

## ► Safety relays PNOZsigma

The compact safety relays PNOZsigma combine many years of experience with today's very latest safety technology: you can achieve maximum safety and cost-effectiveness with minimum effort. With particularly narrow housing widths and multifunctionality compressed into each unit, PNOZsigma provides maximum functionality in minimum width. So you can implement safety technology faster, with greater flexibility and therefore more efficiently, while saving space.



PNOZ s1

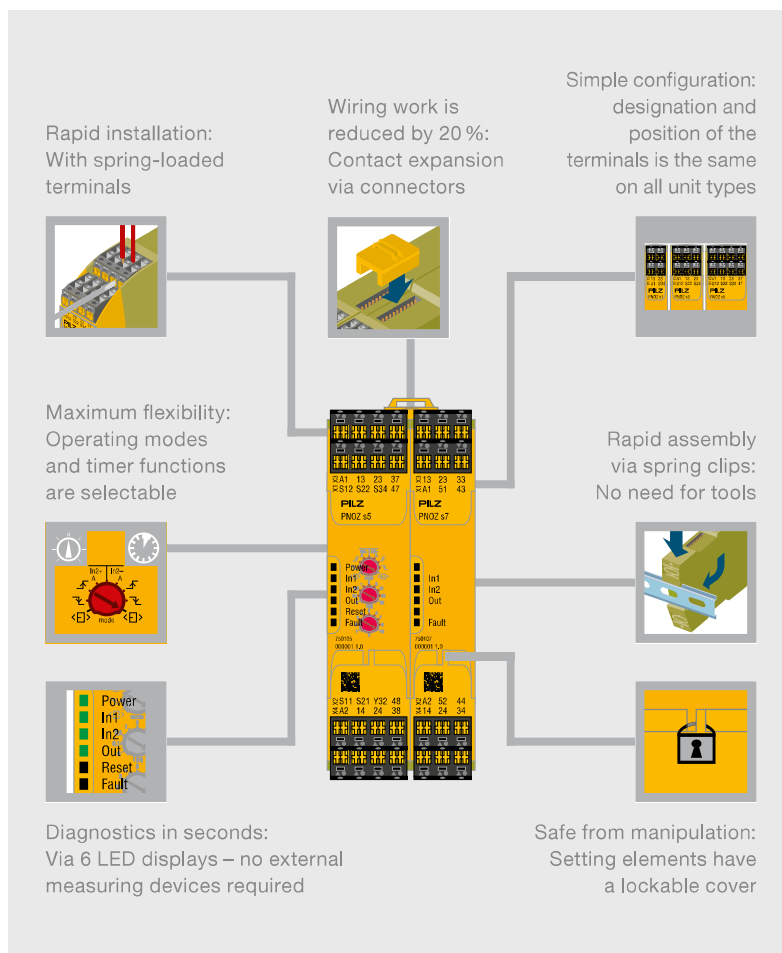
PNOZ s3

PNOZ s5

PNOZ s30

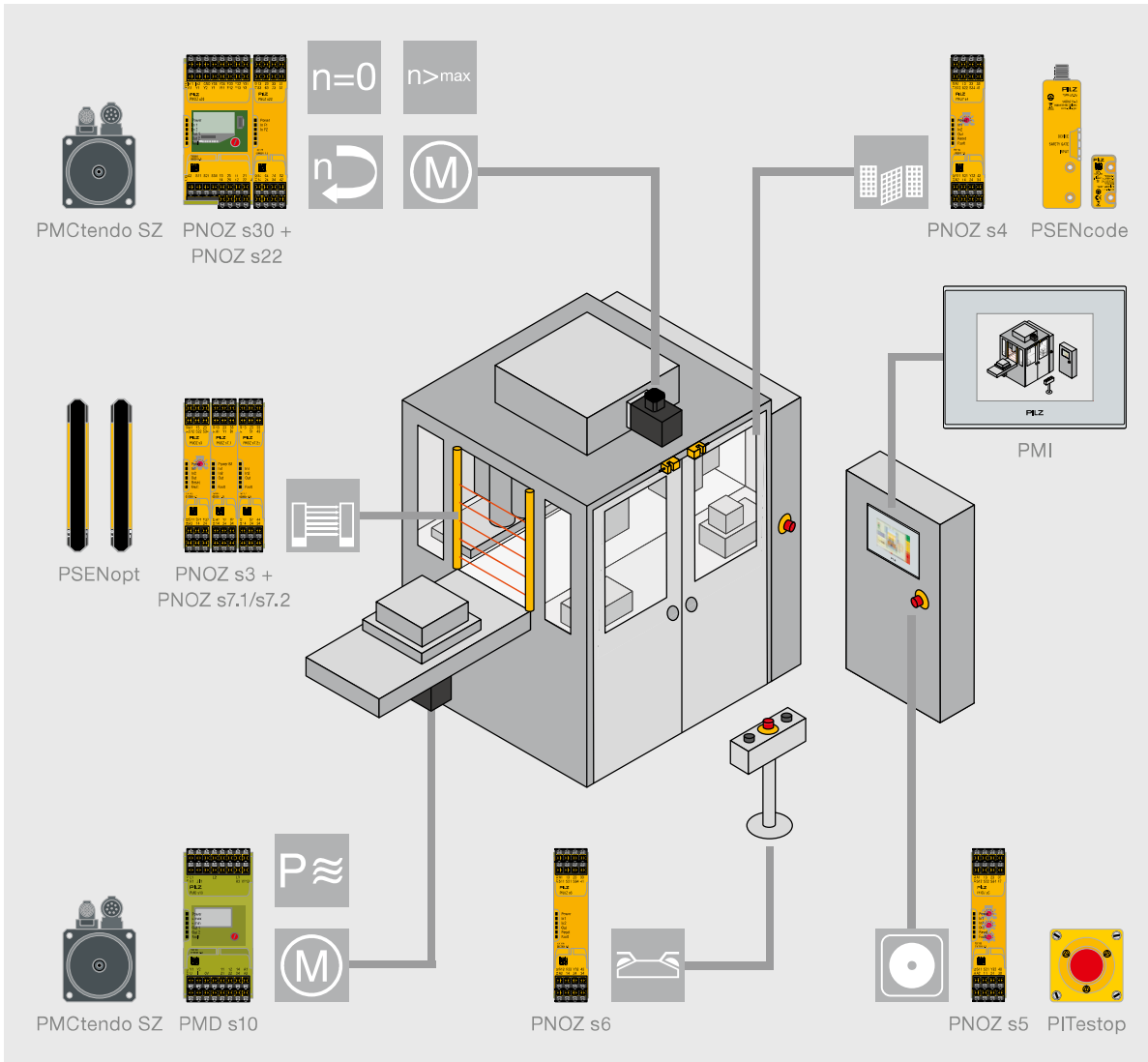
### Small number of types – suitable for a variety of uses

