# ITEM 097789 STP4A-4141A024SEM4AS1

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



## Features

- Actuating head made of metal
- Auxiliary release on the front

## Guard locking type

**STP4**  Open-circuit current principle, guard locking by control of AS-i output 0. Release by spring force.

## 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

## 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.

## Auxiliary release

Is used for releasing the guard locking with the aid of a tool. To protect against tampering, the auxiliary release is sealed with sealing lacquer.

## Approvals

EAC

## Mechanical values and environment

| | |
|---|---|
| Housing material | Reinforced thermoplastic |
| Weight | |
| Net | 0,5 kg |
| Ambient temperature | -20 ... 55 °C |
| Degree of protection | IP67 |
| Mechanical life | $1 \times 10^6$ |
| 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 | Open-circuit current principle |
| Locking force $F_{max}$ | 2500 N |
| Locking force $F_{Zh}$ | 2000 N |

| Retention force | 20 N |
|---|---|
| Extraction force | 30 N |
| Actuating force | 35 N |

## 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 | | 300 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

| $B10_D$ | $5 \times 10^6$ |
|---|---|

## in combination withActuator BETAETIGER-S-GT-SN

## Mechanical values and environment

| Overtravel | | |
|---|---|---|
| | Horizontal | 5 mm |
| | Vertical | 5 mm |
| Insertion depth | | |
| | Horizontal | 24,5 mm |
| | Vertical | 24,5 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



