

## ITEM 082921 TX1B-A024M

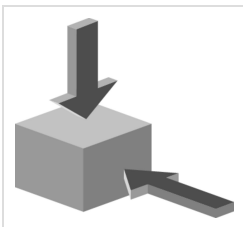
Description	Technical data	Accessories	Downloads
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### Features

- › Auxiliary release on the front
- › With door monitoring contact

### Approach direction



- › Figure  
Horizontal and vertical  
Can be adjusted in 90° steps

### Solenoid operating voltage

- › AC/DC 24 V +10%, -15%

### LED function display

The switch has a function display (2 LEDs, red and green). The LED voltage is same as the solenoid operating voltage.

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## Guard locking type

**TX1** Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

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## Switching element

**ETX B** Slow-action switching contact 2 NC  $\oplus$  / 1 NO + 1 NC (door monitoring contact)

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## Auxiliary release

Is used for releasing the guard locking with the aid of a tool. The auxiliary release must be sealed to prevent tampering (for example with sealing lacquer).

## Approvals



## Mechanical figures and environment

Housing material	Die-cast alloy, cathodically dipped
Ground	
Net	0,8 kg
Ambient temperature	-20 ... 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 NC contacts	1
Number of guard lock monitoring positively driven contacts	2
Number of guard lock monitoring NO contacts	1
Connection	
	3 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 <sub>max</sub>	1700 N

Locking force $F_{Zh}$ (in accordance with GS-ET-19)	1300 N
Retention force	20 N
Extraction force	35 N
Actuating force	35 N
Insertion depth	min. 32 mm

### Electrical connection ratings

Thermal rated current $I_{th}$	4 A
Utilization category acc. to EN 60947-5-1	
AC-15	4A 230V
DC-13	4A 24V
Solenoid operating voltage	
AC/DC	24 V -15% ... +10%
Short circuit protection according to IEC 60269-1	
(Fuse)	4A gG
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	8 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>[1]</sup>

### Reliability values according to EN ISO 13849-1

	Control of the guard locking
Category	Depending on external control of guard locking <sup>[2]</sup>
Performance Level	Depending on external control of guard locking <sup>[3]</sup>
PFH <sub>d</sub>	Depending on external control of guard locking <sup>[4]</sup>
	Monitoring of guard locking and the safety guard position
B10 <sub>d</sub>	6 x 10 <sup>6</sup>

### In combination with Actuator BETAETIGER-X-GQ, 079740

### Mechanical figures and environment

Overtravel	1 mm
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In combination with Actuator BETAETIGER-X-GNQ, 079742, 098082, 097906

