



Current information on our PNOZmulti modular safety systems and PNOZ safety relays is available at www.pilz.com. Many documents are available to download as PDF files under the Download category.

- ▶ Data sheets
- ▶ Operating manuals
- ▶ Technical catalogues
- ▶ Promotional literature and much more

You can also request information or a demo copy of the CD-ROM PNOZmulti Configurator from the address below.

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In many countries we are represented by sales partners.

Please refer to our Homepage for further details or contact our headquarters.

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pilz
more than automation
safe automation

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2-3-2-2-014-10/03 Printed in Germany

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PNOZmulti – Now even more functions!

pilz
more than automation
safe automation

The modular safety system with safe speed monitoring and user-friendly diagnostics

Many functions, one solution.



▶ The customer is our focus

Pilz offers more than automation technology – Pilz offers safe automation and has been an innovation and market leader in this area for years. We are a solution supplier, working with customers to develop practical automation solutions.



You can find out more about Pilz, our products and services on the Internet:

- ▶ www.pilz.com
- ▶ www.pnozmulti.com

or just request additional documentation.

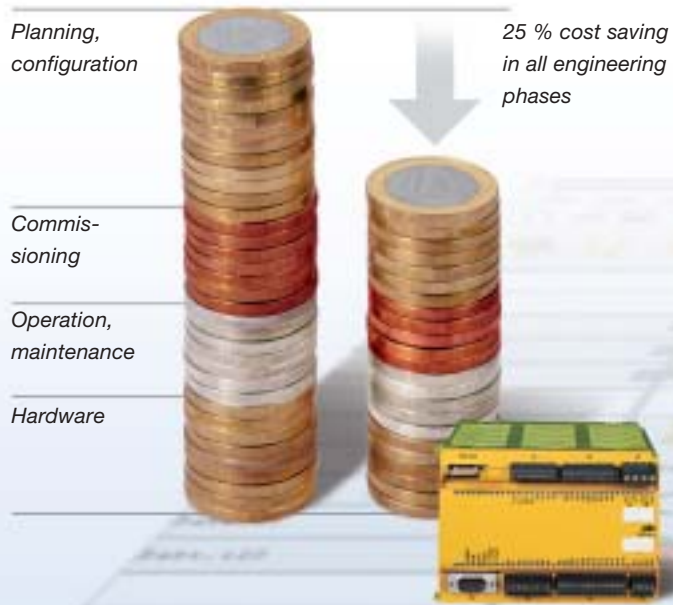


▶ Ingeniously simple, simply ingenious ...

... the PNOZmulti modular safety system

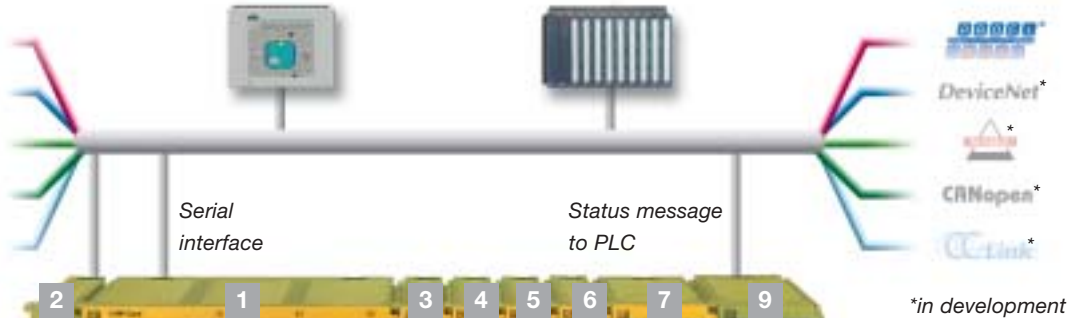
The PNOZmulti safety system is multifunctional, freely configurable and tailor-made for use in many areas of mechanical engineering. Safety functions such as emergency stop, safety gates, light barriers, two-hand control and many more are monitored safely. The PNOZmulti even covers standard control functions. Instead of intricate wiring, the circuit is easily generated on the PC using a graphics configuration tool. The configuration is downloaded to the PNOZmulti base unit and stored on a chip card. Compared with conventional solutions you can save over 25 % of your time and costs – in all engineering phases.

