

## Category 3, EN 954-1 PNOZ X6



Safety gate monitor and emergency stop relay in accordance with VDE 0113 part 1, 11/98, EN 60204-1, 12/97 and IEC 204-1, 11/98

### Features

- PST 3 compatible
- Single-channel or dual-channel which detects shorts across the inputs
- Designed for driving via semi-conductors
- Automatic or monitored manual reset
- Simultaneity monitoring can be switched-on or off

### Approvals

	PNOZ X6
	●
	●
	●

Technical Data	PNOZ X6
<b>Electrical Data</b>	
Supply Voltage	AC: 42, 100, 110 ... 120, 200, 230 ... 240 V AC/DC: 24 V
Tolerance	85 ... 110 %
Residual Ripple DC	Max. 120 %
Power Consumption	Approx. 1,5 W/5,0 VA
Voltage and Current at input circuit and feedback control loop	24 VDC, 50 mA
Switching Capability in accordance with EN 60947-4-1, 10/91	AC1: 240 V/8 A/2000 VA 400 V/5 A/2000 VA DC1: 24 V/8 A/200 W
EN 60947-5-1, 10/91 (DC13: 60 cycles/min)	AC15: 230 V/5 A DC13: 24 V/7 A
Output Contacts	3 N/O safety contacts
Contact Fuse Protection to EN 60947-5-1, 10/91	10 A quick or 6 A slow
Max. permitted Switch-on Current	10 A
<b>Times</b>	
Response Delay	Approx. 300 ms
Delay-on De-energisation	Approx. 50 ms
Recover Time	Approx. 200 ms
Simultaneity channel 1/2	Approx. 200 ms or ∞
Max. Supply Interrupt before De-energisation	10 ms
<b>Mechanical Data</b>	
Max. cross section of external conductors	2 x 2.5 mm <sup>2</sup> Single-core or multi-core with crimp connectors
Dimensions (H x W x D)	87 x 45 x 121 mm
Weight	AC: 400 g, DC: 300 g

### Description

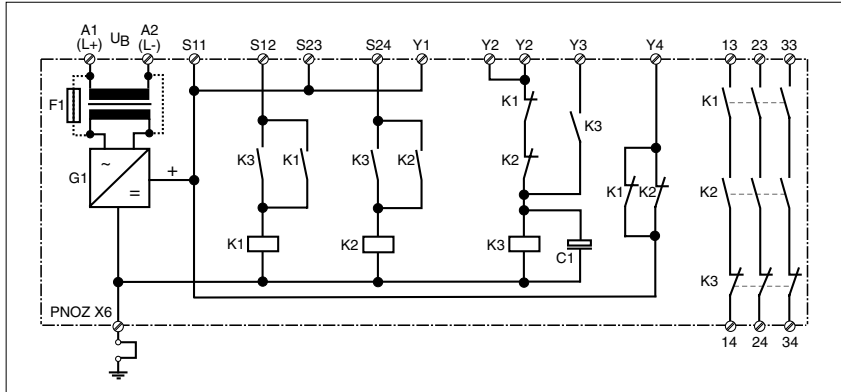
- 45 mm P-97-housing, DIN-Rail mounting
- Relay outputs, positive-guided:
  - 3 (N/O) safety contacts
- Connections:
  - e-stop button
  - safety gate limit switch
  - reset button
- LED indicators: channel 1/2 and supply voltage
- Increase in the number of contacts available by connecting external contactors / relays

### Operating Modes

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

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### Internal Wiring Diagram



### - Key

S1/S2: E-Stop or safety gate switch

S3: Reset button

↑ Switch activated

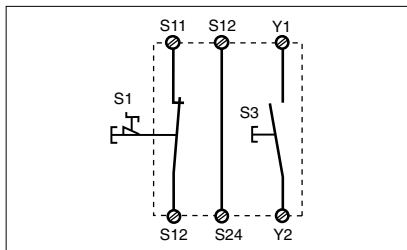
🔒 Gate not closed

🔓 Gate closed

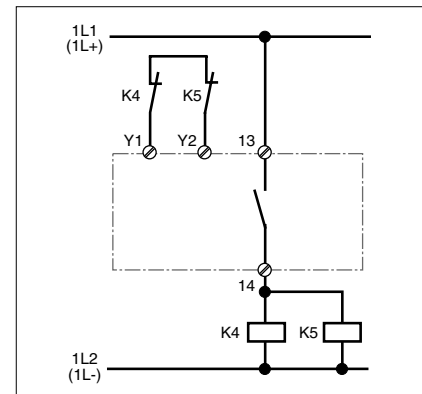
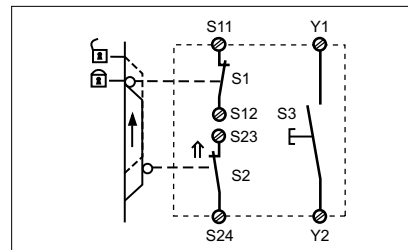
● Increase in contacts  
If required the number of output contacts on the PNOZ X6 can be increased using external relays / contactors.

### External Wiring

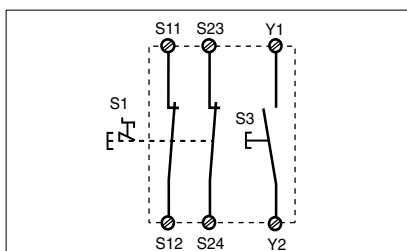
● Example 1  
Single-channel E-Stop wiring with manual reset



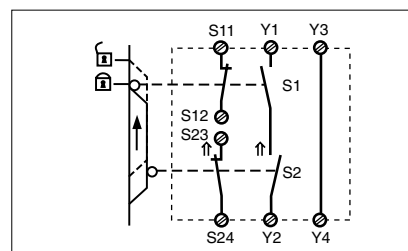
● Example 4  
Dual-channel safety gate control with manual reset



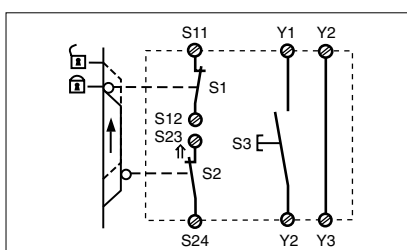
● Example 2  
Dual-channel E-Stop wiring with manual reset



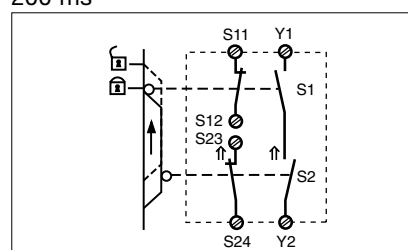
● Example 5  
Dual-channel safety gate control with automatic reset, simultaneity: infinity



● Example 3  
Dual-channel safety gate control with monitored reset



● Example 6  
Dual-channel safety gate control with automatic reset, simultaneity: max. 200 ms



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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 <sub>2</sub>
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 <sub>B</sub>	Order No.
PNOZ X6	24 V AC/DC	774 729
PNOZ X6	120-110 V AC	774 725
PNOZ X6	230-240 V AC	774 726