



► Configurable safe small controllers PNOZmulti 2

PILZ
THE SPIRIT OF SAFETY

Many functions – one solution! From small machinery to interlinked plants – monitor safely and in compliance with standards!



► Configurable safe small controllers PNOZmulti 2 –



The configurable safe small controllers PNOZmulti prove themselves in hundreds and thousands of applications each day. Users worldwide trust the market leader in configurable safety controllers! You can use PNOZmulti regardless of the machine type, plant type, country or industry sector. 2nd generation PNOZmulti offers the right solution for your automation task and is as easy to use as a safety relay, but as flexible as a programmable controller!

The configuration software – one fits all!

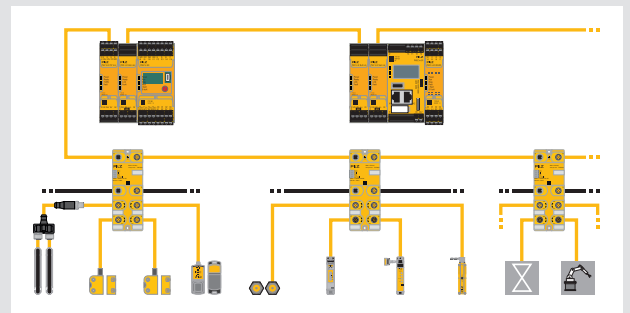
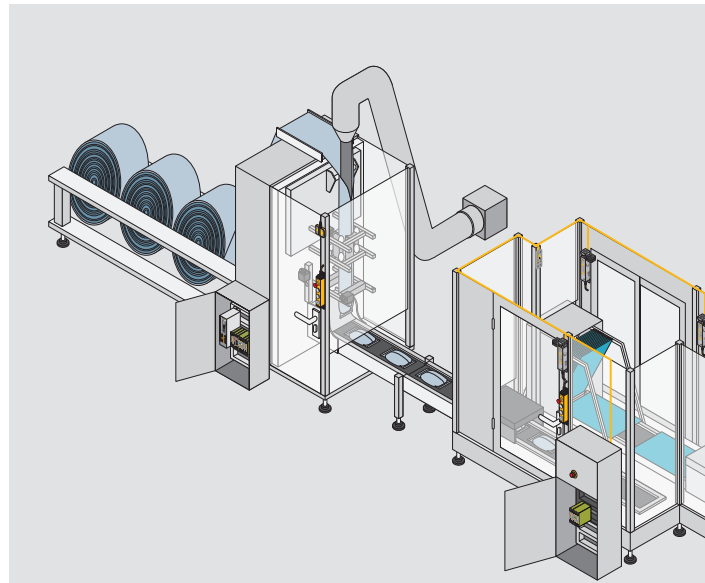
Create the safety circuit using the software tool PNOZmulti Configurator, available free of licence costs. The graphics configuration tool saves engineering costs because you create your user program via drag and drop on the PC. You have access to a range of certified software blocks. Whether emergency stop, safety gate monitoring, light curtain or two-hand operation, see for yourself how the software tool PNOZmulti Configurator realises your safety requirements simply, flexibly and intuitively.

Standalone or modular – you stay flexible!

Five base units and a wide range of expansion modules such as analogue input modules, dual-pole output modules, motion monitoring modules, input and output modules as well as link modules offer you maximum flexibility in your application. The software tool supports you during the hardware configuration – you only need one tool from planning to maintenance. A wide range of diagnostic options ensures short downtimes for your plant and machinery.

