

▶ Configurable small controllers

The configurable small controllers bridge the gap between classic safety relays and large programmable control systems. Use the configurable small controllers PNOZmulti to implement multiple safety functions. Functional safety to protect man and machine is thus achievable both simply and flexibly. On small machines, the small controllers PNOZmulti also perform automation tasks. Your plant and machinery is visualised optimally using the web-based visualisation software PASvisu.

Product area

Configurable small controllers

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► Configurable small controllers PNOZmulti – Many



With PNOZmulti, the pioneer among configurable safety technology, you can be sure you've made the right decision. Why? It's quite simple: Because with PNOZmulti you can rely on a system in use successfully worldwide, always at the forefront of technology. The configurable small controllers bridge the gap between classic safety relays and large programmable control systems. Use the configurable small controllers PNOZmulti mainly to implement multiple safety functions. Functional safety to protect man and machine is thus achievable both simply and flexibly.



PNOZ m B0



PNOZ m B1

Configurable control systems

PNOZmulti 2

PNOZmulti 2 is the very latest generation. If you need to monitor more than four safety functions, PNOZmulti is the right solution for you. The full function range of the “classic” PNOZmulti base units is now available in a unit measuring 45 mm in width. The modular structure is as flexible as your application.

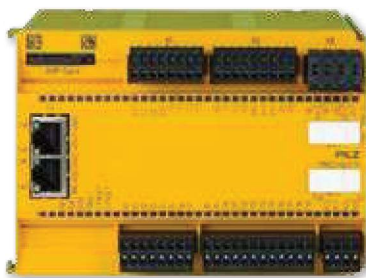


PNOZ mm0.1p

Configurable compact controllers

PNOZmulti Mini

PNOZmulti Mini is worthwhile if you have three or more safety functions. You choose between four base units and a small number of expansion modules. Additional output contacts are possible using the contact expansion modules from the product group PNOZsigma.



PNOZ m1p ETH

Configurable safety systems

PNOZmulti

PNOZmulti is the classic safety system. The system is characterised by a diverse range of modules and communication options.

Your benefits at a glance

- Cost-effective and long-lasting: worldwide safety standard for many automation environments and communication systems
- Just one system from planning to maintenance
- Flexible: configuration using certified software blocks, simple adjustment and adaptation
- Customised costs: exact adaptation to your application using expansion modules
- Minimal machine downtimes and high plant availability through simple, user-friendly diagnostics
- Maximum safety – depending on the wiring, safety categories up to PL e and SIL CL 3
- Simple wiring means short commissioning times
- Potential for rationalisation because safety components cover automation tasks
- Suitable for international use due to worldwide certification
- User-friendly thanks to technical support

functions, one solution!

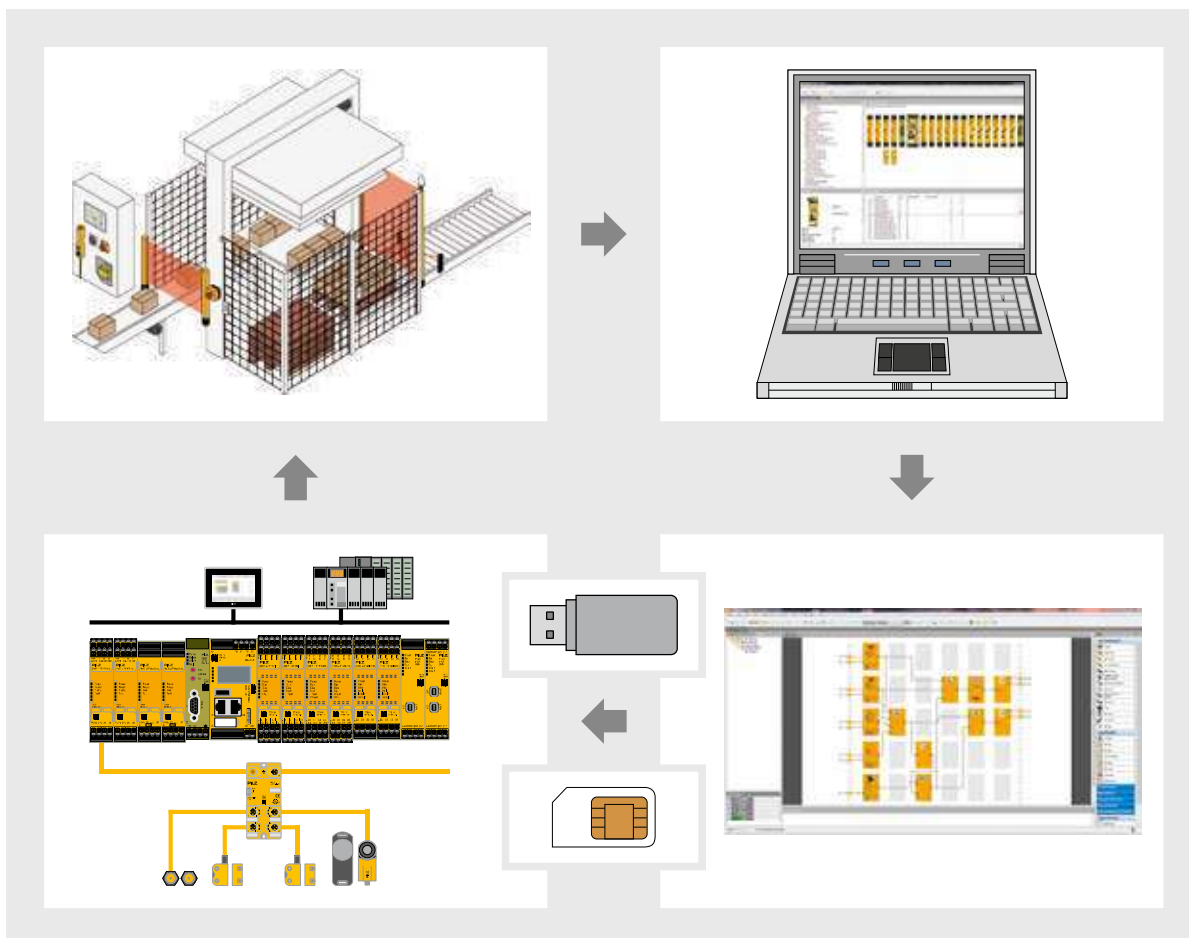
All for one and one for all

The software tool PNOZmulti Configurator will convince you with its simple operation: install, open, work intuitively. Furthermore, you have several options for carrying out diagnostics – for high plant availability and minimal downtimes. The range of fieldbuses and communication possibilities are a major benefit of PNOZmulti. It allows the system to be used independently of the higher-level operation control system. A wide selection of expansion modules ensures maximum flexibility and safety for your application. Input and output modules, motion monitoring modules and link modules are available.

Potential for rationalisation:


Safety components cover automation tasks

PNOZmulti is powerful enough to assume complete machine control on smaller machines. You can count on products of an extremely high quality. Moreover, as there is no need for an additional control system, PNOZmulti can make savings in a range of areas, from hardware costs and space in the control cabinet to procurement and stock holding costs.



From your application to the solution with PNOZmulti. Configure the hardware and the safety circuit using the convenient software tool PNOZmulti Configurator. The configuration, which is stored on an exchangeable storage medium (chip card or USB stick), is inserted into the base unit and installed. This shortens your time-to-market and allows you to harness great cost-saving potential in all engineering phases – from planning all the way to maintenance!

Keep up-to-date on configurable small controllers PNOZmulti:

 Webcode: web150495

Online information at www.pilz.com

► Software for the configurable small controllers



PNOZmulti small controllers make design, configuration, documentation and commissioning simple. Easy diagnostic solutions reduce standstill times on your plant or machine. Our user-friendly software tools are available to do this. With the PNOZmulti Configurator, you can create your safety circuit on the PC. The software has a broad function and command range so that even large-scale projects can be easily implemented. For user-friendly diagnostics, you can use the tools of the diagnostic solution PVIS. You can keep a close eye on your automation system using the web-based visualisation software PASvisu.



Simple hardware configuration by means of drag&drop.



Simple application creation, linking using the mouse.

Flexible to use and child's play to operate

First select the necessary hardware by drag&drop. The hardware consists of a base unit and, if necessary, expansion modules. The number of available inputs and outputs is displayed in table form. The software tool provides support, for example, by listing the expansion modules available for the selected base unit. The tool can also help if the permitted number of expansion modules has been exceeded or if the modules have been positioned incorrectly. Online help with documentation is available throughout configuration.

Mouse used for wiring

The graphics-based user interface conforms to the Windows® standard; the elements of the safety circuit are available as icons or in selection menus. Simply drag them onto the user interface and link them using the mouse.

You protect the safety circuit against tampering with passwords and transfer it to the base unit. A chip card or, with the PNOZ m B1, a USB stick is used as the exchangeable storage medium.



PNOZmulti



A wide range of logic connections can be combined to form a macro.

Enter a new dimension with macro elements


The logic connections that are defined between inputs and outputs can be combined into macro elements. Once created, macro elements are stored in the macro library. They are then available for use in all further configurations. A simple import and export function and the ability to edit macros within the editor reduce your engineering time and save costs. Macros can also be read and write protected, so protecting your expertise.

Your benefits at a glance

- ▶ The PNOZmulti Configurator is a universal tool for all engineering phases – planning, project development, commissioning, operation and maintenance
- ▶ Short time-to-market thanks to time and cost saving
- ▶ PVIS minimises machine downtimes through the fast, effective rectification of faults

The technical details for the PNOZmulti Configurator can be found on page 106.

Keep up-to-date on the software tool PNOZmulti Configurator:

 Webcode:
web150399

Online information at www.pilz.com




Reducing downtimes using the diagnostic solution PVIS

PVIS helps to visualise diagnostic information for PVIS-enabled control systems, such as small controllers PNOZmulti or drive technology PMC. Together with the PMI operator terminals, this provides you with a complete, fully integrated diagnostic solution. With the PVIS OPC and OPC UA tools, PVIS is available on the basis of standard software interfaces so that it can be integrated in almost any environment. The OPC UA standard is used for smart factory plants within the framework of Industry 4.0. If a fault occurs, features such as plain text messages with precise information on the location, clearly defined responsibilities and integrated first fault display all ensure that production is quickly restarted. The PNOZmulti Configurator contains the PNOZmulti project, texts for diagnostics, proposed solutions and much more. The benefits are obvious: simpler project development, greater flexibility and reduction of downtimes.



Keep up-to-date on the software tool "Diagnostic solution PVIS":

 Webcode:
web150398

Online information at www.pilz.com

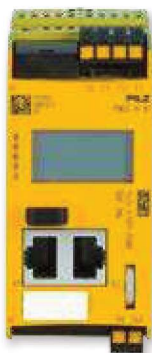
► Optimum visualisation and simple diagnostics



Use perfectly matched software to visualise your plant and machinery that use the small controllers PNOZmulti. Using an OPC UA server connection, you can easily link PNOZmulti to the web-based visualisation software PASvisu and import all variables of the small controller. So you can combine the control of your machine's safety functions with all the benefits on offer from the PASvisu. Thanks to a direct connection to the PNOZmulti small controllers, the full function range of the software (including diagnostic capability) is available with version 1.4 of the visualisation software PASvisu.



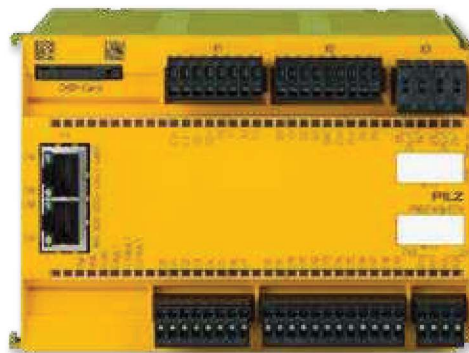
PMIvisu with visualisation software PASvisu



PNOZ m B1



PNOZ mm0p



PNOZ m1p ETH



Simple diagnostics

The configurable control systems PNOZmulti provide you with many options for performing diagnostics: for high plant availability and minimal downtimes. Use our PMI operator terminals and the Ethernet TCP/IP and Modbus TCP interfaces for status messages to the connected PLC controller or the higher-level fieldbus. Fieldbus modules which can be replaced without the program needing to be changed are available for the latter. PNOZmulti units can be connected to all common communication networks.




