

## ITEM 086141 TZ1RE024SEM4AS1

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



### Features

- › Auxiliary release on the front
- › Actuating head fitted right
- › Plug connector M12

### Guard locking type

**TZ1** Closed-circuit current principle, guard locking by spring force. Release by control of AS-i output 0.

### Control of the guard locking solenoid

The guard locking solenoid is controlled by the control system via AS-Interface bus bit D0. In addition the 24V connection can be switched safely.

### AS-Interface inputs

**D0, D1** Door monitoring contact SK  
**D2, D3** Solenoid monitoring contact ÜK  
Evaluation is performed via a safety monitor.

## AS-Interface outputs

- D0** Guard locking solenoid
- D1** Red LED
- D2** Green LED

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## LED function display

- › The Power LED indicates the operating voltage on the bus.
- › The Fault LED indicates if a fault has been detected on the AS-Interface bus.
- › The green and the red LEDs can be controlled as required by the control system via the bus using bits D1 and D2.

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## Auxiliary release

Is used for releasing the guard locking with the aid of a tool. A seal and auxiliary tool are fitted to protect against tampering.

## Approvals



## Mechanical values and environment

|  |                                  |
|--|----------------------------------|
| Housing material   | Anodized die-cast alloy          |
| Weight   | Net 1,2 kg                       |
| Ambient temperature  | -25 ... 55 °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         |                                  |
| According to As-i Safety at Work                           | 1 D0,D1 [1]                      |
| Number of guard lock monitoring positively driven contacts |                                  |
| According to As-i Safety at Work                           | 1 D2,D3 [2]                      |
| Connection   |                                  |
| 1 x  | Plug connector M12 [3]           |
| Approach speed   |                                  |
| max.   | 20 m/min                         |
| Actuation frequency  | 1200 1/h                         |
| Guard locking principle                                    | Closed-circuit current principle |
| Retention force  | 10 N                             |

|                  |       |
|------------------|-------|
| Extraction force | 30 N  |
| Actuating force  | 35 N  |
| Insertion depth  | 52 mm |

### Electrical connection ratings

|                                    |                      |
|------------------------------------|----------------------|
| ASi voltage                        | 22,5 ... 30 V 31,6 V |
| ASi operating current              | max.45 mA            |
| ASi auxiliary voltage              |                      |
| IEC 60742, PELV                    | 24 V -15% ... +10%   |
| ASi auxiliary current              | 350 mA               |
| Solenoid duty cycle                | 100 %                |
| ASi slave type                     |                      |
| According to ASI specification 2.1 | EA code: 7           |
| According to ASI specification 2.1 | ID code: B           |
| ASi data in                        |                      |
| According to ASI safety at work    | D0,D1,D2,D3 [4]      |
| ASi data out                       |                      |
| Guard locking solenoid             | D0 [5]               |
| LED red                            | D1 [6]               |
| LED green                          | D2 [7]               |
| ASi LED                            |                      |
| LED green                          | Power [8]            |
| LED red                            | Fault [9]            |

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

|                  |                 |
|------------------|-----------------|
| B10 <sub>D</sub> | $3 \times 10^6$ |
|------------------|-----------------|

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

#### Mechanical values and environment

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

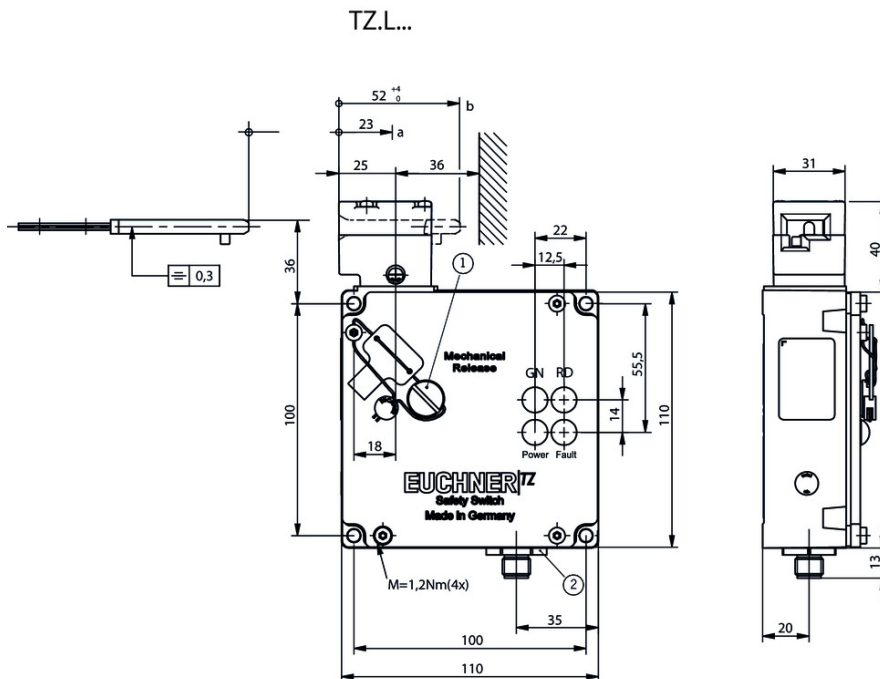
### in combination with Actuator BETAETIGER-Z-GN