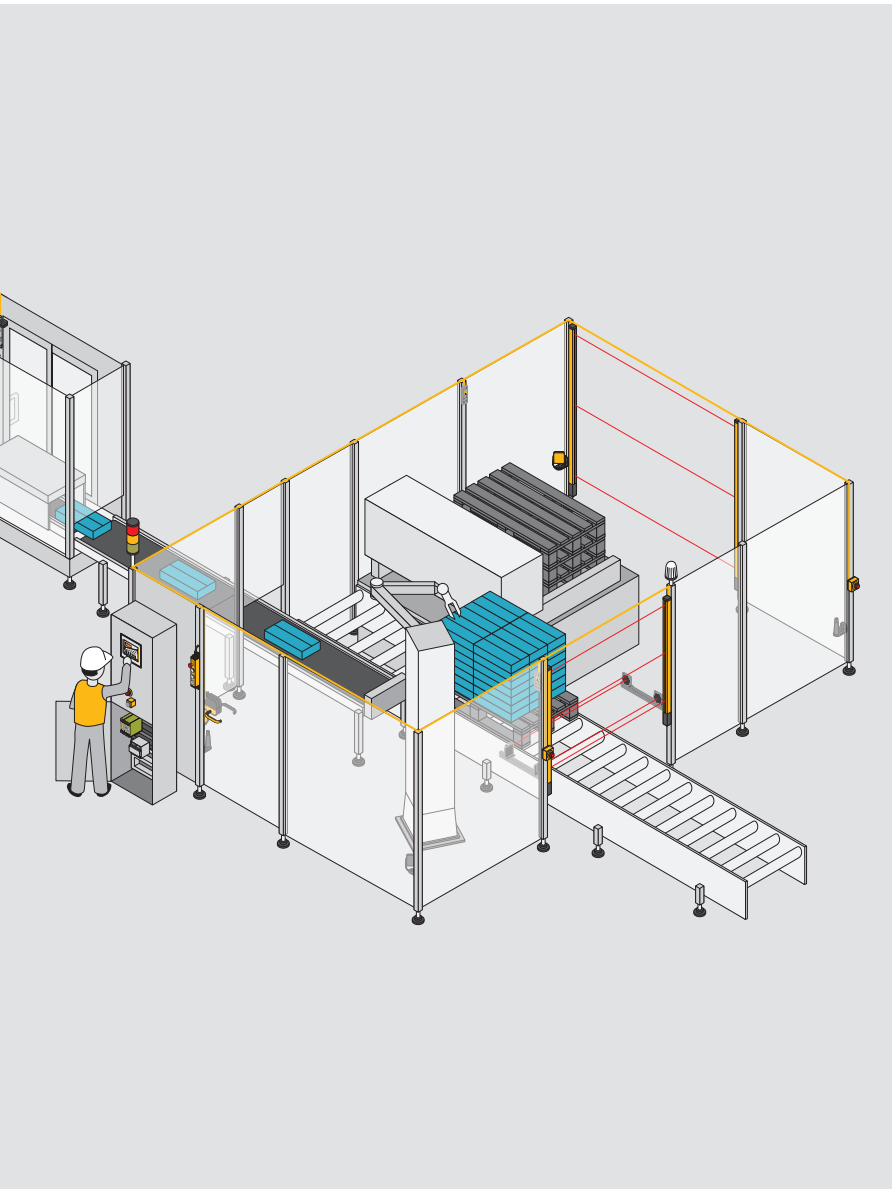
Decentrally in the field

The input and output modules PDP67 forward signals from up to 64 sensors connected decentrally in the field to PNOZmulti. The modules optimise the installation and wiring effort – saving you time, money and space in the control cabinet. The PDP67 modules are integrated into dirt and water-repellent IP67 housings and can thus be used for applications with high demands on hygiene, for example in the food industry.



Direct link to the field:
decentrally monitor up to 64 sensors

worldwide safety standard



Automation solutions from safe sensor and actuator technology and control and signal devices in combination with small controllers PNOZmulti 2, using decentralised periphery