- ▶ Selectable operating modes and timers enable each unit to be flexible in its application
- ▶ A single unit type monitors different safety functions
- ▶ Your stockholding can be reduced to a few unit types

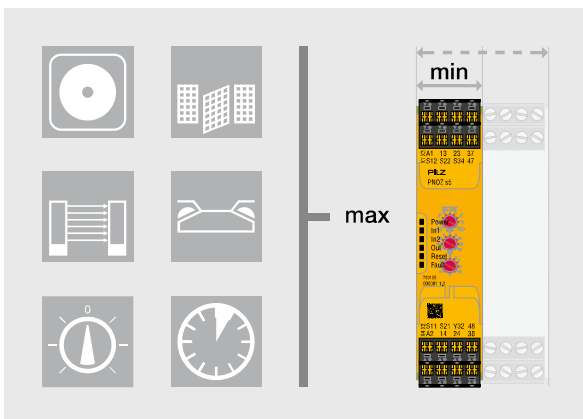


### Your benefits at a glance

- ▶ Narrower widths save space within the control cabinet, and therefore costs
- ▶ Reduction in wiring costs through push-in technology and contact expansion through the use of connectors
- ▶ Rapid commissioning and high availability
- ▶ Low logistics costs: few unit types covering many safety functions
- ▶ Opt for the complete solution from Pilz and add optimally matched and approved safety components to PNOZsigma: from the E-STOP button and safe sensors such as safety switches and light curtains to operator terminals for diagnostics and visualisation



The appropriate solution for every safety application – e.g. use of the safety relays PNOZsigma on a packaging machine.



**Up to 50 % space saving**

- ▶ Widths starting at 12.5 mm
- ▶ Housing is up to 50 % narrower with the same functionality <sup>1)</sup>
- ▶ Reduced space requirement in the control cabinet saves costs

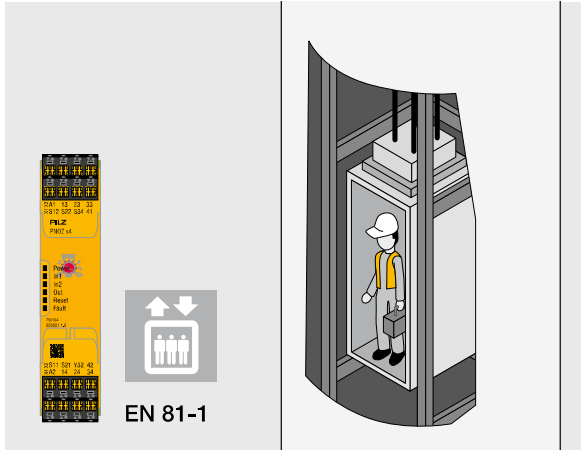
<sup>1)</sup> Compared to standard electromechanical safety relays available on the market

Keep up-to-date on safety relays PNOZsigma:

Webcode: web150099

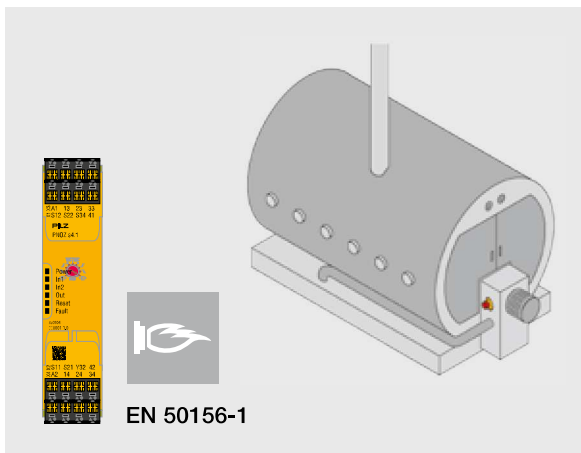
Online information at [www.pilz.com](http://www.pilz.com)

## ► Safety relay PNOZsigma – Tried and tested in special applications



### Safety relay PNOZ s4 with lift approval

The "Lifts standard" EN 81-1 defines the safety rules for the "construction and installation of lifts; Part 1: Electric lifts". The PNOZ s4 has this approval and guarantees lift operators and lift manufacturers maximum functionality in minimum width. With a width of 22,5 mm, the PNOZ s4 achieves PL e as defined in EN ISO 13849-1, and SIL CL 3. The areas of application of the PNOZ s4 range from passenger lifts, freight and goods lifts to all types of lifting devices which are subject to this standard.



