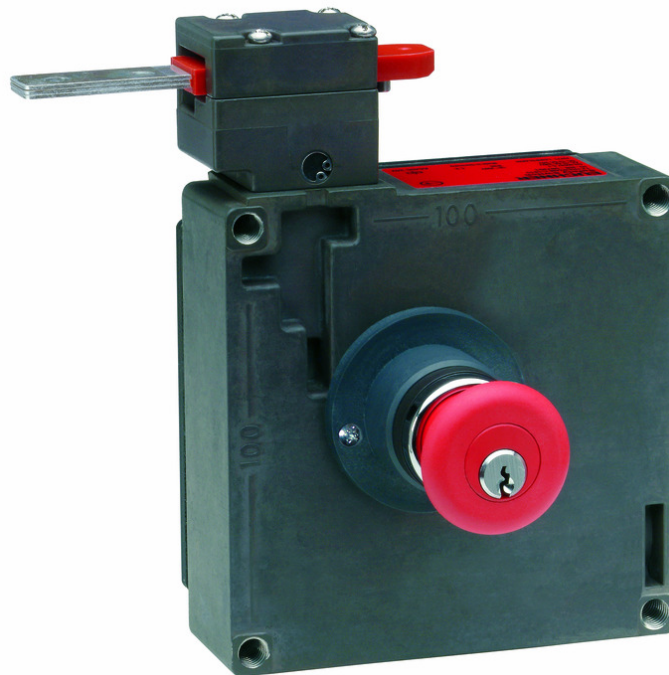


**ITEM 089468 TZ1LE024MVAB-C1828**

| Description | Technical data | Accessories | Downloads |
|-------------|----------------|-------------|-----------|
|-------------|----------------|-------------|-----------|



**Features**

- › Auxiliary release on the front
- › Escape release on the rear with key button
- › Two LED indicators, red and green
- › Actuating head fitted left

**Approach direction**



- › Figure  
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.

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## Switching elements

**SK** For monitoring the door/actuator position

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

**2131H** Slow-action switching contact 3 NC $\ominus$  + 1 NO

**3131H** Slow-action switching contact 2 NC $\ominus$  + 2 NO

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## Auxiliary release

Is used for releasing the guard locking with the aid of a tool. Sealing can be fitted to protect against tampering. Lead seal kit and tool included (already pre-assembled on versions with plug connectors).

---

## Escape release

This is used for manual release of guard locking from within the danger area without tools. The disable can only be removed and the switch returned to its operating state using a key included (2 keys included).

## Approvals



## Mechanical values and environment

|  |                               |
|--|-------------------------------|
| Housing material   | Anodized die-cast alloy       |
| Weight   | Net 1,2 kg                    |
| Ambient temperature  | -25 ... 80 °C                 |
| Degree of protection                                       | IP67                          |
| Mechanical life  | 1 x 10 <sup>6</sup>           |
| Contact material   | Silver alloy, gold flashed    |
| Switching principle  | Slow-action switching contact |
| Installation position                                      | Any                           |
| Number of door position positively driven contacts         | 3                             |
| Number of door position NO contacts                        | 1                             |
| Number of guard lock monitoring positively driven contacts | 2                             |
| Number of guard lock monitoring NO contacts                | 2                             |
| Connection   |                               |

|                         |     |                                  |
|-------------------------|-----|----------------------------------|
|                         | 1 x | M20 x 1.5                        |
| Approach speed          |     | max.20 m/min                     |
| Actuation frequency     |     | 1200 1/h                         |
| Guard locking principle |     | Closed-circuit current principle |
| Locking force $F_{max}$ |     | 2000 N                           |
| Locking force $F_{Zh}$  |     | 1500 N                           |
| Retention force         |     | 10 N                             |
| Extraction force        |     | 30 N                             |
| Actuating force         |     | 35 N                             |
| Insertion depth         |     | min.52 mm                        |
| Cover lid               |     | Black                            |

