

Category 4, EN 954-1 PNOZ X2C, PNOZ X2.1C






Emergency stop relay and safety gate monitor in accordance with VDE 0113 part 1, 11/98 and EN 60204-1, 12/97.

Features

- Dual-channel operation which detects shorts across the input contacts
- Supply voltage: 24 V AC/DC
- PNOZ X2C: monitored manual reset only

Approvals

	PNOZ X2C/X2.1C
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Technical Details	PNOZ X2C, PNOZ X2.1C
Electrical Data	
Supply voltage	24 V AC/DC
Tolerance	85 ... 110 %
Power consumption	Approx. 2 W
Voltage and current at the input, reset and feedback circuits	24 VDC/25 mA
Switching capability in accordance with EN 60947-4-1, 10/91	AC1: 240 V/8 A/2000 VA DC1: 24 V/8 A/200 W
EN 60947-5-1, 11/97 (DC13: 6 cycles/min)	AC15: 230 V/5 A; DC13: 24 V/3 A
Output contacts	2 safety contacts (N/O)
Contact fuse protection according to EN 60947-5-1, 11/97	10 A quick or 6 A slow
Times	
Delay on energisation	Automatic reset: max. 150 ms Manual reset: max. 100 ms
Delay on de-energisation	Single-channel input circuit: max. 100 ms Dual-channel input circuit: max. 30 ms
Recovery time	Approx. 1 s
Simultaneity channels 1/2	∞
Max. supply interruption before de-energisation	Approx. 10 ms
Mechanical Data	
Max. cross section of the ext. conductors	2 x 1.5 mm ² or 1 x 2.5 mm ² Single-core or multiple-core with crimp connectors
Dimensions (H x W x D)	87 x 45 x 80 mm
Weight	90 g

Description

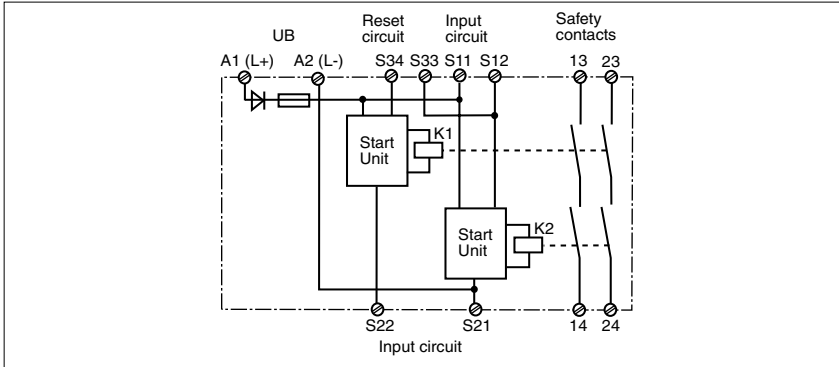
- 45 mm PL-99 housing, DIN-Rail mounting
- Positive-guided relay outputs: 2 safety contacts (N/O)
- Connections for
 - E-STOP buttons or safety gate switches
 - reset button
- Detects shorts across the input contacts
- LEDs for channel 1, channel 2 and power supply
- Increase in the number of safety contacts available by connecting expander modules

Operating modes

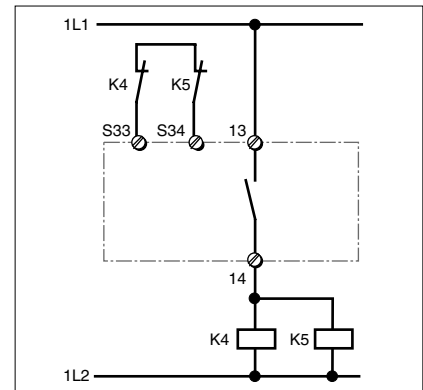
- Single-channel operation
- Dual-channel operation
- Manual reset
- PNOZ X2C only: monitored manual reset
- PNOZ X2.1C only: automatic reset

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Internal wiring diagram



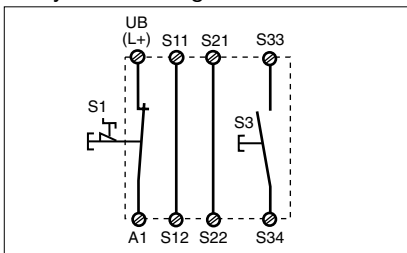
- Increase in safety contacts
The number of output contacts can be increased by using expander modules or relays/contactors with positive-guided contacts.



External wiring

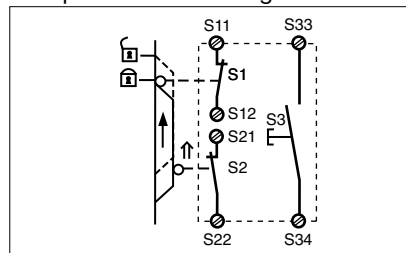
● Example 1

Single-channel E-STOP wiring with monitored manual reset.
Delay on de-energisation: max. 1 s.



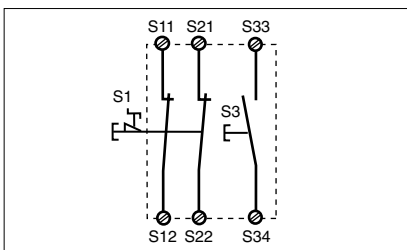
● Example 4

Dual-channel safety gate control through forced-contact limit switches with position monitoring.



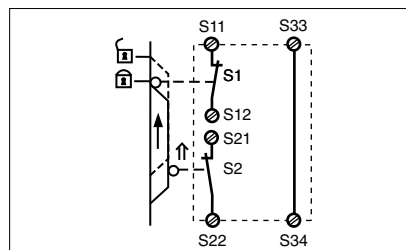
● Example 2

Dual-channel E-STOP wiring with monitored manual reset.



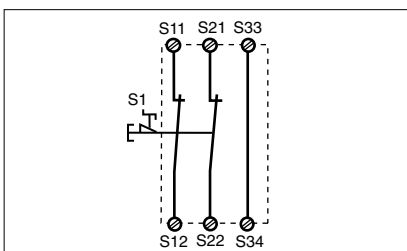
● Example 5

PNOZ X2.1C only: dual-channel safety gate control with automatic reset.



● Example 3

PNOZ X2.1C only: dual-channel E-STOP wiring with automatic reset.



– Key

S1/S2: E-STOP or safety gate switch

S3: Reset button

↑ Switch operated

⬆ Gate open

⬆ Gate closed

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General Technical Data

Unless stated otherwise in the technical details for the specific unit

Electrical Data

Frequency Range AC	50 ... 60 Hz
Residual Ripple DC	160 %
Contact Material	AgSnO ₂
Continuous Duty	100 %

Environmental Data

EMC	EN 50081-1, 01/92, EN 50082-2, 03/95
Vibration in accordance with EN 60068-2-6, 04/95	Frequency: 10 ... 55 Hz, Amplitude: 0.35 mm
Climatic Suitability	DIN IEC 60068-2-3, 12/86
Airgap Creepage	DIN VDE 0110 part 1, 04/97
Ambient Temperature	-10 ... +55 °C
Storage Temperature	-40 ... +85 °C

Mechanical Data

Torque Setting on Connection Terminals	0.6 Nm (screws)
Mounting Position	Any
Housing Material	Thermoplast Noryl SE 100
Protection	Mounting: IP 54 Housing: IP 40 Terminal Range: IP 20

The units were tested in accordance with the relevant standards current at the time of development.

Order References

Type	U _B	Order No.
PNOZ X2C	24 V AC/DC	774 304
PNOZ X2.1C	24 V AC/DC	774 305