Your benefits at a glance

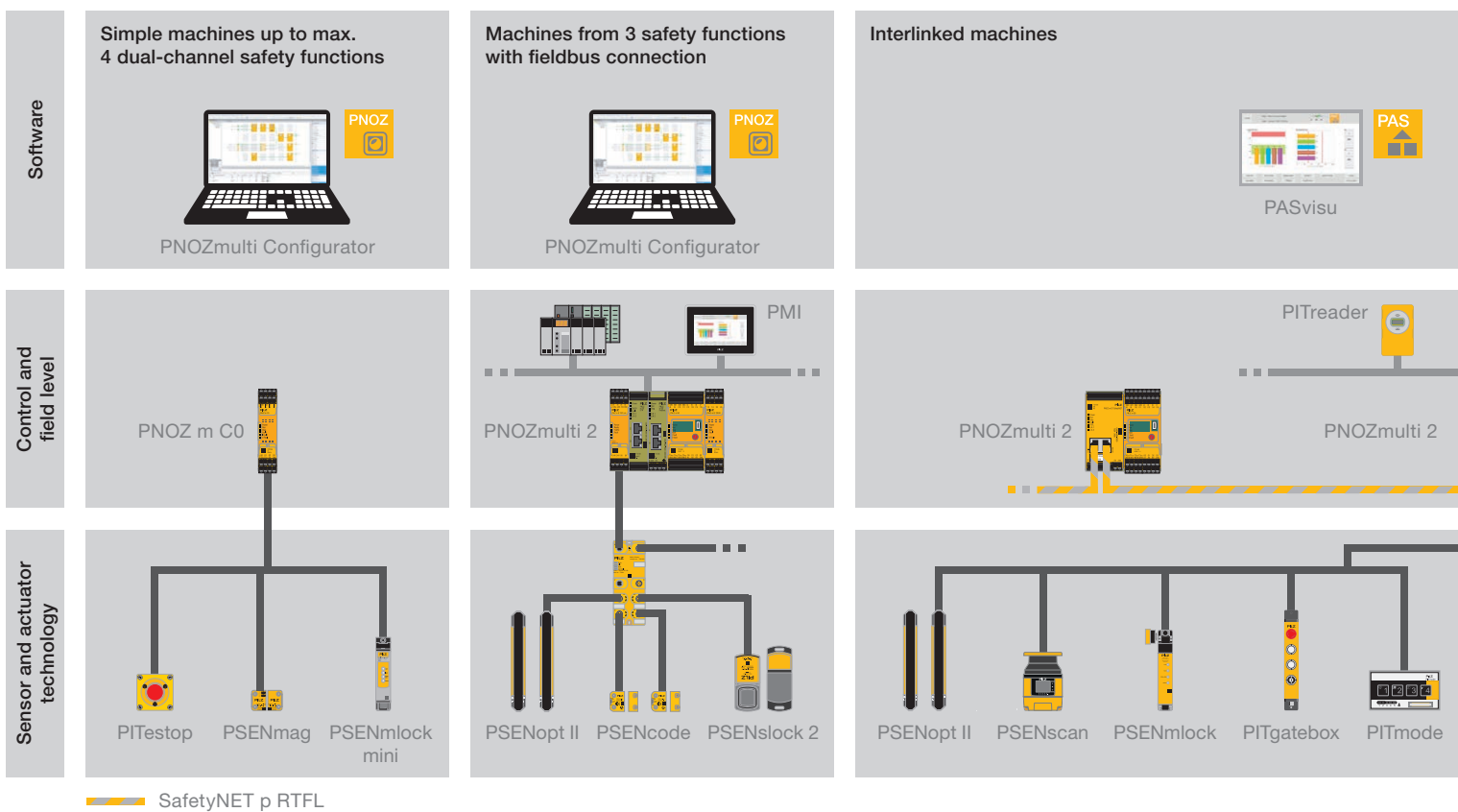
- ▶ Cost-effective and sustainable: Worldwide safety standard for many automation environments and communication systems
- ▶ Flexible: Configuration with certified software blocks; inputs and outputs are freely configurable
- ▶ Just one software application from planning to maintenance
- ▶ Easy modifications and adjustments of the user program
- ▶ Optimised costs: Exact adaptation to your application using certified expansion modules
- ▶ Minimal machine downtimes and high plant availability through simple, comprehensive diagnostics and user-friendly, web-based visualisation
- ▶ Maximum safety – up to PL e and SIL CL 3, depending on the application
- ▶ Fast commissioning thanks to simple wiring with plug-in terminals
- ▶ Potential for rationalisation because safety components cover automation tasks



Find out more at
www.pilz.com/pnozmulti

► Configurable safe small controllers PNOZmulti 2 –

The configurable safe small controllers are suitable for both simple machines and large automation projects. In combination with the web-based visualisation software PASvisu, the diagnostics and visualisation panels PMIvisu, the safe sensor technology PSEN, the operator devices PIT and the decentralised periphery PDP67, you get a complete solution for your automation tasks. While others are still busy wiring, you are already producing – you can count on the safety standard PNOZmulti, which can be used regardless of the higher-level plant control system.



Flexible architectures with EtherCAT FSoE

For efficient production, it should be possible to seamlessly integrate the safety concept into the machine concept. Control data as well as safety-related information are transferred via the open communication system EtherCAT, in combination with the safe protocol Safety over EtherCAT FSoE. You can use PNOZmulti as the FSoE MainInstance (master), as the FSoE SubordinateInstance (slave), or even as the EtherCAT SubordinateDevice – depending on the requirement. The configuration is performed in the software tool PNOZmulti Configurator via device description files (ESI files). With PNOZmulti 2, it is easy to implement safety-related networking with the safe radar sensor PSENradar and safe drive technology PMC – both with FSoE functionality. You can flexibly implement safe plant structures with a “one-cable solution” on the fieldbus level.