### Electrical connection ratings

|   |              |  |
|---|--------------|--|
| Rated thermal current $I_{th}$                    |              | 4 A <sup>[1]</sup>   |
| Utilization category according to EN 60947-5-1    |              |  |
|   | AC-15        | 4A 230V <sup>[2]</sup>   |
|   | DC-13        | 4A 24V <sup>[3]</sup>  |
| Solenoid operating voltage                        |              |  |
|   | AC/DC        | 24 V -15% ... +10%   |
| Short circuit protection according to IEC 60269-1 |              |  |
|   | (Fuse)       | 4A gG <sup>[4]</sup>   |
| Rated insulation voltage $U_i$                    |              | 250 V  |
| Rated impulse withstand voltage $U_{imp}$         |              | 2,5 kV   |
| Switching voltage                                 |              |  |
|   | Min. at 10mA | 12 V   |
| Switching current                                 |              |  |
|   | Min. at 24V  | 1 mA   |
| Power consumption                                 |              | 10 W   |
| Solenoid duty cycle                               |              | 100 %  |
| Connection cross-section                          |              | 0,34 ... 1,5 mm <sup>2</sup>   |
| LED indicator                                     |              | Operating voltage corresponds to the solenoid voltage <sup>[5]</sup> |

### Miscellaneous

|          |       |                                    |
|----------|-------|------------------------------------|
| C number |       |                                    |
|          | C1828 | with escape release <sup>[6]</sup> |

### Reliability values acc. to EN ISO 13849-1

|                   |  |  |
|-------------------|--|--|
|                   |  | <b>Control of the guard locking</b>            |
| Category          |  | Depending on external control of guard locking |
| Performance Level |  | Depending on external control of guard locking |
| PFH <sub>D</sub>  |  | Depending on external control of guard locking |

|      |  |
|------|--|
|      | <b>Monitoring of guard locking and the safety guard position</b> |
| B10D | $3 \times 10^6$  |

---

### **in combination with Actuator BETAETIGER-Z-G**

#### **Mechanical values and environment**

|            |      |
|------------|------|
| Overtravel | 4 mm |
|------------|------|

### **in combination with Actuator BETAETIGER-Z-GN**

#### **Mechanical values and environment**

|            |       |
|------------|-------|
| Overtravel | 16 mm |
|------------|-------|

[1, 2, 3]  $> 70^\circ\text{C} \Rightarrow 2\text{A}$

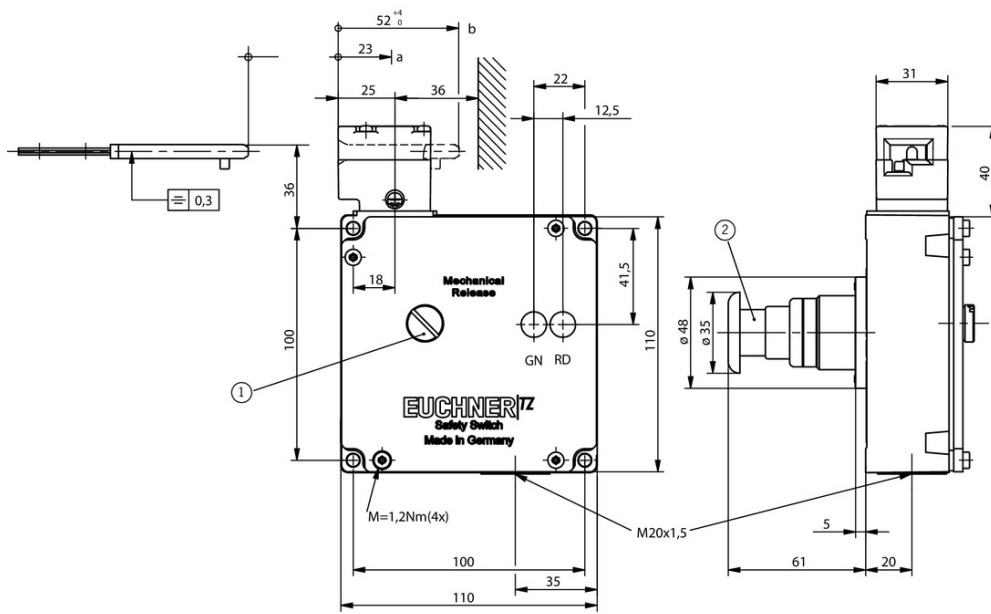
[4]  $> 70^\circ\text{C} \Rightarrow 2\text{A gG}$

[5] 2 LEDs; green, red

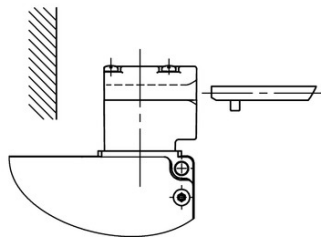
[6] (Mushroom-head key button)

#### **Dimension drawing**

TZ.L...



