myPNOZ®

create your safety



Modular safety relay myPNOZ

PILZ
THE SPIRIT OF SAFETY

Tailored to your individual requirements
and produced for you in batch size 1.

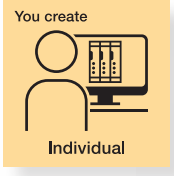


myPNOZ – your new safety relay

The modular safety relays myPNOZ enable tailored safety solutions. Precisely aligned to the requirements of your plant and machinery. myPNOZ combines the advantages of an easy-to-understand and easy-to-operate safety relay with internal combinational logic. Clever product features, the innovative online tool myPNOZ Creator and individual production in batch size 1 offer you maximum reliability, flexibility and cost efficiency.

With myPNOZ we are introducing B2C sales processes to the B2B world! You make the selection, we assemble it, you receive your safety relay myPNOZ pre-assembled, adjusted and tested and just have to install it via plug-and-play. It couldn't be any simpler, right?

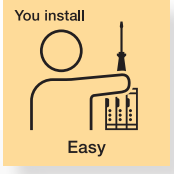
Three steps to your individual safety solution



The user-friendly myPNOZ Creator can be used to create your individual myPNOZ safety relay.



We produce your myPNOZ tailor-made for you in batch size 1.



You install your myPNOZ via plug-and-play and easily put it into operation with minimal wiring effort.



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Further information on myPNOZ is available here.

Order safety online – myPNOZ Creator

With the intuitive myPNOZ Creator you can configure the modular safety relay myPNOZ online according to your needs. You choose the required safety functions and myPNOZ Creator selects the ideal hardware. You receive a safety relay produced individually for you in batch size 1 and only pay for the features that you actually need.

Validation
If the tool discovers logic errors in the sequence of your safety functions, a red “lamp” lights up. It lights up green if there are no errors.

Hardware view
As an alternative, you can use the hardware view to select the desired input and output modules yourself. You can naturally switch between the logic view and hardware view at any time.



Simulation

Use the simulation to check the safety design of your solution. This allows you to verify and – where necessary – adjust your configuration at any time.

Logic view

The logic view allows you to easily select the required safety functions and their connections. The tool automatically configures the required and ideally suited modules.

Check-out and documentation

On completion you receive an overview of all required modules. You can use a Type Code to call up your configuration at any time. You also receive the corresponding wiring diagram, a cause/effect table and the operating instructions as direct downloads.

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Start your configuration right away.

Five reasons for using myPNOZ



You save costs – pay for what you need

Out of a total of 13 modules, either you or the myPNOZ Creator only selects the modules with the functions that you actually need. The system can also be modified and upgraded at any time after commissioning – even when installed. This offers you maximum flexibility across the entire lifecycle of your machinery.



You avoid errors – no programming skills required

In the myPNOZ Creator you define the required safety functions, logically connect them and assign them an output. The myPNOZ Creator automatically selects the optimal hardware and the corresponding sequence of the modules. No programming knowledge is required!



You save time – simple and easy installation and commissioning

You receive your myPNOZ from us pre-assembled, adjusted and tested in accordance with your individual configuration. Ready for “plug-and-play” commissioning without additional software and without complicated wiring. The myPNOZ modules are connected via a BUS connector and are supplied with voltage by the head module.



You save space – narrow width

myPNOZ saves you valuable space in the control cabinet. On the one hand, every input module monitors two safe input functions, meaning you require fewer modules. On the other hand, myPNOZ has extremly narrow widths of 12.5 mm or 17.5 mm. In the maximum configuration with nine modules, myPNOZ is less than 16 cm.



You increase the availability of your plant – shut it down where it matters

With myPNOZ you can monitor parts of the system independently of one another in separate safety zones. This allows you to separate the compressed air supply, for example, or the robot assembly from the overall shutdown. It is also possible to optionally implement OR links between input functions. In this case only relevant machine areas are shut down in a targeted manner.



Shown in original size.