## Mechanical figures and environment

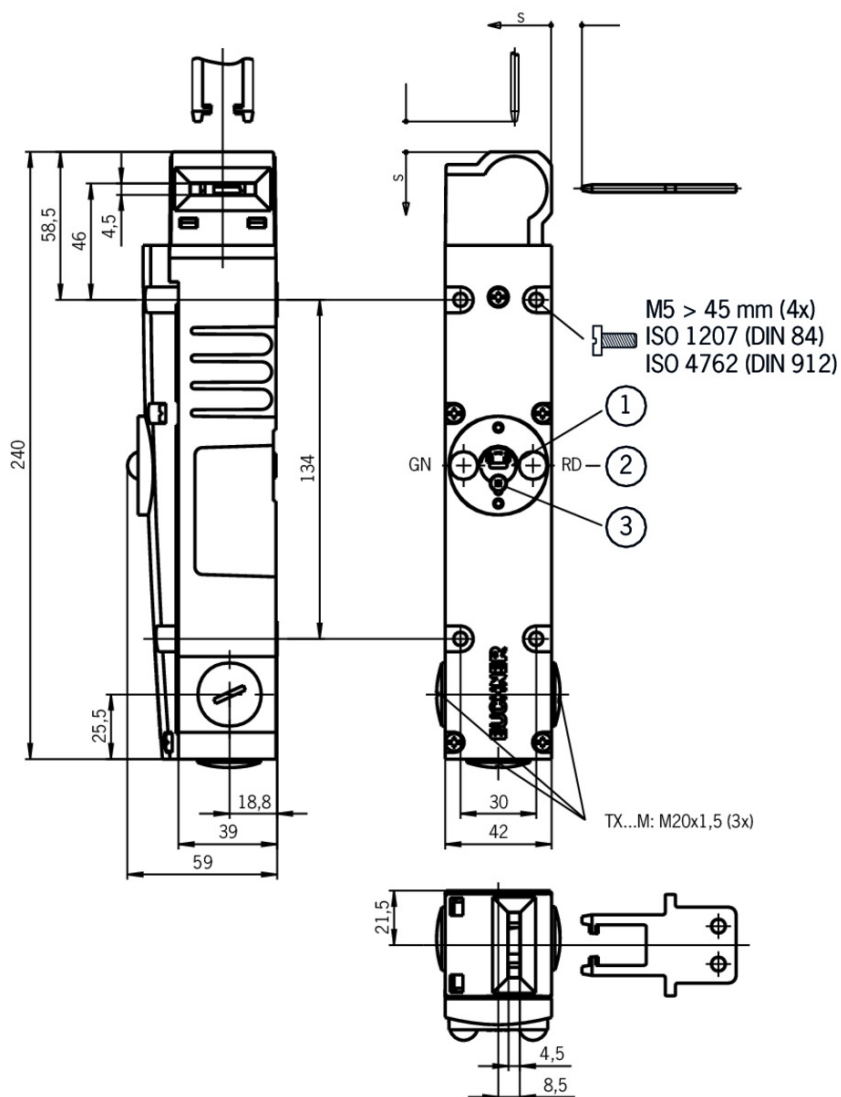
Overtravel

8 mm

[1] 2 LEDs; green, red

[2, 3, 4] LEDs have the same ground potential as the guard locking solenoid.