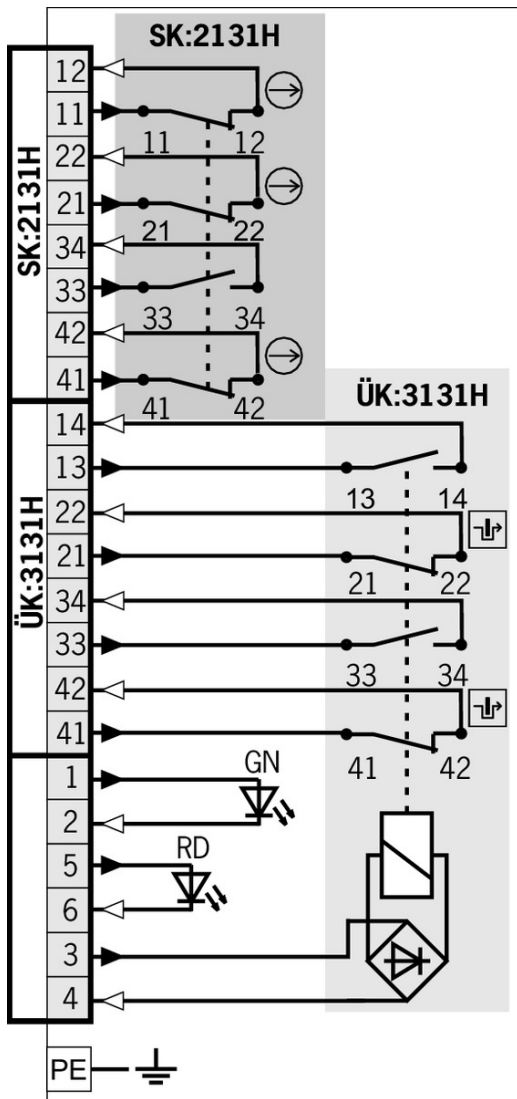
TZ.R...



## Legende

- 1 Auxiliary release
- 2 Escape release (red key button)