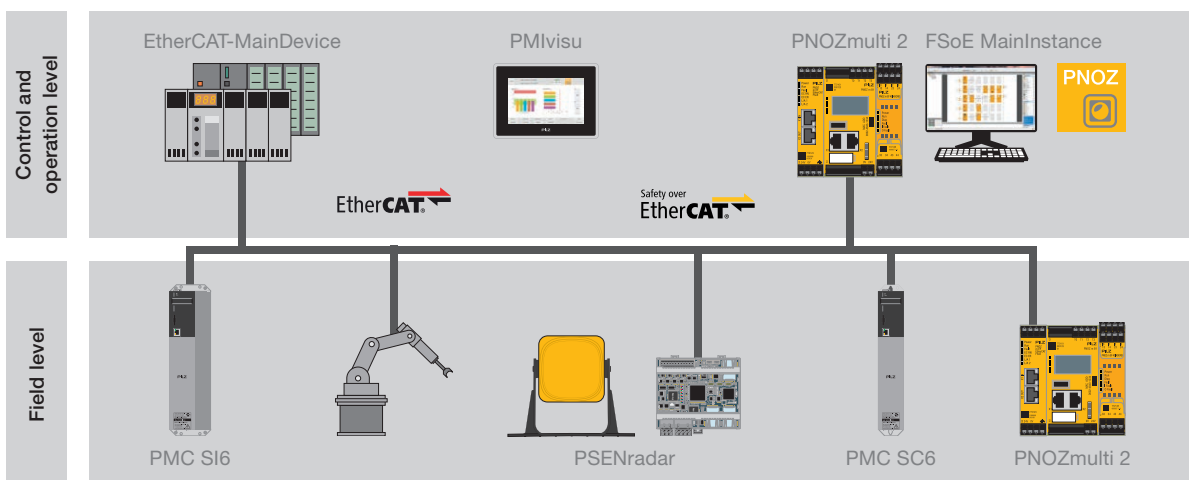
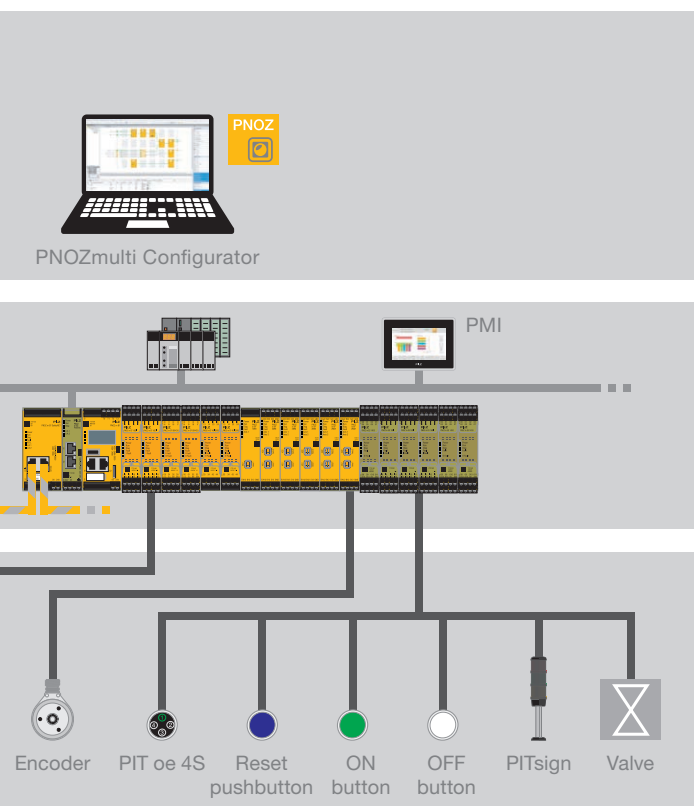
flexible for every application

Safety and Security

Comprehensive protection of your employees and the best possible safeguarding of your machinery require a holistic safety concept. Identification and Access Management (I.A.M.) allows you to implement a number of tasks, from simple authentication to complex access permissions and entry management, up to safe operating mode selection, maintenance safeguarding and safeguarding of data and networks. It is therefore possible to use the access permission system PITrader to implement numerous tasks relating to access permissions.

















Safe, but also Secure

The EU Machinery Regulation 2023/1230, the application of which is binding from 20 January 2027, defines Industrial Security as a mandatory element for the safety of machinery. The base units PNOZmulti 2, such as the PNOZ m C0 or PNOZ m B1, are already equipped with mechanisms against inadvertent and intentional modifications or access. This includes password protection for the device, but also the specification and definition of the rights of users and user groups. These mechanisms can be easily configured in the software tool.