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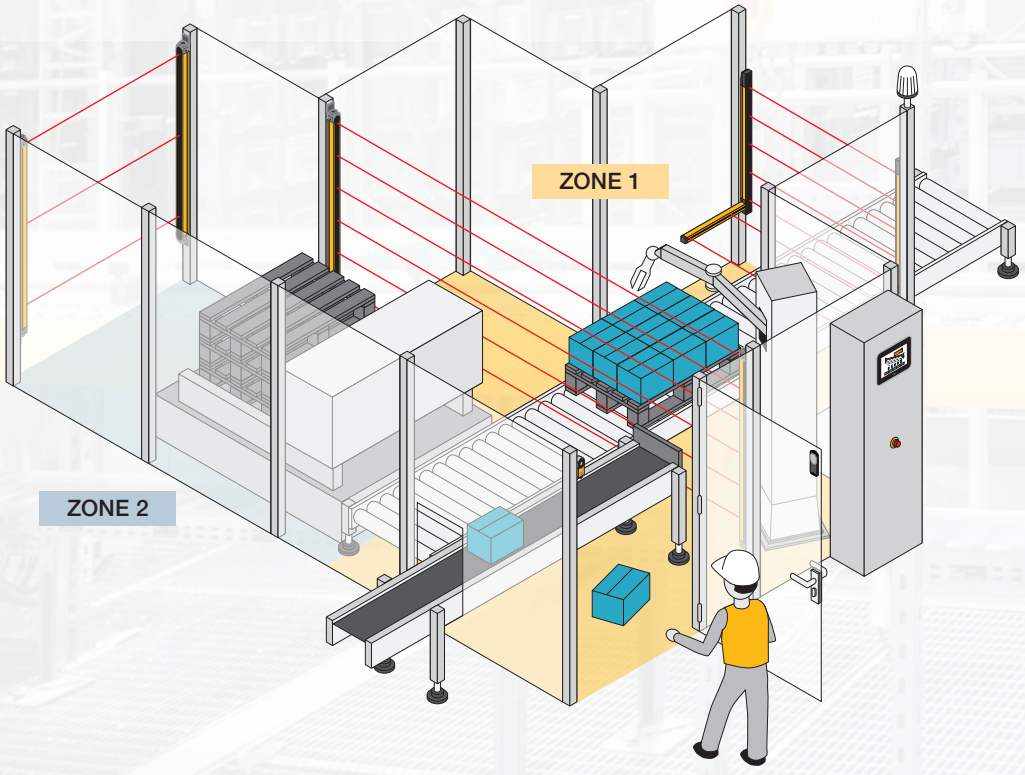
myPNOZ

Find out more about other benefits of myPNOZ.

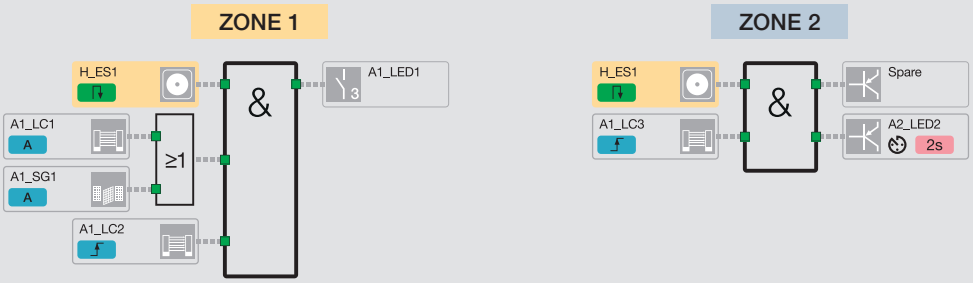
In practice – how to use myPNOZ

Thanks to its modular design, the safety relay myPNOZ can be used on a variety of different plant and machinery and is ideal for use in small to mid-sized applications with low to medium complexity. If your application changes or safety functions are added, you can easily modify or upgrade myPNOZ. The example application shows which options and benefits the safety relay myPNOZ offers you when used on plant and machinery.

