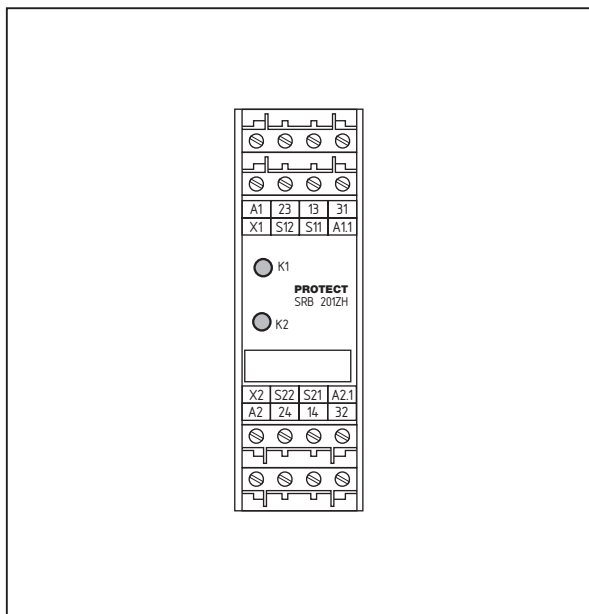


### 3. Two-hand relay modules

#### 3.1 SRB 201ZH



#### Dimensions

- Two-hand module to DIN EN 574 (1997) type III C
- Plug-in terminals
- 2 safety enabling outputs
- 1 feedback output with NC function (floating contact)
- Electronic fuse
- Installed width: 22.5 mm
- Green LED displays for relays K1 and K2

**Dimensions** 22.5 x 100 x 121 mm

#### Type

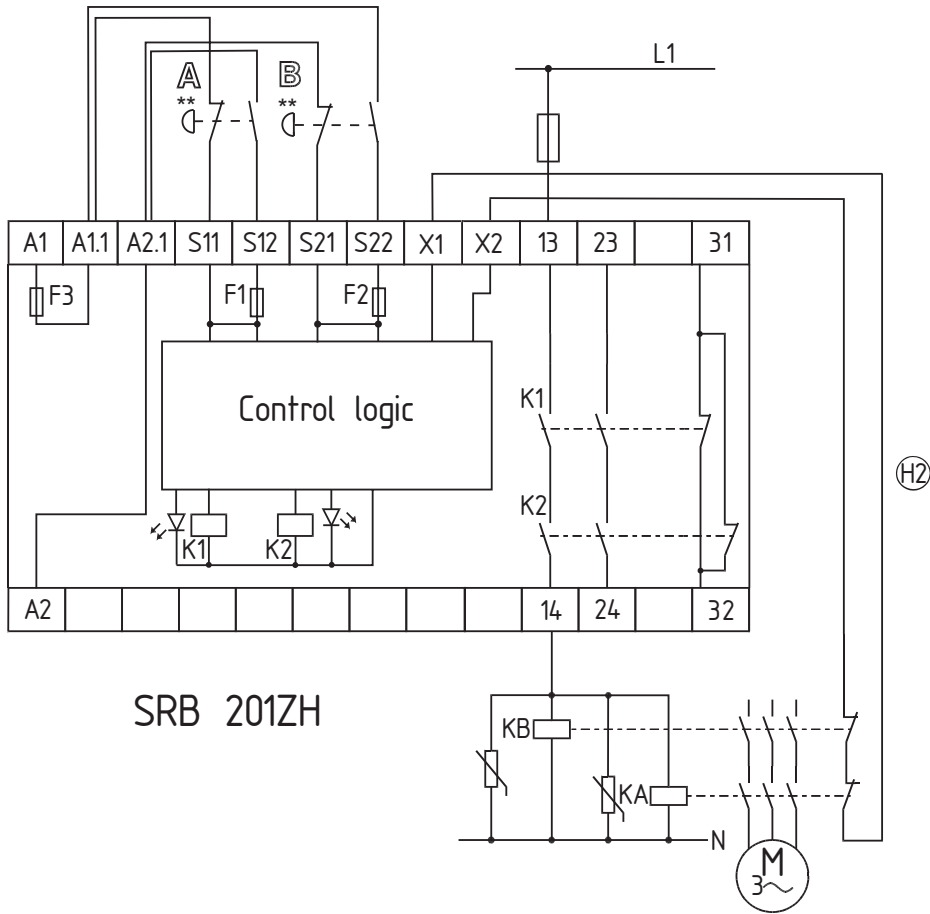
**designation** Operating voltage **24 VDC**