All your automation at a glance!

Your automation projects can be managed using the web-based visualisation software PASvisu for simple configuration and optimum visualisation. This provides you with a convenient, comprehensive overview of your plant – locally and via remote access; with sophisticated visualisation thanks to the most diverse style sheets.

Your benefits at a glance

- ▶ Simple, intuitive handling and maximum suitability for use
- ▶ Fast, safe automation
- ▶ Future-proof and platform-independent
- ▶ Use of current web technologies: HTML5, CSS3 and JavaScript
- ▶ Accelerated projects: from engineering and runtime to maintenance
 - Linking between PAS4000 and PASvisu projects enables shorter project times
 - Faster engineering, as variables do not need to be entered and assigned manually
- ▶ Platform independence thanks to the use of web technology enables flexible application on a wide range of end devices
- ▶ Reduced downtimes thanks to remote access with true client/server functionality
- ▶ Uniform look-and-feel thanks to project-wide design templates (CSS3 style sheets)

Keep up-to-date on the web-based visualisation software PASvisu:

 Webcode: web150503

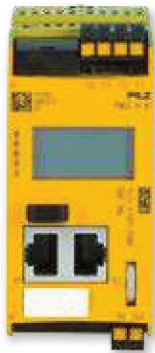
Online information at www.pilz.com

► Configurable control systems PNOZmulti 2 – The



Use the configurable control systems PNOZmulti 2 to implement multiple safety functions on your plant or machinery. The base units are just 45 mm wide, have an illuminated display and are modular and expandable so that they can grow with the requirements and size of your machine. In this way, you only pay for what you actually use.

You create the safety architecture just once, independently of the higher level plant control. This provides benefits in terms of time and cost savings. You can do this with the help of the intuitive PNOZmulti Configurator. The software tool impresses with its wide variety of certified blocks. They allow PNOZmulti to be used irrespective of machine type, plant type, country or branch of industry.



PNOZ m B1

Base unit PNOZ m B1 – for large-scale projects

- ▶ Fine granularity of the application – no inputs or outputs on the base unit, number controllable depending on the type of I/O modules used
- ▶ 2 integrated Ethernet interfaces
- ▶ Modbus TCP on board
- ▶ Can be used for large-scale projects
 - up to 1024 connection lines possible in the PNOZmulti Configurator (version 10 or higher)
 - max. 12 safe expansion modules can be connected on the right side as well as one output module for standard applications
 - max. 4 link modules and max. 1 fieldbus module can be connected on the left side
- ▶ USB stick as storage medium

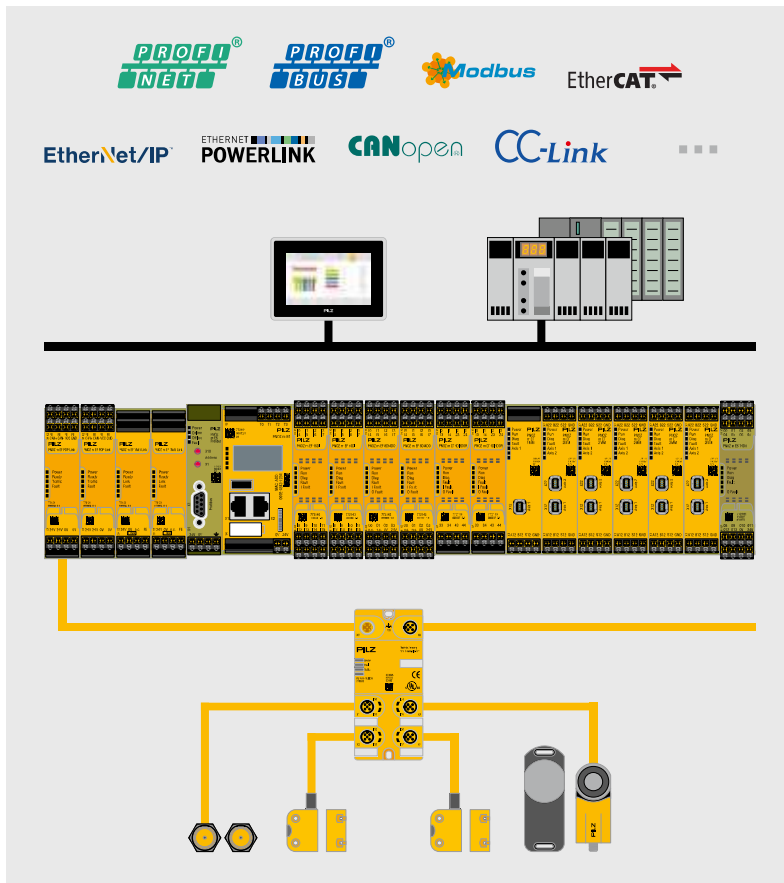


PNOZ m B0

Base unit PNOZ m B0 – the universal option

- ▶ 20 safe inputs, up to 8 of which can be configured as standard outputs
- ▶ 4 safe semiconductor outputs
- ▶ 4 test pulse outputs, up to 4 of which can be configured as standard outputs
- ▶ Max. 6 expansion modules can be connected on the right side
- ▶ Max. 4 link modules and max. 1 fieldbus module and 1 communication module can be connected on the left side
- ▶ Up to 80 % less energy consumption than comparable products
- ▶ Chip card as storage medium

future-proof solution



PNOZmulti 2 – for large-scale automation projects in conjunction with the web-based visualisation software PASvisu, the operator terminals PMI, safe sensor technology PSEN and decentralised periphery PDP67.

High plant availability and minimal downtimes

The configurable control systems PNOZmulti 2 provide you with many options for performing diagnostics. Use our PMI operator terminals, the Ethernet TCP/IP and Modbus TCP interfaces, the status messages to the connected PLC controller or higher-level fieldbus. Fieldbus modules which can be replaced without the program needing to be changed are available for the latter. PNOZmulti 2 units can be connected to all common communication networks. The diagnostic solution PVIS is easy to install and can be selected in the PNOZmulti Configurator with just a few clicks. Your plant and machinery is visualised optimally using the web-based visualisation software PASvisu.

Your benefits at a glance

- ▶ Certified hardware and software for reliable operation
- ▶ Easy to configure thanks to user-friendly software tools
- ▶ Short time-to-market as the inputs and outputs are freely configurable
- ▶ The appropriate modules for every requirement – flexible, simple, economical to expand
- ▶ Comprehensive diagnostic options mean short downtimes
- ▶ Fast commissioning thanks to simple wiring with plug-in terminals
- ▶ Maximum safety – up to PL e and SIL CL 3, depending on the application



Keep up-to-date on configurable control systems PNOZmulti 2:

Webcode: web150500

Online information at www.pilz.com

► Expansion modules – for particular requirements



SS1



SS2



SSR



SSM



SDI



SOS

Safe motion monitoring modules

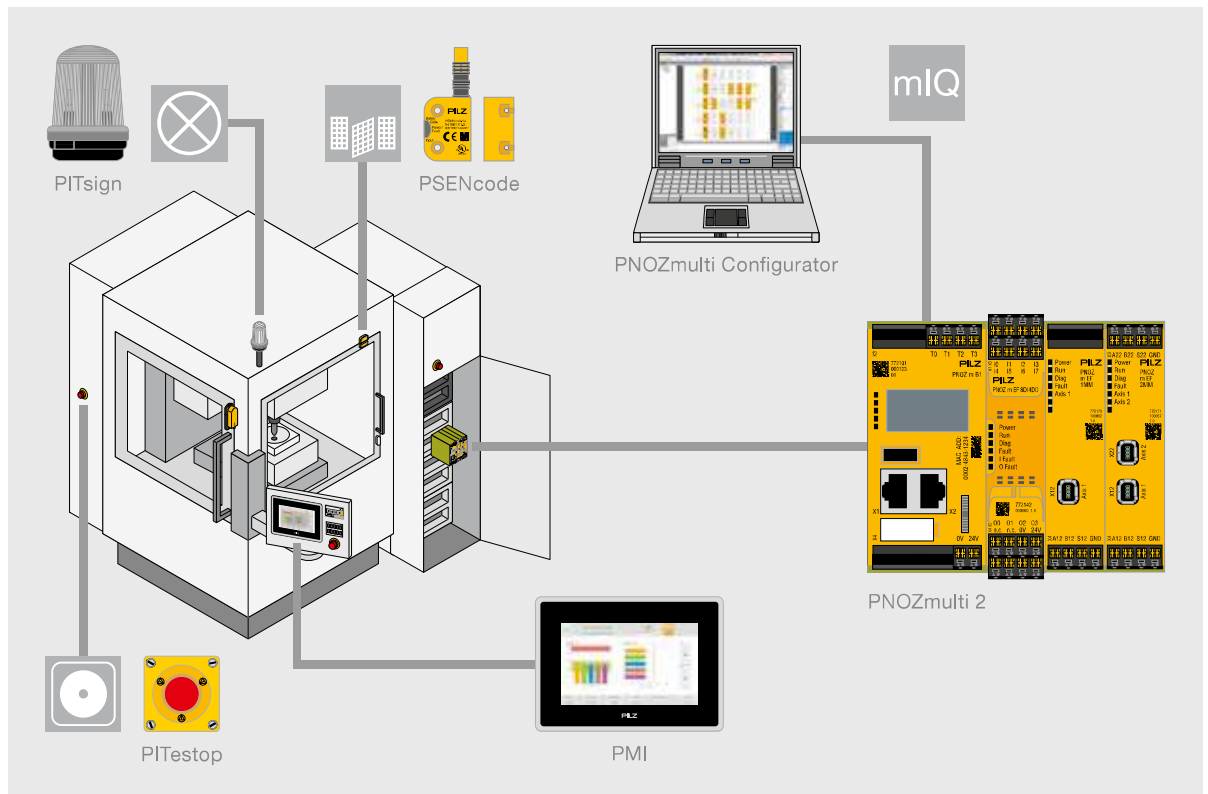
The safe motion monitoring modules ensure safe monitoring of your drives. Your plant and machinery are thus even more productive:

- ▶ Safety functions in accordance with EN 61800-5-2 (adjustable speed electrical power drive systems)
- ▶ Safe stop 1: SS1
- ▶ Safe stop 2: SS2
- ▶ Safe speed range: SSR
- ▶ Safe speed monitor: SSM
- ▶ Safe direction: SDI
- ▶ Safe operating stop: SOS
- ▶ Connection to all common incremental encoders via industry-compatible Mini I/O interface

