

### MIRO Safety



#### MIRO SAFE Switch

Emergency-stop and guard-door applications.  
Visual switch-condition indicator and network control by LED.  
Applicable up to safety category 4 with and without start-button monitoring.

from page 1.14.4



#### MIRO SAFE Hand

Two-hand control.  
Visual switch-condition indicator and network control by LED.  
Applicable up to type IIIc safety category, two-hand operating device acc. to ZH1/456 and EN 574.

page 1.14.6



#### MIRO SAFE Step

For safety strips and safety mats with a max. resistance of 200 Ohm.  
Safety with cross circuit monitoring, applicable up to safety category 3 with automatic start.

page 1.14.7



#### MIRO SAFE Light

For safety light barrier and light curtain applications.  
Applicable up to safety category 4. Start button monitoring possible with external bridge.

page 1.14.7



#### MIRO SAFE T

For emergency-stop, guard-door, and light barrier applications  
Safety with cross circuit monitoring, applicable up to safety category 4 with controlled or automatic start.

page 1.14.8



#### MIRO SAFE SSO

Emergency-stop and guard-door applications. With 4 safe solid state relays.  
Applicable up to safety category 4 with controlled or automatic start.

page 1.14.9



#### MIRO SAFE Flex

For emergency-stop and guard-door/two-hand control/light barrier/light curtain applications.  
Applicable up to safety category 4 with controlled or automatic start.

page 1.14.9



#### MIRO SAFE E/EQ

Expansion modules.

page 1.14.10

# SAFETY-RELAY

Emergency-stop/guard-door applications

## MIRO SAFE Switch HCS

With start button monitoring  
3 N/O contacts 1 N/C contact

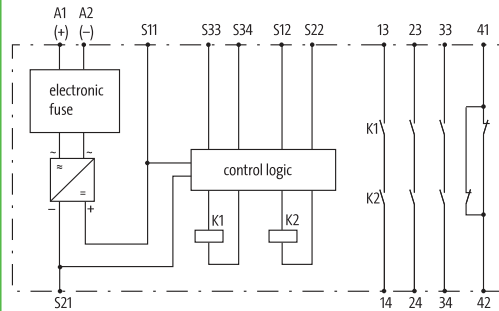
## MIRO SAFE Switch HA

Without start button monitoring  
3 N/O contacts 1 N/C contact

Approvals:



### Circuit diagram

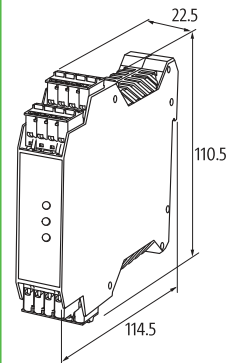


| Ordering data | Art.-No.                       | Art.-No.                       |
|---------------|--------------------------------|--------------------------------|
| Input voltage | Spring clamp plug-in terminals | Spring clamp plug-in terminals |
| 24 V AC/DC    | 3000-33013-302 0010            | 3000-33013-302 0015            |
| 230 V AC      | 3000-33013-102 0010            | 3000-33013-102 0015            |

| Accessories                  | Art.-No.                           |
|------------------------------|------------------------------------|
| Double spring clamp terminal | (set 4 pieces) 3000-33010-000 0000 |
| Label plate                  | (set 5 pieces) 3000-33030-000 0000 |

| Technical data                        |   |
|---------------------------------------|---|
| Input voltage/- current               | 24 V AC/DC $\pm 10\%$ /approx. 200 mA<br>230 V AC $\pm 10\%$ /approx. 16 mA |
| Max. switching voltage                | 250 V AC  |
| Max. current                          | 5 A   |
| Max. power rating (voltage dependent) | 1250 VA (resistive load)  |
| Achievable safety class               | up to 4/PL e (EN ISO 13849-1)   |
| Contact material                      | Ag Sn O <sub>2</sub>  |
| Lifetime mech./electr.                | 10 <sup>7</sup> /load dependent   |
| Temperature range                     | -25...+55 °C  |
| Mounting method                       | DIN-rail mounting acc. to EN 60715  |

