

## Up to PL e of EN ISO 13849-1 PST 4






Safety gate monitor in accordance with VDE 0113-1, EN 60204-1 and IEC 204-1.

### Features

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

### Approvals

	PST 4
	●
	●
	●

Technical Details	PST 4
<b>Electrical Data</b>	
Supply Voltage	AC: 24, 42, 110, 230 V, 240 V DC: 24 V
Tolerance	-15 % ... +10 %
Power Consumption	Approx. 5.5 W/12 VA
Frequency Range AC	50 ... 60 Hz
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	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 (DC13: 6 cycles/min.)	
Output Contacts	6 safety contacts (N/O) 4 auxiliary contacts (N/C)
Contact Material	AgSnO <sub>2</sub> +Au
Contact Fuse Protection (EN 60947-5-1)	10 A quick or 6 A slow
<b>Times</b>	
Continuous Duty	100 %
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
<b>Mechanical Data</b>	
Cable cross section	
1 core, flexible	0,20 - 4,00 mm <sup>2</sup> , 24 - 10 AWG
2 core, same cross section flexible: with crimp connectors, without insulating sleeve	0,20 - 2,50 mm <sup>2</sup> , 24 - 14 AWG
without crimp connectors or with TWIN crimp connectors	0,20 - 2,50 mm <sup>2</sup> , 24 -14 AWG
Dimensions (H x W x D)	87 x 90 x 121 mm
Weight	AC: 700 g, DC: 530 g

### Description

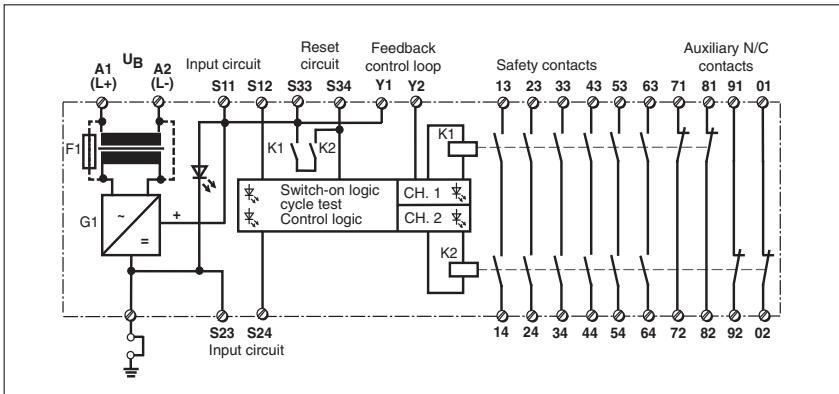
- 90 mm, P-93 housing, DIN-Rail mounting
- Positive-guided relay outputs:
  - 6 safety contacts (N/O)
  - 4 auxiliary contacts (N/C)
- Connection for
  - safety gate limit switches
  - reset button
- LEDs for channel 1/2 and power
- Increase in the number of safety contacts available by connecting expander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

### Operating Modes

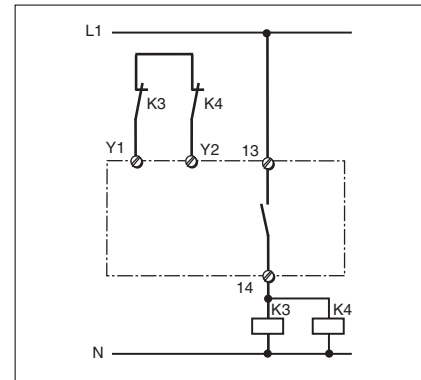
- Dual-channel operation
- Automatic reset
- Manual reset

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### Internal Wiring Diagram



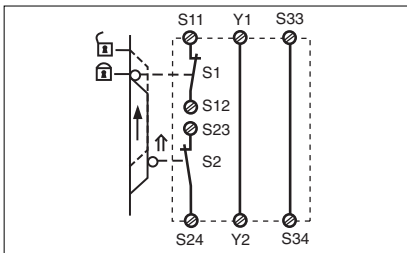
- Increase in safety contacts  
The number of output contacts can be increased by using expander modules or relays/contactors with positive-guided contacts.



### External Wiring

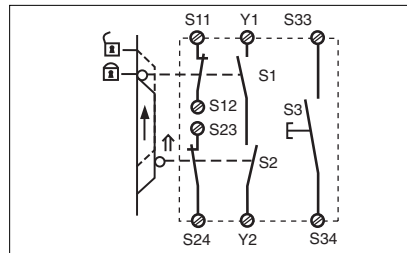
#### ● Example 1

Dual-channel safety gate control with automatic reset.



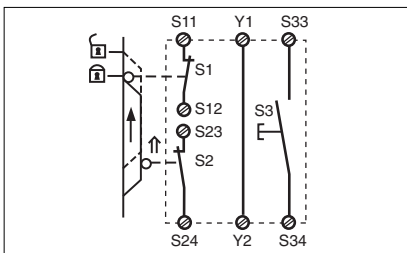
#### ● Example 4

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



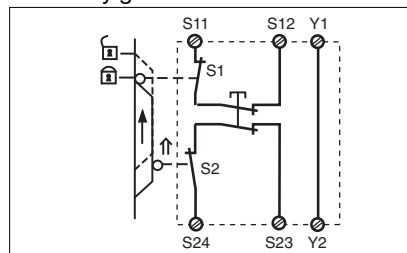
#### ● Example 2

Dual-channel safety gate control with manual reset.



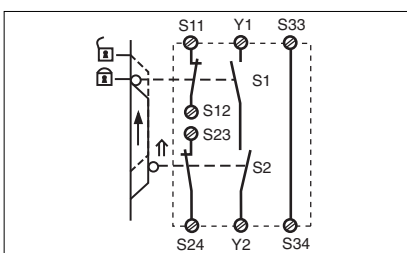
#### ● Example 5

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

#### Safety-related characteristic data

PL in accordance with EN ISO 13849-1: 2006	PL e (Cat. 4)
Category in accordance with EN 954-1	Cat. 4
SIL CL in accordance with EN IEC 62061	SIL CL 3
PFH in accordance with EN IEC 62061	5,14E-09
SIL in accordance with IEC 61511	SIL 3
PFD in accordance with IEC 61511	4,98E-06
TM [year] in accordance with EN ISO 13849-1: 2006	20

#### Environmental Data

EMC	EN 60947-5-1, EN 61000-6-2
Vibration in accordance with EN 60068-2-6	Frequency: 10 ... 55 Hz, Amplitude: 0.35 mm
Climatic Suitability	EN 60068-2-30
Airgap Creepage	EN 60947-1
Pollution degree	2
Overvoltage category	III / II
Rated insulation voltage	400 V
Rated impulse withstand voltage	4 kV
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	PPO UL 94 V0
Protection	Mounting: IP54 Housing: IP40 Terminal Range: IP20

The standards current on 2009-05 apply.

### Order References

Type	U <sub>B</sub>	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
PST 4	240 V AC	720 310