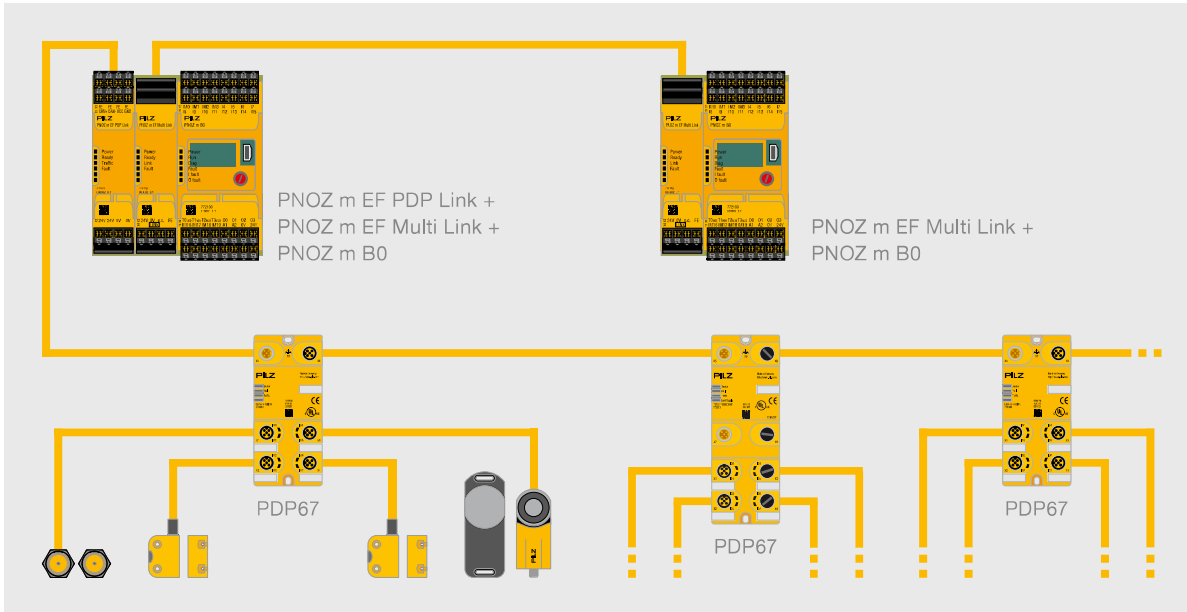
The safe motion monitoring modules are easily parameterised using the software tool PNOZmulti Configurator with certified software blocks. An independent module program (mIQ) is created for this and is executed on the module. This brings considerable benefits for you, the user: For example, fine-grained configuration of several monitoring zones, such as speed or rotational speed, is possible. The module program is run locally on the expansion module. This reduces the load on the base unit.

Flexible and robust

Modules for safe monitoring of one axis or two axes are available. All common incremental encoders can be connected using drive-specific connection cables via the **industry-compatible Mini I/O interface**, characterised by particularly high durability.



Configurable control systems PNOZmulti 2 with module program (mIQ) for configuring multiple monitoring zones. The module program is run locally on the expansion module.



The decentralised modules PDP67 can be connected to the PNOZmulti 2 via a link module – for cost-effective, simple, decentralised expansion. A link module is also available for networking several base units.

PNOZmulti 2 – with decentralised expansion

The configurable control systems PNOZmulti 2 can be expanded using link modules for decentralisation and for safe communication between multiple base units. Safety functions on more complex plant and machinery can thus be easily implemented.

Decentrally in the field

The PDP link module serves as the interface for the decentralised modules PDP67 (to protection type IP67) to the base unit. The signals from the connected sensors are directly forwarded to the PDP link module from the field for further processing. With up to 16 PDP67 modules on one base unit, the number of sensors that can be connected increases by 64. This is what an economical solution looks like!

Complex tasks – a team effort

The multi link module enables simple, safe data exchange between several base units. Thanks to the modular structure of the PNOZmulti 2, different topologies can be implemented on one base unit with up to four link modules. As a result, users can connect several PNOZmulti units to implement safety functions for complex plant and machinery.



► Technical details PNOZmulti 2

PNOZmulti 2 – Base units



Common features

- ▶ Efficient in the case of 4 or more safety functions, modular and expandable
- ▶ Application area: for monitoring E-STOP pushbuttons, two-hand buttons, safety gate limit switches, light beam devices, scanners, enabling switches, safety gate switches PSEN, operating mode selector switches, pressure-sensitive mats, safe motion monitoring and many other applications
- ▶ Safety-related characteristic data: depending on the application, up to Performance Level PL e/Cat. 4 of EN ISO 13849-1 and Safety Integrity Level (SIL) CL 3 of IEC 62061
- ▶ Can be configured using the software tool PNOZmulti Configurator
- ▶ Exchangeable program memory
- ▶ Illuminated display for status and device information
- ▶ If the diagnostic solution PVIS is activated, it is possible to display customised texts
- ▶ Visualisation software PASvisu: version 1.3 via OPC UA server connection, version 1.4 and higher with direct connection to PNOZmulti
- ▶ Supply voltage: 24 V DC
- ▶ LED status indicators
- ▶ Plug-in connection terminals: either spring-loaded terminals or screw terminals available as obligatory accessories



PNOZ m B1



PNOZ m B0

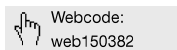
Type	Features
PNOZ m B1	<ul style="list-style-type: none"> ▶ Automation project is transferred to the base unit using a USB stick (512 MB, included) or via the integrated ETH interface: <ul style="list-style-type: none"> - multiple projects can be stored - only one can be executed - managed via the project manager ▶ Larger programs in the PNOZmulti Configurator only with PNOZ m B1: <ul style="list-style-type: none"> - up to 1024 connection lines possible - macro programming not yet available - module programs supported (mIQ) ▶ Date and time for PNOZ m B1 can be set in the PNOZmulti Configurator
PNOZ m B0	<ul style="list-style-type: none"> ▶ Automation project is transferred to the base unit using a chip card (not included, available as an accessory) or via the integrated USB interface ▶ 20 safe inputs, up to 8 of which can be configured as auxiliary outputs ▶ 4 safe semiconductor outputs – up to PL e and SIL CL 3, depending on the application

	Approvals	Order number		
		Without terminals	Plug-in spring-loaded terminals	Plug-in screw terminals
<ul style="list-style-type: none"> ▶ 4 test pulse outputs for detecting shorts across contacts between the inputs, otherwise no inputs and outputs on the base unit ▶ Right side: max. 12 safe expansion modules, 1 output module for standard applications ▶ Left side: up to 4 safe link modules, max. 1 fieldbus module ▶ Modbus TPC on board ▶ Display with backlighting for diagnostics, for activating the project, Ethernet settings, for setting the date and time of the system, for stopping and starting the device ▶ Multifunction switch for menu control ▶ 2 Ethernet interfaces with switch: transmission rate 10 MBit/s, 100 MBit/s; connector type RJ-45 ▶ Dimensions (H x W x D) in mm: 100 x 45 x 120.2 	CE, cULus Listed, TÜV, BG	772 101 RJ-45 cable ▶ 1.5 m _____ 314 094	751 016	750 016
<ul style="list-style-type: none"> ▶ 4 test pulse outputs, up to 4 of which can be configured as standard outputs ▶ Right side: max. 6 safe expansion modules ▶ Left side: max. 4 safe link modules, max. 1 fieldbus module and max. 1 communication module ▶ Display with backlighting to indicate the status of the supply voltage and the inputs and outputs ▶ Rotary knob for menu control ▶ Dimensions (H x W x D) in mm: 101.4/98 ¹⁾ x 45 x 120 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	772 100 Mini USB cable ▶ 3 m _____ 312 992 ▶ 5 m _____ 312 993 ▶ Chip card 8 kByte 1 piece ____ 779 201 ▶ Chip card 32 kByte 1 piece ____ 779 211	751 008 (1 set)	750 008 (1 set)

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

Configurable small controllers

Keep up-to-date on PNOZmulti 2 base units:



Online information at www.pilz.com

► Technical details PNOZmulti 2

PNOZmulti 2 – Expansion modules



PNOZ m EF 16DI



PNOZ m EF 8DI4DO



PNOZ m EF 4DI4DOR



PNOZ m EF 1MM



PNOZ m EF 2MM



PNOZ m EF Multi Link



PNOZ m EF PDP Link



PNOZ m ES 14DO

Type	Application area
PNOZ m EF 16DI	Safe input module
PNOZ m EF 8DI4DO	Safe input/semiconductor output module
PNOZ m EF 4DI4DOR	Safe input/relay output module
PNOZ m EF 1MM	Safe motion monitoring module for monitoring one axis
PNOZ m EF 2MM	Safe motion monitoring module for monitoring two axes
PNOZ m EF Multi Link	Safe link module for connecting two base units; optionally with PNOZmulti Mini and PNOZmulti; as many base units as necessary can be connected using link modules.
PNOZ m EF PDP Link	Safe link module for connecting a base unit to up to 4 decentralised modules PDP67
PNOZ m ES 14DO	Output module for standard applications
PDP67 F 8DI ION PDP67 F 8DI ION HP	Decentralised input modules


Common features

- Can be configured with the software tool PNOZmulti Configurator
- Status indicators via LEDs

Features	Approvals	Order number		
		Without terminals	Plug-in spring-loaded terminals	Plug-in screw terminals
<ul style="list-style-type: none"> ▶ 16 safe inputs ▶ Monitoring of shorts across contacts by means of test pulse outputs at the inputs ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 120 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	772 140	751 004 (1 set)	750 004 (1 set)
<ul style="list-style-type: none"> ▶ 8 safe inputs ▶ 4 safe semiconductor outputs, depending on the application up to PL e, SIL CL 3 ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 120 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	772 142	751 004 (1 set)	750 004 (1 set)
<ul style="list-style-type: none"> ▶ 4 safe inputs ▶ 4 safe relay outputs, depending on the application up to PL e and SIL CL 3 ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 120 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	772 143	751 004 (1 set)	750 004 (1 set)
<ul style="list-style-type: none"> ▶ Safe monitoring functions in accordance with EN 61800-5-2 (electrical power drive systems with adjustable speed) <ul style="list-style-type: none"> - Stop 1 (SS1) and stop 2 (SS2) - Safe speed monitoring (SSM) - Safe speed range monitoring (SSR-M) - Safe direction monitoring (SDI-M) - Safe operating stop monitoring (SOS-M) - Analogue voltage (track S) ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 111 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	772 170	783 542 (1 set)	793 542 (1 set)
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	772 171	783 544 (1 set)	793 544 (1 set)
<ul style="list-style-type: none"> ▶ On the left side, max. 4 multi-link modules can be connected to the base unit ▶ Point-to-point connection via 4-core shielded, twisted-pair cable ▶ Transfer of 32 bit input data and 32 bit output data (virtual I/Os) ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 120 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	772 120	783 538 (1 set)	793 538 (1 set)
<ul style="list-style-type: none"> ▶ Maximum number of devices which can be connected: <ul style="list-style-type: none"> - 4 PDP link modules on the left side of the base unit - 4 decentralised modules PDP67 F 8DI ION (VA) or PDP67 F 8DI ION HP (VA) to 1 PDP link module (maximum configuration: 16 PDP67 modules) - 4 sensors to 1 decentralised PDP67 module (maximum configuration: 64 sensors) ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 120 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	772 121	783 540 (1 set)	793 540 (1 set)
<ul style="list-style-type: none"> ▶ Expansion module with 14 semiconductor outputs for non-safety-related applications ▶ Max. 1 output module can be connected on the right side of the base unit PNOZ m B1 ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 120 	CE	772 181	751 004 (1 set)	750 004 (1 set)
For further information, please refer to pages 110–111	-	-	-	-

Configurable small controllers

Keep up-to-date on PNOZmulti 2 I/O modules:

 Webcode: web150385

Online information at www.pilz.com

► Technical details PNOZmulti 2

PNOZmulti 2 – Fieldbus modules/communication modules



PROFI
NET

PNOZ m ES PROFINET



PROFI
BUS

PNOZ m ES PROFIBUS



EtherCAT

PNOZ m ES EtherCAT



EtherNet/IP

PNOZ m ES EtherNet/IP



ETHERNET
POWERLINK

PNOZ m ES POWERLINK



CANopen

PNOZ m ES CANopen



CC-Link

PNOZ m ES CC-Link



Ethernet

PNOZ m ES ETH



RS232

PNOZ m ES RS232

Type	Application area
PNOZ m ES PROFINET	Fieldbus module PROFINET (I/O Device)
PNOZ m ES PROFIBUS	Fieldbus module PROFIBUS-DP (slave, DPV0)
PNOZ m ES EtherCAT	Fieldbus module EtherCAT (slave, CANopen over EtherCAT)
PNOZ m ES EtherNet IP	Fieldbus module EtherNet/IP (adapter)
PNOZ m ES POWERLINK	Fieldbus module Ethernet POWERLINK V2 (slave)
PNOZ m ES CANopen	Fieldbus module CANopen (slave, CiA 301 V 4.2.0)
PNOZ m ES CC-Link	Fieldbus module CC-Link
PNOZ m ES ETH	Communication module with Ethernet/Modbus TCP interface
PNOZ m ES RS232	Communication module with serial interface