Production running yet or are you still wiring?



► Safely into the future with PNOZmulti

The latest highlights are safe speed and standstill monitoring, connection to fieldbus systems, the ability to upload and download the configuration into the PNOZmulti directly, dynamic status display and extended software functionalities. The continual expansion of the product range safeguards your investment.



- 1 Base unit PNOZ m1p (Version 3.0) with serial interface
- 2 Communication module PROFIBUS-DP PNOZ mc3p
- 3 Input module PNOZ mi1p
- 4 Semiconductor output module PNOZ mo1p
- 5 Relay output module PNOZ mo2p
- 6 Relay output module PNOZ mo4p
- 7 Speed monitoring module PNOZ ms1p
- 8 PNOZ msi1p adapter for PNOZ ms1p
- 9 PNOZ mc1p signal module for status messages to the PLC





► Configure speed with ease ...

... monitor drives safely



Speed monitored safely?

The PNOZmulti modular safety system enables drives to be monitored safely for standstill and speed in set-up and automatic mode, up to and including Category 3 in accordance with EN 954-1. It is possible to monitor up to eight independent axes. Up to eight selectable limit values plus standstill can be monitored on each axis, either through incremental encoders

or proximity detectors.

Data is evaluated in the PNOZmulti for further processing. The direction of rotation can be detected simultaneously.

The set values are entered quite simply in the graphics configuration tool, PNOZmulti Configurator. Safety functions such as E-STOP, safety gates and operating mode selector switches are easy to configure and monitor using PNOZmulti.

So applications such as opening a safety gate on standstill or safe reduced speed in set-up mode are easy to implement.



► PNOZmulti – Safe and economical ...

... in all industries

Even industry-specific safety functions can be easily controlled using PNOZmulti. PNOZmulti conforms with the standards by complying with EN 12417 for processing centres and EN 12415 for lathes.



PNOZmulti – complies with the standards for processing centres and machine tools

For increased cost effectiveness – configure speed with ease



Benefits at a glance

► Take advantage of these benefits ...



Three birds with one stone – monitor speed and standstill safely, simply and economically

- Save time when planning and engineering, as even complex safety applications such as speed and standstill can be implemented simply and quickly at the same time as other safety functions, such as emergency stops, safety gates and operating mode selector switches.
- Save costs through rapid commissioning and reduced wiring.
- Substantial cost savings thanks to the minimum use of hardware, because existing input devices can be used and the PNOZmulti modular safety system undertakes all the safety functions.
- Greater productivity as the cycle times are considerably shorter, because set-up test mode is simple and user-friendly and there is no need to shut down the drives, even when a safety gate is open. There is only a shutdown in the case of an error.
- One solution for safety and standard control functions.



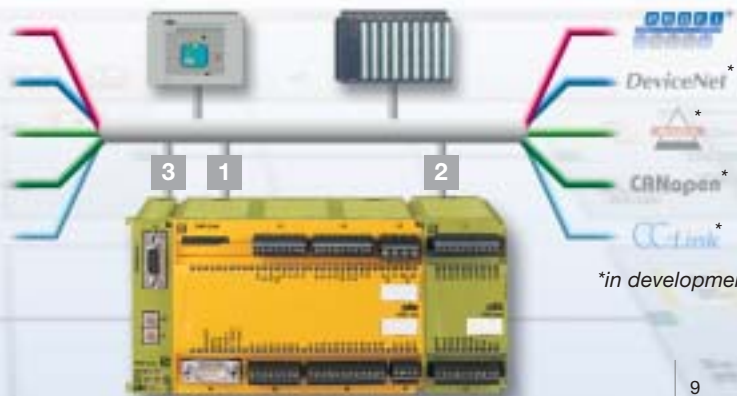
Diagnostics

► Always in the picture with PNOZmulti

User-friendly diagnostic options guarantee short downtimes and high plant availability.

- 1 Communication with common automation systems such as PLCs, CNCs or HMIs can be simple and direct via the integral serial interface on the PNOZ m1p base unit, or alternatively
- 2 Via an I/O interconnection with a standard PLC
- 3 Communication modules for all common fieldbus systems such as PROFIBUS-DP, Device-Net, Interbus, CANopen or CC-Link are particularly easy to use.