#### Mechanical values and environment

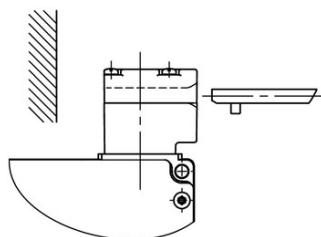
|            |       |
|------------|-------|
| Overtravel | 16 mm |
|------------|-------|

- [1] 1 = Door closed
- [2] 1 = Locked
- [3] 4-pin
- [4] See positively driven NC contact
- [5] 1 = Solenoid energized
- [6, 7] 1 = LED on
- [8] ASI voltage is present
- [9] Offline phase or address 0

## Dimension drawing



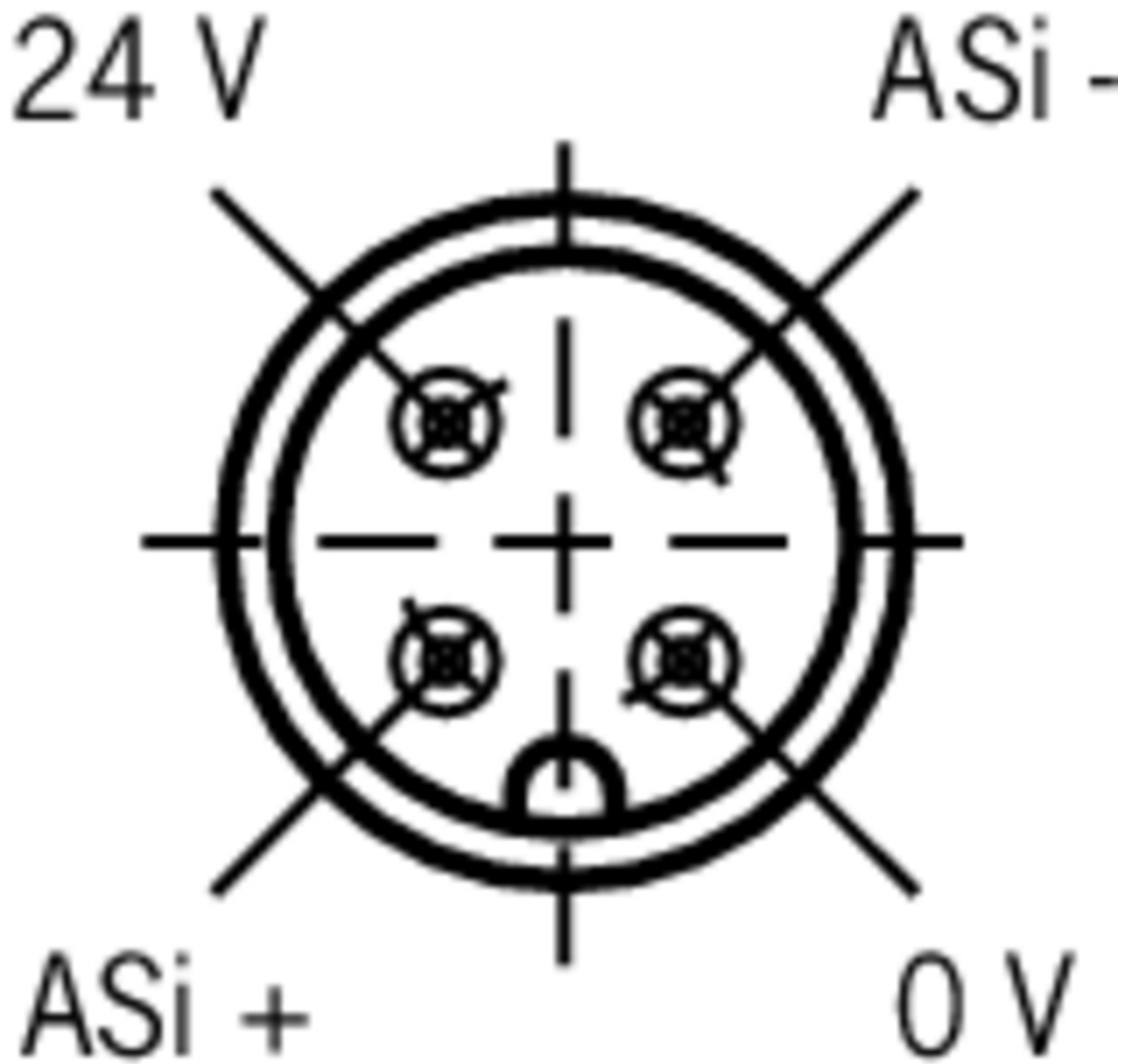
TZ.R...



