

Safety relay

→ 2-hand control

- Type III C "2-hand control" functions according to EN 574/97
- Control device with two channels
- Level 4 according to NF.EN 954-1
- "KZH2-XS" :
 - 2 "N/O" safety contacts with linked contacts-6A/250 VAC
- "KZH3-RS" :
 - 3 "N/O" safety contacts with linked contacts-6A/250 VAC
 - "NC" signalling contact



Specifications

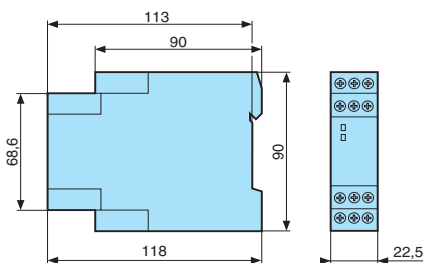
| Type | Supply voltage | Connections | Weight (g) | Code |
|---------|----------------|----------------|------------|------------|
| KZH2-XS | 24 VAC DC | Screw terminal | 230 | 85 100 626 |
| KZH3-RS | 24 V AC DC | Screw terminal | 310 | 85 100 636 |
| | 115 V AC | Screw terminal | 410 | 85 100 634 |
| | 230 V AC | Screw terminal | 410 | 85 100 635 |

General characteristics

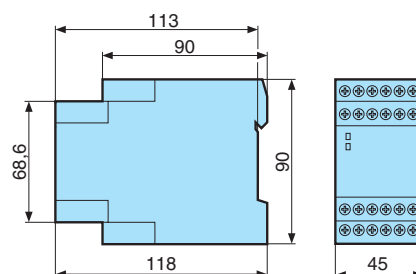
| | |
|---|--|
| Operating range | -15 % / +10 % of Un for AC -10 % / + 15 % of Un for DC |
| Synchronisation difference | KZH2-XS : < 500 ms |
| Reset time | KZH3-RS / < 500 ms |
| Response time on release of control device | KZH3-RS : < 20 ms |
| Maximum response time on emergency stop at Un | KZH3-RS : < 20 ms |
| Number of safety circuits | KZH2-XS : 2 "N/O" AgSnO2 contacts KZH3-RS : 3 "N/O" AgSnO2 contacts |
| Number of data circuits | KZH3-RS : 1 "NC" AgSnO2 contacts |
| Max. absorbed power | KZH2-XS : AC 1.5 VA / DC 1.5 W KZH3-RS : 24 AC 1.5 VA / 24 DC 1.5 W / 115-230 AC 3.2 VA |
| Dielectric strength | 2.95 kV according to IEC 664-1 |
| Resistance to tracking | Material group III |
| Radiated electromagnetic field | 30 V / m Level X acc. to IEC 1000.4.3 80 MHz to 1GHz / 900 MHz (ENV50140 / 204) |
| Electrostatic discharge | 15 kV in the air acc. to IEC 1000.4.2 |
| Shock waves | Level 3 acc. to IEC 1000.4.5 Common mode 2 kV for 24 V DC and 24 V AC KZH3-RS / Common mode 4 kV for 230 V AC 2kV residual current mode |
| Radio frequencies in common mode | 10 V rms on inputs / level 3 acc. to IEC 1000.4.6 30 V rms on supp. / Level X acc. to IEC 1000.4.6 150 kHz to 80 MHz (ENV 50141) acc. to IEC 1000.4.11 |

Dimensions

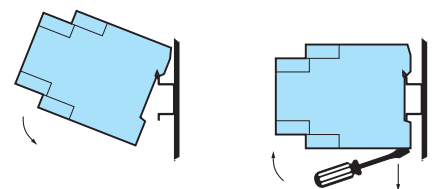
KZH2-XS



KZH3-RS



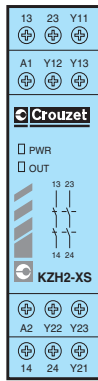
Mounting - Removing



To order, see page 6

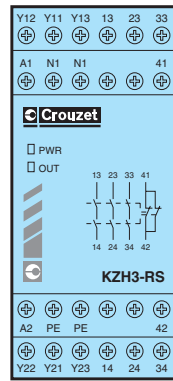
Connections

KZH2-XS



A1-A2 Power supply
Y11-Y12-Y13 / Y21-Y22-Y23 Redundant inputs with differentiated voltage for control devices
13-14/23-24 "N/O" safety contacts

KZH3-RS



A1-A2 Power supply
Y11-Y12-Y13 / Y21-Y22-Y23 Redundant inputs with differentiated voltage for control devices
13-14/23-24/33-34 "N/O" safety contacts
41-42 "N/C" signalling contacts

Principles

Control devices :

The KZH2-XS and KZH3-RS can receive the following components as inputs :
- two pushbuttons with two positions "N/O" + "N/C" (Y11-Y12-Y13 and Y21-Y22-Y23)
- one or two emergency stop pushbuttons with one or two channels (A1-A2).

Control devices :

The KZH2-XS has two "N/O" safety contacts (13-14/23-24). One or more control devices may be wired up to the breaking capacity of the safety contacts : 1500 VA. However, to limit internal heating in the KZH2-XS, it is advisable not to exceed 8 A thermal for both contacts.

