Emergency Stop Relay

Type BN 5930.48
safemaster

Model BN 5930.48

Technical Committee of Electrical Engineering

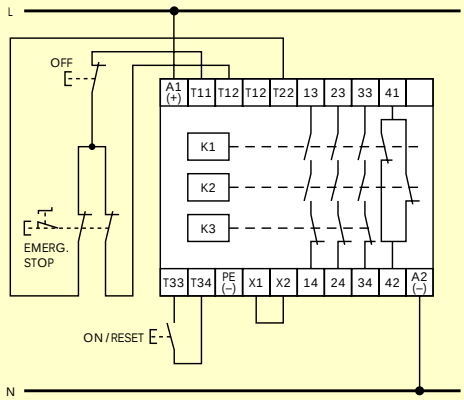
Features

- **Category 3, SIL CL3**
- **Contacts**
  3 N/O, 1 N/C rated for switching 415Vac
- **Removable terminal strips for fast replacement**
- **Internal auxiliary power supply protection with automatic reset**
- **AC or 24V DC auxiliary supply options**
- **Single channel or dual channel operation**
- **Manual or automatic reset**
- **Full terminal compatibility with 'competitors' products**

Typical Schematic Diagram

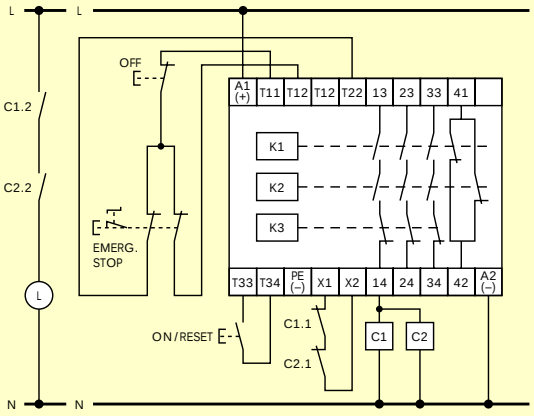
BN 5930.48

For Auto Reset link T33, T34



Diag 1

BN 5930 with External Contactors.
This diagram shows how external contactors with positive guided contacts C1 and C2 may be used to reinforce the switching capacity of BN 5930 with continued redundancy.



Diag 2

Description

Emergency Stop Relay Type BN 5930 complies fully with the requirements of the Standard Specifications referred to on page x of this Publication. It is housed in a compact 100 mm wide case suitable for DIN rail mounting and is available in a wide range of auxiliary voltages.

Circuit Connections

Relay BN 5930 operates on the principle described on page x of this catalogue.The OFF and the EMERGENCY STOP buttons are connected in series between terminals T11 and T12/T22. The On/Reset button is connected between terminals T33 and T34. Terminals X1, X2 are linked. The auxiliary supply is connected to terminals A1(+) and A2(–).
The circuits to be tripped may be connected to terminals 13-14, 23-24 and 33-34. Remote signalling circuitry, if applicable, is connected to terminals 41-42. For additional security an insulation monitoring relay may be connected to monitor terminal PE(-) to ground. (Relay details on request). This relay is suitable for category 3 applications.

Special Note

It is recommended that redundancy is carried through to the EMERGENCY STOP button by using a dual contact button as shown. If a single contact button is used then terminals T12 and T22 should be bridged (category 2 applications only).

Indication

The relay is equipped with three green LEDs. When illuminated they indicate the healthy condition of the auxiliary supply and circuits K1 – K2.