Common features

- Can be configured using the PNOZmulti Configurator
- Fieldbus modules: 128 virtual outputs can be defined in the PNOZmulti Configurator for communication with the fieldbus

Features	Approvals	Order number		
		Without terminals	Plug-in spring-loaded terminals	Plug-in screw terminals
<ul style="list-style-type: none"> ▶ Transmission rate 100 MBit/s (100BaseTX), full-duplex and half-duplex ▶ Two RJ-45 ports ▶ PROFINET I/O Device (V2.2) functions in accordance with conformance class C ▶ Supported functions: RT, IRT, MRP, LLDP ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 110.4 	CE, cULus Listed, EAC (Eurasian), CCC	772 138	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ Station addresses from 0 ... 99, selected via rotary switch ▶ Transmission rate: max. 12 MBit/s ▶ Connection to fieldbus via female 9-pin D-Sub connector ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 115 	CE, cULus Listed, EAC (Eurasian), CCC	772 132	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ Transmission rate: 100 MBit/s ▶ Max. 148 bytes TxPDO and 20 bytes RxPDO ▶ Connection to fieldbus via RJ-45 connector ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 115 	CE, cULus Listed, EAC (Eurasian), CCC	772 136	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ Transmission rate: 10 MBit/s, 100 MBit/s ▶ IP address is set at DIP switch on the front of the unit ▶ 2-port switch ▶ Connection to fieldbus via RJ-45 connector ▶ Integrated web server ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 110.4 	CE, cULus Listed, EAC (Eurasian), CCC	772 137	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ Station addresses from 1 ... 239, selected via rotary switch ▶ Transmission rate: 100 MBit/s ▶ Connection to fieldbus via RJ-45 connector ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 110.4 	CE, cULus Listed, EAC (Eurasian), CCC	772 119	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ Station addresses from 0 ... 99, selected via rotary switch ▶ Transmission rate: max. 1 MBit/s ▶ Transmission rate selected via rotary switch ▶ Connection to fieldbus via male 9-pin D-Sub connector ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 115 	CE, cULus Listed, EAC (Eurasian), CCC	772 134	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ Station addresses from 1 ... 63, selected via rotary switch ▶ Station type: remote device ▶ Occupied stations: 3 ▶ Transmission rate: max. 10 MBit/s ▶ Connection to fieldbus: via 5-pin Combicon plug-in connector ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 110.4 	CE, EAC (Eurasian), CCC	772 135	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ With 2 Ethernet interfaces ▶ Transmission rate 10 MBit/s or 100 MBit/s ▶ Connection to fieldbus via RJ-45 connector ▶ Can only be used with base unit PNOZ m B0 ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 111 	CE, cULus Listed, EAC (Eurasian), CCC	772 130	-	-
<ul style="list-style-type: none"> ▶ 1 serial interface RS232 ▶ Can only be used with base unit PNOZ m B0 ▶ Dimensions (H x W x D) in mm: 101.4 x 22.5 x 120 	CE, cULus Listed, EAC (Eurasian), CCC	772 131	783 538 (1 set)	793 538 (1 set)

- ▶ Status indicators via LEDs
- ▶ Max. 1 fieldbus module can be connected
- ▶ Only with PNOZ m B0: max. 1 communication module can additionally be connected

Keep up-to-date on PNOZmulti 2 communication modules:

 Webcode: web150393

Online information at www.pilz.com

► Configurable compact controllers PNOZmulti Mini

You need to monitor more than three safety functions but have limited space? Then PNOZmulti Mini is the right solution for you! You can choose between four base units which can be used as stand-alone devices or modular and expanded. A stand-alone variant is intended for use under hostile industrial conditions with increased environmental requirements. The modular, expandable base units can be linked to each other or connected to decentralised PDP modules. Different communication and fieldbus modules are used for transmitting diagnostic and status information to the higher-level controller. If you need more relay contacts, then use the contact expansion modules from the product group PNOZsigma. You use the compact small controller as a standardised safety solution independently of the operation control system and simply adapt it to changing applications.



PNOZ mm0p

Compact device – stand-alone base unit

With a width of just 45 mm, the stand-alone base unit has 20 freely configurable safe inputs, 4 safe semiconductor outputs (PL e/SIL CL 3) and 4 test pulse outputs. The compact design saves space in the control cabinet. The integrated display offers simple diagnostics and the ability to display customised texts. Short commissioning times and simple wiring save costs. Also available as a version for an extended temperature range.

Genial device – modular, expandable base unit

The base unit PNOZ mm0.1p is ready to meet growing requirements. It has the same technical features as PNOZ mm0p. The difference: it is modular and expandable. By selecting the appropriate modules and thanks to the simple configuration, you can expand your application easily and economically. Expand to the left using safe link and communication modules. On the right-hand side, contact expansion modules from the product group PNOZsigma are available to multiply the relay contacts.

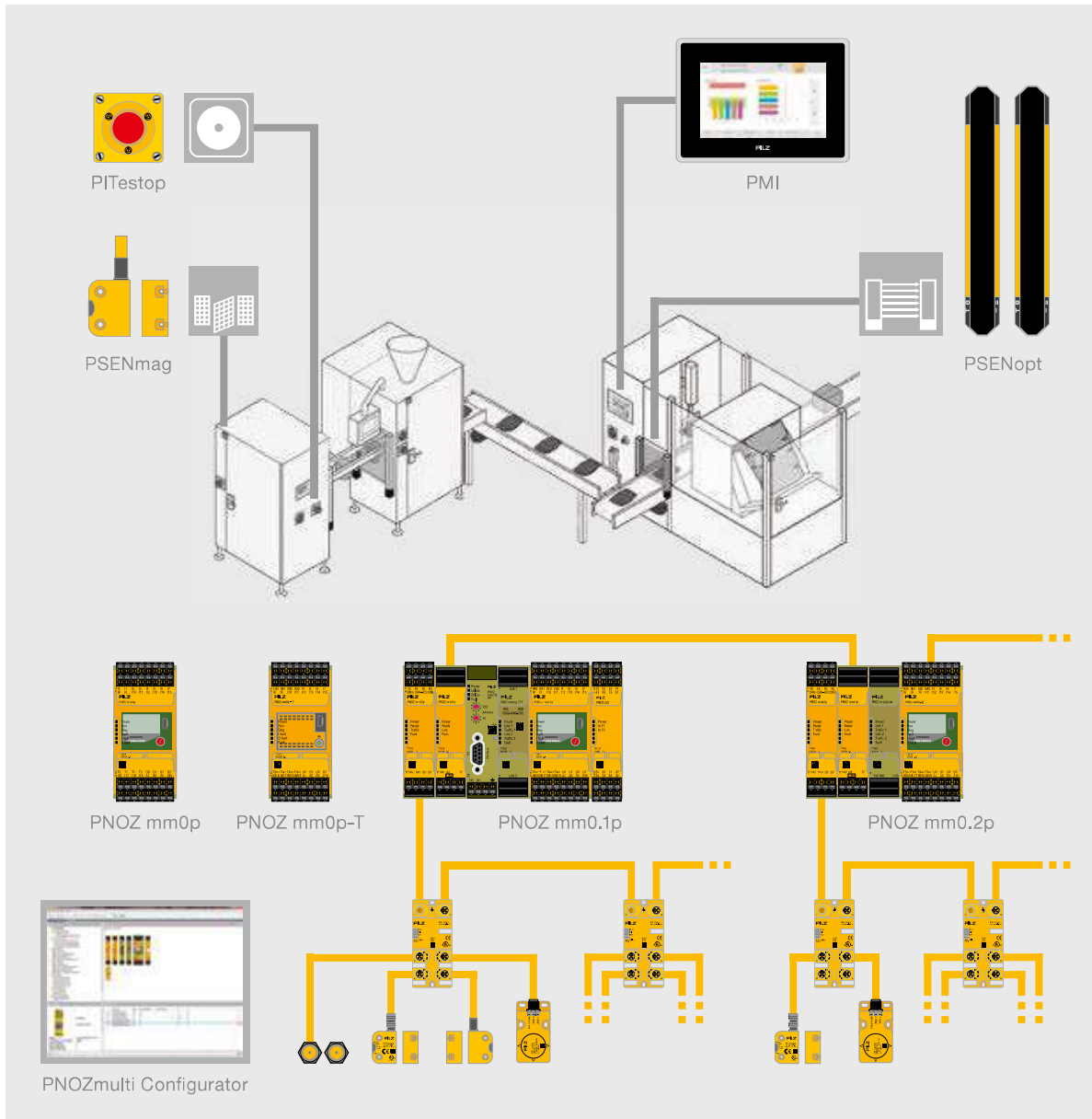


PNOZ mm0.1p

Communicative device – base unit with multi-link inside

In addition to the functionality of the PNOZ mm0.1p, the base unit PNOZ mm0.2p also provides an integrated multi-link interface. This removes the need for an additional module, saving you costs. As a result, it is easy to link and exchange data between several PNOZmulti Mini base units and between PNOZmulti Mini, PNOZmulti and PNOZmulti 2.






Configurable small controllers

Your benefits at a glance

- ▶ Efficient from three safety functions onwards
- ▶ The software tool PNOZmulti Configurator saves you time and costs in all engineering phases
- ▶ Maximum flexibility: inputs and outputs are freely configurable
- ▶ Saves lots of space in the control cabinet due to the compact design
- ▶ Reduced downtimes thanks to PVIS support
- ▶ Customer texts can be displayed
- ▶ Worldwide safety standard for all machine types

Keep up-to-date on configurable compact controllers PNOZmulti Mini:

 Webcode: web150501

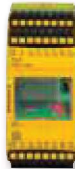
Online information at www.pilz.com

► Technical details – PNOZmulti Mini

PNOZmulti Mini – Base units

Common features:

- ▶ Application area: for monitoring E-STOP pushbuttons, two-hand buttons, safety gate limit switches, light beam devices, scanners, enabling switches, safety gate switches PSEN, operating mode selector switches and pressure-sensitive mats
- ▶ Safety-related characteristic data: depending on the application, up to Performance Level PL e/Cat. 4 of EN ISO 13849-1 and Safety Integrity Level (SIL) CL 3 of IEC 62061
- ▶ Configurable using PNOZmulti Configurator via chip card or USB interface
- ▶ Exchangeable program memory: chip card
- ▶ 20 inputs, up to 8 of which can be configured as outputs for standard applications
- ▶ 4 safe semiconductor outputs, depending on the application up to PL e, SIL CL 3
- ▶ 4 test pulse outputs, up to 4 of which can be configured as outputs for standard applications
- ▶ Supply voltage (U_s): 24 V DC
- ▶ Voltage/current/rating: 24 V DC/2 A/48 W, outputs using semiconductor technology
- ▶ With display for error messages, state of the supply voltage, state of the inputs and outputs, status and device information; customised texts can be displayed
- ▶ If the diagnostic solution PVIS is activated, it is possible to display customised texts
- ▶ Visualisation software PASvisu: version 1.3 via OPC UA server connection, version 1.4 and higher with direct connection to PNOZmulti
- ▶ Rotary knob for menu control
- ▶ Dimensions (H x W x D) in mm: 100/98¹⁾ x 45 x 120



