

Category 4, EN 954-1 PNOZ X10.1



Emergency stop relay and safety gate monitor in accordance with VDE 0113-1, 11/98, EN 60204-1, 12/97 and IEC 204-1, 11/98.

Features

- Dual-channel operation with or without detecting shorts across the input contacts
- Monitored manual or automatic reset can be selected
- Designed for operation via semiconductors outputs
- 4 auxiliary contacts (N/C)

Approvals

	PNOZ X10.1
	●
	●
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Technical Details	PNOZ X10.1
Electrical Data	
Supply Voltage	AC: 24, 42, 100, 110, 115, 120, 200, 230, 240 V DC: 24 V
Tolerance	85 ... 110 %
Power Consumption	10 VA/5 W
Voltage and Current at the Input and Reset Circuits and Feedback Control Loop	24 VDC, 50 mA
Switching Capability in accordance with EN 60947-4-1, 01/92	AC1: 240 V/8 A/2000 VA 400 V/5 A/2000 VA DC1: 24 V/8 A/200 W AC15: 230 V/5 A; DC13: 24 V/7A
EN 60947-5-1, 11/97 (DC13: 6 cycles/min.)	
Output Contacts	6 safety contacts (N/O), 4 auxiliary contacts (N/C)
Contact Fuse Protection (EN 60947-5-1, 11/97)	10 A quick or 6 A slow
Times	
Delay-on Energisation	Max. 250 ms
Delay-on De-energisation	Max. 25 ms
Recovery Time	Approx. 0.3 s
Simultaneity channel 1/2	Max. 150 ms
Max. Supply Interruption before De-energisation	Max. 150 ms
Mechanical Data	
Maximum Cross Section of External Conductors	2 x 1.5 mm ² or 1 x 2.5 mm ² Single-core or multi-core with crimp connectors
Dimensions (H x W x D)	87 x 90 x 121 mm
Weight	AC: 920 g, DC: 750 g

Description

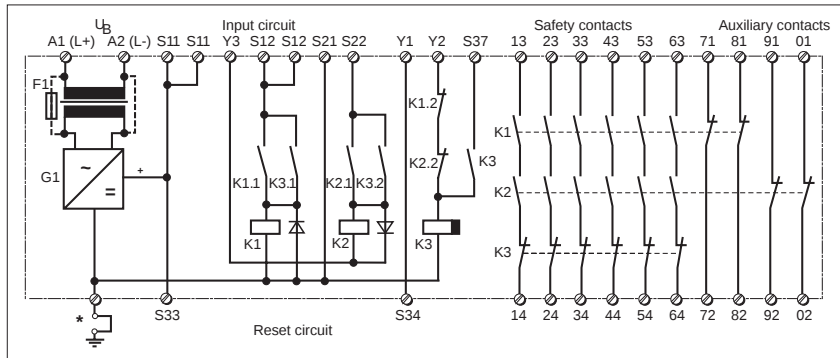
- 90 mm P-93 housing, DIN-Rail mounting
- Positive-guided relay outputs:
 - 6 safety contacts (N/O)
 - 4 auxiliary contacts (N/C)
- Connections for
 - E-STOP button
 - safety gate limit switch
 - reset button
- Detects shorts across the input contacts
- LEDs for reset circuit, input circuits, channel 1/2 and power
- Increase in the number of safety contacts available by connecting expander modules.

Operating Modes

- Single-channel operation
- Dual-channel operation
- Automatic reset
- Manual reset
- Monitored manual reset

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Internal Wiring Diagram



– Key

S1/2: E-STOP or safety gate switch

S3: Reset button

↑ Switch operated

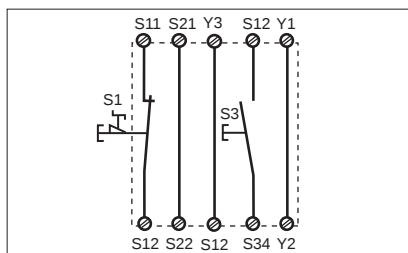
□ Gate open

□ Gate closed

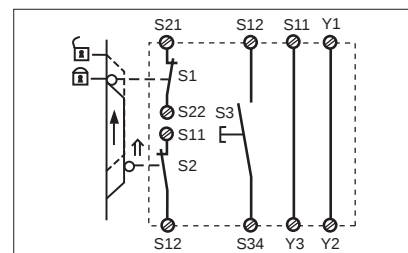
● Increase in safety contacts
The number of output contacts can be increased by using expander modules or relays/contactors with positive-guided contacts.

External Wiring

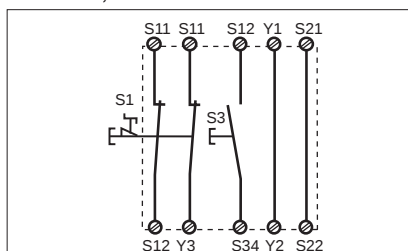
● Example 1
Single-channel E-STOP wiring with manual reset.



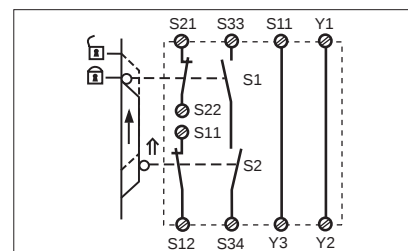
● Example 4
Dual-channel safety gate control with manual reset.



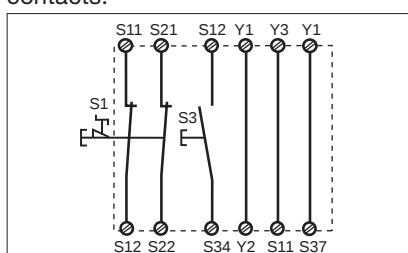
● Example 2
Dual-channel E-STOP wiring without detecting shorts across the input contacts, but with manual reset.



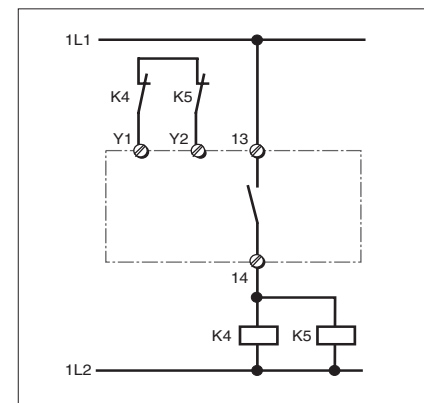
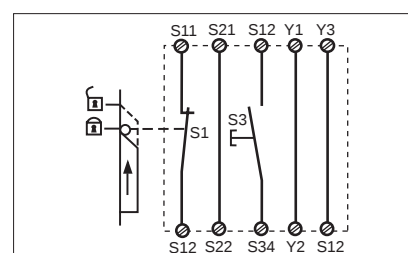
● Example 5
Dual-channel safety gate control with automatic reset.



● Example 3
Dual-channel E-STOP wiring, with monitored manual reset and detection of shorts across the input contacts.



● Example 6
Single-channel safety gate control.



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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 X10.1	24 V AC	774 740
PNOZ X10.1	42 V AC	774 741
PNOZ X10.1	100 V AC	774 742
PNOZ X10.1	110 V AC	774 743
PNOZ X10.1	115 V AC	774 744
PNOZ X10.1	120 V AC	774 745
PNOZ X10.1	200 V AC	774 748
PNOZ X10.1	230 V AC	774 746
PNOZ X10.1	240 V AC	774 747
PNOZ X10.1	24 V DC	774 749