### Safety relay PNOZ s4.1 – for use in burner controls

Thanks to three safe, diverse safety contacts, the PNOZ s4.1 is approved for use in burner controls. It is approved in accordance with the standard EN 50156-1 for electrical equipment on furnaces, in particular with regard to the requirements for application design and installation. Safety valves of furnaces can be monitored using PNOZ s4.1. The operating modes can be set easily and conveniently using a rotary switch.

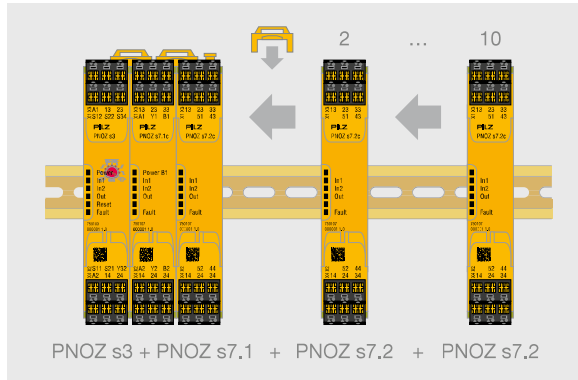


# ► More contacts with PNOZsigma – Simply and quickly

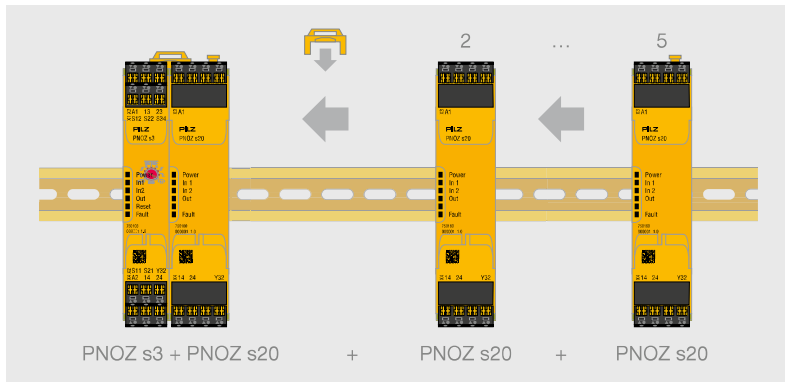
## Multiple expansion with PNOZ s7.1 and PNOZ s7.2

Using a base unit and a PNOZ s7.1, it is possible to expand the number of safety contacts almost without limit. A series of up to ten PNOZ s7.2 units can be connected to a PNOZ s7.1. If you need even more safety contacts, an additional PNOZ s7.1 can be added. No wiring is involved – just a connector and one simple hand movement.

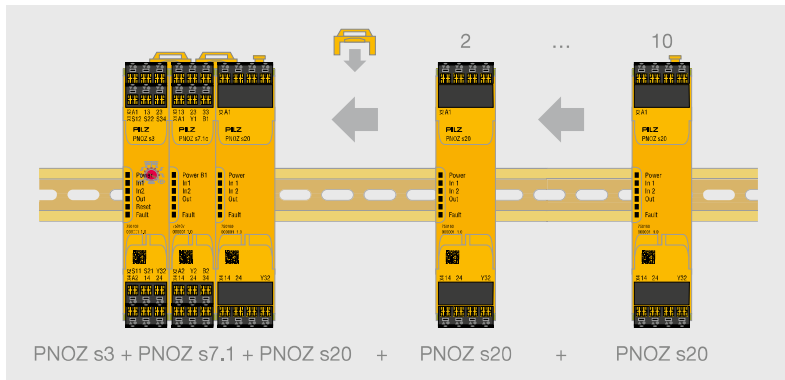
At just 17.5 mm wide, the PNOZ s7.1 has three safety contacts, while the PNOZ s7.2 has four safety contacts plus one auxiliary contact. They can be combined with other PNOZsigma expansion units at any time.



Fast contact expansion – it's easy with PNOZsigma!



Fast contact expansion – with PNOZsigma also possible completely free of wear! Up to 5 contact expansion modules PNOZ s20 are possible at the base unit.



Expansion almost without limit – in conjunction with the contact expansion module PNOZ s7.1.

## Contact expansion module PNOZ s20 with safe semiconductor outputs

Apart from contact expansion with instantaneous safety contacts, contact expansion with safe semiconductor outputs is also available. If you need a maximum of ten semiconductor outputs, then connect the contact expansion module PNOZ s20 directly to a base unit. If you require even more safe semiconductor outputs, connect the contact expansion module PNOZ s7.1; with this module, you can then expand the number of semiconductor outputs to the desired number.

### Your benefits at a glance

- Wiring work is reduced by 20% by expanding the contacts via connectors
- Flexible application as the number of safety contacts and semiconductor outputs can be expanded through cascading

Keep up-to-date on safety relays PNOZsigma:

Webcode: web150099

Online information at [www.pilz.com](http://www.pilz.com)

## ► Safety relay PNOZ s30 – Convenient speed monitoring



SSR



SSM



SDI



SOS

The stand-alone safety relay PNOZ s30 ensures safe monitoring of your machines for standstill, speed, position, shear pin breakage, speed range and direction of rotation up to PL e of EN ISO 13849-1 and up to SIL CL 3 of EN/IEC 62061. Using the PNOZ s30 ensures compliance with the Machinery Directive with respect to drive monitoring, i.e. the requirement to safely monitor and maintain the operating status of the drive when the drive is shut down. With PNOZ s30, you save costs and protect your machine and personnel.



PNOZ s30

### Increased safety of operating personnel

For example, movement at reduced speed during set-up mode increases operator safety and reduces set-up times. Safe working with the safety gate open and faster access to the machine once standstill is initiated, protect you and your products. Productivity is increased, as an unnecessary shutdown is prevented. PNOZ s30 with safe functions such as safe speed range (SSR), safe speed monitoring (SSM), safe direction (SDI) and safe operating stop (SOS) is the right solution for stand-alone drive monitoring.

