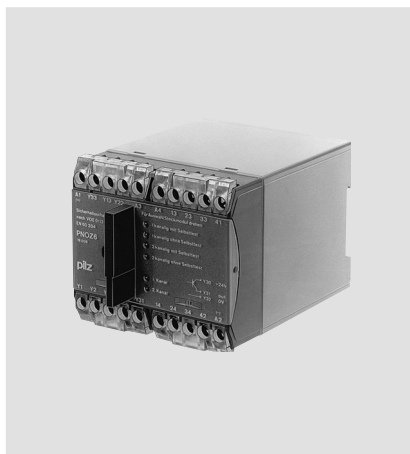


Category 4, EN 954-1 PNOZ 6



Emergency stop relay and safety gate monitor in accordance with EN 60204-1 (VDE 0113-1), 11/98 and IEC 60204-1, 10/97.

Features

- Operating mode can be programmed via the plug-in module
- Operation with automatic self-test possible
- 1 semiconductor output (K1/K2)

Approvals

	PNOZ 6
	●
	●

Technical Details	PNOZ 6
Electrical Data	
Supply Voltage	AC: 230 V DC: 24 V
Tolerance	-15 ... +10 %
Power Consumption	Approx. 4.5 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, 02/01	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/7 A
EN 60947-5-1, 08/00 (DC13: 6 cycles/min.)	
Output Contacts	3 safety contacts (N/O) 1 auxiliary contact (N/C)
Contact Fuse Protection (EN 60947-5-1, 08/00)	10 A quick or 6 A slow
Semiconductor Outputs	24 VDC/50 mA, PNP short-circuit protected
External Supply Voltage	24 VDC $\pm$ 20 %
Times	
Delay-on Energisation	Approx. 300 ms
Delay-on De-energisation	Approx. 50 ms
Recovery Time	Approx. 0.3 s
Simultaneity channel 1/2	300 ms
Max. Supply Interruption before De-energisation	Approx. 35 ms
Mechanical Data	
Torque Setting on Connection Terminals	1.2 Nm (screws)
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 90 x 110 mm
Weight	AC: 750 g, DC: 660 g

Description

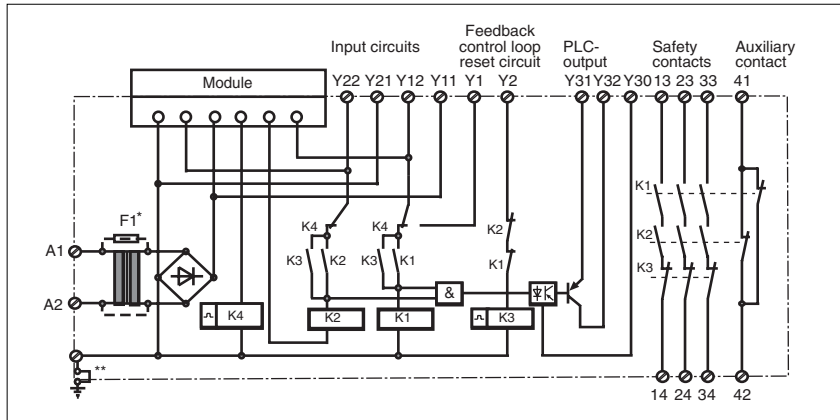
- 90 mm, P-75 housing, DIN-Rail mounting
- Relay outputs, positive-guided:
 - 3 safety contacts (N/O)
 - 1 auxiliary contact (N/C)
- Connections for
 - E-STOP button
 - safety gate limit switch
 - reset button
- LEDs for operating mode and status of the input circuit
- Increase in the number of safety contacts available by connecting expander modules.