The integral diagnostics on the PNOZmulti can be called up as detailed information about the PNOZmulti safety system, the external wiring or the status of individual safety devices. The data to be downloaded is selected and configured directly within the PNOZmulti Configurator via drag and drop. The amount of time saved during configuration is a further benefit. Simple, cost-effective integration within plant or machinery also saves costs and reduces commissioning times.





► PNOZmulti – Technical details

The modular safety system



PNOZ ms1p
Speed monitoring module

Application range in accordance with EN 954-1, Cat. 3: for speed and standstill monitoring via incremental encoders or proximity detectors

Order number:

- 773 800 – without terminals

Accessories:

- 783 800 – Set of plug-in cage clamp terminals
- 793 800 – Set of plug-in screw terminals
- Up to 8 limit values can be configured using the PNOZmulti Configurator
- Proximity detectors are connected directly to the terminals on the PNOZ ms1p
- Incremental encoders are connected via adapters
- Two axes can be monitored independently
- Max. of 4 speed monitoring modules can be connected to the PNOZ m1p base unit (from Version 3)
- Can be evaluated in the Configurator
- Connected to base unit via plug-in connector on the back of the unit
- Supply voltage (U_B): 24 VDC via base unit
- Dimensions (H x W x D): 94 x 45 x 121 mm



PNOZ msi1p
Adapter for PNOZ ms1p

Application range in accordance with EN 954-1, Cat. 3: to connect incremental encoders

Order number:

- 773 850 – PNOZ msi1p, 25/25 Si/Ha, 2.5 m*
- * Additional versions on request

- Used to connect an incremental encoder to the PNOZ ms1p speed monitor
- 25-pin or 15-pin D-Sub male and female connector for connection to the drive and the incremental encoder
- Variable cable lengths

The modular safety system



PNOZ mc3p
PROFIBUS-DP communication module

Application range in accordance with EN 50170: non-safety-related applications

Order number:

- 773 721
- Can be configured using the PNOZmulti Configurator
- Station addresses from 0 ... 99, selected via rotary switch
- Status indicators via LEDs
- Passive subscriber (Slave) on PROFIBUS-DP
- Connected to base unit via plug-in connector on the back of the unit
- Supply voltage (U_B): 24 VDC via base unit
- Transmission rate: Max. 12 Mbit/s
- Dimensions (H x W x D): 94 x 22.5 x 119 mm



► PNOZmulti Configurator – Technical details

Software



PNOZmulti Configurator
Configuration software

Order number:

- 773 000¹⁾ – Documentation folder with software on CD-ROM
- 773 000...²⁾ – Licence type³⁾

- Runs under Windows® 95/98/2000/XP and Windows® NT 4.0
- Project configuration, configuration generation, documentation, commissioning
- Data transfer via standard serial cable or via a chip card
- Graphic configuration of safety circuit



PNOZmulti service tool

Order number:

- 773 005¹⁾ – Documentation folder with software on CD-ROM
- 773 005...²⁾ – Licence type³⁾

- PNOZmulti service tool is a supplement for the configuration software PNOZmulti Configurator.
- Purpose: troubleshooting and diagnostics for service and maintenance; downloading projects.
Any options that modify a project are disabled, i.e. the service tool is unable to change a project.

When ordering:

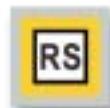
¹⁾ Please order licence separately.

²⁾ Please state the type of licence you require after the order number (.B for basic licence; ..K for user licence; ..G for project licence; .T2*, .T3* or .T4* for time-limited licence).
E.g. 773 000B.

* Validity of licence in months.

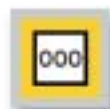
³⁾ Required in order to enable the software.

Version 2.0.0 – New software features



Logic element – RS-Flipflop
With priority reset

- Used to store information/status conditions on sequence controllers
- Function can be compared with “Latching” in relay technology



Logic element – Event counter
Ascending order

- Optional: automatic and manual reset



Dynamic status display

- Shows the online status of inputs, outputs, internal logic connections and status LEDs on the PNOZ m1p base unit
- Polls error messages, used for diagnostics, troubleshooting, commissioning



Download via serial interface

- Direct upload: configuration and all its settings can be transferred back
- Direct download without chip card reader, chip card is written directly within the base unit