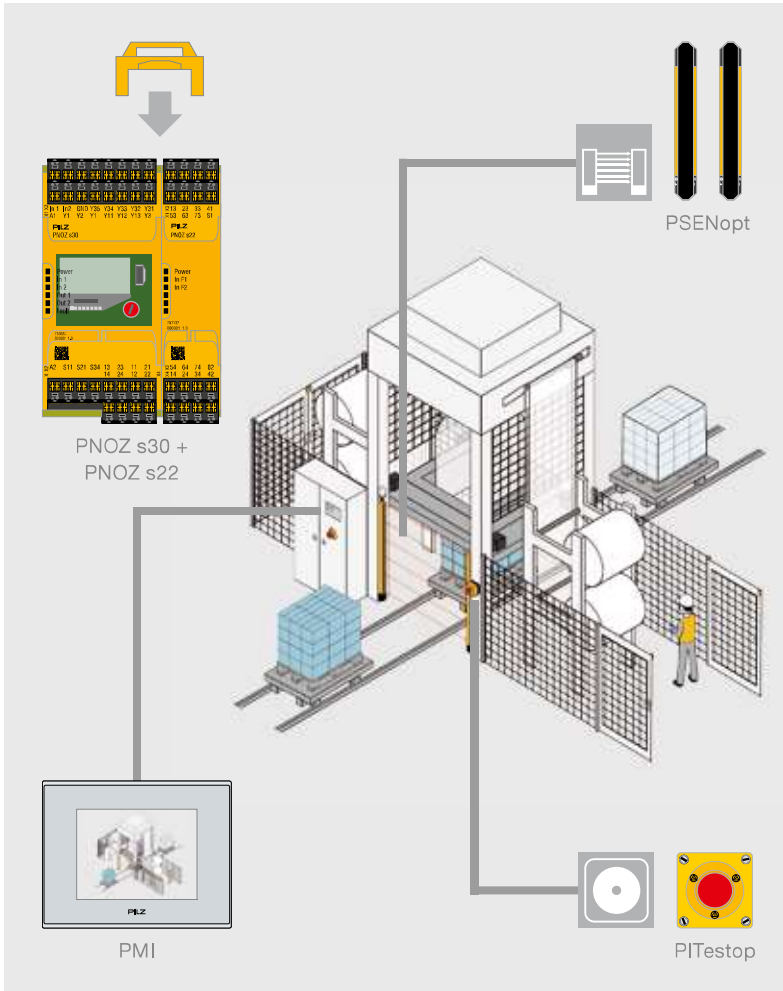
### Simple use

A display makes configuration and fault indication simple and convenient. The speed monitor PNOZ s30 is suitable for all common motor feedback systems and proximity switches.

### Applications

Choose PNOZ s30 for applications such as wind turbines, machining centres, balancing machines, high rack storage systems, centrifuges, filling systems, amusement parks and many others.





**Your benefits at a glance**

- ▶ Increased productivity and safety for operating personnel
- ▶ Productivity is increased by avoiding unnecessary shutdown processes: advance warning is given when a defined warning threshold is reached
- ▶ Save time during setup and when units are exchanged, thanks to convenient operation via rotary knob (push and turn)
- ▶ Suitable for all common motor feedback systems and proximity switches
- ▶ Contact expansion module PNOZ s22: duplication of the relay contacts enables the application's function range to be expanded

The number of relay contacts can be multiplied by combining PNOZ s30 and PNOZ s22.




PNOZ s22

**Contact expansion module PNOZ s22 – twice as good**

PNOZ s22 provides two relay functions which can be controlled separately and which comply with PL e of EN ISO 13849-1. Each relay function provides three N/O contacts and one N/C contact. These can be controlled separately so that the outputs can be assigned different functions, depending on the base unit. Safe separation between the two relay functions enables different potentials to be switched.

Keep up-to-date on safety relays PNOZ s30:

 Webcode: web150619

Online information at [www.pilz.com](http://www.pilz.com)

## ► Safety relay PNOZ s50 for safe brake control

The stand-alone safety relay PNOZ s50 provides a cost-effective solution for controlling two brakes up to category PL e of EN ISO 13849-1. The contactless technology allows very short reaction times to be achieved, enhancing personal protection. You can take advantage of the full flexibility and the individual shutdown options for your application of this manufacturer-independent solution.

### Safe, contactless braking – so it's non-wearing

PNOZ s50 helps to make your plant energy efficient: application cycle times are shortened because temporary overexcitation is followed by selectable voltage reduction (pulse width modulation PWM). The safety relay enables rapid switching in emergency situations and slow, low-wearing switching in normal operation, thereby helping to reduce maintenance costs.

As an addition to the PNOZsigma product range, PNOZ s50 also has a rotary knob for menu navigation and a display for showing set-up parameters and diagnostic messages.

Both motor brakes and safety brakes can be safely controlled and monitored with the safety relay PNOZ s50. Safety is significantly improved due to "wear monitoring", particularly on motor-integrated holding brakes.



PNOZ s50



Find out more in the animation for the safety relay PNOZ s50.