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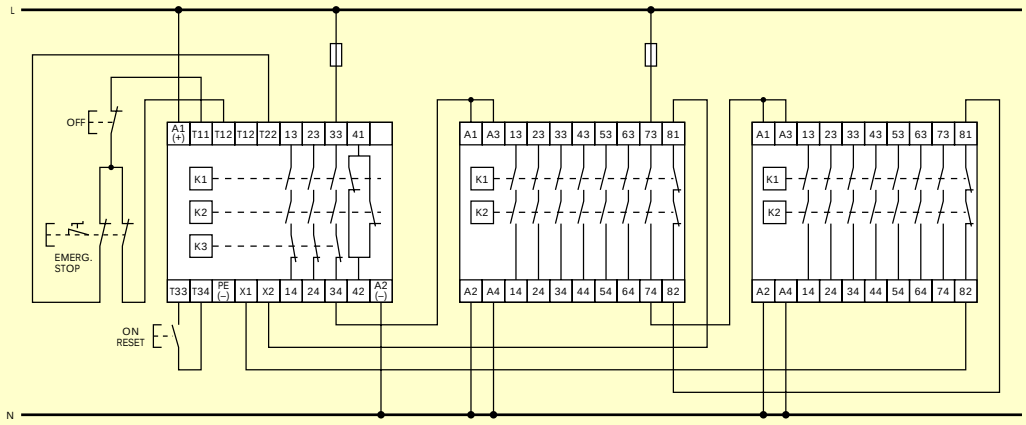
BN 5930.48 with BN 3081 Extension modules



BN 5930.48 **BN 3081** **BN 3081** Diag 3

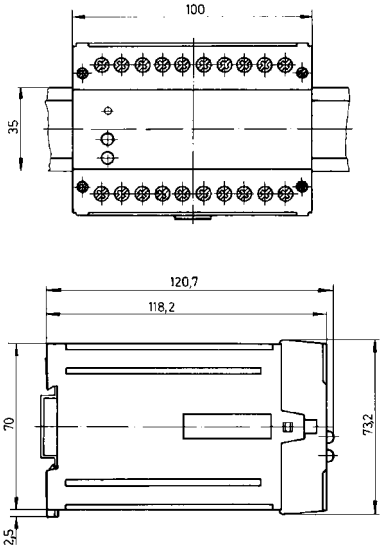
Specifications

Nominal Voltage (Vn)	24,48,110,127,230V ac or 24V dc (To be Specified)
Burden	<5VA ac/3W 24V dc
Voltage Tolerance	0·8–1.1 Vn ac. 0·8–1·2 Vn dc
Frequency	50 to 60Hz ±5%
Control Voltage	24V dc (T11)
Min. return voltage	18·5V dc (T12/T22)
Contacts	3N/O, 1N/C
Max Switching Capacity	10A ac (cos ø 1 – 0·7) 10A dc see page xx
Continuous Current Rating	see page xx
Contact Life Mechanical	30 x 10^6 operations
Contact Life Electrical	see page xx
Derated Capacity	AC15, 6A, 250V ac
(for Heavy Inductive Loads)	DC13, 6A, 24V dc
Min Switching Voltage & Current	10V, 15mA ac/dc
Max Switching Voltage	415V ac 250V dc
Max Switching Power	2500VA (AC1)/240W dc
Max Switching Frequency	6000 operations/hour
Max Loop Resistance	110Ω T11/T12–T22 Dual Channel Operation
Reaction times	Reset 200ms E-STOP<20ms
Operating Temperature	–15°C … +55°C at 90% RH
Protection Class	Case IP40 Terminals IP20
Test Voltage	2·5KV 1 minute
Shock Loading	Amplitude 0.35mm Frequency 10–55Hz (5g @ 50Hz)
Enclosure Material	Thermoplastic Vo Rating UL94
Terminations	2 x 2·5mm² solid 2 x 1·5mm² stranded

Additional Information

If additional switching contacts are required then Relay BN 5930 may be used with extension module Type BN 3081 (diag. 3). Should a delayed release contact be required then BN 5930 may be used with time delay modules BG 7925 / BG 7926 / IL 7824 / IN 7824 or BA 7924 (page xx). Gold plated contacts are also available as an optional extra, should very low switching currents be required.

Dimensions



Weight 0.8 Kg

Information Required With Order

• Model type • Auxiliary supply

Example: Emergency Stop Relay Type BN 5930.48 Auxiliary Supply 230V 50Hz