Enabling paths **SRB 201ZH**  
2 NO/1 NC

#### Test symbol

(in preparation)     
FRG USA CAN

Circuit example



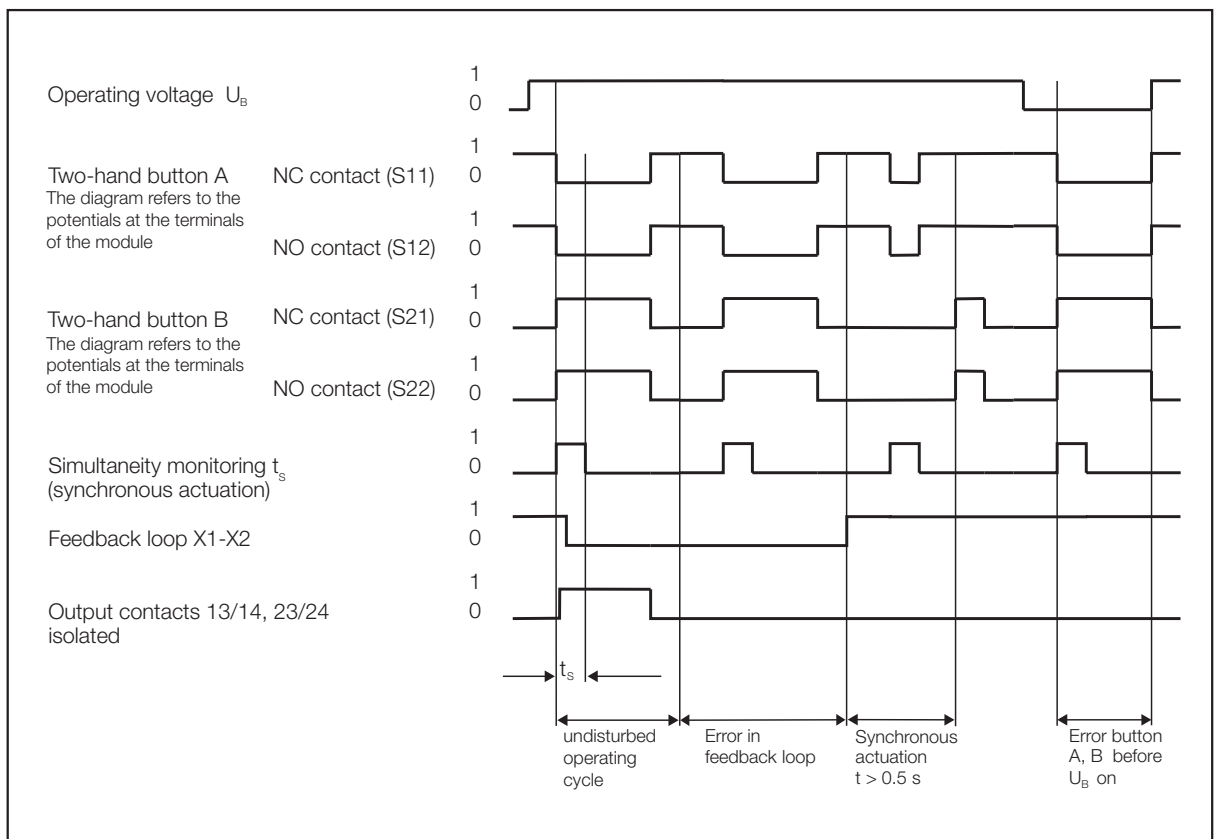
NB

- 2-channel control with two contacts A and B
- The NC contact of the buttons A and B must have opened before the NO contact closes. No overlapping contacts since otherwise the fuses F1 and F2 would trigger.
- Power level: 2-channel control, suitable for contact amplification and contact multiplication through contactors or relays with positively driven contacts.
- (H2) = feedback loop
- The control circuit detects wire breaks and earth leakage in the monitoring circuit.