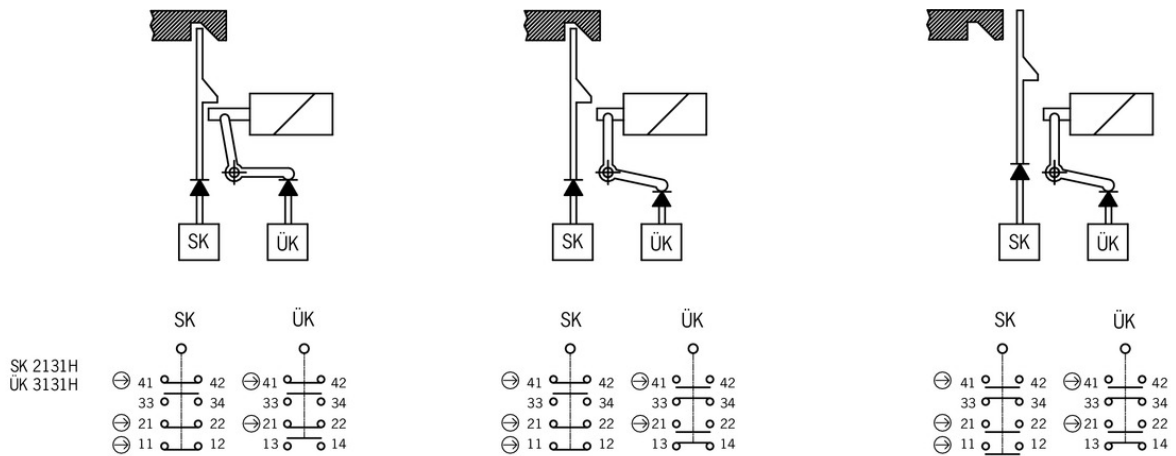
**SK: 2131H / ÜK: 3131H**



**Legende**

- Solenoid monitoring
- Door monitoring

## Switching functions



## Actuator

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



#### **048850** RADIUSBETAETIGER-Z-U

##### ✓ Features

- › Two stainless safety screws per actuator



#### **074414** RADIUSBETAETIGER-Z-U/V25

##### ✓ Features

- › Two stainless safety screws per actuator
- › Packaging unit 25 pieces

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



#### **057950** RADIUSBETAETIGER-Z-O

##### ✓ Features

- › Two stainless safety screws per actuator



#### **074415** RADIUSBETAETIGER-Z-O/V25

##### ✓ Features

- › Two stainless safety screws per actuator
- › Packaging unit 25 pieces

### ✓ Actuators for safety switches NZ.VZ, NZ.VZ.VS and TZ



#### **072251** BETAETIGER-Z-GN

##### ✓ Features

- › Two stainless safety screws per actuator



#### **074411** BETAETIGER-Z-G/V25

##### ✓ Features

- › Two stainless safety screws per actuator

- › Packaging unit 25 pieces



**097436 BETAETIGER-Z-GME**

✓ Features

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



**016849 BETAETIGER-Z-G**

✓ Features

- › Two stainless safety screws per actuator

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



**024299 RADIUSBETAETIGER-Z-R**

✓ Features

- › Two stainless safety screws per actuator



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

✓ Features

- › Two stainless safety screws per actuator
- › Smaller door radii



**074412 RADIUSBETAETIGER-Z-R/V25**

✓ Features

- › Two stainless safety screws per actuator
- › Packaging unit 25 pieces

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



**074413 RADIUSBETAETIGER-Z-L/V25**

✓ Features

- › Two stainless safety screws per actuator
- › Packaging unit 25 pieces



**100407 RADIUSBETAETIGER-Z-L-C2194**

✓ Features

- › Two stainless safety screws per actuator
- › Smaller door radii



**024298 RADIUSBETAETIGER-Z-L**

✓ Features

- › Two stainless safety screws per actuator

## Spare parts

✓ Lead seal kit



## 048257 PLOMBENSATZ TZ

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### Function expansion

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- ▼ Lockout mechanism NZ.VZ/TZ, 5 holes

#### 086538 SPERREINSATZ-Z-086538

##### ▼ Features

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

- ▼ Protective plate NZ.VZ/TZ

#### 059136 SCHUTZBLECH NZ/TZ

---

- ▼ Lockout mechanism NZ.VZ/TZ, 3 holes



#### 091305 SPERREINSATZ MIT KETTE

##### ▼ Features

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



#### 046730 SPERREINSATZ-Z-046730

##### ▼ Features

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

- ▼ Adapter NZ/TZ 45/30



#### 079033 ADAPTER NZ/TZ 45/30

##### ▼ Features

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

### Mounting accessories

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



#### 093458 EMP-B2

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- ▼ Mounting plates EMP-SA for safety switches TZ



#### 094401 EMP-SA

##### ▼ Features

- › For vertical and horizontal mounting of safety switch TZ

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



**093457** EMP-B1

- ▼ Safety screws for actuators, M5 x 10

**073455** M5X10-NIRO/V100 NZ/TZ

- ▼ Features

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

- ▼ Safety screws for actuators, M5 x 16

**073456** M5X16/V100

- ▼ Features

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

- ▼ Safety screws M5 x 25

**073457** M5X25/V100

- ▼ Features

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

## Bolt

- ▼ Bolt BTC-TZ00... with escape release for safety switch TZ



**106281** BTC-TZ00-C-TH-01-F

- ▼ Features

- › Aluminum bolt
- › For doors hinged on the left
- › Lever for escape release from the danger area
- › Pushbutton in open position
- › Can be locked in open position with padlocks
- › Actuator included

- ▼ Bolts NZ/TZ-S1/AF and NZ/TZ-S1/CF with escape release for safety switches NZ.VZ, NZ.VZ.VS and TZ with escape release



**079785** RIEGEL NZ/TZ-S1/CF

- ▼ Features

- › Aluminum bolt
- › For doors hinged on the left
- › Escape release

- › Spring catch in open position
- › Can be locked in open position with padlocks
- › Actuator included

---

▼ Bolt NZ/TZ-ACF with escape release for safety switches NZ.VZ and TZ with escape release