### Dimension drawing



### Notes

## SAFETY-RELAY

Emergency-stop/guard-door applications

### MIRO SAFE Switch BCS

With start button monitoring  
2 N/O contacts

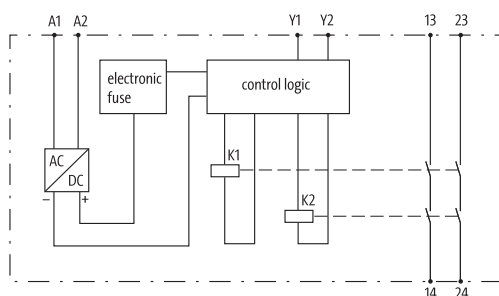
### MIRO Switch BA

Without start button monitoring  
2 N/O contacts

Approvals:



#### Circuit diagram

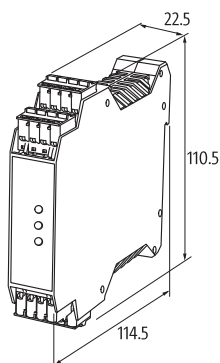


| Ordering data               | Art.-No.  | Art.-No.  |
|-----------------------------|---|---|
| Input voltage<br>24 V AC/DC | Spring clamp plug-in terminals<br>3000-33013-302 0020 | Spring clamp plug-in terminals<br>3000-33013-302 0025 |

| Accessories                                    | Art.-No.            |
|--|---------------------|
| Double spring clamp terminal<br>(set 4 pieces) | 3000-33010-000 0000 |
| Label plate<br>(set 5 pieces)                  | 3000-33030-000 0000 |

| Technical data                        |                                      |
|---------------------------------------|--------------------------------------|
| Input voltage/-current                | 24 V AC/DC $\pm 10\%$ /approx. 70 mA |
| Max. switching voltage                | 250 V AC                             |
| Max. current                          | 6 A                                  |
| Max. power rating (voltage dependent) | 1500 VA (resistive load)             |
| Achievable safety class               | up to 3/PL d (EN ISO 13849-1)        |
| Contact material                      | Ag Sn O <sub>2</sub>                 |
| Lifetime mech./electr.                | 10 <sup>6</sup> /load dependent      |
| Temperature range                     | -25...+55 °C                         |
| Mounting method                       | DIN-rail mounting acc. to EN 60715   |

#### Dimension drawing



#### Notes

# SAFETY-RELAY

## Two-hand control

### MIRO SAFE Hand

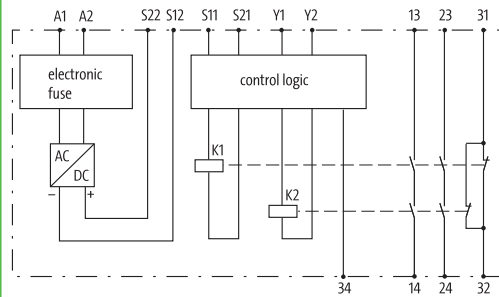
2 N/O contacts 1 N/C contact



Approvals:



### Circuit diagram



### Ordering data

Art.-No.

|               |                                |                     |
|---------------|--------------------------------|---------------------|
| Input voltage | Spring clamp plug-in terminals |                     |
| 24 V AC/DC    |                                | 3000-33013-302 0030 |
| 230 V AC      |                                | 3000-33013-102 0030 |

### Accessories

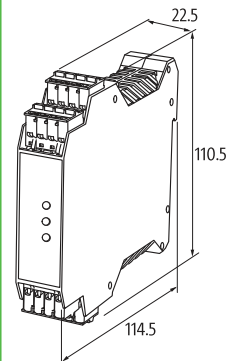
Art.-No.

|                              |                |                     |
|------------------------------|----------------|---------------------|
| Double spring clamp terminal | (set 4 pieces) | 3000-33010-000 0000 |
| Label plate                  | (set 5 pieces) | 3000-33030-000 0000 |

