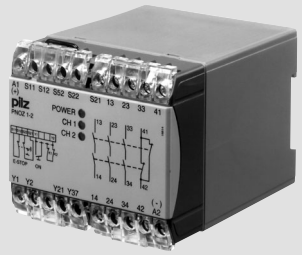
Category 4, EN 954-1

PNOZ 1-2



Emergency stop relay and safety gate monitor in accordance with VDE 0113-1, 11/98, EN 60204-1, 12/97, IEC 204-1, 11/98 and VDE 0116.

Features

- Dual-channel operation with or without detecting shorts across the input contacts
- Approved in accordance with VDE 0116 (burner technology)
- Monitored manual or automatic reset can be selected
- With diverse relays

Approvals

	PNOZ 1-2
c UL us LISTED	●
TÜV SÜDDEUTSCHLAND	●
CCC	●

Technical Details	PNOZ 1-2
Electrical Data	
Supply Voltage	AC: 24, 48, 110, 120, 230 V DC: 24 V
Tolerance	85 ... 110 %
Power Consumption	≤3.5 W/6 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, 10/91	AC1: 240 V/6 A/1500 VA 400 V/3,75A/1500 VA DC1: 24 V/4A/100 W
EN 60947-5-1, 10/91 (DC13: 6 cycles/min.)	AC15: 230 V/5 A; DC13: 24 V/4A
Output Contacts	3 safety contacts (N/O) 1 auxiliary contact (N/C)
Contact Fuse Protection (EN 60947-5-1, 10/91)	6 A quick or 4 A slow
Times	
Delay-on Energisation	Max. 250 ms
Delay-on De-energisation	Max. 50 ms
Recovery Time	Approx. 0.3 s
Simultaneity channel 1/2	Approx. 140 ms
Max. Supply Interruption before De-energisation	Approx. 35 ms
Mechanical Data	
Torque Setting on Connection Terminals	1.2 Nm (screws)
Maximum Cross Section of External Conductors	2 x 2.5 mm^2 Single-core or multi-core crimp connectors
Dimensions (H x W x D)	75 x 90 x 110 mm
Weight	AC: 700 g, DC: 640 g

Description

- 90 mm, P-75 housing, DIN-Rail mounting
- Positive-guided relay outputs:
  - 3 safety contacts (N/O)
  - 1 auxiliary contacts (N/C)
- Connections for
  - E-STOP button
  - safety gate limit switch
  - reset button
- LEDs for channel 1/2 and operating voltage
- 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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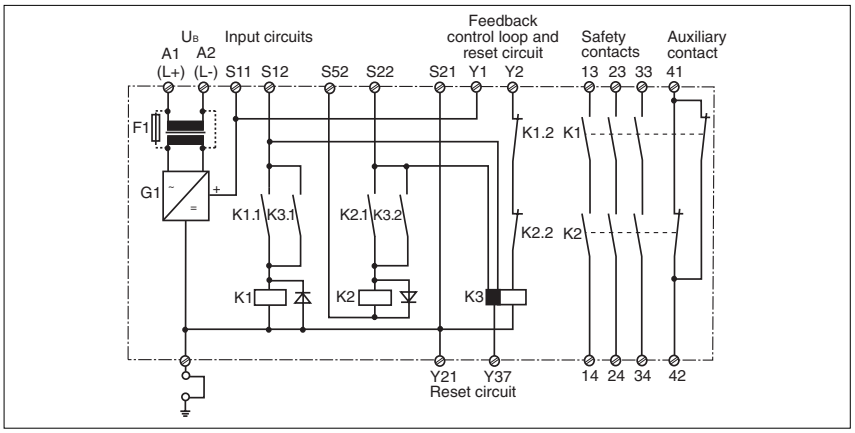
Category 4, EN 954-1
PNOZ 1-2

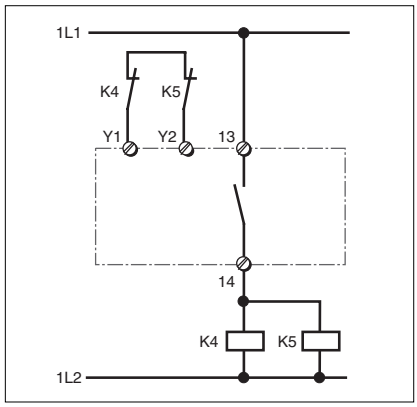
Internal Wiring Diagram



– Key

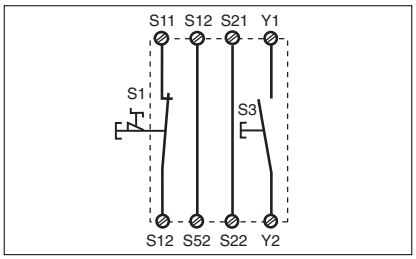
S1/2:	E-STOP or safety gate switch
S3:	Reset button
	Switch operated
	Gate open
	Gate closed

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

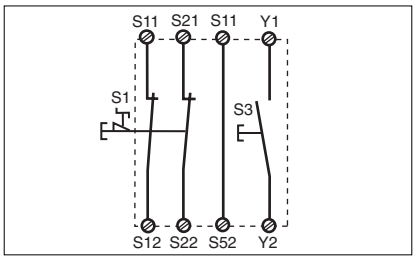


External Wiring

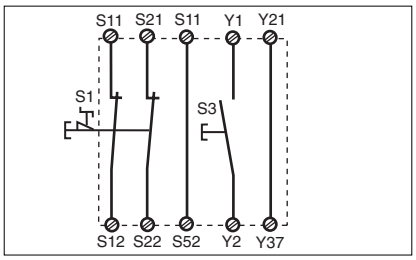
● Example 1
Single-channel E-STOP wiring with manual reset.



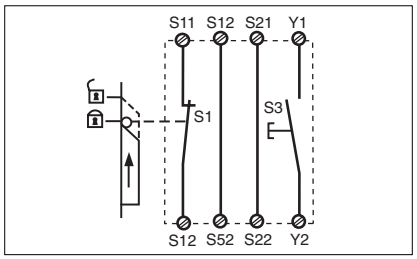
● Example 2
Dual-channel E-STOP wiring with manual reset.



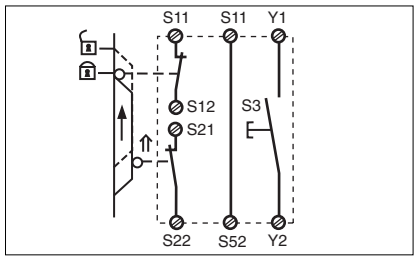
● Example 3
Dual-channel E-STOP wiring with monitored manual reset.



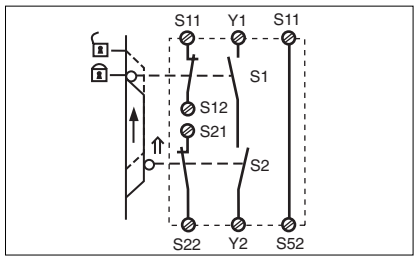
● Example 4
Single-channel safety gate control with manual reset.



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



● Example 6
Dual-channel safety gate control with automatic reset.



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Category 4, EN 954-1
PNOZ 1-2

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 1-2	24 V DC	474 696
PNOZ 1-2	24 V AC	474 697
PNOZ 1-2	110 V AC	474 631
PNOZ 1-2	230 V AC	474 652

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