**083900** RIEGEL NZ/TZ-ACF

▼ Features

- › Steel bolt
- › For doors hinged on the right or left
- › Lever for escape release from the danger area
- › Detent knob in open position
- › Can be locked in open position with padlocks
- › Bolt for two safety switches
- › Actuator included

---

▼ Bolt TZ-CF with escape release for safety switches TZ with escape release



**076199** RIEGEL TZ-CF

▼ Features

- › Steel bolt
- › For doors hinged on the left
- › Escape release
- › Lever for escape release from the danger area
- › Detent knob in open position
- › Can be locked in open position with padlocks
- › Actuator and switch bracket included



**121716** RIEGEL TZ-CF-NIRO-C2392

▼ Features

- › Steel bolt
- › For doors hinged on the left
- › Escape release
- › Lever for escape release from the danger area
- › Detent knob in open position
- › Can be locked in open position with padlocks
- › Actuator and switch bracket included

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## Connection material

▼ Cable glands M20x1.5



**077684** EKVM20/09

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## Instructions

▼ Betriebsanleitung Sicherheitsschalter TZ...

|   | Doc. no. | Version  | Language     | Download |
|---|----------|----------|--------------|----------|
| Betriebsanleitung Sicherheitsschalter TZ...<br>Operating Instructions TZ... Safety Switch<br>Manual de instrucciones del interruptor de<br>seguridad TZ...<br>Mode d'emploi Interrupteur de sécurité TZ...<br>Istruzioni di impiego dei finecorsa di sicurezza<br>TZ... | 2088062  | 09-05/18 | <br><br><br> | 6.9 MB   |
| Instrukcja obsługi wyłącznika bezpieczeństwa<br>TZ...   | 2088062  | 09-05/18 |              | 1.8 MB   |
| Manual de instruções da chave de segurança<br>TZ...   | 2088062  | 09-05/18 |              | 1.5 MB   |
| Руководство по эксплуатации<br>предохранительных выключателей TZ...   | 2088062  | 09-05/18 |              | 1.9 MB   |
| Návod na obsluhu – bezpečnostný spínač TZ...  | 2088062  | 09-05/18 |              | 1.8 MB   |
| 使用说明书安全开关 TZ...   | 2088062  | 09-05/18 |              | 1.6 MB   |

## Catalogs

- Sicherheitsschalter mit Metallgehäuse Safety Switches with Metal Housing Bezpečnostní spínače s kovovým pouzdrém Interrupteurs de sécurité avec boîtier métallique 金属壳体的安全开关 Interruptores de seguridad con carcasa metálica

|   | Doc. no. | Version  | Language | Download |
|---|----------|----------|----------|----------|
| Sicherheitsschalter mit Metallgehäuse             | 100319   | 11-03/18 |          | 7.9 MB   |
| Interrupteurs de sécurité avec boîtier métallique | 100676   | 11-03/18 |          | 7.9 MB   |
| Interruptores de seguridad con carcasa metálica   | 104856   | 11-03/18 |          | 14.0 MB  |
| Safety Switches with Metal Housing                | 100369   | 11-03/18 |          | 7.9 MB   |
| Bezpečnostní spínače s kovovým pouzdrém           | 121650   | 11-03/18 |          | 7.9 MB   |
| 金属壳体的安全开关   | 102453   | 11-03/18 |          | 8.2 MB   |

## Declaration of conformity

- EU prohlášení o shodě

|  | Doc. no. | Version  | Language                         | Download |
|--|----------|----------|----------------------------------|----------|
| EU-Konformitätserklärung<br>Declaración UE de conformidad<br>Déclaration UE de conformité<br>Dichiarazione di conformità<br>EU declaration of conformity   | 2077153  | 25-02/17 | <br><br><br><br>                 | 0.3 MB   |
| EU prohlášení o shodě<br>EU-overensstemmelseserklæring<br>Δήλωση συμμόρφωσης της ΕΕ<br>EU-vaatimustenmukaisuusvakuutus<br>EU-típusbizonyítvány<br>EU-conformiteitsverklaring<br>Deklaracja zgodności UE<br>Declaração de Conformidade UE<br>Declarația de conformitate UE<br>EÚ vyhlásenie o zhode | 2077153  | 25-02/17 | <br><br><br><br><br><br><br><br> | 0.5 MB   |

## CAD data

CAD data for this item on TraceParts