► Compact overview of base units and expansion mo

Safe small controllers PNOZmulti 2 – overview of base units

				 
<p>PNOZ m C0 – the compact device</p> <ul style="list-style-type: none"> ▶ 8 safe inputs ▶ 4 safe semiconductor outputs ▶ USB connection, chip card ▶ Not modular and expandable, standalone 	<p>PNOZ m B0.1 – for small to medium-sized applications</p> <ul style="list-style-type: none"> ▶ 20 safe inputs, up to 8 can be configured as standard outputs ▶ 4 safe semiconductor outputs ▶ USB connection, chip card ▶ Right side: can be expanded with max. 1 I/O module 	<p>PNOZ m B0 – the universal option</p> <ul style="list-style-type: none"> ▶ As for PNOZ m B0.1 ▶ Right-hand side: up to 6 safe modules can be connected ▶ Safe motion monitoring and analogue input modules can be connected 	<p>PNOZ m B1 – for large projects</p> <ul style="list-style-type: none"> ▶ Fine granularity due to the number/type of I/O modules used ▶ Modbus TCP on board; 2 ETH interfaces; USB stick ▶ Right-hand side: up to 12 safe modules can be connected, incl. safe motion monitoring and analogue input modules and up to 6 standard input/standard output modules ▶ Safe fieldbus module PNOZ m EF EtherCAT FSoE only available on PNOZ m B1 	<p>PNOZ m B1 Burner – burner management system</p> <ul style="list-style-type: none"> ▶ As for PNOZ m B1 ▶ Additional special burner management function block, can be configured in the software tool PNOZmulti Configurator ▶ Control and monitor up to 12 burners with one base unit
Order number: 772105	Order number: 772104	Order number: 772100	Order number: 772101	Order number: 772102
Width: 22.5 mm	Width: 45 mm, illuminated display			
Certifications: CE, UKCA, cULus Listed, TÜV, EAC	<ul style="list-style-type: none"> ▶ Certifications: CE, UKCA, cULus Listed, KOSHA, TÜV, EAC. ▶ PNOZ m B1 Burner is designed for continuous operation for the control and monitoring of furnaces in accordance with the standards (extract): EN 298, EN 50156-1 and EN 50156-2, UL 60730-2-5, Australian Gas Association (AGA) and many more. 			
-	Left-hand side can be expanded with safe link modules, communication and fieldbus modules			
-	<p>Fieldbus and communication modules</p>          			

Common features

- ▶ Application area: For monitoring E-STOP buttons, start buttons, two-hand buttons, safety gate limit switches, light barriers, scanners, enable switches, safety gate switches PSEN, operating mode selector switches
- ▶ 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 3 of EN IEC 62061

dules

Safe small controllers PNOZmulti 2 – expansion modules

	Type	Technical features	Order number ¹⁾
 PNOZ m EF 4AI	PNOZ m EF 4AI	Analogue Input Module ▶ 4 safe analogue inputs	772160
 PNOZ m EF 16DI	PNOZ m EF 16DI	Safe input module ▶ 16 safe inputs	772140
 PNOZ m EF 8DI4DO	PNOZ m EF 8DI4DO	Safe input/semiconductor output module ▶ 8 safe inputs ▶ 4 safe semiconductor outputs	772142
 PNOZ m EF 4DI4DOR	PNOZ m EF 4DI4DOR	Safe input/relay output module ▶ 4 safe inputs ▶ 4 safe relay outputs	772143
 PNOZ m EF 4DI4DORD	PNOZ m EF 4DI4DORD	Diverse input and output module ▶ 4 safe inputs ▶ 4 safe positive-guided relay outputs, diverse ▶ Suitable for control of a burner's safety valves	772145
 PNOZ m EF 8DI2DOT	PNOZ m EF 8DI2DOT	2-pole, semiconductor output module ▶ 8 digital inputs ▶ 2 2-pole semiconductor outputs	772144
 PNOZ m EF 2DOR	PNOZ m EF 2DOR	Safe relay output module ▶ 2 safe relay outputs	772146
 PNOZ m EF 1MM2DO	PNOZ m EF 1MM2DO	Safe motion monitoring module ▶ Monitors 1 axis ▶ 2 safe semiconductor outputs ▶ 1 cascading input and output, can also be used as a standard output ▶ 1 output for standard applications	772172
 PNOZ m EF 1MM	PNOZ m EF 1MM	Safe motion monitoring module ▶ Monitors 1 axis	772170
 PNOZ m EF 2MM	PNOZ m EF 2MM	Safe motion monitoring module ▶ Monitors 2 axes	772171
 PNOZ m ES 16DI	PNOZ m ES 16DI	Input module for standard applications ▶ 16 digital inputs for the connection of buttons and other digital sensors ▶ Can be connected to PNOZ m B1, max. 6 modules total, also possible in combination/mixed with PNOZ m ES 14DO	772182
 PNOZ m ES 14DO	PNOZ m ES 14DO	Output module for standard applications ▶ 14 Semiconductor outputs for non-safety-related applications ▶ Can be connected to PNOZ m B1, max. 6 modules total, also possible in combination/mixed with PNOZ m ES 16DI	772181
 PNOZ m EF Multi Link	PNOZ m EF Multi Link	Link module for safe point-to-point connection between 2 base units	772120
 PNOZ m EF PDP Link	PNOZ m EF PDP Link	Link module for safe connection of 1 base unit to up to 4 decentralised modules PDP67	772121
 PDP67 F 8DI ION HP	PDP67 F 8DI ION/ PDP67 F 8DI ION HP	Decentralised input modules ▶ Protection type IP67; connection via link module PNOZ m EF PDP-Link ▶ 8 safe digital inputs	Webcode web150450



