

Category 4, EN 954-1 PST 4






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

Features

- Simultaneity monitoring
- Manual or automatic reset
- Start-up test after supply voltage is applied

Approvals

	PST 4
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Technical Details	PST 4
Electrical Data	
Supply Voltage	AC: 24, 42, 110, 230 V DC: 24 V
Tolerance	85 ... 110 %
Power Consumption	Approx. 5.5 W/12 VA
Residual Ripple DC	Max. 20 %
Voltage and Current at the Input Circuits 1/2	24 VDC, 30 mA
Switching Capability in accordance with EN 60947-4-1, 10/92	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	6 safety contacts (N/O) 4 auxiliary contacts (N/C)
Contact Fuse Protection (EN 60947-5-1, 08/00)	10 A quick or 6 A slow
Times	
Delay-on Energisation	Approx. 100 ms
Delay-on De-energisation	Approx. 50 ms
Recovery Time	Approx. 150 ms
Simultaneity channel 1/2	Approx. 4 s
Max. Supply Interruption before De-energisation	35 ms
Mechanical Data	
Maximum Cross Section of External Conductors	2 x 1.5 mm ² Single-core or multi-core with crimp connectors
Dimensions (H x W x D)	87 x 90 x 121 mm
Weight	AC: 700 g, DC: 600 g

Description

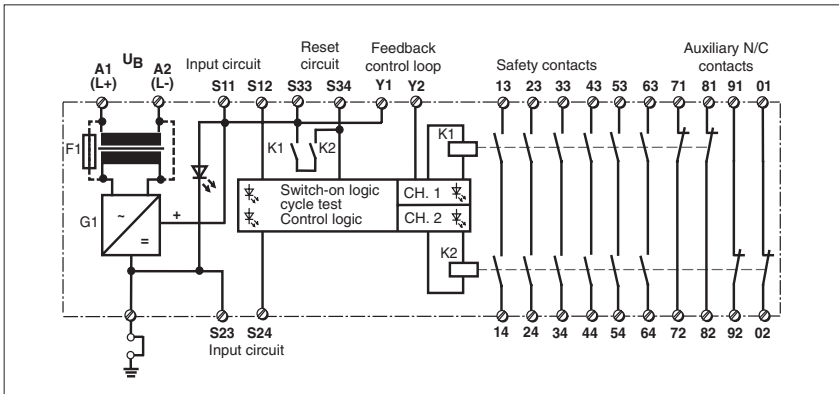
- 90 mm, P-93 housing, DIN-Rail mounting
- Positive-guided relay outputs:
 - 6 safety contacts (N/O)
 - 4 auxiliary contacts (N/C)
- Connection for
 - safety gate limit switches
 - reset button
- LEDs for power, channel 1 IN, channel 2 IN, channel 1 OUT and channel 2 OUT
- Increase in the number of safety contacts available by connecting expander modules.

Operating Modes

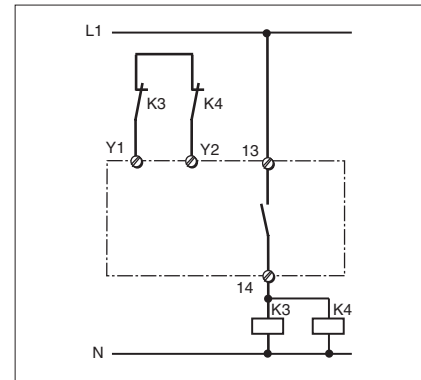
- Dual-channel operation
- Automatic reset
- Manual reset

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Internal Wiring Diagram



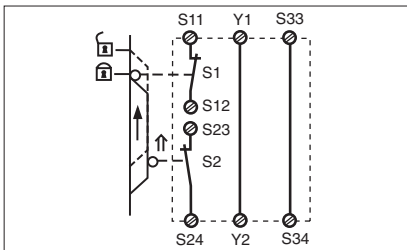
- Increase in safety contacts
The number of output contacts can be increased by using expander modules or relays/contactors with positive-guided contacts.



External Wiring

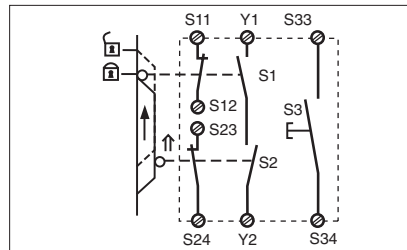
● Example 1

Dual-channel safety gate control with automatic reset.



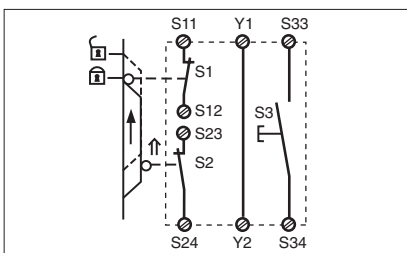
● Example 4

Dual-channel safety gate control with manual reset and start-up testing.



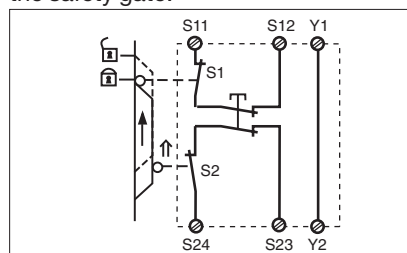
● Example 2

Dual-channel safety gate control with manual reset.



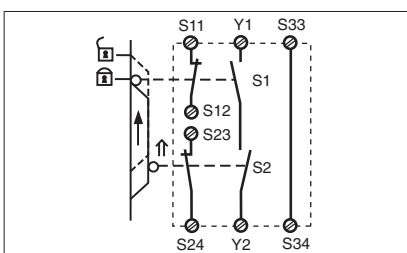
● Example 5

Dual-channel safety gate control with simulation for opening and closing the safety gate.



● Example 3

Dual-channel safety gate control with automatic reset and start-up testing.



– Key

- S1/S2: E-STOP or safety gate switch
- S3: Reset button
- ↑ Switch operated
- ☐ Gate open
- ☐ Gate closed

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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 61000-2-3, 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 0110-1, 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.
PST 4	24 V DC	720 300
PST 4	24 V AC	720 301
PST 4	42 V AC	720 303
PST 4	110 V AC	720 308
PST 4	230 V AC	720 309