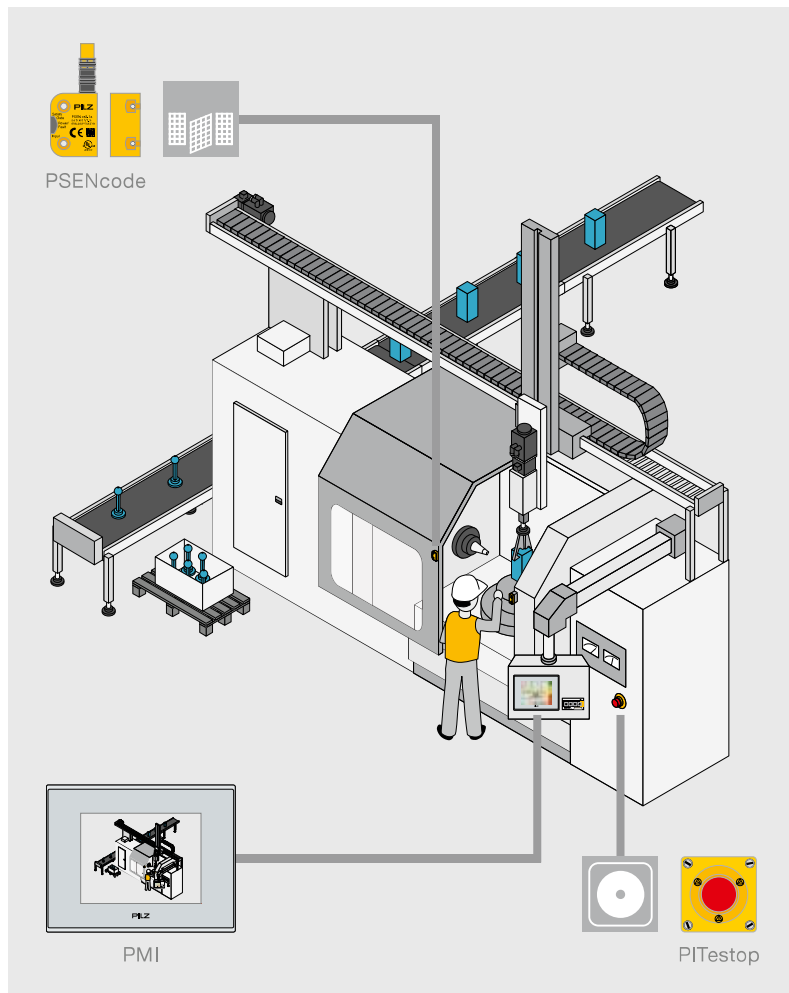
### Safety relay PNOZ s50



PNOZ s50

#### Technical features

- ▶ Stand-alone unit
- ▶ 2 brakes up to PL e of EN ISO 13849-1 / SIL CL 3 of EN/IEC 62061
- ▶ 1 brake up to PL d of EN ISO 13849-1 / SIL CL 3 of EN/IEC 62061
- ▶ 2 x 2-pole safe electronic digital outputs for 24 V DC, each with 4,5 A
- ▶ Approvals: CE, cULus Listed, EAC (Eurasian), TÜV
- ▶ Temporary overexcitation with subsequent voltage reduction
- ▶ Ambient temperature: 0 ... 45 °C
- ▶ Number of inputs:
  - Failsafe: 4
  - Standard: 4
- ▶ Number of failsafe semiconductor outputs:
  - 1-pole: 3
  - 2-pole: 2



With the safety relay PNOZ s50, you can safely control braking in many application areas – e.g. in stage technology, on tooling machines and on packaging machines. If, in addition to the holding brake, you also need to safeguard a second brake, then PNOZ s50 provides you with the ideal solution.

#### Your benefits at a glance

- ▶ Highest level of safety up to PL e when controlling 2 brakes (holding brakes or safety brakes)
- ▶ Contactless technology up to 4.5 A per brake enables short reaction times, a long-lasting solution and high availability
- ▶ Reduced cycle times through temporary overexcitation with subsequent voltage reduction
- ▶ High safety and low wear on the brake thanks to fast and slow shutdown of the power circuits
- ▶ Rapid diagnostics by means of the display
- ▶ Manufacturer-independent brake control thanks to safe, digital inputs


- ▶ Supply voltage:
  - 1-pole: 24 V DC
  - 2-pole: 24 VDC, 48 VDC
- ▶ Voltage tolerance:
  - 1-pole: -15% ... +20%
  - 2-pole: -10% ... +10%
- ▶ Output current of semiconductor outputs (1-pole): 0.1 A
- ▶ Test pulse outputs of semiconductor outputs (1-pole): 2

- ▶ Reduced voltage of semiconductor outputs (2-pole): 6 V, 8 V, 12 V, 16 V, 24 V
- ▶ Output current of semiconductor outputs (2-pole):
  - 24 VDC supply voltage:
    - Continuous duty (1 output/2 outputs): 1 x 6.5 A/2 x 4.5 A
    - Overexcitation (1 output/2 outputs): 1 x 6.5 A/max. 10 A
  - 48 V DC supply voltage:
    - Continuous duty (1 output/2 outputs): 1 x 3.25 A/2 x 2.25 A
    - Overexcitation (1 output/2 outputs): 1 x 3.25 A/2 x 3.25 A

#### Order number

751 500  
(with  
spring-loaded  
terminals)

Keep up-to-date  
on the safety relay  
PNOZ s50:

 Webcode:  
web150117

Online information  
at [www.pilz.com](http://www.pilz.com)