Operating Modes

- Single-channel operation
- Dual-channel operation
- Automatic reset
- Manual reset
- Self-test
- Start-up test
- Additional manual reset

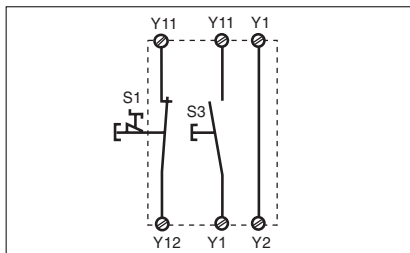
Category 4, EN 954-1 PNOZ 6

Internal Wiring Diagram

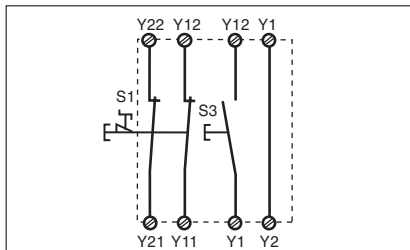


External Wiring

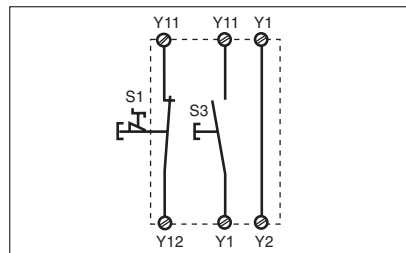
- Example 1
Single-channel E-STOP wiring with manual reset.
Plug-in module, position ②



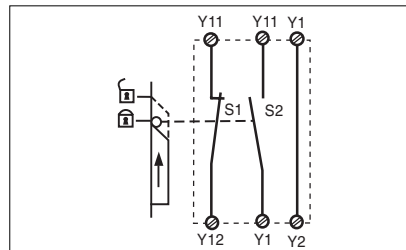
- Example 2
Dual-channel E-STOP wiring with manual reset
Plug-in module, position ④



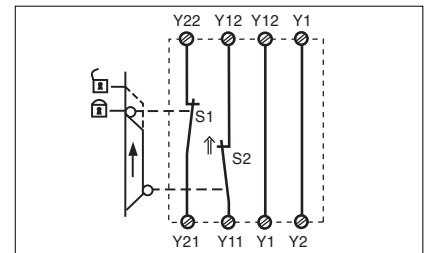
- Example 3
Single-channel E-STOP wiring with additional manual reset
Plug-in module, position ①



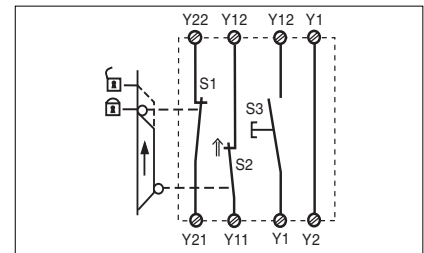
- Example 4
Single-channel safety gate control with automatic reset
Plug-in module, position ②



- Example 5
Dual-channel safety gate control with automatic reset.
Plug-in module, position ④



- Example 6
Dual-channel safety gate control with manual reset
Plug-in module, position ③



– Key

S1/2: E-STOP or safety gate switch

S3: Reset button

↑↑ Switch operated

⬇ Gate open

⬆ Gate closed

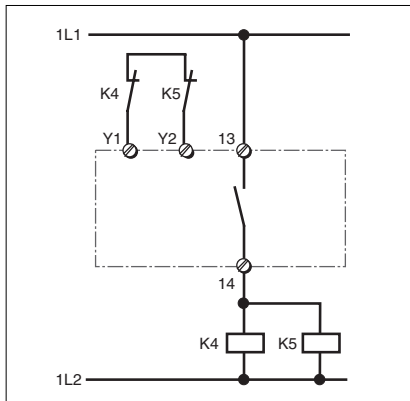
The following positions on the plug-in module will set the corresponding operating mode:

- ① Single-channel with self-test
- ② Single-channel without self-test
- ③ Dual-channel with self-test
- ④ Dual-channel without self-test

Category 4, EN 954-1 PNOZ 6

● Increase in safety contacts

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



Category 4, EN 954-1 PNOZ 6

General Technical Data

Unless stated otherwise in the technical details for the specific unit

Electrical Data

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 60068-2-78, 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	1.2 Nm (screws)
Mounting Position	Any
Housing Material	Thermoplast Noryl SE 100
Protection	Mounting: IP54 Housing: IP40 Terminal Range: IP20

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

Order References

Type	U _B	Order No.
PNOZ 6	24 V DC	474 899
PNOZ 6	230 V AC	474 908