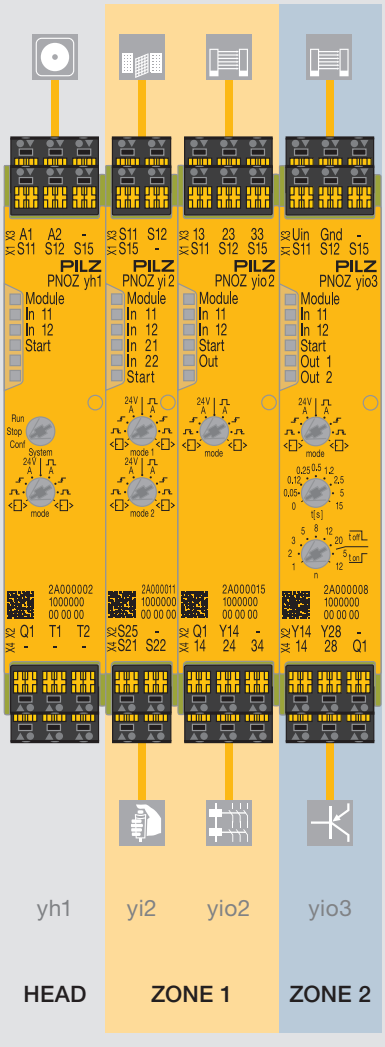




Logic



Hardware



What myPNOZ offers you

- Monitors safety functions such as emergency stop, safety gates, light guards, two-hand pushbuttons (IIIA/C) or enabling switches
- Can be used for the monitoring of 2 to max. 16 safe input functions
- Comprises different module types (inputs/outputs) that can be freely combined, allowing for individual configuration
- Enables the creation of several independent safety zones within a system
- Offers the option of AND/OR connection of safety functions
- Exchange and expansion of modules possible when installed

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You have specific requests or questions? Just contact us!

Your choice – these modules are available

Every myPNOZ comprises a head module and one to max. eight expansion modules. A total of twelve expansion modules are available in the form of four input modules, four output modules and four input/output modules.

- The head module incorporates the power supply as well as the primary safe input function for the entire system.
- Input modules monitor two safe AND or OR connected input functions.
- Input/output modules monitor a safe input function and are available with relay or semiconductor outputs and as versions with time delay.
- Output modules are available with relay or semiconductor outputs and as versions with time delay.



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Create your myPNOZ now.



Basic principles for the use of myPNOZ

- The global, primary safety function is located in the head module.
- All input modules are logically AND connected to the global safety function of the head module and each acts on the next output module.
- The outputs can be supplemented with additional relay and semiconductor output modules.
- If an input module follows an output module, a new independent safety zone begins.
- The safety functions of an OR input module are AND connected to the safety functions of the same safety zone.
- The start type, the type of connected sensor technology and the output delay time can be set using rotary switches on the modules.
- The expansion modules are inserted on the right side of the head module and connected via a BUS connector.
- Individual modules can be exchanged without having to remove the adjacent modules or the BUS connector.

