

Category 3, EN 954-1 PNOZ 3



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

- Single-channel or dual-channel without the detection of shorts across the input contacts
- 1 N/O auxiliary contact is a fleeting contact

Approvals

	PNOZ 3
	●
	●
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Technical Details	PNOZ 3
Electrical Data	
Supply Voltage	AC: 24, 42, 48, 110, 115, 120, 230, 240 V DC: 24 V
Tolerance	85 ... 110 %
Power Consumption	Approx. 4.5 W/9 VA
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, 01/00	AC1: 240 V/8 A/2000 VA, 400 V/5 A/2000VA DC1: 24 V/8 A/200 W
EN 60947-5-1, 08/00 (DC13: 6 cycles/min.)	AC15: 230 V/5 A; DC13: 24 V/7 A
Output Contacts	5 safety contacts (N/O) 1 auxiliary contact (N/C) 1 fleeting auxiliary contact (N/O)
Contact Fuse Protection EN 60947-5-1, 08/00	10 A quick or 6 A slow
Times	
Delay-on Energisation	Approx. 250 ms
Delay-on De-energisation	Max. 50 ms
Fleeting Contact 73-74	Approx. 150 ms
Simultaneity channel1/2	Approx. 150 ms or ∞
Max. Supply Interruption before De-energisation	Approx. 10 ms
Mechanical Data	
Torque Setting on Connection Terminals	1.2 Nm (screws)
Max. Cross Section of External Conductors	2 x 2.5 mm ² Single-core or multi-core with crimp connectors
Dimensions (H x W x D)	75 x 135 x 111.5 mm
Weight	830 g

Description

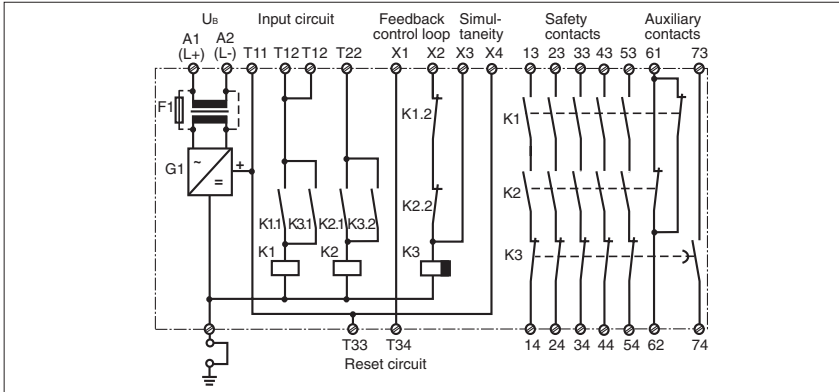
- 135 mm, P-75 housing, DIN Rail mounting
- Positive-guided relay outputs:
 - 5 safety contacts (N/O)
 - 1 auxiliary contact (N/C)
 - 1 fleeting auxiliary contact (N/O)
- Connections for
 - E-STOP button
 - safety gate limit switch
 - reset button
- LEDs for channel 1/2 and power
- Increase in the number of safety contacts available by connecting expander modules.

Operating Modes

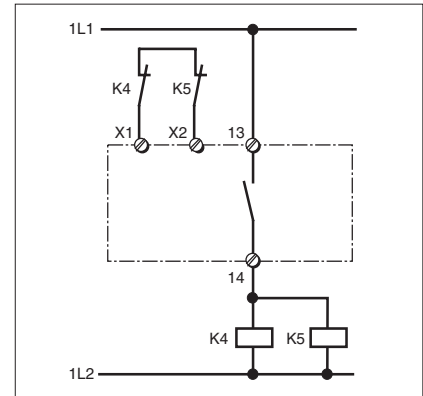
- Single-channel operation
- Dual-channel operation
- Automatic reset
- Manual reset

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Internal Wiring Diagram

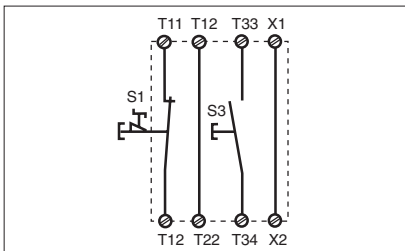


- Increase in safety contacts
The number of output contacts can be increased by using expander modules or relays/contactors with positive-guided contacts.

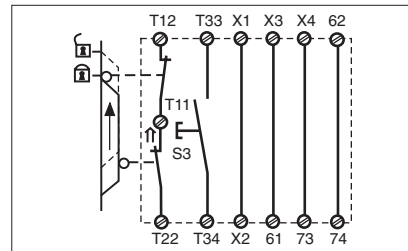


External Wiring

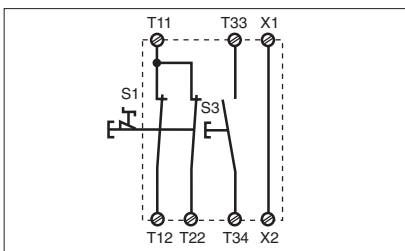
- Example 1
Single-channel E-STOP wiring with manual reset.



- Example 4
Time difference extended to infinity on a safety gate control with manual reset.



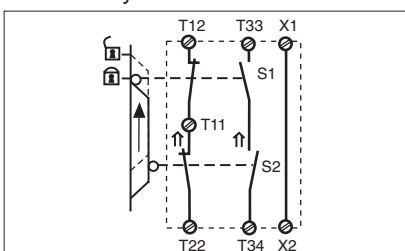
- Example 2
Dual-channel E-STOP wiring with manual reset.



– Key

S1/2:	E-STOP or safety gate switch
S3:	Reset button
	Switch operated
	Gate open
	Gate closed

- Example 3
Single-channel safety gate control with automatic reset while simultaneity is maintained.



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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 61000-6-2, 03/00
Vibration in accordance with EN 60068-2-6, 01/00	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 3	24 V DC	474 894
PNOZ 3	24 V AC	474 803
PNOZ 3	42 V AC	474 813
PNOZ 3	48 V AC	474 823
PNOZ 3	110 V AC	474 833
PNOZ 3	115 V AC	474 837
PNOZ 3	120 V AC	474 843
PNOZ 3	230 V AC	474 856
PNOZ 3	240 V AC	474 859