

Base Unit PNOZ p1p



Base unit for the PNOZpower modular safety system in accordance with EN 60204-1 (VDE 0113-1), 11/98 IEC 60204-1, 10/97

Features

- Dual-channel operation with or without detecting shorts across the input contacts
- Automatic or monitored manual reset can be selected
- Designed for operation using semiconductor outputs
- 2 semiconductor outputs: Fault (group fault signal), K1/K2
- Plug-in connection terminals

Approval

	PNOZ p1p
	●
	●
	●

Technical Details	PNOZ p1p
Electrical Data	
Supply voltage	DC: 24 V
Tolerance	85 ... 110 %
Power consumption	3 W + load expander modules
Voltage and current at the input, reset and feedback circuits	24 VDC, 50 mA
Semiconductor Outputs	24 VDC/20 mA, short-circuit protected
External Supply Voltage	24 VDC ±20 %
Times	
Switch-on delay	Monitored manual reset: max. 180 ms Auto./ manual reset: max. 250 ms
Delay-on De-energisation	With E-STOP: max. 25 ms With power failure: max. 1 s
Recovery time	Approx. 0.3 s
Simultaneity channels 1/2	Max. 150 ms
Max. supply interruption before de-energisation	Approx. 25 ms
Mechanical Data	
Cable cross section	
1 Core	flexible: 0.25 ... 2.5 mm ²
2 cables with the same cross	flexible with crimp connectors without insulating sleeve: 0,25 x 1 mm ² flexible without crimp connectors or with TWIN crimp: 0,25 x 1,5 mm ²
Torque setting for connection terminals	0.5 Nm (screws)
Mounting Position	On a top hat rail installed horizontally.
Protection Housing	IP 30
Dimensions (H x W x D)	94 x 45 x 135 mm
Weight	280 g

Description

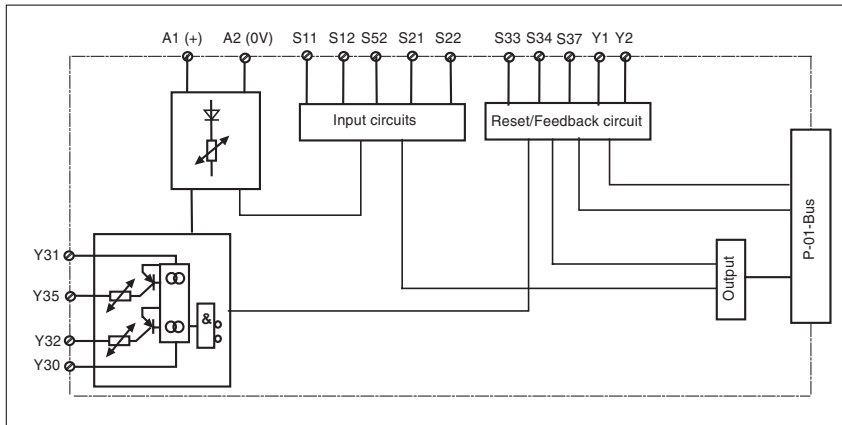
- 45 mm P-01 housing, DIN-Rail mounting
- Connections for
 - E-STOP button
 - safety gate limit switches
 - reset buttons
- Output connected to PNOZpower Bus
- Maximum of 4 expander modules can be connected.
- Connection between PNOZ p1p and expansion module via PNOZpower Bus bus using connector plug on the backside of the unit.
- LEDs for status of input and output circuit, reset circuit, power supply and faults.

Operating modes

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

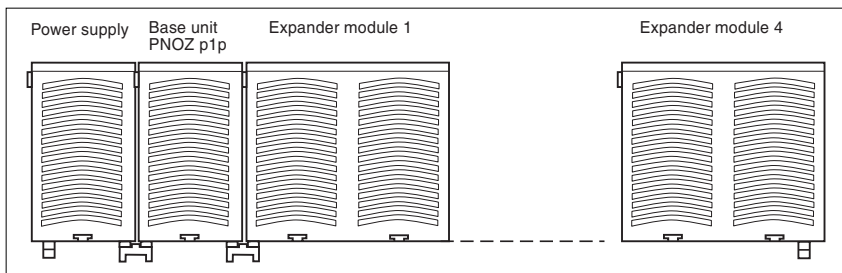
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Internal wiring diagram

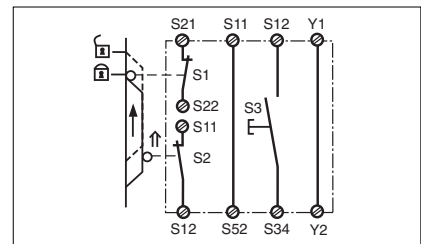


External wiring

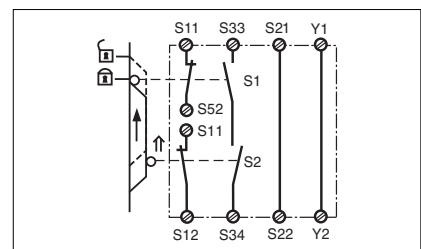
- PNOZpower Bus: Base unit connected with 4 expansion modules and power supply (optional) via connector plugs.



- Example 5
Dual-channel safety gate control with manual reset and short-circuit recognition.

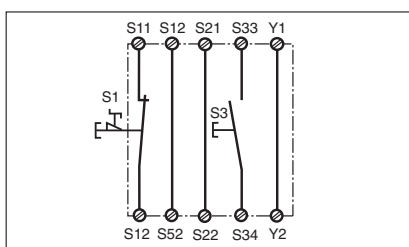


- Example 6
Dual-channel safety gate control with automatic reset.

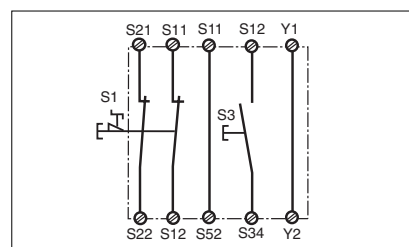


- Key

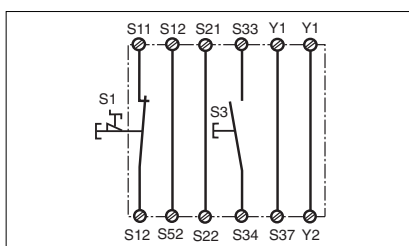
- Example 1
Single-channel E-STOP wiring with manual reset.



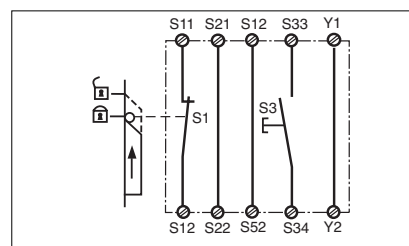
- Example 3
Dual-channel E-STOP wiring with manual reset and short-circuit recognition.



- Example 2
Single-channel E-STOP wiring with monitored manual reset.



- Example 4
Single-channel safety gate control with manual reset.



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

Base Unit

PNOZ p1p

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 61000-4-6, 04/97 EN 61000-6-2, 04/99
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	Front: ABS UL 94 V0 Housing: PPO UL 94 V0
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 p1p	24 V DC	773 300