PNOZ mm0p



PNOZ mm0p-T



PNOZ mm0.1p




PNOZ mm0.2p

Type	Application area
PNOZ mm0p	Base unit – non-modular and expandable, from 3 ... 6 safety functions
PNOZ mm0p-T ³⁾	As for PNOZ mm0p for increased environmental requirements, without display
PNOZ mm0.1p	Base unit – modular and expandable, from 4 safety functions and for standard control functions
PNOZ mm0.2p	Base unit – as for PNOZ mm0.1p, with an additional integrated multi-link interface


Features	Approvals	Order number		
		Without terminals	Push-in spring-loaded terminals	Plug-in screw terminals
Accessories ²⁾ for all PNOZmulti Mini base units: <ul style="list-style-type: none"> ▶ Mini USB cable, 3 m: 312992 ▶ Mini USB cable, 5 m: 312993 ▶ Chip card 8 kByte, 1 piece: 779201 ▶ Chip card 32 kByte, 1 piece: 779211 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC, KCC	772000	751008 (1 set)	750008 (1 set)
<ul style="list-style-type: none"> ▶ Ambient temperature in accordance with standard EN 60068-2-14 Temperature range –25 ... + 60 °C ▶ Short-term condensation formation during operation (only with protective extra-low voltage) 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	772010	751008 (1 set)	750008 (1 set)
<ul style="list-style-type: none"> ▶ As PNOZ mm0p ▶ Expandable to the left using the link modules PNOZ mml1p Multi Link, PNOZ mml2p PDP and a communication module PNOZ mmc1p ETH or PNOZ mmc2p serial; a fieldbus module can be additionally connected ▶ Expandable to the right using a contact expansion module PNOZsigma: PNOZ s22 or s7, s7.1, s7.2, s10, s11 ▶ Decentralisation: PDP67 modules for connecting sensor technology ▶ PVIS support 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC, KCC	772001	751008 (1 set)	750008 (1 set)
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC, KCC	772002	751008 (1 set)	750008 (1 set)

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

²⁾ For more accessories, see page 108

³⁾  For increased environmental requirements (e.g. extended temperature range, condensation tolerance, resistance against corrosive gases)

Keep up-to-date on PNOZmulti Mini base units:

 Webcode: web150394

Online information at www.pilz.com

► Technical details – PNOZmulti Mini

PNOZmulti Mini – I/O modules

Common features:

- ▶ Can be configured using the PNOZmulti Configurator
- ▶ Max. 4 link modules can be connected to the left of the base unit
- ▶ 1 PNOZsigma expansion module (+ 1 contact expansion module) can be connected to the right of the base unit



PNOZ mml1p



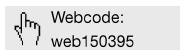
PNOZ mml2p

Type	Application area
PNOZ mml1p Multi Link	Safe link module for connecting two base units: optionally with PNOZmulti 2 and PNOZmulti; as many base units as necessary can be connected using link modules
PNOZ mml2p PDP	Safe link module for connecting a base unit to up to 4 decentralised modules PDP67
PDP67 F 8DI ION PDP67 F 8DI ION HP	Decentralised input modules
PNOZsigma expansion modules	Contact expansion

Features	Approvals	Order number		
		Without terminals	Push-in spring-loaded terminals	Plug-in screw terminals
<ul style="list-style-type: none"> ▶ Max. 4 PNOZ mml1p units can be connected to the base unit ▶ Point-to-point connection via 4-core shielded, twisted-pair cable ▶ 32 virtual inputs and 32 virtual outputs ▶ Dimensions (H x W x D) in mm: 100 x 22,5 x 120 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	772 020	783 538 (1 set)	793 538 (1 set)
<ul style="list-style-type: none"> ▶ Maximum number of devices which can be connected: <ul style="list-style-type: none"> - 4 PNOZ mml2p units on the left side of the base unit - 4 decentralised modules PDP67 F 8DI ION (VA) or PDP67 F 8DI ION HP (VA) to 1 PDP link module (maximum configuration: 16 PDP67 modules) - 4 sensors to 1 decentralised PDP67 module (maximum configuration: 64 sensors) ▶ Dimensions (H x W x D) in mm: 98/100¹⁾ x 22,5 x 120 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	772 021	783 540 (1 set)	793 540 (1 set)
For further information, please refer to pages 110–111	-	-	-	-
For further information, please refer to pages 34–35	-	-	-	-

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

Keep up-to-date on PNOZmulti Mini I/O modules:



Online information at www.pilz.com

► Technical details – PNOZmulti Mini

PNOZmulti Mini – Fieldbus modules/communication modules



Ethernet
Modbus

PNOZ mmc1p ETH



RS232

PNOZ mmc2p serial



PROFIBUS

PNOZ mmc3p DP



DeviceNet

PNOZ mmc4p DN



CANopen

PNOZ mmc6p CAN



CC-Link

PNOZ mmc7p CC



EtherCAT

PNOZ mmc11p CAT



ETHERNET POWERLINK

PNOZ mmc12p POWERLINK

Type	Application area
PNOZ mmc1p ETH	Communication module, subscriber on Ethernet TCP/IP and Modbus TCP (slave)
PNOZ mmc2p serial	Communication module with serial interface RS232
PNOZ mmc3p DP	Fieldbus module PROFIBUS-DP (Slave DPVO)
PNOZ mmc4p DN	Fieldbus module DeviceNet (slave)
PNOZ mmc6p CAN	Fieldbus module CANopen (slave)
PNOZ mmc7p CC	Fieldbus module CC-Link (slave V 1.10)
PNOZ mmc11p CAT	Fieldbus module EtherCAT CANopen over EtherCAT (conforms to DS301 V 4.02, slave)
PNOZ mmc12p PL	Fieldbus module POWERLINK (Ethernet POWERLINK V 2 protocol)

Common features:

- Can be configured using the PNOZmulti Configurator
- In the PNOZmulti Configurator, 24 virtual inputs and outputs can be defined for communication with the fieldbus; the number of inputs and outputs can be expanded to 128.
- Max. 1 fieldbus module and max. 1 communication module can be connected to the left of the base unit

Features	Approvals	Order number		
		Without terminals	Push-in spring-loaded terminals	Plug-in screw terminals
<ul style="list-style-type: none"> ▶ 2 Ethernet interfaces ▶ Transmission rate 10 MBit/s ▶ Status indicators via LEDs ▶ Max. 1 communication module can be connected to the left of the base unit; a fieldbus module can also be connected ▶ Connected to base unit via a link on the back of the unit ▶ Dimensions (H x W x D) in mm: 100 x 22.5 x 120 	CE, cULus Listed, EAC (Eurasian), CCC, KCC	772 030	-	-
<ul style="list-style-type: none"> ▶ 1 serial interface RS232 ▶ Status indicators via LEDs ▶ Max. 1 communication module can be connected to the left of the base unit; a fieldbus module can also be connected ▶ Connected to base unit via a link on the back of the unit ▶ Dimensions (H x W x D) in mm: 100 x 22.5 x 120 	CE, cULus Listed, EAC (Eurasian), CCC, KCC	772 031	783 538 (1 set)	793 538 (1 set)
<ul style="list-style-type: none"> ▶ Station addresses from 0 ... 99, selected via rotary switch ▶ Transmission rate: max. 12 MBit/s ▶ Connection to fieldbus via female 9-pin D-Sub connector ▶ Dimensions (H x W x D) in mm: 100 x 22.5 x 115 	CE, cULus Listed, EAC (Eurasian), CCC	772 032	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ Station addresses from 0 ... 63, selected via DIP switch ▶ Transmission rate: 500 kBit/s ▶ Connection to fieldbus via 5-pin Combicon plug-in connector ▶ Dimensions (H x W x D) in mm: 100 x 22.5 x 110 	CE, cULus Listed, EAC (Eurasian), CCC	772 033	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ Station addresses from 0 ... 99, selected via rotary switch ▶ Transmission rate: max. 1 MBit/s ▶ Transmission rate selected via rotary switch ▶ Connection to fieldbus via female 9-pin D-Sub connector ▶ Dimensions (H x W x D) in mm: 100 x 22.5 x 115 	CE, cULus Listed, EAC (Eurasian), CCC	772 034	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ Transmission rate: max. 10 MBit/s ▶ Connection to fieldbus via 5-pin Combicon plug-in connector ▶ Dimensions (H x W x D) in mm: 100 x 22.5 x 110 	CE, cULus Listed, EAC (Eurasian), CCC	772 035	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ Transmission rate: max. 100 MBit/s ▶ Connection to fieldbus via RJ-45 connector ▶ Dimensions (H x W x D) in mm: 100 x 22.5 x 115 	CE, cULus Listed, EAC (Eurasian), CCC	772 036	783 542 (1 set)	793 542 (1 set)
<ul style="list-style-type: none"> ▶ Station addresses from 1 ... 239, selected via rotary switch ▶ Transmission rate: 100 MBit/s ▶ Connection to fieldbus via RJ-45 connector ▶ Dimensions (H x W x D) in mm: 100 x 22.5 x 110.4 	CE, cULus Listed, EAC (Eurasian), CCC	772 019	783 542	793 542

Keep up-to-date on PNOZmulti Mini fieldbus and communication modules:

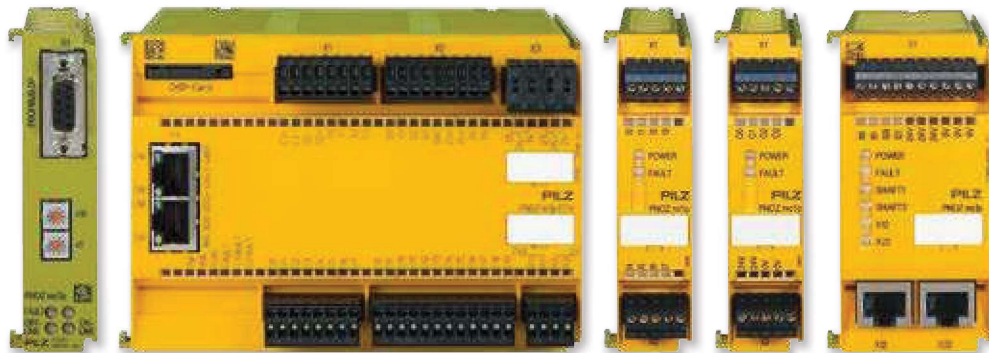
 Webcode: web150397

Online information at www.pilz.com

► Configurable safety systems PNOZmulti



The configurable safety system PNOZmulti is ideal when several safety functions are to be implemented on a machine. Instead of wiring, you can simply configure your safety circuit on a PC. PNOZmulti is multifunctional, freely configurable and tailor-made for use in many areas of mechanical engineering.



PNOZ m1p ETH

The safety system PNOZmulti monitors safety functions such as E-STOP, safety gates, light beam devices, two-hand controls and many more. All safety functions are created with the software tool PNOZmulti Configurator. Configuration of the hardware with selection of base unit and expansion modules can also be done easily via the PNOZmulti Configurator. This reduces your engineering times and the time-to-market. You can then save the completed configuration on to a chip card. From there it is transferred to the base unit.

The right module for every requirement ...

