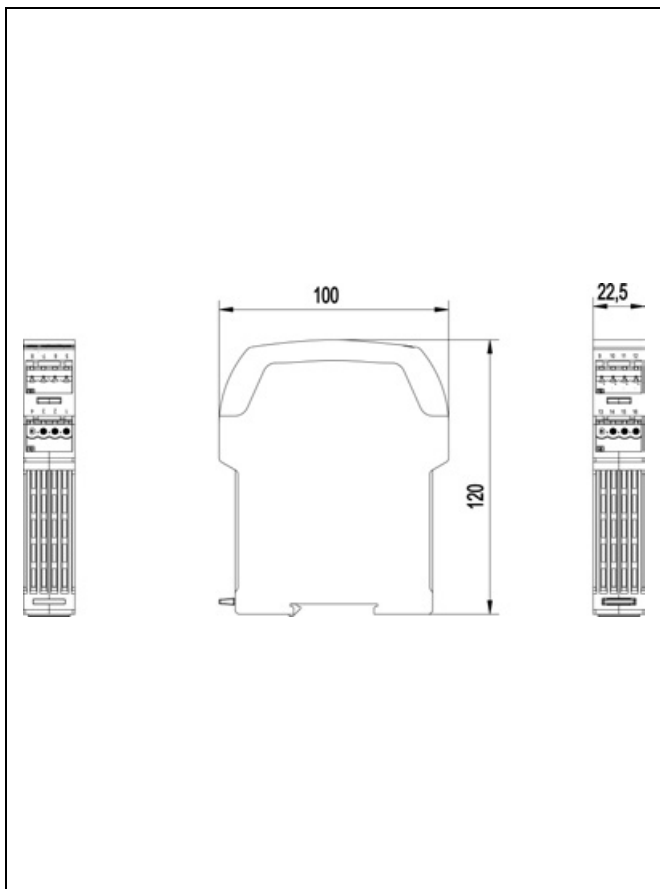


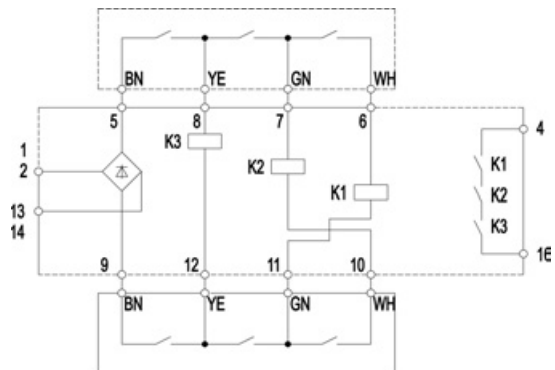


470 131
470 131 01
470 134
470 134 01

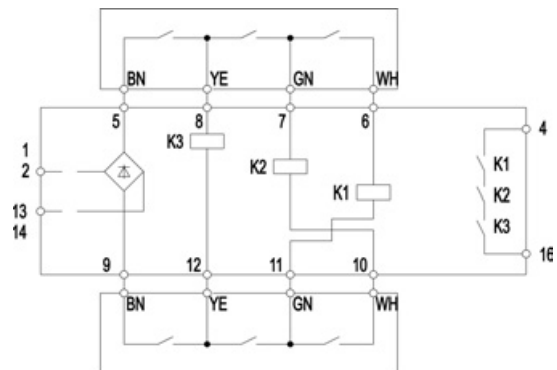
- D** Betriebsanleitung
Auswerteeinheit
- GB** Operating instructions
Control unit
- F** Notice d'utilisation
Unité de contrôle
- I** Istruzioni d'impiego
Unità di controllo



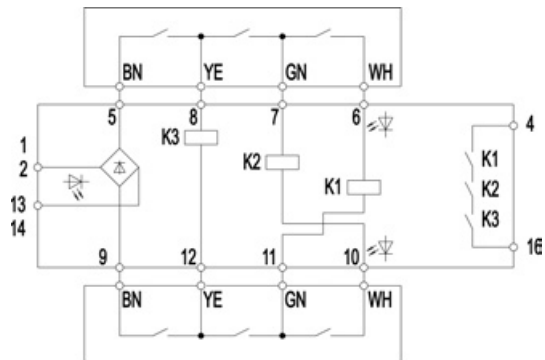
470 131



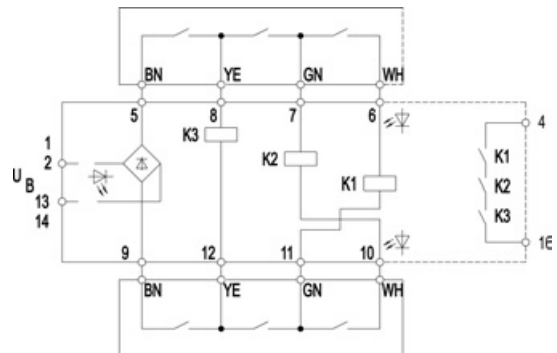
470 134



470 131 01



470 134 01



1 Technical data

1.1 Terminal assignment

Terminal	Assignment
1, 2, 13, 14	Operating voltage
4, 16	Output contact maker, floating
5	Power supply, sensor 1
8	Contact maker 1 of sensor 1
7	Contact maker 2 of sensor 1
6	Contact maker 3 of sensor 1
9	Power supply, sensor 2
12	Contact maker 1 of sensor 2
11	Contact maker 2 of sensor 2
10	Contact maker 3 of sensor 2

1.2 Type denomination/Variants

The following example and table are given to explain the type denomination of the control units.