## Legende

- 1 Auxiliary release
- 2 Plug connector not aligned
- a Travel without operation: Actuator is in the guide slot, but function is not triggered.
- b Switching operation completed. actuator must be inserted to this point to ensure reliable switching. The actuator must be withdrawn at least to point a for switching off.

## Connector assignment



## Legende

View of connection side

## Function expansion

▼ 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



**046730** SPERREINSATZ-Z-046730

✓ Features

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



**091305** SPERREINSATZ MIT KETTE

✓ Features

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

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## Spare parts

- ✓ Lead seal kit

**048257** PLOMBENSATZ TZ

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## Bolt

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



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

✓ Features

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

- ✓ Bolt TZ-A... for safety switches TZ



**079798** RIEGEL TZ-A-NIRO

✓ Features

- › Stainless 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

✓ Features

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

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**057736** RIEGEL TZ-A

✓ Features



- › 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

##### ✓ Features

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

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



#### **028359** RIEGEL NZ/TZ-S2

##### ✓ Features

- › 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



#### **028357** RIEGEL NZ/TZ-S1

##### ✓ Features

- › 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

## Mounting accessories

#### ✓ 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

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



#### **093458** EMP-B2

#### ✓ 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
- 

## Actuator

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



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

☑ Features

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



**048850** RADIUSBETAETIGER-Z-U

☑ Features

- › Two stainless safety screws per actuator
- 

☑ 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
- 

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



**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



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

✓ Features

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

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



**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



**024299** RADIUSBETAETIGER-Z-R

✓ Features

- › Two stainless safety screws per actuator

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



**072251** BETAETIGER-Z-GN

✓ Features

- › Two stainless safety screws per actuator



**016849** BETAETIGER-Z-G

✓ 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

## Connection material

### Bus coupling module with plug connector M12, 5-pin



#### 105756 BCM-A-P2-SEM4-1

##### Features

- › Conversion from M12 to ribbon cable
- › Very compact design
- › Easy handling

## Instructions

### Betriebsanleitung Sicherheitsschalter TZ...AS1

|   | Doc. no. | Version  | Language     | Download |
|---|----------|----------|--------------|----------|
| Betriebsanleitung Sicherheitsschalter TZ...AS1<br>Mode d'emploi pour les interrupteurs de sécurité TZ...AS1<br>Istruzioni di impiego dei finecorsa di sicurezza TZ...AS1<br>Operating Instructions Safety Switches TZ...AS1 | 086963   | 07-08/15 | <br><br><br> | 4.0 MB   |
| Инструкция по эксплуатации предохранительных выключателей TZ...AS1  | 086963   | 07-08/15 |              | 0.4 MB   |

## Catalogs











### Sicherheitsschalter mit AS-Interface Safety Switches with AS-Interface Interrupteurs de sécurité avec AS-Interface

|   | Doc. no. | Version  | Language | Download |
|---|----------|----------|----------|----------|
| Sicherheitsschalter mit AS-Interface        | 092164   | 11-04/17 |          | 2.3 MB   |
| Interrupteurs de sécurité avec AS-Interface | 112564   | 11-04/17 |          | 2.3 MB   |
| Safety Switches with AS-Interface           | 092332   | 11-04/17 |          | 2.3 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           | 2077153 | 25-02/17 |   |  0.5 MB |
| EU-overensstemmelseserklæring   |         |          |  |   |
| Δήλωση συμμόρφωσης της ΕΕ       |         |          |  |   |
| EU-vaatimustenmukaisuusvakuutus |         |          |  |   |
| EU-típusbizonyítvány            |         |          |  |   |
| EU-conformiteitsverklaring      |         |          |  |   |
| Deklaracja zgodności UE         |         |          |  |   |
| Declaração de Conformidade UE   |         |          |  |   |
| Declarația de conformitate UE   |         |          |  |   |
| EÚ vyhlásenie o zhode           |         |          |  |   |

**CAD data**

CAD data for this item on TraceParts