If your plant expands, the PNOZmulti simply expands with it. Expansion modules are available to extend the modular system; these can be used in any combination to suit the requirement:

- Input and output modules, e.g. the safe analogue input module
- Fieldbus modules

- Safe speed and standstill monitors
- Safe link modules for the safe connection of several PNOZmulti base units or for the safe connection of decentralised periphery

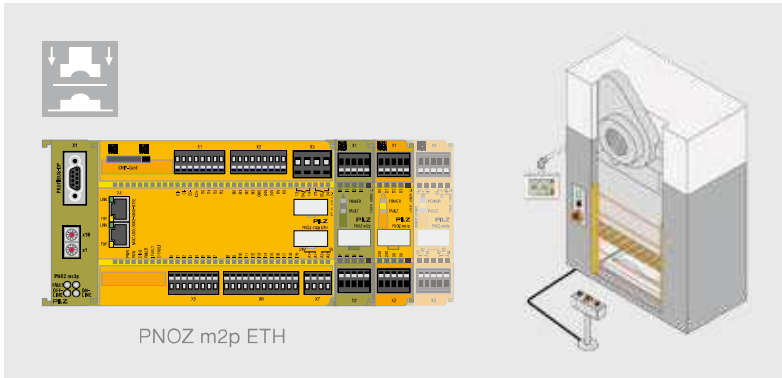
All PNOZmulti base units have 20 inputs, 4 safe semiconductor outputs and 2 relay outputs. Versions are available with serial or ETH interface.



PNOZ ma1p

Monitoring analogue input signals safely

The safe analogue input module PNOZ ma1p provides two independent, safe inputs. For each input, up to eight limit values can be defined in the PNOZmulti Configurator with just a few clicks of the mouse. The inputs are suitable for connecting transducers or encoders with standardised 10 V voltage signals or 20 mA current signals. As users you benefit from rapid commissioning and reduced wiring. With its analogue input module, the PNOZmulti is particularly suitable for the process engineering sector as well as for cable car and chair lift design and for burner controls.

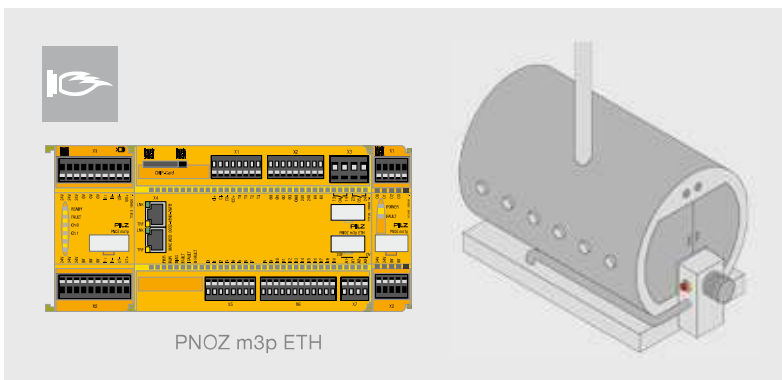


Specifically for press applications.

Use in presses

The base unit PNOZ m2p is specially designed for controlling and monitoring small and medium-sized eccentric and hydraulic presses. Approved software blocks are available for operating modes such as set-up mode, single-stroke mode and automatic mode, and for monitoring safety light curtains in single-break or double-break mode; these blocks make the system simple and economical to use.

In combination with the dual-pole semiconductor output module PNOZ mo3p, the PNOZ m2p can control press safety valves safely and efficiently.



Specifically for burner management.


PNOZmulti in burner management

PNOZ m3p controls and monitors furnaces, e.g. safety sequences. The safe ignition of the fuel and the monitoring of a furnace during operation are safety-related criteria that prevent an explosion with serious damage. The base unit PNOZ m3p provides a safety-related solution that fulfils these requirements.

Your benefits at a glance

- ▶ System which provides a solution for safety-related and automation tasks
- ▶ Potential savings of up to 40 % in all engineering phases thanks to a graphical configuration tool
- ▶ Wide variety of base units and modules for flexible, industry-wide use
- ▶ Simple and economical to expand by selecting compatible modules
- ▶ Simple, user-friendly diagnostics mean short downtimes and high plant availability
- ▶ Certified worldwide

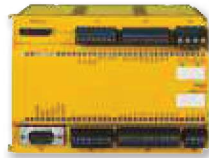
Keep up-to-date on configurable safety systems PNOZmulti:

 Webcode: web150497

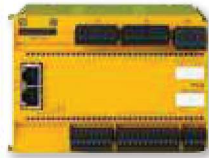
Online information at www.pilz.com

► Technical details – PNOZmulti

PNOZmulti – Base units




PNOZ m1p




PNOZ m1p ETH

Type	Application area
PNOZ m0p	<ul style="list-style-type: none"> ▶ Base unit – for 3 ... 6 safety functions ▶ Only link modules and fieldbus modules can be connected, no other expansion modules can be used
PNOZ m0p ETH	
PNOZ m1p	Base unit – for 4 or more safety functions and for automation functions
PNOZ m1p ETH	
PNOZ m1p coated version ¹⁾	
PNOZ m1p ETH coated version ¹⁾	
PNOZ m2p	
PNOZ m2p ETH	
PNOZ m3p	Base unit – specifically for burner management: Control and monitoring of furnaces, e.g. monitoring of safety sequences, combustion air pressure, ignition, flame, external compound controller and leaktightness control; plus control of safety valves, ignition valves, exhaust valves, ignition, external compound controller and combustion air blower
PNOZ m3p ETH	

Features	Approvals	Order number		
		Without terminals	Spring-loaded terminals	Plug-in screw terminals
<ul style="list-style-type: none"> ▶ Application area: for connecting E-STOP devices, two-hand buttons, safety gate limit switches, light beam devices, scanners, enabling switches, safety gate switches PSEN, operating mode selector switches, muting, pressure-sensitive mats and sensors ▶ Configurable using the PNOZmulti Configurator via a chip card or the RS232 interface/Ethernet interface ▶ Exchangeable program memory: chip card ▶ Diagnostic interface ▶ Max. 1 fieldbus module can be connected ▶ PNOZ m1p/PNOZ m2p/PNOZ m3p: max. 8 expansion modules can be connected ▶ Inputs/outputs: <ul style="list-style-type: none"> - 20 freely configurable inputs - Positive-guided relay outputs: <ul style="list-style-type: none"> 2 safety outputs – up to PL e and SIL CL 3, depending on the application - Semiconductor outputs: <ul style="list-style-type: none"> 4 safety outputs – up to PL e and SIL CL 3, depending on the application; 1 output for standard applications - 4 test pulse outputs - 1 cascading input and output, can also be used as a standard output ▶ Integrated interfaces: <ul style="list-style-type: none"> - PNOZ mxp: serial interface RS232 - PNOZ mxp ETH: 2 Ethernet interfaces ▶ Supply voltage (U_s): 24 VDC ▶ Voltage/current/rating: <ul style="list-style-type: none"> - Outputs using semiconductor technology: 24 VDC/2 A/48 W - Relay outputs: DC1: 24 V/6 A/144 W ▶ Dimensions (H x W x D) in mm: 94 x 135 x 121 <p>Accessories for all PNOZmulti base units:</p> <ul style="list-style-type: none"> ▶ Chip card 8 kByte, 1 piece: 779201 ▶ Chip card 32 kByte, 1 piece: 779211 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC, KCC	773 110	783 100	793 100
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC, KCC	773 113	783 100	793 100
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC, KCC	773 100	783 100	793 100
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC, KCC	773 103	783 100	793 100
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC, KCC	773 105	783 100	793 100
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	773 104	783 100	793 100
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC, KCC	773 120	783 100	793 100
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC, KCC	773 123	783 100	793 100
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC, KCC	773 125	783 100	793 100
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC, KCC	773 126	783 100	793 100

¹⁾  For increased environmental requirements (e.g. extended temperature range, condensation tolerance, resistance against corrosive gases)

Keep up-to-date on PNOZmulti base units:

 Webcode: web150378

Online information at www.pilz.com

► Technical details – PNOZmulti

PNOZmulti – Input modules



PNOZ mi1p



PNOZ mi2p

Type	Application area	Inputs/outputs
PNOZ mi1p	Safe input module	8 safe inputs
PNOZ mi1p coated version ¹⁾	Safe input module	8 safe inputs
PNOZ mi2p	Input module	8 inputs for non-safety-related functions

PNOZmulti – Safe analogue input module




PNOZ ma1p


Type	Application area	Inputs/outputs
PNOZ ma1p	<ul style="list-style-type: none"> ► Safe analogue input module ► Exact analogue value can be forwarded to a fieldbus for diagnostic purposes 	<ul style="list-style-type: none"> ► 2 safe analogue inputs for voltage or current measurement (configurable) ► Each input can be configured separately
PNOZ ma1p coated version ¹⁾		

Features	Approvals	Order number		
		Without terminals	Spring-loaded terminals	Plug-in screw terminals
<ul style="list-style-type: none"> ▶ Max. 8 input modules can be connected to the base unit ▶ Connected to base unit via a link on the back of the unit 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC	773 400	783 400 (1 set)	793 400 (1 set)
		773 405	783 400 (1 set)	793 400 (1 set)
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC	773 410	783 400 (1 set)	793 400 (1 set)

Features	Approvals	Order number		
		Without terminals	Spring-loaded terminals	Plug-in screw terminals
<ul style="list-style-type: none"> ▶ Range monitoring (4 range limits can be configured) ▶ Threshold value monitoring (8 limit values can be configured) ▶ Voltage range: -10.24 ... +10.2375 V ▶ Current range: 0 ... 25.59 mA ▶ Can be connected to the left of the base unit ▶ Max. 4 PNOZ ma1p units can be connected to the base unit ▶ Status indicators ▶ Dimensions (H x W x D) in mm: 94 x 45 x 121 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	773 812	783 700 (1 set)	793 700 (1 set)
		773 813	783 700 (1 set)	793 700 (1 set)

¹⁾  For increased environmental requirements (e.g. extended temperature range, condensation tolerance, resistance against corrosive gases)

Keep up-to-date on PNOZmulti I/O modules:

 Webcode: web150379

Online information at www.pilz.com

► Technical details – PNOZmulti

PNOZmulti – Output modules



PNOZ mo1p




PNOZ mc1p

Type	Application area	Outputs
PNOZ mo1p	Safe semiconductor output module: switching 24 V actuators	Outputs using semiconductor technology: 4 safety outputs
PNOZ mo1p coated version ¹⁾		
PNOZ mo2p	Safe relay output module: volt-free switching of actuators	Relay outputs: 2 safety outputs
PNOZ mo2p coated version ¹⁾		
PNOZ mo3p	Safe semiconductor output module, 2-pole	2-pole outputs using semiconductor technology: 2 safety outputs
PNOZ mo4p	Safe relay output module: volt-free switching of actuators	Relay outputs: 4 safety outputs
PNOZ mo4p coated version ¹⁾		
PNOZ mo5p	Safe relay output module: to control the safety valves on a burner in accordance with EN 50156	Positive-guided relay outputs, diverse: 4 safety outputs
PNOZ mc1p	Output module: status message to PLC	16 auxiliary outputs using semiconductor technology
PNOZ mc1p coated version ¹⁾		


Common features

- Safety outputs: up to PL e and SIL CL 3, depending on the application (except PNOZ mc1p)
- Connected to base unit via a link on the back of the unit
- Dimensions (H x W x D) in mm: 94 x 22,5 x 121,
PNOZ mc1p: 94 x 45 x 121

Outputs: Voltage/ current/rating	Features	Approvals	Order number		
			Without terminals	Spring-loaded terminals	Plug-in screw terminals
24 VDC/2 A/48 W	▶ Max. 6 output modules can be connected to the right of the base unit	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC	773500	783400 (1 set)	793400 (1 set)
			773505	783400 (1 set)	793400 (1 set)
DC1: 24 V/6 A		CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC	773520	783520 (1 set)	793520 (1 set)
			773525	783520 (1 set)	793520 (1 set)
24 V DC/2 A		CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC	773510	783400 (1 set)	793400 (1 set)
DC1: 24 V/6 A		CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC	773536	783536 (1 set)	793536 (1 set)
			773537	783536 (1 set)	793536 (1 set)
DC1: 24 V/6 A/144 W		CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	773534	783536 (1 set)	793536 (1 set)
-	▶ Max. 8 output modules can be connected to the right of the base unit	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC	773700	783700 (1 set)	793700 (1 set)
			773705	783700 (1 set)	793700 (1 set)

