

Category 2, EN 954-1 PNOZ 5, PNOZ 5.1



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

Features

- Single-channel operation
- Supply voltage applied at the E-STOP button

Approvals

	PNOZ 5/5.1
	●
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Technical Details	PNOZ 5	PNOZ 5.1
Electrical Data		
Supply Voltage	AC: 24, 42, 48, 110, 115/120, 230/240 V DC: 24 V	DC: 24 V
Tolerance	85 ... 110 %	(55 °C): 90 ... 110 %
Supply Voltage	24 VDC	24 VDC
Residual Ripple	DC: 20%	DC: 10%
Power Consumption U_g	Approx. 4 VA/2.5 W	Approx. 4 VA/2.5 W
Voltage and Current at the Reset Circuit and Feedback Control Loop	24 VDC, 50 mA	24 VDC, 50 mA
Switching Capability in accordance with EN 60947-4-1, 02/01		
DC units	AC1: 240 V/6 A/1500 VA DC1: 24 V/6 A/150 W	
AC units	AC1: 240 V/5 A/1200 VA DC1: 24 V/5 A/120 W AC15: 230 V/4 A; DC13: 24 V/3A	
EN 60947-5-1, 11/97 (DC13: 6 cycles/min.)		
Output Contacts	2 safety contacts (S)	
Contact fuse protection according to EN 60947-5-1, 08/00	Blow-out fuse: 6 A quick or 4 A slow Safety cut-out: 24 V AC/DC: 6 A, Characteristic B/C	
Times		
Switch-on Delay	Automatic reset: max. 400 ms Manual reset: max. 105 ms	
Delay-on De-energisation	AC: Max. 200 ms	Max. 200 ms DC: Max. 200 ms
Recovery Time	Approx. 100 ms	Approx. 100 ms
Max. Supply Interruption before De-energisation	Approx. 10 ms	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 45 x 110 mm	
Weight	AC: 290 g, DC: 230 g	

Description

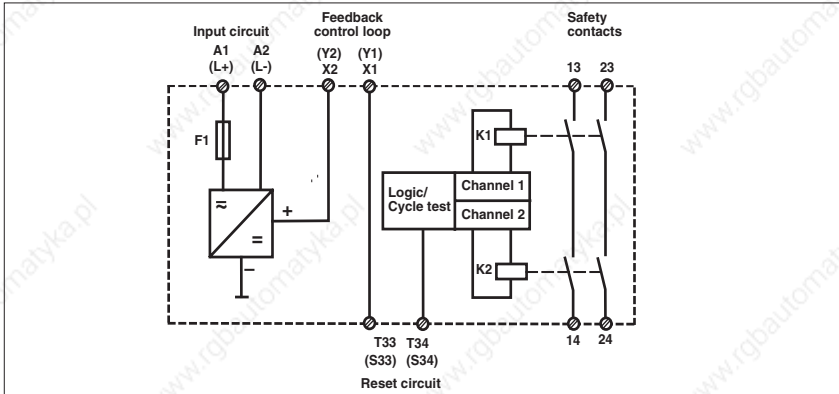
- 45 mm, P-75 housing, DIN Rail mounting
- Positive-guided relay outputs:
 - 2 safety contacts (N/O)
- Connections for
 - E-STOP button
 - reset button
- Increase in the number of safety contacts available by connecting expander modules.

Operating Modes

- Single-channel operation
- Automatic reset
- Manual reset

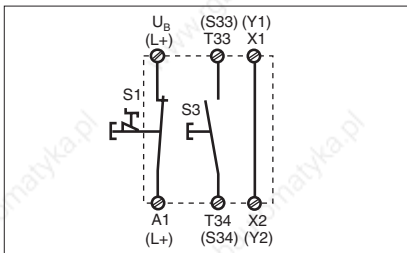
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Internal Wiring Diagram



External Wiring

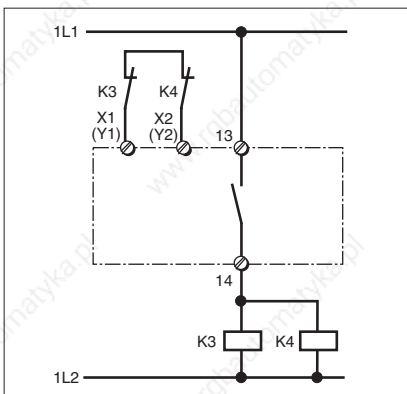
- Example 1
Single-channel E-STOP with manual reset.



– Key

- | | |
|-----|------------------------------|
| S1: | E-STOP or safety gate switch |
| S3: | Reset button |

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



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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 5	24 V DC	474 590
PNOZ 5	24 V AC	474 591
PNOZ 5	42 V AC	474 592
PNOZ 5	48 V AC	474 593
PNOZ 5	110 V AC	474 594
PNOZ 5	115/120 V AC	474 595
PNOZ 5	230/240 V AC	474 597
PNOZ 5.1	24 V DC	474 605