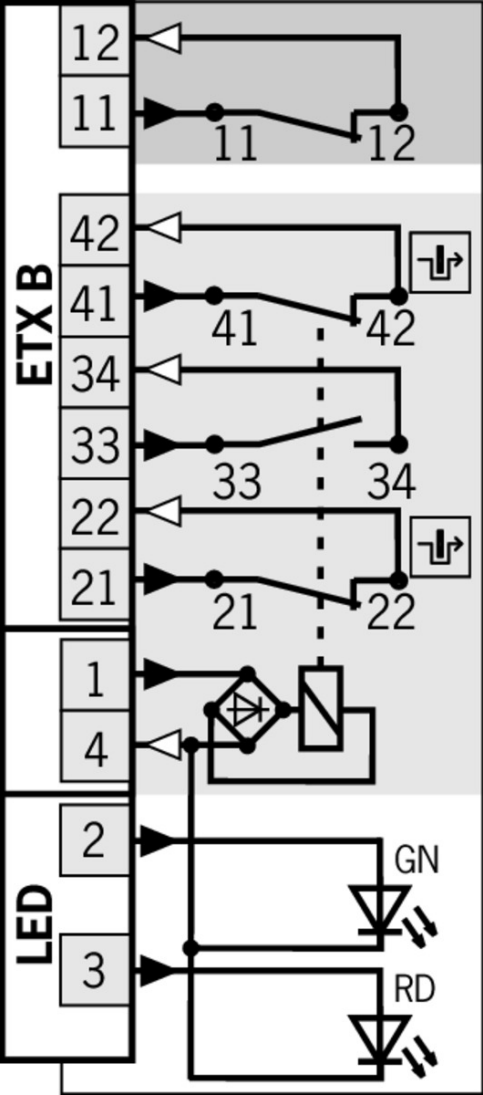
## Dimension drawing



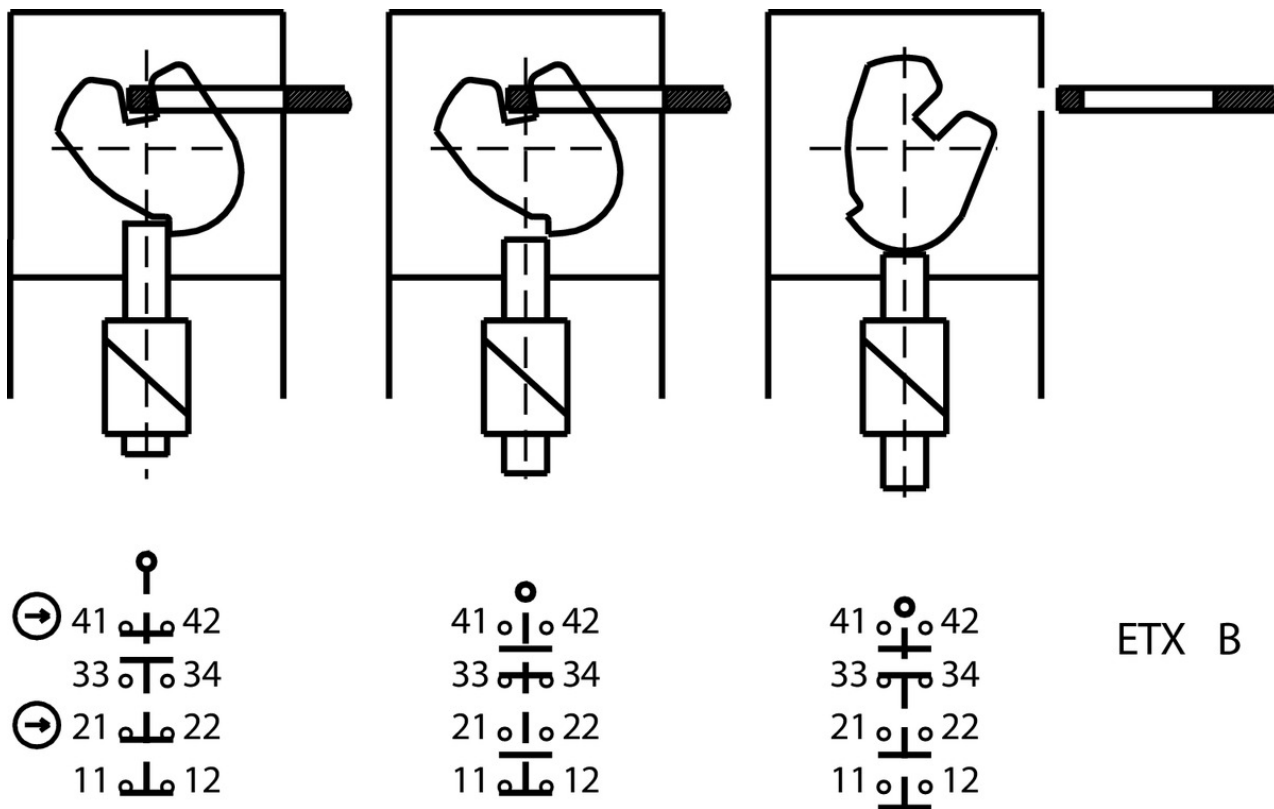
## Legende

- 1 Auxiliary release
- 2 LED indicator
- 3 Locking screw
- s Insertion depth

ETX B



## Switching functions



## Function expansion

### ✓ Lockout mechanism NX/TX



#### **096098** SPERREINSATZ TX

##### ✓ Features

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

### ✓ Emergency unlocking for safety switches TX



#### **094771** NOTENTSPERRUNG TX

### ✓ Release with automatic reset for safety switches TX



#### **094773** ENTRIEGELUNG RUECKSTELLEND TX1/3

### ✓ Lock for mechanical release for safety switches TX



#### **079796** SCHLOSS TX VERSCHIEDENSCHLIESSEND

#### **079795** SCHLOSS TX GLEICHSCHLIESSEND



## Mounting accessories

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



**093458** EMP-B2

- ✓ Mounting plates EMP-SB for safety switches CTP, TP...A, STA, STP and TX



**093456** EMP-SB

- ✓ Features

- › For vertical and horizontal mounting of safety switches TP...A, STA, STP and TX