### Technical data

|                                       |  |
|---------------------------------------|--|
| Input voltage/- current               | 24 V AC/DC $\pm 10\%$ /approx. 85 mA<br>230 V AC $\pm 10\%$ /approx. 10 mA |
| Max. switching voltage                | 250 V AC   |
| Max. current                          | 6 A  |
| Max. power rating (voltage dependent) | 1500 VA (resistive load)   |
| Achievable safety class               | up to type IIIc (EN 574-1)   |
| Contact material                      | Ag Sn O <sub>2</sub> gold plated   |
| Lifetime mech./electr.                | 10 <sup>7</sup> /load dependent  |
| Temperature range                     | -25...+55 °C   |
| Mounting method                       | DIN-rail mounting acc. to EN 60715   |

### Dimension drawing



### Notes

# SAFETY-RELAY

## Modules for

- safety mats
- light barrier monitoring

### Approvals:



### MIRO SAFE Step

For safety mats  
3 N/O contacts 1 N/C contact

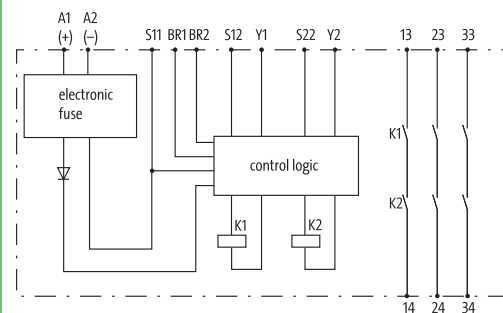
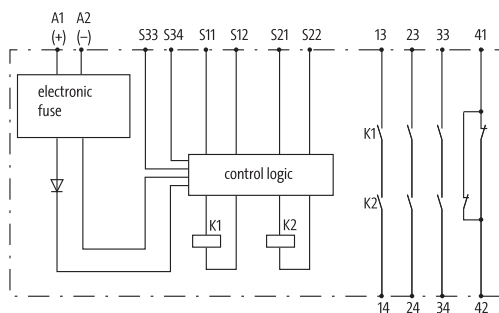


### MIRO SAFE Light

Light barrier monitoring  
3 N/O contacts



### Circuit diagram



### Ordering data

### Art.-No.

### Art.-No.

|               |                                |                                |
|---------------|--------------------------------|--------------------------------|
| Input voltage | Spring clamp plug-in terminals | Spring clamp plug-in terminals |
| 24 V AC/DC    | 3000-33013-302 0050            |                                |
| 24 V DC       |                                | 3000-33013-302 0040            |

### Accessories

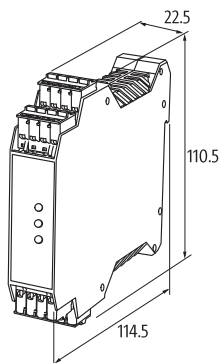
### Art.-No.

|                              |                |                     |
|------------------------------|----------------|---------------------|
| Double spring clamp terminal | (set 4 pieces) | 3000-33010-000 0000 |
| Label plate                  | (set 5 pieces) | 3000-33030-000 0000 |

### Technical data

|                                       |                                    |                               |
|---------------------------------------|------------------------------------|-------------------------------|
| Input voltage/-current                | 24 V AC/DC ±10 %/approx. 200 mA    | 24 V DC ±10 %/approx. 100 mA  |
| Max. switching voltage                | 250 V AC                           |                               |
| Max. current                          | 5 A                                | 6 A                           |
| Max. power rating (voltage dependent) | 1250 VA (resistive load)           | 1500 VA (resistive load)      |
| Achievable safety class               | up to 3/PL d (EN ISO 13849-1)      | up to 4/PL e (EN ISO 13849-1) |
| Contact material                      | Ag Sn O <sub>2</sub> gold plated   |                               |
| Lifetime mech./electr.                | 10 <sup>7</sup> /load dependent    |                               |
| Temperature range                     | -25...+55 °C                       |                               |
| Mounting method                       | DIN-rail mounting acc. to EN 60715 |                               |

### Dimension drawing



### Notes

# SAFETY-RELAY

Emergency-stop/guard-door applications

Light barrier

– with delay time  
0.05...600 s

Approvals:

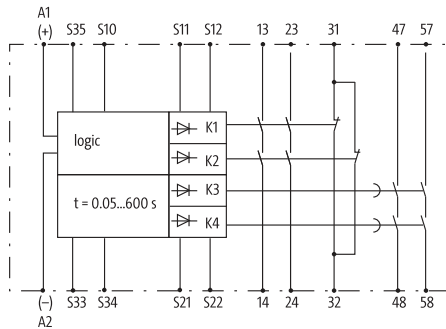


## MIRO SAFE T

2 N/O contacts (with switch-off delay) 1 N/C contact



### Circuit diagram



### Ordering data

|               |                                | Art.-No.            |
|---------------|--------------------------------|---------------------|
| Input voltage | Spring clamp plug-in terminals |                     |
| 24 V AC/DC    |                                | 3000-33013-302 0060 |

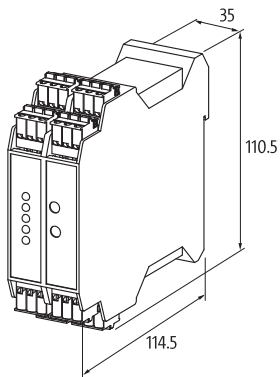
### Accessories

|                              |                | Art.-No.            |
|------------------------------|----------------|---------------------|
| Double spring clamp terminal | (set 4 pieces) | 3000-33010-000 0000 |
| Label plate                  | (set 5 pieces) | 3000-33030-000 0000 |

### Technical data

|                                       |   |
|---------------------------------------|---|
| Input voltage/- current               | 24 V AC/DC -20/+25 %/approx. 200 mA           |
| Max. switching voltage                | 250 V AC                                      |
| Max. current                          | 6 A   |
| Max. power rating (voltage dependent) | 1500 VA (resistive load)                      |
| Achievable safety class               | up to 4/PL e (EN ISO 13849-1)/SIL3 (EN 61508) |
| Contact material                      | Ag Cu Ni                                      |
| Lifetime mech./electr.                | 2 x 10 <sup>6</sup> /load dependent           |
| Temperature range                     | -25...+55 °C                                  |
| Mounting method                       | DIN-rail mounting acc. to EN 60715            |

### Dimension drawing



### Notes

## SAFETY-RELAY

Emergency-stop/guard-door applications

Emergency-stop/guard-door applications/two-hand control light barriers/light curtains

Approvals: **TUV NORD**

### MIRO SAFE SSO

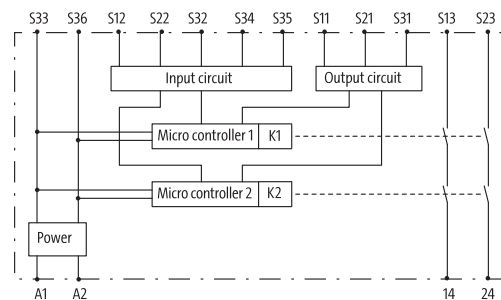
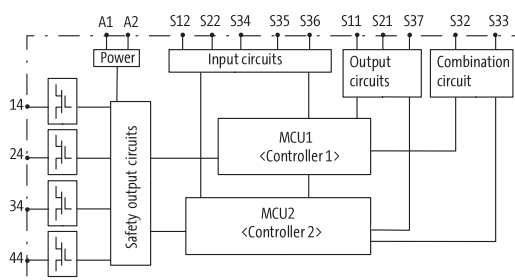
Emergency-stop/guard-door applications  
With 4 safe solid state outputs



### MIRO SAFE Flex

Emergency-stop/guard-door applications/two-hand control  
Light barriers/light curtains  
2 N/O contacts, 1 auxiliary output

#### Circuit diagram



#### Ordering data

|               | Art.-No.                       | Art.-No.                       |
|---------------|--------------------------------|--------------------------------|
| Input voltage | Spring clamp plug-in terminals | Spring clamp plug-in terminals |
| 24 V DC       | 3000-33013-302 0080            | 3000-33013-302 0090            |