¹⁾  For increased environmental requirements (e.g. extended temperature range, condensation tolerance, resistance against corrosive gases)

Keep up-to-date on PNOZmulti I/O modules:

 Webcode: web150379

Online information at www.pilz.com

► Technical details – PNOZmulti

PNOZmulti – Safe speed and standstill monitors

Common features

- ▶ Application area: The expansion modules monitor drives for standstill, speed and direction of rotation in set-up and automatic mode up to PL e of EN ISO 13849-1 and up to SIL CL 3 of EN IEC 62061
- ▶ Monitoring of 2 independent axes (8 limit frequencies can be selected), PNOZ ms4p: 1 axis
- ▶ Connection technology on incremental encoder: RJ-45 female connector, 8-pin
- ▶ Connection technology on proximity switch: plug-in connection terminals
- ▶ Max. 4 speed monitors can be connected to the base unit
- ▶ Measured variables: standstill, speed, direction of rotation
- ▶ Axis types and start mode can be selected in the PNOZmulti Configurator
- ▶ Dimensions (H x W x D) in mm: 94 x 45 x 121



PNOZ ms1p



PNOZ ms4p

Type	Connectable encoders
PNOZ ms1p	Proximity switch, incremental encoder Sin/Cos, TTL (5 V)
PNOZ ms2p	Proximity switch, incremental encoder Sin/Cos, TTL (5 V), HTL (24 V)
PNOZ ms2p HTL	Proximity switch, incremental encoder HTL
PNOZ ms2p TTL	Proximity switch, incremental encoder Sin/Cos, TTL (RS422, 5 V)
PNOZ ms2p TTL coated version ¹⁾	
PNOZ ms3p	Incremental encoder Sin/Cos, TTL (RS422, 5 V), HTL (24 V)
PNOZ ms3p HTL	Incremental encoder (12 V ... 30 V)
PNOZ ms3p TTL	Incremental encoder Sin/Cos, TTL (5 V)
PNOZ ms4p	Incremental encoder Sin/Cos, TTL (5 V), HTL (24 V)

PNOZmulti – Link modules

Common features

- ▶ Can be configured using the PNOZmulti Configurator
- ▶ Dimensions (H x W x D) in mm: 94 x 22,5 x 121



PNOZ ml1p


Type	Application area
PNOZ ml1p	To safely connect two PNOZmulti base units; tree or ring structure possible
PNOZ ml1p coated version ¹⁾	
PNOZ ml2p	To safely connect a base unit to up to 4 decentralised modules PDP

Features	Approvals	Order number		
		Without terminals	Spring-loaded terminals	Plug-in screw terminals
<ul style="list-style-type: none"> ▶ Connection per axis: 1 incremental encoder or 2 proximity switches or one of each ▶ Encoder types can be selected in the PNOZmulti Configurator ▶ Proximity detectors are connected directly to the terminals 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC	773800	783800 (1 set)	793800 (1 set)
	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC	773810		
<ul style="list-style-type: none"> ▶ Incremental encoder with differential output signals from 12 Vss ... 30 Vss, i.e. now also suitable for HTL encoders ▶ Independent of the supply voltage of the incremental encoder, i.e. also for e.g. encoders with 8 V supply voltage 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC	773815		
<ul style="list-style-type: none"> ▶ Connection per axis: 1 incremental encoder or 2 proximity switches or 1 incremental encoder and 1 proximity switch 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, KOSHA, CCC	773816		
		773811		
<ul style="list-style-type: none"> ▶ Connection per axis: 1 incremental encoder 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	773820		
<ul style="list-style-type: none"> ▶ Connection per axis: 1 incremental encoder with differential output signals from 12 Vss ... 30 Vss 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	773825		
<ul style="list-style-type: none"> ▶ Connection per axis: 1 incremental encoder from 0,5 Vss ... 5 Vss 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	773826		
<ul style="list-style-type: none"> ▶ Monitoring of 1 axis (16 limit frequencies can be selected) ▶ Connection per axis: 1 incremental encoder from 0,5 Vss ... 30 Vss 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC	773830		


Configurable small controllers

Features	Approvals	Order number		
		Without terminals	Spring-loaded terminals	Plug-in screw terminals
<ul style="list-style-type: none"> ▶ Point-to-point connection via 4-core shielded, twisted-pair cable ▶ Transfer of 32 bit input data and 32 bit output data (virtual I/Os) ▶ Max. 4 PNOZ ml1p units can be connected to the base unit 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC, KCC	773540	783400 (1 set)	793400 (1 set)
		773545		
<ul style="list-style-type: none"> ▶ Max. 4 PNOZ ml2p units can be connected to the base unit ▶ Max. 4 decentralised modules PDP67 F 8DI ION can be connected to the link module PNOZ ml2p 	CE, cULus Listed, EAC (Eurasian), TÜV, BG, CCC, KCC	773602		

Keep up-to-date on PNOZmulti I/O modules:

 Webcode: web150379

Online information at www.pilz.com

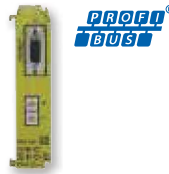
¹⁾  For increased environmental requirements (e.g. extended temperature range, condensation tolerance, resistance against corrosive gases)

► Technical details – PNOZmulti

PNOZmulti – Communication modules/fieldbus modules



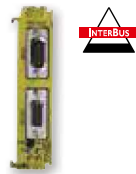
PNOZ mc2.1p



PNOZ mc3p



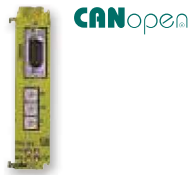
PNOZ mc4p



PNOZ mc5p



PNOZ mc5.1p



PNOZ mc6p


Type	Application area
PNOZ mc2.1p	Fieldbus module EtherCAT subscriber (slave), supports CANopen over EtherCAT
PNOZ mc3p	Fieldbus module PROFIBUS-DP subscriber (slave)
PNOZ mc4p	Fieldbus module DeviceNet subscriber (slave)
PNOZ mc4p coated version ¹⁾	
PNOZ mc5p	Fieldbus module Interbus subscriber (slave)
PNOZ mc5.1p	Fieldbus module Interbus fibre-optic cable (FO) subscriber (slave)
PNOZ mc0p power supply	Power supply for Interbus fieldbus modules PNOZ mc5p/PNOZ mc5.1p
PNOZ mc6p	Fieldbus modules CANopen subscriber (slave)
PNOZ mc6p coated version ¹⁾	
PNOZ mc6.1p	


Common features

- Can be configured using the PNOZmulti Configurator
- Data can be used for visualisation/diagnostics or for control
- Status indicators via LEDs
- Max. 1 fieldbus module can be connected to the base unit
- Connection to the base unit using jumpers on the back of the unit

Dimensions (H x W x D) in mm	Features	Approvals	Order number
94 x 22.5 x 114	<ul style="list-style-type: none"> ▶ Transmission rate: max. 100 MBit/s ▶ Connection to fieldbus via RJ-45 connector 	CE, cULus Listed, EAC (Eurasian), CCC	773 713
94 x 22.5 x 119	<ul style="list-style-type: none"> ▶ Station addresses from 0 ... 99, selected via rotary switch ▶ Transmission rate: max. 12 MBit/s ▶ Connection: 9-pin D-Sub female connector 	CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC, KCC	773 732
94 x 22.5 x 122	<ul style="list-style-type: none"> ▶ Station addresses from 0 ... 63, selected via DIP switch ▶ Transmission rate: 125, 250, 500 kBit/s ▶ Connection to fieldbus via 5-pin Combicon plug-in connector 	CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC, KCC	773 711
			773 729
94 x 22.5 x 119	<ul style="list-style-type: none"> ▶ Transmission rate: 500 kBit/s, 2 MBit/s, selected via jumper ▶ Connection to IBS IN via 9-pin D-Sub male connector, to IBS OUT via 9-pin D-Sub female connector 	CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC, KCC	773 723
94 x 22.5 x 121	<ul style="list-style-type: none"> ▶ Transmission rate: 500 kBit/s, 2 MBit/s, selected via jumper ▶ Status indicators for communication with Interbus and for errors ▶ Connection to fieldbus via F-SMA connector 	CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC, KCC	773 728
94 x 22.5 x 121	<ul style="list-style-type: none"> ▶ Interface for connecting the base unit and a fieldbus module ▶ Galvanic isolation ▶ Status indicators ▶ Plug-in terminals (either with spring-loaded terminals or screw connection) 	CE, cULus Listed, EAC (Eurasian), CCC	<ul style="list-style-type: none"> ▶ PNOZ mc0p power supply _____ 773 720 ▶ Spring-loaded terminals (1 set) _____ 783 400 ▶ Plug-in screw terminals (1 set) _____ 793 400
94 x 22.5 x 119	<ul style="list-style-type: none"> ▶ Station addresses from 0 ... 99, selected via rotary switch ▶ Transmission rate: max. 1 MBit/s, selected via rotary switch ▶ Supported protocols: - PNOZ mc6p: CiA DS-301 V3.0 - PNOZ mc6.1p: CiA DS-301 V4.0.2 ▶ Connection to fieldbus via male 9-pin D-Sub connector 	CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC, KCC	773 712
			773 727
		CE, cULus Listed, EAC (Eurasian), CCC	773 733

Keep up-to-date
on PNOZmulti
communication
modules:

¹⁾  For increased environmental requirements (e.g. extended temperature range,
condensation tolerance, resistance against corrosive gases)

 Webcode:
web150380

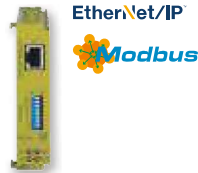
Online information
at www.pilz.com

► Technical details – PNOZmulti

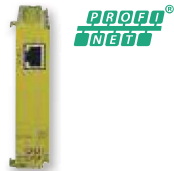
PNOZmulti – Communication modules/fieldbus modules



PNOZ mc7p



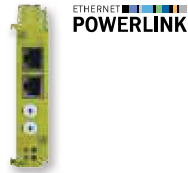
PNOZ mc8p



PNOZ mc9p



PNOZ mc10p




PNOZ mc12p

Type	Application area
PNOZ mc7p	Fieldbus module CC-Link subscriber (slave)
PNOZ mc7p coated version ¹⁾	
PNOZ mc8p	Fieldbus module subscriber on EtherNet IP/ Modbus TCP (slave)
PNOZ mc8p coated version ¹⁾	
PNOZ mc9p	Fieldbus module subscriber on PROFINET
PNOZ mc10p	Fieldbus module Sercos III subscriber (Slave)
PNOZ mc12p	Fieldbus module POWERLINK (Ethernet POWERLINK V 2 protocol), controlled node


Common features

- Can be configured using the PNOZmulti Configurator
- Data can be used for visualisation/diagnostics or for control
- Status indicators via LEDs
- Max. 1 fieldbus module can be connected to the base unit
- Connection to the base unit using jumpers on the back of the unit

Dimensions (H x W x D) in mm	Features	Approvals	Order number
94 x 22.5 x 122	<ul style="list-style-type: none"> ▶ Station addresses from 0 ... 63, selected via rotary switch ▶ Occupied stations: 2 ▶ Transmission rate: max. 10 MBit/s, selected via rotary switch ▶ Connection: 5-pin Combicon plug-in connector 	CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC, KCC	773 726
		CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC	773 725
94 x 22.5 x 114	<ul style="list-style-type: none"> ▶ Transmission rate: max. 10 MBit/s ▶ IP address is set using DIP switches on the front of the unit ▶ Connection to fieldbus via RJ-45 connector 	CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC, KCC	773 730
		CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC	773 734
94 x 22.5 x 114	<ul style="list-style-type: none"> ▶ Device name can be configured in the PNOZmulti Configurator ▶ Diagnostics and alarm function are not supported ▶ Transmission rate: 100 MBit/s ▶ Connection to fieldbus via RJ-45 connector 	CE, cULus Listed, EAC (Eurasian), TÜV, KOSHA, CCC, KCC	773 731
94 x 22.5 x 114	<ul style="list-style-type: none"> ▶ Transmission rate: max. 100 MBit/s ▶ Connection to fieldbus via RJ-45 connector 	CE, cULus Listed, EAC (Eurasian), CCC	773 715
94 x 22.5 x 114	<ul style="list-style-type: none"> ▶ Station addresses from 1 ... 239, selected via rotary switch ▶ Transmission rates 100 MBit/s ▶ Connection to fieldbus via RJ-45 connector 	CE, cULus Listed, EAC (Eurasian), CCC	773 719