## Legende

*1* Auxiliary release

*2* Locking screw

*3* LED indicator

**Connector assignment**

24 V

ASi -

ASi +

0 V
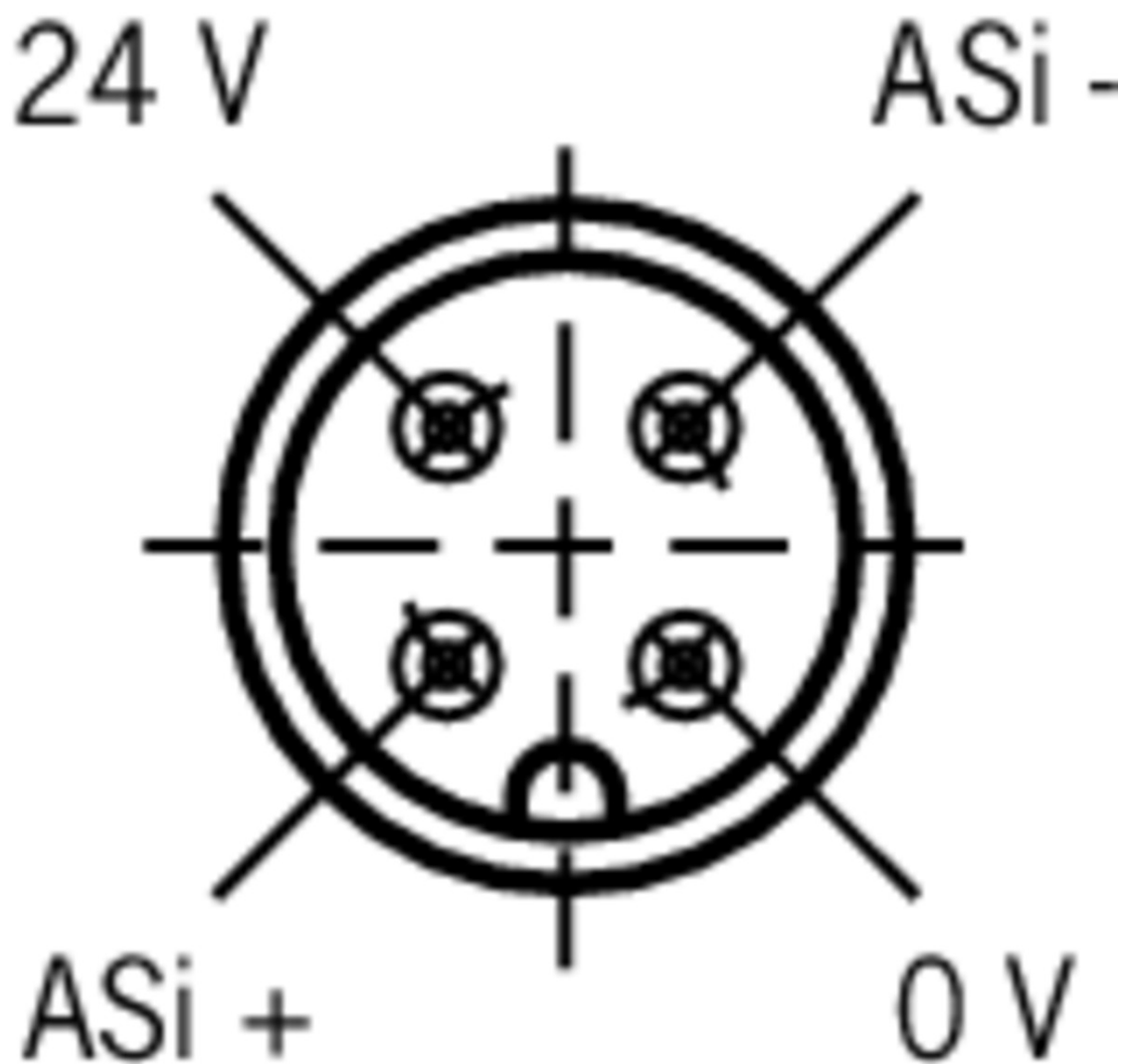
**Legende**

View of connection side

## Actuator

Actuator S, bent, for safety switches SGA/SGP/STA/STP/STM

**095740** BETAETIGER-S-WQT-SN
Features
> Two safety screws included

**115073** BETAETIGER-S-W-SN-C2115
Features
> Two stainless safety screws per actuator
> Minimum door radius 300 mm

**105808** BETAETIGER-S-WT-SN-C2115

<span style="color:red">❯</span> Features

- ❯ Two stainless safety screws per actuator
- ❯ Actuators with rubber bushings
- ❯ Minimum door radius 300 mm

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Actuator L, bent, for safety switches SGA/SGP/STA/STP/STM for insertion funnel

**095741** BETAETIGER-S-WQT-LN

<span style="color:red">❯</span> Features

- ❯ Two safety screws included
- ❯ Actuators with rubber bushings

**105809** BETAETIGER-S-WT-LN-C2115

<span style="color:red">❯</span> Features

- ❯ Two stainless safety screws per actuator
- ❯ Actuators with rubber bushings
- ❯ Minimum door radius 300 mm

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Hinged actuator S top/bottom for safety switches SGA/SGP/STA/STP/STM

**095315** RADIUSBETAETIGER-S-OU-SN

<span style="color:red">❯</span> Features

- ❯ Actuators made of stainless steel
- ❯ Two safety screws included
- ❯ For doors hinged at top and bottom

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Hinged actuator S left/right for safety switches SGA/SGP/STA/STP/STM

**096838** RADIUSBETAETIGER-S-LR-SN

<span style="color:red">❯</span> Features

- ❯ Actuators made of stainless steel
- ❯ Two safety screws included
- ❯ For doors hinged on right and left

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Actuator L for safety switches SGA/SGP/STA/STP/STM for insertion funnel

**095739** BETAETIGER-S-GT-LN

<span style="color:red">❯</span> Features

- ❯ Two safety screws included
- ❯ Actuators with rubber bushings

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Hinged actuator L top/bottom, for safety switches SGA/SGP/STA/STP/STM for insertion funnel

**096697** RADIUSBETAETIGER-S-OU-LN

<span style="color:red">❯</span> Features

- ❯ Actuators made of stainless steel
- ❯ Two stainless safety screws per actuator
- ❯ For doors hinged at top and bottom

- **Hinged actuator L left/right, for safety switches SGA/SGP/STA/STP/STM for insertion funnel**

  **096844** RADIUSBETAETIGER-S-LR-LN
  - Features
    - › Actuators made of stainless steel
    - › Two stainless safety screws per actuator
    - › For doors hinged on right and left

- **Actuator S for safety switches SGA/SGP/STA/STP/STM**

  **097861** BETAETIGER-S-G-SN-C2115
  - Features
    - › Two safety screws included
    - › Physically compatible with TP actuator P-G

  **095738** BETAETIGER-S-GT-SN
  - Features
    - › Two safety screws included
    - › Actuators with rubber bushings

## 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

## Function expansion

- **Lock for auxiliary release for safety switches CTP/TP/STP**

  **084177** SCHLOSS TP VERSCHIEDENSCHLIESSEND
  - Features
    - › Lock unique locking
    - › Key removable in "unlocked" and "locked" positions