## ► Selection guide – PNOZsigma













| Safety relays PNOZsigma |   |   |   |   |   |  |                   |
|-------------------------|---|---|---|---|---|--|-------------------|
| Type                    | Application   |   |   |   | Performance Level (PL) – EN ISO 13849-1 | Safety Integrity Level (SIL) CL – claim limit in accordance with IEC 62061 |                   |
|                         |   |   |   |   |   |  |                   |
| PNOZ s1                 | ◆   | ◆ |   |   |   | c  | 2                 |
| PNOZ s2                 | ◆   | ◆ |   |   |   | e  | 3                 |
| PNOZ s3                 | ◆   | ◆ | ◆ |   |   | e  | 3                 |
| PNOZ s4                 | ◆   | ◆ | ◆ |   |   | e  | 3                 |
| PNOZ s4.1               | ◆   | ◆ | ◆ |   |   | e  | 3                 |
| PNOZ s5                 | ◆   | ◆ | ◆ |   | ◆                                       | e  | 3                 |
| PNOZ s6                 |   |   |   | ◆ | EN 574, Type IIIC                       | e  | 3                 |
| PNOZ s6.1               |   |   |   | ◆ | EN 574, Type IIIA                       | c  | 1                 |
| PNOZ s7                 | Contact expansion                                     |   |   |   |   | e  | 3                 |
| PNOZ s7.1               | Contact expansion                                     |   |   |   |   | e  | 3                 |
| PNOZ s7.2               | Contact expansion                                     |   |   |   |   | e  | 3                 |
| PNOZ s8                 | Contact expansion                                     |   |   |   |   | c  | 2                 |
| PNOZ s9                 | Contact expansion or safe timer                       |   |   |   | ◆                                       | e  | 3                 |
| PNOZ s10                | Contact expansion                                     |   |   |   |   | e  | 3                 |
| PNOZ s11                | Contact expansion                                     |   |   |   |   | e  | 3                 |
| PNOZ s20                | Contact expansion                                     |   |   |   |   | e/d <sup>2)</sup>  | 3/2 <sup>2)</sup> |
| PNOZ s22                | Contact expansion for PNOZ s30 and PNOZ mm0.1p/mm0.2p |   |   |   |   | e  | 3                 |

| Type     | Application                       |  |  | Performance Level (PL) – EN ISO 13849-1 | Safety Integrity Level (SIL) CL – claim limit in accordance with IEC 62061 |   |
|----------|-----------------------------------|--|--|---|--|---|
|          |                                   |  |  |   |  |   |
| PNOZ s30 | Safe speed and standstill monitor |  |  |   | e  | 3 |


| Type                   | Application        | Performance Level (PL) – EN ISO 13849-1 | Safety Integrity Level (SIL) CL – claim limit in accordance with IEC 62061 |
|------------------------|--------------------|---|--|
|                        |                    |   |  |
| PNOZ s50 <sup>3)</sup> | Safe brake control | e                                       | 3  |

| Output contacts  |   |   |   | Semiconductor outputs   |   | Supply voltage (U <sub>B</sub> ) | Dimensions (H x W x D) in mm      |
|--|---|---|---|---|---|----------------------------------|-----------------------------------|
| Safe   |   | Auxiliary contacts  |   | Safe  | Auxiliary outputs   |                                  |                                   |
|  |  |  |  |  |  |                                  |                                   |
| 2  | -   | -   | 1   | -   | -   | 24 V DC                          | 100/98 <sup>1)</sup> x 12.5 x 120 |
| 3  | -   | 1   | 1   | -   | -   | 24 V DC                          | 100/98 <sup>1)</sup> x 17.5 x 120 |
| 2  | -   | -   | 1   | -   | -   | 24 V DC                          | 100/98 <sup>1)</sup> x 17.5 x 120 |
| 3  | -   | 1   | 1   | -   | -   | 24 V DC, 48 ... 240 V AC/DC      | 100/98 <sup>1)</sup> x 22.5 x 120 |
| 3  | -   | 1   | 1   | -   | -   | 24 V DC, 48 ... 240 V AC/DC      | 100/98 <sup>1)</sup> x 22.5 x 120 |
| 2  | 2   | -   | 1   | -   | -   | 24 V DC, 48 ... 240 V AC/DC      | 100/98 <sup>1)</sup> x 22.5 x 120 |
| 3  | -   | 1   | 1   | -   | -   | 24 V DC, 48 ... 240 V AC/DC      | 100/98 <sup>1)</sup> x 22.5 x 120 |
| 3  | -   | 1   | 1   | -   | -   | 24 V DC, 48 ... 240 V AC/DC      | 100/98 <sup>1)</sup> x 22.5 x 120 |
| 4  | -   | 1   | -   | -   | -   | 24 V DC                          | 100/98 <sup>1)</sup> x 17.5 x 120 |
| 3  | -   | -   | -   | -   | -   | 24 V DC                          | 100/98 <sup>1)</sup> x 17.5 x 120 |
| 4  | -   | 1   | -   | -   | -   | 24 V DC                          | 100/98 <sup>1)</sup> x 17.5 x 120 |
| 2  | -   | -   | 1   | -   | -   | 24 V DC                          | 100/98 <sup>1)</sup> x 12.5 x 120 |
| -  | 3   | 1   | -   | -   | -   | 24 V DC                          | 100/98 <sup>1)</sup> x 17.5 x 120 |
| 4  | -   | 1   | -   | -   | -   | 24 V DC                          | 100/98 <sup>1)</sup> x 45.0 x 120 |
| 8  | -   | 1   | -   | -   | -   | 24 V DC                          | 100/98 <sup>1)</sup> x 45.0 x 120 |
| -  | -   | -   | -   | 2   | 1   | 24 V DC                          | 100/98 <sup>1)</sup> x 22.5 x 120 |
| 2x3  | -   | 2x1   | -   | -   | -   | 24 V DC                          | 100/98 <sup>1)</sup> x 22.5 x 120 |

| Output contacts  |   |   |   | Semiconductor outputs   |   | Supply voltage (U <sub>B</sub> ) | Dimensions (H x W x D) in mm      |
|--|---|---|---|---|---|----------------------------------|-----------------------------------|
| Safe   |   | Auxiliary contacts  |   | Safe  | Auxiliary outputs   |                                  |                                   |
|  |  |  |  |  |  |                                  |                                   |
| 2  | -   | 2   | 4   | -   | -   | 24 ... 240 VAC/DC                | 100/98 <sup>1)</sup> x 45.0 x 120 |

| Semiconductor outputs  |   | Semiconductor outputs   |   | Supply voltage (U <sub>B</sub> ) | Dimensions (H x W x D) in mm      |
|--|---|---|---|----------------------------------|-----------------------------------|
| 2-pin  | 1-pin   | Safe  | Auxiliary outputs   |                                  |                                   |
|  |  |  |  |                                  |                                   |
| 2  | 3   | -   | -   | 24 VDC, 48 VDC                   | 100/98 <sup>1)</sup> x 45.0 x 120 |