¹⁾  For increased environmental requirements (e.g. extended temperature range, condensation tolerance, resistance against corrosive gases)

Keep up-to-date on PNOZmulti communication modules:

 Webcode: web150380

Online information at www.pilz.com

► Software tools for small controllers

Software tool – PNOZmulti Configurator



Type	Features
PNOZmulti Configurator	<ul style="list-style-type: none"> ▶ Graphical tool for configuring and programming the configurable small controllers PNOZmulti ▶ Project development, configuration generation, documentation and commissioning ▶ Data transmission varies depending on the used base unit: via serial interface, USB interface, ETH interface, chip card or USB stick ▶ User interface in German, English, French, Italian, Spanish, Japanese and Chinese (selectable) ▶ System requirements (version 10.0.0 or higher): <ul style="list-style-type: none"> - Operating system: Windows Server 2008/Vista - Standard-PC with min. 1 GHz processor - RAM: min. 1024 MB - Hard drive: 20 GB; min. 15 GB free memory space - Graphics card: supports Super VGA graphics - Browser: Internet Explorer version 9 or higher ▶ To be able to fully utilise the PNOZmulti Configurator, you will need a valid licence in addition to the software package because without a licence the PNOZmulti Configurator will only run in the demo version; various licences are available ▶ Each licence type is available as a full version or service version <ul style="list-style-type: none"> - Full version: The full version provides the whole functional range of a licence - Service version: The service version of a licence is intended for service and maintenance; it provides only limited editing options


Software tool – Diagnostic solution PVIS



Type	Features
PVIS	Diagnostic configurations can be created for all PVIS-capable control systems. This is done using the respective system software of the controller, e.g. using the PNOZmulti Configurator. The diagnostic configuration contains event notifications which can be displayed e.g. if errors occur in or at the control system, if the operating status of the control system changes or in the case of defined conditions.
PVIS OPC Server UA/ OPC Server	The OPC Server "PVIS OPC Server UA" from Pilz is used for displaying the event notifications in visualisation software. The OPC Server is installed on a PC or a PMI operator terminal.
PVIS OPC Configurator	The PVIS OPC Configurator is used to create an OPC project which contains the diagnostic configurations and the OPC data for the individual control systems. The OPC Server connects to the control systems, reads in the data and makes it available in the namespace. In the namespace, not only the event notifications can be viewed but also status information and the process data of the control systems.
ActiveX Control UA/ ActiveX Control	In order to retrieve the event notifications of a control system from the OPC Server and to display them in visualisation software, ActiveX control can use "PVIS ActiveX Control UA".

Licence type	Order number		
	Type	Full version	Service version
<ul style="list-style-type: none"> ▶ Basic Licence: Single user licence, issued to one owner (company name and location/project must be stated) ▶ User Licence: Discounted licence for an additional workstation, issued to the owner of a basic licence ▶ Lite Licence: Licence limited to the base units PNOZ m0p and the base units PNOZmulti Mini, for use on one workstation ▶ Multi User Licence: Multi-user licence, graduated according to the number of workstations (up to 25, 50, 100 and over 100) ▶ Project Licence: Licence to use the software within a contractually limited framework ▶ Basic/User/Multi User/Project Upgrade Licence: Discounted licence to allow existing licence owners to upgrade to a newer version of the software ▶ Time Limited Licence: Basic licence limited to 2, 3 or 4 months 	Software can be downloaded from the Internet		
	▶ Basic Licence	773 010B	773 011B
	▶ User Licence	773010K	773011K
	▶ Lite Licence	773010L	773011L
	▶ Multi User Licence	773010M	773011M
	▶ Project Licence	773010G	773011G
	▶ Time Limited Licence, 2 months	773010S	-
	▶ Time Limited Licence, 3 months	773010R	-
	▶ Time Limited Licence, 4 months	773010Q	-
	Upgrade		
	▶ Basic Upgrade Licence	773010U	773011U
	▶ User Upgrade Licence	773010V	773011V
	▶ Multi User Upgrade Licence	773010N	773011N
	▶ Project Upgrade Licence	773010W	773011W


Keep up-to-date on the software tool PNOZmulti Configurator:

 Webcode: web150399

Online information at www.pilz.com

Licence type	Order number		
	Type	Runtime licence	Project licence
<ul style="list-style-type: none"> ▶ Runtime licence: OPC/OPC UA server application which is licensed for a target computer and can be used without time restriction ▶ Project licence: Licence to use the software within a contractually limited framework 	PVIS OPC Server for PMI, point-to-point	261 905	261 905G
	PVIS OPC Server for PMI, 8 devices	261 906	261 906G
	PVIS OPC Server for PC, point-to-point	261 907	261 907G
	PVIS OPC Server for PC, unlimited	261 908	261 908G

Keep up-to-date on the software tool "Diagnostic solution PVIS":

 Webcode: web150398

Online information at www.pilz.com

► Accessories – PNOZmulti

Accessories – Configurable small controllers PNOZmulti



PNOZmulti Toolkit



Chipcard



PSEN ma adapter

Type	Application area/features	Order number
PNOZmulti Toolkit	The tool kit in transport case contains the accessories required for starting with PNOZ m B0, PNOZmulti Mini and PNOZmulti: Documentation folder with the PNOZmulti Configurator software and manual, chip card reader, chip card set with 10 chip cards incl. chip card adapter for rewriting broken-out chip cards, configuration cable (5 m), mounting bracket.	779 000
USB memory 512 MB	For base unit PNOZ m B1, for follow-up orders only	779 213
Chipcard	Chip card for the base units PNOZ m B0, PNOZmulti Mini, PNOZmulti (obligatory accessories)	<ul style="list-style-type: none"> ▶ 8 kByte, 1 piece ____ 779 201 ▶ 8 kByte, 10 piece ____ 779 200 ▶ 32 kByte, 1 piece ____ 779 211 ▶ 32 kByte, 10 pieces ____ 779 212
Chipcard Holder	Chip card holder	779 240
Chipcard Reader	Chip card reader, PNOZmulti Configurator version 9.6.0 or higher	779 230
PNOZmulti Seal	Adhesive label for chip card, 12 pieces	779 250
SafetyNET p Cable	Connection cable for all link modules of the small controllers PNOZmulti, available by the metre 1 ... 500 m, signal yellow RAL1003	380 000
SafetyNET p connector RJ45s	Plug-in connector	380 400
PSSu A RJ45-CAB 1.5M	Patch cable with RJ-45 connector, light grey	▶ 1.5 m ____ 314 094
PSSu A USB-CAB03	Mini USB cable for the base units PNOZ m B0 and PNOZmulti Mini	<ul style="list-style-type: none"> ▶ 3 m ____ 312 992 ▶ 5 m ____ 312 993
PNOZ mli1p	Cable for safe connection of 2 link modules PNOZ mli1p, preassembled in spring-loaded or screw terminal variant	<ul style="list-style-type: none"> ▶ 5-pin shielded, push-in spring-loaded terminals - 1.5 m ____ 773 896 - 5 m ____ 773 893 - 10 m ____ 773 894 - 50 m ____ 773 895 ▶ Plug-in screw terminals - 1.5 m ____ 773 897 - 5 m ____ 773 890 - 10 m ____ 773 891 - 50 m ____ 773 892
PSEN ma adapter	Adapter for connection to PSENmag safety switches	380 300
PSEN cs adapter	Adapter for connection to PSENcode safety switches	380 301

Accessories – Configurable small controllers PNOZmulti



PNOZ msi1Ap



MM A MINI-IO-CAB

Type	Application area/features	Order number
PNOZ msi1Ap Adapter Si/Ha 25/25	▶ Connection cable for the safe speed and standstill monitors	▶ 2.5 m _____ 773840
		▶ 5 m _____ 773844
PNOZ msi1Bp Adapter Si/Ha 25/25	▶ PNOZ ms1p/PNOZ ms2p/PNOZ ms3p, used to connect incremental encoders	▶ 2.5 m _____ 773841
		▶ 5 m _____ 773839
PNOZ msi3Ap Adapter Si/Ha 15/15	▶ Connection cable for all common makes of drive ▶ Connection to drive and incremental encoder via 25-pin or 15-pin D-Sub male and female connector, or wired with stranded cable	▶ 2.5 m _____ 773842
PNOZ msi3Bp Adapter Si/Ha 15/15		▶ 2.5 m _____ 773843
PNOZ msi5p Adapter Bos/Rex 15/15	▶ For more information, please refer to the operating instructions	▶ 2.5 m _____ 773857
		▶ 1.5 m _____ 773858
PNOZ msi6p Adapter Elau 9/9		▶ 7.5 m _____ 773859
		▶ 2.5 m _____ 773860
		▶ 1.5 m _____ 773861
PNOZ msi7p Adapter SEW 15/15		▶ 2.5 m _____ 773864
		▶ 1.5 m _____ 773865
PNOZ msi8p Adapter Lenze 9/9		▶ 2.5 m _____ 773862
		▶ 1.5 m _____ 773863
PNOZ msi9p adapter cable		▶ 5.0 m _____ 773856
		▶ 2.5 m _____ 773854
		▶ 1.5 m _____ 773855
PNOZ msi19p ADAPTER ELAU PACDrive3		▶ 2.5 m _____ 773847
		▶ 1.5 m _____ 773846
PNOZ msi b1 Box 9p	▶ Adapter box for PNOZ msxp speed monitoring modules PNOZmulti	▶ 9-pin _____ 773882
PNOZ msi b1 Box 15p		▶ 15-pin _____ 773880
PNOZ msi b1 Box 25p		▶ 25-pin _____ 773883
PNOZ msi S09	▶ Connector sets/adapters for connecting frequency converters to speed monitors PNOZ msxp, PNOZ s30, PNOZ m EF 1MM/2MM, adapter box PNOZ msi b1 Box	▶ 9-pin _____ 773870
PNOZ msi S15		▶ 15-pin _____ 773871
PNOZ msi S25		▶ Plug-in connector X1/X2: x-pin D-Sub male connector/female connector ▶ 25-pin _____ 773872
PNOZ msi9p	▶ Connection cable for adapter box PNOZ msi b1 Box	▶ 1.5 m _____ 773855
PNOZ msi10p		▶ 2.5 m _____ 773854
PNOZ msi11p	▶ Connection via RJ-45 connector, stranded wire cables with wire end ferrules	▶ 5 m _____ 773856
PNOZ msi b0 cable 15/RJ45	▶ For adapter box PNOZ msi b1 Box ▶ x-pin D-Sub male connector/ 8-pin RJ-45 connector	▶ 15-pin, 0.3 m _____ 773881
PNOZ msi b0 cable 25/RJ45		▶ 25-pin, 2.5 m _____ 773884
MM A MINI-IO-CAB	▶ Adapter cable for PNOZmulti 2, PNOZ m EF 1MM and PNOZ m EF 2MM ▶ Shielded ▶ Preassembled 8-pin Mini IO male connector at one end	▶ 1.5 m _____ 772200
		▶ 2.5 m _____ 772201
		▶ 5.0 m _____ 772202