Module overview of myPNOZ and technical features



PNOZ yh1 2DI 24VDC



PNOZ yi1 4DI



PNOZ yo1 2SO



PNOZ yio1 2DI 2SO

Type	Application	Width	Order number
Head module **PNOZ yh1 2DI 24VDC**	▸ Inputs: 2 for monitoring a global safety function ▸ Outputs: 1 signal output using semiconductor technology, U_B = 24 VDC	17.5 mm	2A000002
Input modules **PNOZ yi1 4DI**	Inputs: 4 for monitoring up to 2 safety functions, AND linked	12.5 mm	2A000004
PNOZ yi2 4DI or	Inputs: 4 for monitoring 2 safety functions, OR linked	12.5 mm	2A000011
PNOZ yi3 2DI T3a	Inputs: 4 for Type IIIA two-hand monitoring in accordance with EN 574 and an additional safety function, AND linked	12.5 mm	2A000005
PNOZ yi4 2DI T3C	Inputs: 6 for Type IIIC two-hand monitoring in accordance with EN 574 and an additional safety function, AND linked	12.5 mm	2A000006
Output modules **PNOZ yo1 2SO**	Outputs: 2 safe instantaneous switching semiconductor outputs, 1 signal output using semiconductor technology	17.5 mm	2A000012
PNOZ yo2 3NO	Outputs: 3 N/O safe, instantaneous switching relay contacts, 1 signal output using semiconductor technology	17.5 mm	2A000014
PNOZ yo3 1SO 1SO t	Outputs: 1 direct and 1 switch-off delay or delay-on energisation safe semiconductor output, 1 signal output using semiconductor technology	17.5 mm	2A000007
PNOZ yo4 3NO	Outputs: 3 N/O safe switch-off delay or delay-on energisation relay contacts, 1 signal output using semiconductor technology	17.5 mm	2A000009
Input/output modules **PNOZ yio1 2DI 2SO**	▸ Outputs: 2 safe instantaneous switching semiconductor outputs, 1 signal output using semiconductor technology ▸ Inputs: 2 for monitoring a safety function	17.5 mm	2A000013
PNOZ yio2 2DI 3NO	▸ Outputs: 3 N/O safe, instantaneous switching relay contacts, 1 signal output using semiconductor technology ▸ Inputs: 2 for monitoring a safety function	17.5 mm	2A000015
PNOZ yio3 2DI 1SO 1SO t	▸ Outputs: 1 direct and 1 switch-off delay or delay-on energisation safe semiconductor output, 1 signal output using semiconductor technology ▸ Inputs: 2 for monitoring a safety function	17.5 mm	2A000008
PNOZ yio4 2DI 3NO t	▸ Outputs: 3 N/O safe switch-off delay or delay-on energisation relay contacts, 1 signal output using semiconductor technology ▸ Inputs: 2 for monitoring a safety function	17.5 mm	2A000010
Accessories **Spring-loaded terminals**	▸ 1 set of plug-in spring-loaded terminals, 2-pin ▸ 1 set of plug-in spring-loaded terminals, 3-pin	12.5 mm 17.5 mm	751 002 751 003
Screw terminals	▸ 1 set of plug-in screw terminals, 2-pin ▸ 1 set of plug-in screw terminals, 3-pin	12.5 mm 17.5 mm	750 002 750 003
myPNOZ connector	▸ Connectors, 10 pcs.	-	2A000202

Common features

- Input modules: Single/dual-channel wiring with/without detection of shorts across contacts
- Ambient temperature: –10 °C to +55 °C
- Supply voltage: 24 VDC
- Safety level up to PL e and SIL CL 3
- TÜV, UL certification
- Protection type: IP20


PILZ
PNOZ yo1
PILZ
PNOZ yio1
Module
In 11
In 12
Start
Out 1
Out 2
PILZ
PNOZ yi4
Module
In 11 13
In 12 14
In 21
In 22
Start
PILZ
PNOZ yo4
Module
Out
mode
mode
2A000013
1000000
000000
2A000006
1000000
000000
2A000009
1000000
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Support

Technical support is available from Pilz round the clock.

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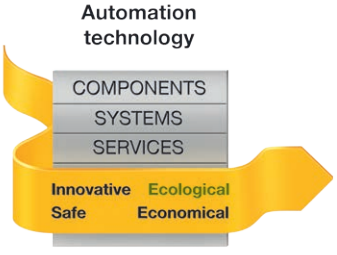
Pilz develops environmentally-friendly products using ecological materials and energy-saving technologies. Offices and production facilities are ecologically designed, environmentally-aware and energy-saving. So Pilz offers sustainability, plus the security of using energy-efficient products and environmentally-friendly solutions.



BLUeCOMPETENCE Alliance Member
Partner of the Engineering Industry Sustainability Initiative

Presented by:

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THE SPIRIT OF SAFETY

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