Technical documentation on safety relays PNOZsigma:

 Webcode: web150635

Online information at [www.pilz.com](http://www.pilz.com)

<sup>1)</sup> Height incl. spring-loaded terminals/plug-in screw terminals

<sup>2)</sup> Depending on the application

<sup>3)</sup> For technical details, see page 28

## ► Technical details – PNOZsigma

### Safety relays PNOZsigma – Base units



PNOZ s1



PNOZ s2



PNOZ s3



PNOZ s4



PNOZ s4.1



PNOZ s5



PNOZ s6




PNOZ s6.1

| Type             | Features   |
|------------------|--|
| <b>PNOZ s1</b>   | <ul style="list-style-type: none"> <li>▶ Single-channel wiring</li> <li>▶ Manual/automatic start</li> </ul>  |
| <b>PNOZ s2</b>   | <ul style="list-style-type: none"> <li>▶ Single-channel wiring</li> <li>▶ Monitored start</li> <li>▶ Manual/automatic start</li> <li>▶ Safe separation</li> </ul>  |
| <b>PNOZ s3</b>   | <ul style="list-style-type: none"> <li>▶ Single- and dual-channel wiring</li> <li>▶ Detection of shorts across contacts</li> <li>▶ Monitored start</li> <li>▶ Manual/automatic start</li> <li>▶ Start-up testing</li> </ul>  |
| <b>PNOZ s4</b>   | <ul style="list-style-type: none"> <li>▶ Single- and dual-channel wiring</li> <li>▶ Detection of shorts across contacts</li> <li>▶ Monitored start</li> <li>▶ Manual/automatic start</li> <li>▶ Start-up testing</li> <li>▶ Approval to EN 81-1/A3 in accordance with the Lifts Directive</li> </ul>   |
| <b>PNOZ s4.1</b> | <ul style="list-style-type: none"> <li>▶ Single- and dual-channel wiring</li> <li>▶ Detection of shorts across contacts</li> <li>▶ Monitored start</li> <li>▶ Manual/automatic start</li> <li>▶ Start-up testing</li> <li>▶ 3 safe, diverse safety contacts</li> <li>▶ Approval in accordance with EN 50156-1 for electrical equipment for furnaces</li> </ul> |
| <b>PNOZ s5</b>   | <ul style="list-style-type: none"> <li>▶ Single- and dual-channel wiring</li> <li>▶ Detection of shorts across contacts</li> <li>▶ Monitored start</li> <li>▶ Manual/automatic start</li> <li>▶ Start-up testing</li> <li>▶ Timer functions: delay-on de-energisation</li> <li>▶ Time range: 0 ... 300 s</li> </ul>  |
| <b>PNOZ s6</b>   | <ul style="list-style-type: none"> <li>▶ Dual-channel wiring</li> <li>▶ Detection of shorts across contacts</li> </ul>   |
| <b>PNOZ s6.1</b> | <ul style="list-style-type: none"> <li>▶ Dual-channel wiring</li> <li>▶ Detection of shorts across contacts</li> </ul>   |

| Outputs:<br>Voltage/current/<br>rating | Approvals   | Order number  |   |
|--|---|---|---|
|  |   | Spring-loaded terminals   | Plug-in screw terminals                                   |
| DC1: 24 V/3 A/72 W                     | CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC | 751 101   | 750 101   |
| DC1: 24 V/6 A/150 W                    | CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC | 751 102   | 750 102   |
| DC1: 24 V/6 A/150 W                    | CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC | 751 103   | 750 103   |
| DC1: 24 V/6 A/150 W                    | CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC | ▶ 24 V DC _____ 751 104<br>▶ 24 V DC,<br>coated version _____ 751 184<br>▶ 48 ... 240 V AC/DC _ 751 134 | ▶ 24 V DC _____ 750 104<br>▶ 48 ... 240 V AC/DC _ 750 134 |
| DC1: 24 V/6 A/150 W                    | CE, cULus Listed, EAC (Eurasian), TÜV, CCC        | ▶ 24 V DC _____ 751 124<br>▶ 48 ... 240 V AC/DC _ 751 154   | ▶ 24 V DC _____ 750 124<br>▶ 48 ... 240 V AC/DC _ 750 154 |
| DC1: 24 V/6 A/150 W                    | CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC | ▶ 24 V DC _____ 751 105<br>▶ 24 V DC,<br>coated version _____ 751 185<br>▶ 48 ... 240 V AC/DC _ 751 135 | ▶ 24 V DC _____ 750 105<br>▶ 48 ... 240 V AC/DC _ 750 135 |
| DC1: 24 V/6 A/150 W                    | CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC | ▶ 24 V DC _____ 751 106<br>▶ 48 ... 240 V AC/DC _ 751 136   | ▶ 24 V DC _____ 750 106<br>▶ 48 ... 240 V AC/DC _ 750 136 |
| DC1: 24 V/6 A/150 W                    | CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC | ▶ 24 V DC _____ 751 126<br>▶ 48 ... 240 V AC/DC _ 751 156   | ▶ 24 V DC _____ 750 126<br>▶ 48 ... 240 V AC/DC _ 750 156 |