### 3. Two-hand relay modules

#### 3.2 Technical data

| SRB 201ZH                                    |   |
|--|---|
| Operating voltage                            | 24 VDC -15%/+10%, residual ripple max. 10%  |
| Fuse of operating voltage                    | internal electronic fuse F1, F2, tripping current >0.2 A, internal electronic fuse F3, tripping current >0.6 A                          |
| Power consumption                            | max. 1.2 W  |
| Switching capacity of the enabling contacts  | 230 VAC, 6 A ohmic (inductive with suitable suppressor circuit)   |
| Fuse of the enabling contacts                | 6 A slow-blowing  |
| Switching capacity of the auxiliary contacts | 24 VDC, 2 A   |
| Fuse of the auxiliary contacts               | 2 A slow-blowing  |
| Utilisation categories                       | AC 15/DC 13: EN 60947-5-1   |
| Pickup delay                                 | ≤ 50 ms   |
| Dropout delay                                | ≤ 30 ms   |
| Contact material/contacts                    | AgSnO, self-cleaning, positively driven   |
| Contact resistance                           | max. 100 mOhm in new state  |
| Air clearance and creepage distance          | DIN VDE 0110-1 (04.97), 4 kV/2  |
| Cable connections                            | Plug-in self-lifting screw terminals<br>min. 0.2 mm <sup>2</sup> , max. 2.5 mm <sup>2</sup> , strand or multicore with wire end ferrule |
| Dimensions                                   | h/b/d 100 mm/22.5 mm/121 mm   |
| Weight                                       | 200 g   |
| Ambient operating temperature                | -25 °C ... 45 °C (derating curve upon request)  |
| Mechanical life                              | 10 <sup>7</sup> switching cycles  |
| Terminal markings                            | DIN EN 50 005/DIN 50 013  |



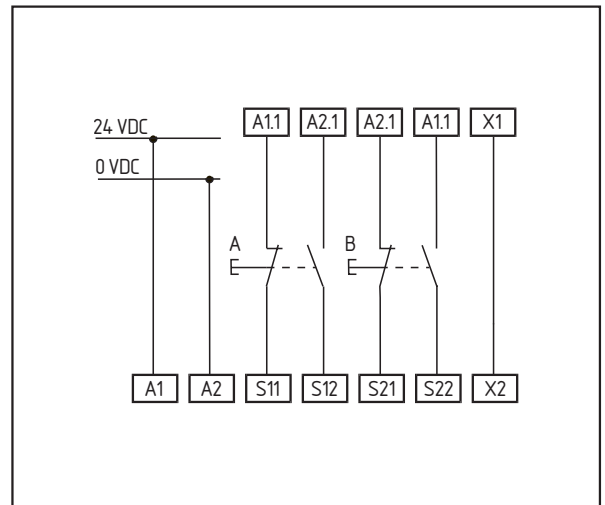
### 3. Two-hand relay modules

#### 3.3 Selection of applications

#### Start/sensor configuration

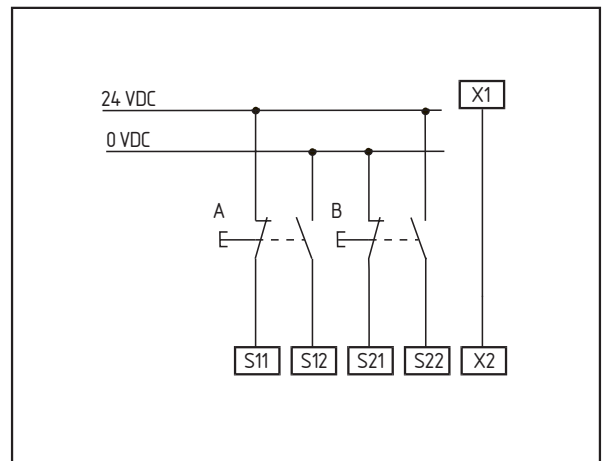
##### Two-hand circuit to DIN EN 574 and EN 60204-1