Learn more about our base units at www.pilz.com/base



about our expansion modules at www.pilz.com/io



and about our communication modules at www.pilz.com/com



The suitable software tools can be found at www.pilz.com/pnozmulti-tools

Safe small controllers PNOZmulti 2 – expansion modules



PDP67 F 10DI4DO
5/8 ION



PNOZ m EF
SafetyNET



PNOZ m EF
EtherCAT FSoE



PNOZmulti
Configurator

Type	Technical features	Order number ¹⁾
PDP67 F 10DI4DO 5/8 ION (VA) PDP67 F 8DI4DO 5/5 ION (VA)	Decentralised input and output modules ▶ Protection type IP67; connection via link module PNOZ m EF PDP-Link ▶ PDP67 F 10DI4DO 5/8 ION: 10 safe digital inputs, 4 safe semiconductor outputs ▶ Connections 2 × M12 5-pin and 2 × M12 8-pin, e.g. for direct connection of the safety locking device PSENmlock ▶ PDP67 F 8DI4DO 5/5 ION: 8 safe inputs, 4 safe semiconductor outputs ▶ Connections: 4 × M12 5-pin ▶ VA: Version with stainless steel screw connection	▶ PDP67 F 10DI4DO 5/8 ION: 772610 ▶ PDP67 F 10DI4DO 5/8 VA ION: 772611 ▶ PDP67 F 8DI4DO 5/5 ION: 772600 ▶ PDP67 F 8DI4DO 5/5 VA ION: 772601
PNOZ m EF SafetyNET	Link module for safe communication via the real-time Ethernet SafetyNET p ▶ Up to 16 PNOZmulti 2 systems in linear topology ▶ Exchange of 32-bit data via RTFL	772122
PNOZ m EF EtherCAT FSoE	Safe communication module for connection to the communication system EtherCAT in combination with the safe protocol Safety over EtherCAT ▶ Can be connected to base unit PNOZ m B1 ▶ Use possible as FSoE MainInstance (master), as FSoE SubordinateInstance (slave) or as EtherCAT SubordinateDevice ▶ Up to 4 MainInstance-MainInstance and up to 60 MainInstance-SubordinateInstance connections ▶ In total max. 512 bit data exchange with subscribers (MainInstance or SubordinateInstance) ▶ Configuration in software tool PNOZmulti Configurator: Import of ESI files ▶ Fieldbus configuration via ESI files ▶ Definition of SubordinateInstances in one catalogue (list view)	772123
Fieldbus and communication modules	▶ Fieldbus modules for connection to SafetyNET p, PROFINET, PROFIBUS, EtherCAT, EtherCAT FSoE, EtherNet/IP, POWERLINK, CANopen, CC-Link ▶ Communication modules with ETH or RS232 interface for PNOZ m B0/B0.1	www.pilz.com/com
PNOZmulti Configurator	▶ Software tool for project planning ▶ Configuration, documentation and commissioning	www.pilz.com/pnozmulti-tools

¹⁾ Please note that there are mandatory accessories such as terminals, chip cards or cables. You can find them in our e-shop at www.pilz.com

We are represented internationally. Please refer to our homepage www.pilz.com for further details or contact our headquarters.

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