Technical documentation on safety relays PNOZsigma:

 Webcode:  
web150635

Online information at [www.pilz.com](http://www.pilz.com)

## ► Technical details – PNOZsigma

### Safety relays PNOZsigma – Contact expansion modules



PNOZ s7



PNOZ s8



PNOZ s9



PNOZ s10



PNOZ s11



PNOZ s20



PNOZ s22

| Type      | Features   |
|-----------|--|
| PNOZ s7   | Safe separation  |
| PNOZ s7.1 | <ul style="list-style-type: none"> <li>▶ Cascading module for connection to PNOZ s7.2</li> <li>▶ Safe separation of safety contacts</li> <li>▶ LEDs for input and switch status</li> <li>▶ Can also be used with other safety control devices, without a PNOZsigma base unit: one input circuit affects the output relays</li> </ul> |
| PNOZ s7.2 | Contact expansion module in conjunction with PNOZ s7.1   |
| PNOZ s8   | Contact expansion  |
| PNOZ s9   | <ul style="list-style-type: none"> <li>▶ Safe separation</li> <li>▶ Timer functions: delay-on energisation, delay-on de-energisation, pulsing, retriggerable</li> <li>▶ Time range: 0 ... 300 s</li> </ul>   |
| PNOZ s10  | Safe separation  |
| PNOZ s11  | Safe separation  |
| PNOZ s20  | <ul style="list-style-type: none"> <li>▶ Contact expansion with 2 instantaneous safety outputs and 1 auxiliary output, each in semiconductor technology</li> <li>▶ Single- and dual-channel wiring</li> </ul>  |
| PNOZ s22  | <ul style="list-style-type: none"> <li>▶ 2 safety contacts that can be controlled separately</li> <li>▶ Contact expansion for speed monitor PNOZ s30 and base units PNOZ mm0.1p/mm0.2p of configurable compact controllers PNOZmulti Mini</li> </ul>   |

### Safety relays PNOZsigma – Speed monitoring




PNOZ s30

| Type     | Features  |
|----------|---|
| PNOZ s30 | <ul style="list-style-type: none"> <li>▶ Safe monitoring of standstill, speed, direction of rotation and shear pin breakage</li> <li>▶ Parameters for device functions can be freely set</li> <li>▶ Parameters are entered via rotary knob (push and turn) in conjunction with a monochrome display</li> <li>▶ Set parameters are saved on a chip card</li> <li>▶ Integrated display shows the set limit values/parameters as well as the current speed</li> <li>▶ Tolerances can be freely set for each limit value</li> </ul> |

| Outputs:<br>Voltage/current/<br>rating  | Approvals   | Order number   |                         |
|---|---|--|-------------------------|
|   |   | Spring-loaded terminals  | Plug-in screw terminals |
| DC1: 24 V/6 A/150 W   | CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC | <ul style="list-style-type: none"> <li>▶ 24 V DC _____ 751 107</li> <li>▶ 24 V DC, coated version _____ 751 187</li> </ul> | 750 107                 |
| DC1: 24 V/6 A/150 W   | CE, cULus Listed, EAC (Eurasian), TÜV, CCC        | 751 167  | 750 167                 |
| DC1: 24 V/6 A/150 W   | CE, cULus Listed, EAC (Eurasian), TÜV, CCC        | 751 177  | 750 177                 |
| DC1: 24 V/3 A/72 W  | CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC | 751 108  | 750 108                 |
| DC1: 24 V/6 A/150 W   | CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC | <ul style="list-style-type: none"> <li>▶ 24 V DC _____ 751 109</li> <li>▶ 24 V DC, coated version _____ 751 189</li> </ul> | 750 109                 |
| DC1: 24 V/12 A/300 W  | CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC | 751 110  | 750 110                 |
| DC1: 24 V/6 A/150 W   | CE, cULus Listed, EAC (Eurasian), TÜV, CCC        | 751 111  | 750 111                 |
| <ul style="list-style-type: none"> <li>▶ Total output of external load, semiconductor 93 W</li> <li>▶ Switching capability:                             <ul style="list-style-type: none"> <li>- 2 safety outputs with load: 1.5 A/40 W</li> <li>- 1 safety output with load: 2 A/50 W</li> </ul> </li> </ul> | CE, cULus Listed, EAC (Eurasian), TÜV, CCC        | 751 160  | 750 160                 |
| DC1: 24 V/6 A/150 W   | cULus Listed, EAC (Eurasian), TÜV, CCC            | 751 132  | 750 132                 |

|   | Outputs:<br>Voltage/current/rating | Approvals                                  | Order number   |
|---|------------------------------------|--|--|
| <ul style="list-style-type: none"> <li>▶ Axis position monitoring is available as an option with the standstill function</li> <li>▶ Advance warning of shutdown when a certain threshold is reached</li> <li>▶ Accessories:                             <ul style="list-style-type: none"> <li>- Chip card reader: 779230</li> <li>- PNOZsigma chip card manager set (software incl. licence, SIM card adapter, chip card reader): 750030</li> <li>- SmartCardCommander with SIM card adapter (software incl. licence, SIM card adapter): 750031</li> </ul> </li> </ul> | DC1: 24 V/4 A/100 W                | CE, cULus Listed, EAC (Eurasian), TÜV, CCC | <ul style="list-style-type: none"> <li>▶ 751 330 (spring-loaded terminals)</li> <li>▶ 750 330 (plug-in screw terminals)</li> </ul> |

Technical documentation on safety relays PNOZsigma:

 Webcode: web150635

Online information at [www.pilz.com](http://www.pilz.com)