- Malfunctions of every button contact as well as earth and cross shorts are detected.
- Feedback loop: the safety-related function of external positively driven contactors is monitored by a series circuit of the NC contacts with the terminals X 1 and X2. In release state this circuit must be closed.
- Safety category III C to DIN EN 574 (02.97)



##### Circuit example control level/ two hand circuit to DIN EN 574 and EN 60204-1

- Malfunctions of every button contact as well as earth and cross shorts are detected.
- Feedback loop: the safety-related function of external positively driven contactors is monitored by a series circuit of the NC contacts with the terminals X 1 and X2. In release state this circuit must be closed.
- Safety category III C to DIN EN 574 (02.97)



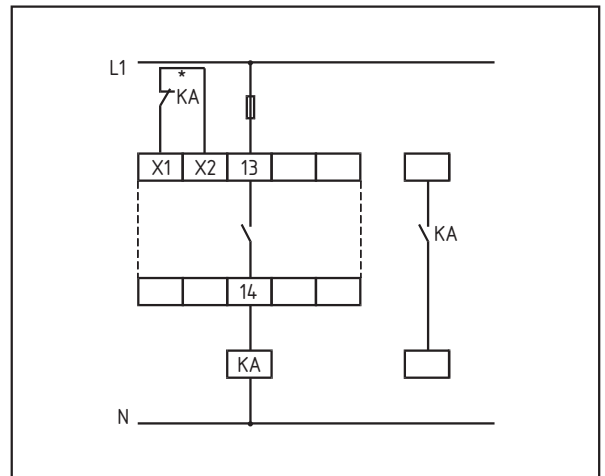
### 3. Two-hand relay modules

#### 3.3 Selection of applications

#### Actuator configuration

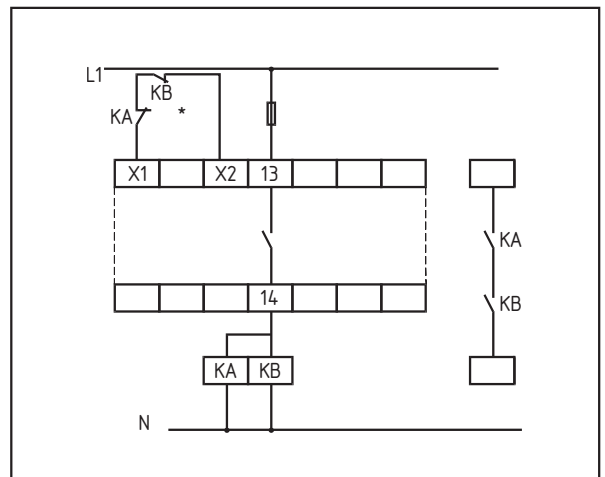
##### Single-channel control

- Suitable for contact amplification or contact multiplication by means of relay or contactor with positively driven contacts.
- \* Feedback loop  
If the feedback loop is not required it is to be replaced by a bridge.



##### Dual-channel control

- Suitable for contact amplification or contact multiplication by means of relay or contactor with positively driven contacts.
- \* Feedback loop  
If the feedback loop is not required it is to be replaced by a bridge.



**3. Safety relay modules**  
**3.4 Terminal designation**

**Terminal designation**

**Voltages**

A1 +24 VDC  
A2 0 VDC

**Inputs**

A1.1/S11 Input 1st actuator (NC contact)  
A2.1/S12 Input 1st actuator (NO contact)  
A1.1/S22 Input 2nd actuator (NO contact)  
A2.1/S21 Input 2nd actuator (NC contact)

**Outputs**

13/14 First safety enabling output (STOP 0)  
23/24 Second safety enabling output (STOP 0)  
31/32 Auxiliary NC output