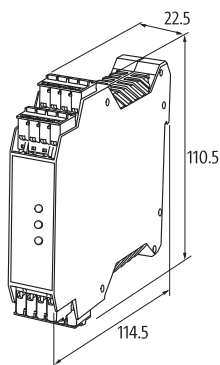
#### Accessories

|                              |                | Art.-No.            |
|------------------------------|----------------|---------------------|
| Double spring clamp terminal | (set 4 pieces) | 3000-33010-000 0000 |
| Label plate                  | (set 5 pieces) | 3000-33030-000 0000 |

#### Technical data

|                                       |   |  |
|---------------------------------------|---|--|
| Input voltage/-current                | 24 V DC -20/+25 %/approx. 10 mA               | 24 V DC -20/+25 %/approx. 8 mA                           |
| Max. switching voltage                | 24 V DC                                       |  |
| Max. current                          | -   | 6 A  |
| Total current                         | max. 2.7 A                                    | -  |
| Max. power rating (voltage dependent) | -   | 1500 VA (resistive load)                                 |
| Achievable safety class               | up to 4/PL e (EN ISO 13849-1)/SIL3 (EN 61508) | up to 4/PL e (EN ISO 13849-1)/SIL3 (EN 62061)/(EN 574-1) |
| Contact material                      | -   | Ag Cu Ni   |
| Lifetime mech./electr.                | -   | 10 <sup>6</sup> /load dependent                          |
| Temperature range                     | -25...+55 °C                                  |  |
| Mounting method                       | DIN-rail mounting acc. to EN 60715            |  |

#### Dimension drawing



#### Notes

# SAFETY-RELAY

## Expansion modules

### MIRO SAFE EQ

4 N/O contacts 1 feedback loop  
Cross-link safe

### MIRO SAFE E

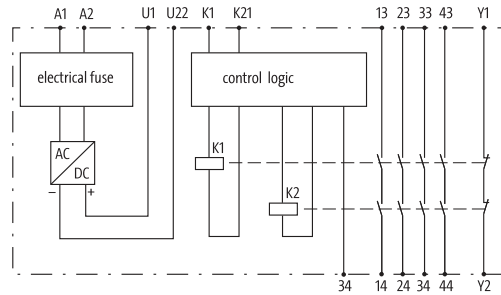
4 N/O contacts 1 feedback loop



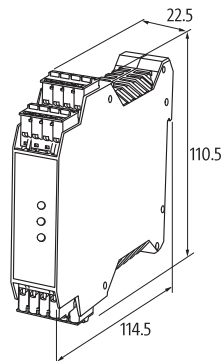
Approvals:



## Circuit diagram



| Ordering data                         | Art.-No.                            | Art.-No.                       |
|---------------------------------------|-------------------------------------|--------------------------------|
| Input voltage                         | Spring clamp plug-in terminals      | Spring clamp plug-in terminals |
| 24 V AC/DC                            | 3000-33013-302 0070                 | 3000-33013-302 0075            |
| Accessories                           | Art.-No.                            |                                |
| Double spring clamp terminal          | (set 4 pieces)                      | 3000-33010-000 0000            |
| Label plate                           | (set 5 pieces)                      | 3000-33030-000 0000            |
| Technical data                        |                                     |                                |
| Input voltage/ -current               | 24 V AC/DC -15/+10 %/approx. 200 mA |                                |
| Max. switching voltage                | 250 V AC                            |                                |
| Max. current                          | 6 A                                 |                                |
| Max. power rating (voltage dependent) | 2000 VA (resistive load)            |                                |
| Achievable safety class               | up to 4/PL e (EN ISO 13849-1)       |                                |
| Contact material                      | Ag Sn O <sub>2</sub>                |                                |
| Lifetime mech./electr.                | 2 x 10 <sup>7</sup> /load dependent |                                |
| Temperature range                     | -25...+55 °C                        |                                |
| Mounting method                       | DIN-rail mounting acc. to EN 60715  |                                |
| Dimension drawing                     |                                     |                                |



## Notes