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



**093457** EMP-B1

## Actuator

- ✓ Actuators for safety switches NX/TX, increased overtravel



**079741** BETAETIGER-X-GNQ

- ✓ Features

- › Actuators made of stainless steel
- › Two stainless safety screws per actuator
- › With rubber bush

- ✓ Actuators for safety switches NX/TX



**079739** BETAETIGER-X-GQ

- ✓ Features

- › Actuators made of stainless steel
- › Two stainless safety screws per actuator
- › With rubber bush

- ✓ Bent actuator for safety switches NX/TX



**079740** BETAETIGER-X-WQ

- ✓ Features

- › Actuators made of stainless steel
- › Two stainless safety screws per actuator
- › With rubber bush

- ✓ Bent actuator for safety switches NX/TX, increased overtravel



#### **079742** BETAETIGER-X-WNQ

##### ✓ Features

- › Actuators made of stainless steel
- › Two stainless safety screws per actuator
- › With rubber bush

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#### ✓ Hinged actuator left/right for safety switches NX/TX



#### **098082** RADIUSBETAETIGER-X-LR-N

##### ✓ Features

- › Actuators made of stainless steel
- › Two stainless safety screws per actuator

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#### ✓ Hinged actuator top/bottom for safety switches NX/TX



#### **097906** RADIUSBETAETIGER-X-OU-N

##### ✓ Features

- › Actuators made of stainless steel
- › Two stainless safety screws per actuator

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### Bolt

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#### ✓ Bolt TX-A/TX-C for safety switches TX and NX



#### **082990** RIEGEL TX-A

##### ✓ Features

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



#### **082991** RIEGEL TX-C

##### ✓ Features

- › Steel bolt
- › For doors hinged on the left
- › Can be locked in open position with padlocks
- › actuator and switch bracket included

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### Spare parts

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#### ✓ Lead seal kit

#### **087256** PLOMBENSATZ C1937

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### Connection material



## ▼ Cable glands M20x1.5



**077683** EKVM20/06



**077684** EKVM20/09

## Instructions

### ▼ Operating Instructions Safety Switches TX...

	Doc. no.	Version	Language	Download
Betriebsanleitung Sicherheitsschalter TX...	079777	06-01/15		4.4 MB
Operating Instructions Safety Switches TX...				
Mode d'emploi pour les interrupteurs de sécurité TX...				
Istruzioni di impiego dei finecorsa di sicurezza TX...				

## Catalogs

### ▼ Safety Switches with Metal Housing

	Doc. no.	Version	Language	Download
Sicherheitsschalter mit Metallgehäuse	100319	10-02/14		13.9 MB
Safety Switches with Metal Housing	100369	10-02/14		13.9 MB
Interrupteurs de sécurité avec boîtier métallique	100676	10-02/14		13.8 MB
Interruptores de seguridad con carcasa metálica	104856	10-02/14		13.7 MB

### ▼ Bezpečnostní spínače s kovovým pouzdem

	Doc. no.	Version	Language	Download
Bezpečnostní spínače s kovovým pouzdem	121650	09-01/13		7.9 MB













## Declaration of conformity

### ▼ EC-Declaration of Conformity

	Doc. no.	Version	Language	Download
EG-Konformitätserklärung	077153	24-01/16		1.1 MB
EC-Declaration of Conformity				
CE-Declaración de Conformidad				
CE-Déclaration de Conformité				
CE-Dichiarazione di conformità				

### ▼ ES prohlášení o shodě

Doc. no.	Version	Language	Download
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ES prohlášení o shodě	111196	06-01/16		 2.7 MB
EF-overensstemmelseserklæring				
Δήλωση πιστότητας EK				
EY-vaatimuksenmukaisuusvakuutus				
EK-típusbizonyítvány				
EG-conformiteitsverklaring				
Deklaracja zgodności WE				
Declaração de Conformidade CE				
Declarație de conformitate CE				
ES vyhlásenie o zhode				
EF-overensstemmelseserklæring				

**CAD data**

CAD data for this item on TraceParts