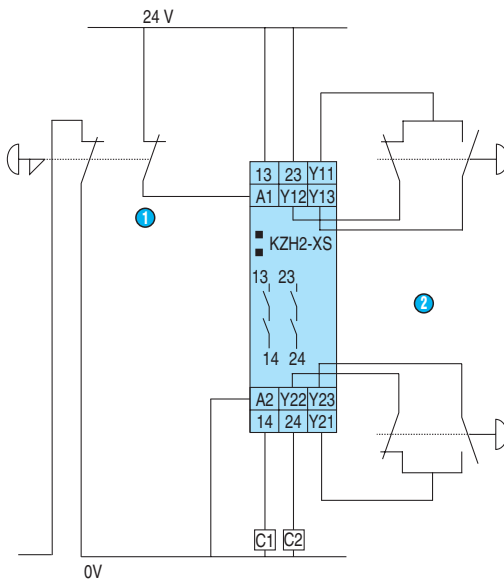
The KZH3-RS has three "N/O" safety contacts (13-14/23-24/33-34) and one "N/C" signalling contact (41/42). One or more control devices may be wired up to the breaking capacity of the safety contacts : 1500 VA. However, to limit internal heating in the KZH3-RS, it is advisable not to exceed 10 A thermal for both contacts.

Extending the number of contacts :

The number of contacts can be extended and the breaking capacity thus increased. To do this, use the KZE3-XS.

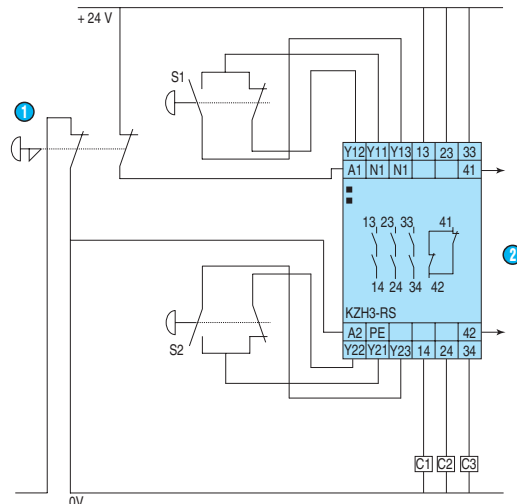
Applications

KZH2-XS



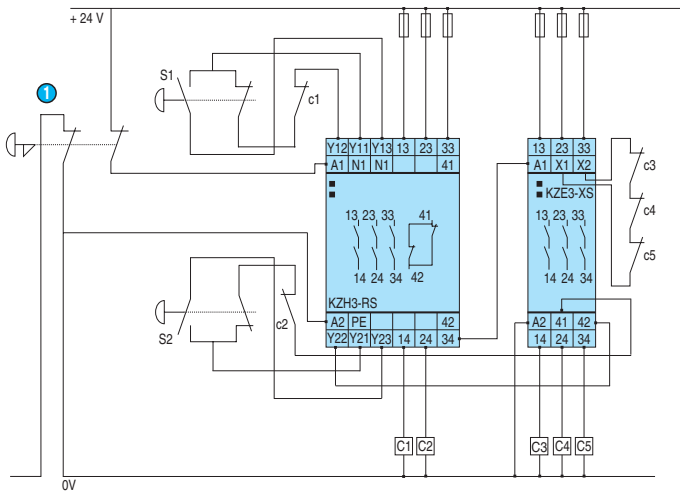
- 1 Emergency stop
- 2 2-hand control console

KZH3-RS



- 1 Emergency stop
- 2 Signalling

KZH3-RS with KZE3-X3 extension module



1 Emergency stop

Safety relay: general characteristics

- Emergency stop
- Timed contacts
- Extension relay
- Zero speed monitoring
- 2-hand control

| Supply | |
|--|--|
| Supply voltage | 24 V AC 50 / 60 Hz 24 V DC maximum ripple 10 % |
| On/off indication | 1 power supply voltage LED |
| Output specification | |
| Type | Volt-free outputs |
| Breaking capacity (V resistive) | 1500 VA |
| Max. breaking current | 6.82 A |
| Max. breaking voltage | 440 V AC |
| Electrical endurance | 10 ⁵ operations at 1500 VA resistive 5.10 ⁵ operations at 500 VA resistive |
| Mechanical life (operations) | 10 ⁷ |
| Function and use | |
| On/off indication | 1 internal relay status LED |
| Operating temperature (°C) IEC 68-2-14 | 0 → +50 |
| Storage temperature (IEC 68-2-12) (°C) | -20 → +70 |
| Internal voltage | 24 V DC |
| EMC immunity according to EN 50082-2 | |
| fast transients | 2kV directly acc. to IEC 1000.4.4 4 kV directly for the 230 V <ac> version 2 Kv when coupled |
| Drop-out / short breaks / microbreaks | Un-30 % for 10 ms every 1 s Un-60 % for 100 ms every 1 s according to IEC 61496-1/97 Un-100 % for 10 ms every 100 ms Un-50 % for 20 ms every 200 ms Un-50 % for 500 ms every 5 s |
| Material | Polycarbonate Self-extinguishing-UL94 class VO |
| Protection Housing | IP 40 |
| Protection Terminal | IP 20 |
| Tightening capacity | 2 x 1.5 mm ² multicore with ferrule 2 x 2.5 mm ² solid conductor |
| Spring terminals, 2 terminals per connection point - rigid wire | 2.5 mm ² |
| Spring terminals, 2 terminals per connection point - flexible wire | 1.5 mm ² |