**086236** SCHLOSS TP GLEICHSCHLIESSEND

Features

- Identical locking
- Key removable in "unlocked" and "locked" positions

**109212** SCHLOSS TP GLEICHSCHLIESSEND C2293

Features

- Identical locking
- Key can be removed only in "locked" position

## Emergency unlocking for safety switches CTP/TP/STP

**099877** NOTENTSPERRUNG TP/STP

## Insertion funnel for safety switches SGP/STA/STP/STM/SGA

**093157** EINFUEHRTRICHTER-S

## Release with automatic reset for safety switches CTP/TP/STP

**103110** ENTRIEGELUNG RUECKSTELLEND TP/STP

## Handle for wire front release

**099795** AY-HDL-099795

Features

- Suitable for all wire front releases

## Lockout bar STA/STP/SGA/SGP/STM

**105701** SPERREINSATZ STP/STA

Features

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

## Wire front release

**096230** AE-B-A1-02,0-096230

Features

- Can be used as escape release or emergency unlocking
- No automatic return
- Sheath length 2 m (rope length 6 m)

**097747** AE-B-A1-02,0-F-097747

Features

- Can be used as escape release or emergency unlocking

- > automatic return
- > Sheath length 2 m (rope length 6 m)

**098313** AE-B-A1-03,0-098313
- ▾ Features
  - > Can be used as escape release or emergency unlocking
  - > No automatic return
  - > Sheath length 3 m (rope length 6 m)

**111233** AE-B-A1-03,0-F-111233
- ▾ Features
  - > Can be used as escape release or emergency unlocking
  - > automatic return
  - > Sheath length 3 m (rope length 6 m)

**098314** AE-B-A1-04,0-098314
- ▾ Features
  - > Can be used as escape release or emergency unlocking
  - > No automatic return
  - > Sheath length 4 m (rope length 6 m)

**124770** AE-B-A1-06,0-F-124770
- ▾ Features
  - > Can be used as escape release or emergency unlocking
  - > automatic return
  - > Rope length 6 m (without sheath)

**125582** AE-B-A1-06,0-125582
- ▾ Features
  - > Can be used as escape release or emergency unlocking
  - > No automatic return
  - > Rope length 6 m (without sheath)

## Spare parts

- ▾ Replacement key for mechanical key release

  **099434** ERSATZSCHLUESSEL GLEICHSCHL.0354

## Bolt

- ▾ Bolt S-... for safety switches STA, STP, SGP and SGA

  **096384** RIEGEL S-A
  - ▾ Features
    - > Steel bolt
    - > For doors hinged on the right
    - > Can be locked in open position with padlocks

> Actuator included

**096385** RIEGEL S-C
⌄ Features
> Steel bolt
> For doors hinged on the left
> Can be locked in open position with padlocks
> Actuator included

⌄ Bolt STP-GFK for safety switches STA, STP, SGP and SGA

**098121** RIEGEL STP-GFK
⌄ Features
> Fiber glass reinforced plastic bolt
> For doors hinged on the left or right
> Can be locked in open position with padlocks
> Actuator included

⌄ Bolt BTC-ST/G... without escape release for safety switches STA, STP, SGP and SGA

**106284** BTC-ST/G-S-TH-00-X
⌄ Features
> Aluminum bolt
> For doors hinged on the left or right
> Can be locked in open position with padlocks
> Actuator included

## 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 STP...AS1

|  | Doc. no. | Version | Language | Download |
|---|---|---|---|---|
| Betriebsanleitung Sicherheitsschalter STP...AS1 | 097810 | 04-07/15 | 🇩🇪 | 🗎 0.9 MB |
| Operating Instructions Safety Switches STP...AS1 | 097810 | 04-07/15 | 🇺🇸 | 🗎 0.9 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 | 🇩🇪🇪🇸🇫🇷🇮🇹🇺🇸 | 📄 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 | 🇨🇿🇩🇰🇬🇷🇫🇮🇭🇺🇳🇱🇵🇱🇧🇷🇷🇴🇸🇰 | 📄 0.5 MB |

## CAD data

CAD data for this item on TraceParts