Example:

470 131 01

4ab cde fg

Placeholder	Characteristic		Meaning
4ab	Housing type and housing width	470	Housing width 22.5 mm
cd	Specification safety input	13	Control unit for sensors with three contact makers
e	Operating voltage	1	24 V
		4	230 V AC
fg	Other		No standard assignment. Explanation: see below

Meaning of placeholder "fg"

Type	Meaning
470 131 01	LEDs indicate the switched state of the output

1.3 Electrical and mechanical data

The control unit in a deenergized state is depicted on the circuit diagram of the fold-out page.

General

Back-up fuse for operating voltage	1.0 A
Fuse for output	3.6 A
Max. switching voltage	250 V AC 30 V DC
Max. switching current	3.0 A
Max. switching capacity	750 VA 90 W
Operating temperature	0 ... +55 °C
Transport and storage temperature	-25 ... +85 °C
International protection	IP 30

Operating voltage

Type	Operating voltage
470 131 fg	24 V AC/DC; $\pm 10\%$
470 134 fg	230 V AC; - 10 % ... + 6 %

2 Appropriate use

The control unit is intended for use exclusively to protect against hazards.

2.1 Norms and guidelines

The control unit complies with the following European guidelines:

- 73/23/EEC (low voltage guideline)
- 2004/108/EC (electromagnetic compatibility guideline)
- 98/37/EC (machinery guideline)

The construction of the control unit conforms to the norms listed below:

General

Norm	Content
EN 954-1 / category 3	Safety-related parts of control systems
EN 292	Safety of machines, basic concepts
EN 60 204	Electrical equipment of industrial machines
VDE 0110, IEC 1010	Electrical safety
VDE 0660, part 209	Non-contact switching devices
EN 61000-6-2	Electromagnetic compatibility, interference immunity for the industrial sector

2.2 Safety/Dangers

- Ensure that the control unit is only installed and put into operation by specially-trained authorised personnel.
- Ensure that the appropriate corresponding fuses (see Technical data) are used. Never bridge or repair fuses.
- Only operate the control unit when it's in an undamaged condition.
- Ensure that the control unit is only used for protection against dangers.
- Ensure that all safety requirements applying for the machine in question are observed.
- Ensure that all European guidelines and national laws/guidelines applying are observed.

3 Function

The control unit switches through the output if the three reed contacts switched in series are closed in both sensors.

The control unit switches off the output as soon as a sensor contact maker opens.

The control unit switches through the output independent of the sequential order of the contact maker.

4 Installation



Danger

► **Danger of electrocution!**

Ensure that the control unit is only installed and put into operation by specially-trained authorised personnel.

- Snap the control unit onto a mounting rail (DIN 50 022) in the switch cabinet. The control unit is attached.
- Connect control unit, see see Technical data.
- Ensure that the prescribed fuses are used, see see Technical data.
- Ensure that the output is protected against inductive and capacitive loads.
- Ensure that when the guard is closed the magnet will actuate the sensors.

If one of the sensors is not used:

- Bridge the terminals of the open sensor input (terminals 5, 8, 7, 6 or terminals 9, 12, 11, 10).

5 Putting into operation



Danger

▶ **Danger of electrocution!**

Ensure that the control unit is only installed and put into operation by specially-trained authorised personnel.

- Apply operating voltage.

The operating voltage LED is on.

The control unit switches through the output.

The control unit is ready for operation.

6 Troubleshooting

6.1 Restoring device to a state of readiness for operation

One or more contact makers of the connected sensors are open.

- Close the contacts at the sensor inputs.

The operating voltage LED is on.

The control unit switches through the output.

The control unit is ready for operation.

7 Maintenance

7.1 Measures

To ensure operational safety, service the control unit as part of the maintenance cycles of the plant to be monitored.

Carry out the following maintenance tasks for all sensors:

- Open the contact maker.
- Close the contact maker.

The safety output will switch off.

- Switch off operating voltage.
- Switch on operating voltage.

With the operating voltage applied:

The operating voltage LED is on.

The control unit switches through the output.

The control unit is ready for operation.

7.2 Disposal

Dispose of used parts and unwanted packaging in accordance with the regulations of the country in which the device is installed.

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