01,8-MA-102516

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 1.8 m
- ▶ With flying lead

### Connecting cable with plug connector MR10, 10-pin, 12.1 m



**102505**  
C-MINF10-10X1,0PV12,1-MA-102505

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 12.1 m
- ▶ With flying lead



**102519**  
C-MINF10-10X1,0PU12,1-MA-102519

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 12.1 m
- ▶ With flying lead

### Connecting cable with plug connector MR10, 10-pin, 15.2 m



**100953**  
C-MINF10-10X1,0PV15,2-MA-100953

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 15.2 m
- ▶ With flying lead



**102520**  
C-MINF10-10X1,0PU15,2-MA-102520

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 15.2 m
- ▶ With flying lead

### Connecting cable with plug connector MR10, 10-pin, 18.2 m



**102521**  
C-MINF10-10X1,0PU18,2-MA-102521

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 18.2 m
- ▶ With flying lead



**103157**  
C-MINF10-10X1,0PV18,2-MA-103157

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 18.2 m
- ▶ With flying lead

## Connecting cable with plug connector MR10, 10-pin, 3.6 m



**100950**  
C-MINF10-10X1,0PV03,6-MA-100950

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 3.6 m
- ▶ With flying lead



**102517**  
C-MINF10-10X1,0PU03,6-MA-102517

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 3.6 m
- ▶ With flying lead

## Connecting cable with plug connector MR10, 10-pin, 6 m



**100951**  
C-MINF10-10X1,0PV06,0-MA-100951

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 6 m
- ▶ With flying lead



**102518**  
C-MINF10-10X1,0PU06,0-MA-102518

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 6 m
- ▶ With flying lead

## Connecting cable with plug connector MR10, 10-pin, 9.1 m



**100952**  
C-MINF10-10X1,0PV09,1-MA-100952

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 9.1 m
- ▶ With flying lead



**100956**  
C-MINF10-10X1,0PU09,1-MA-100956

- ▶ MR10 female plug, 10-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 9.1 m
- ▶ With flying lead

## Function expansion

### Adapter NZ/TZ 45/30



**079033**  
ADAPTER NZ/TZ 45/30

- ▶ The adapter NZ/TZ 45/30 is used to compensate for different profiles, doors/frame 45/30

## Lockout bar NZ.VZ/TZ, 3 holes



**046730**  
SPERREINSATZ-Z-046730

- ▶ Prevents unintentional closing of the door
- ▶ Can be secured with padlocks



**091305**  
SPERREINSATZ MIT KETTE

- ▶ Prevents unintentional closing of the door
- ▶ Can be secured with padlocks

## Lockout bar NZ.VZ/TZ, 5 holes

**086538**  
SPERREINSATZ-Z-086538

- ▶ Prevents unintentional closing of the door
- ▶ Can be secured with padlocks

## Protective plate NZ.VZ/TZ

**059136**  
SCHUTZBLECH NZ/TZ

## Mounting accessories

### Mounting plates EMP-B1 for actuators for safety switches CTP, CTA, TP...A, STA, STP, TX and TZ



**093457**  
EMP-B1

### Mounting plates EMP-B2 for actuators for safety switches CTP, CTA, TP...A, STA, STP, TX and TZ



**093458**  
EMP-B2

### Mounting plates EMP-SA for safety switch TZ



**094401**  
EMP-SA

- ▶ For vertical and horizontal mounting of safety switch TZ

## Safety screws M5 x 10

**073455**  
M5X10-NIRO/V100

- ▶ Safety screws M5 x 10
- ▶ Packaging unit 100 pieces

## Safety screws M5 x 16

**073456**  
M5X16/V100

- ▶ Safety screws M5 x 16
- ▶ Packaging unit 100 pieces

## Safety screws for actuators, M5 x 25

**073457**  
M5X25/V100

- ▶ Safety screws M5 x 25
- ▶ Packaging unit 100 pieces