

Expansion modules PNOZ mc5p

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Expansion module for connection to a base unit from the PNOZmulti modular safety system

Approvals

	PNOZ mc5p
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Unit features

- ▶ Can be configured in the PNOZmulti Configurator
- ▶ Connection for INTERBUS
- ▶ Transmission rate, selectable between 500 kBit/s and 2 MBit/s
- ▶ Status indicators for communication with INTERBUS and for errors
- ▶ Max. 1 PNOZ mc5p units can be connected to the base unit
- ▶ A maximum of 24 outputs on the PNOZmulti safety system can be defined in the PNOZmulti Configurator for communication with INTERBUS. These outputs can be connected to outputs on
 - Logic elements
 - Time elements
 - Event counters
 - Connection points
 - Inputs on the safety system.

Unit description

The expansion module may only be connected to a base unit from the PNOZmulti modular safety system. It connects the PNOZmulti modular safety system to INTERBUS. The PNOZmulti modular safety system is used for the safety-related interruption of safety circuits. The unit is designed for use in:

- ▶ Emergency stop equipment
- ▶ Safety circuits in accordance with VDE 0113 Part 1 and EN 60204-1

The PNOZ mc5p expansion module is used for communication between the PNOZmulti modular safety system and INTERBUS.

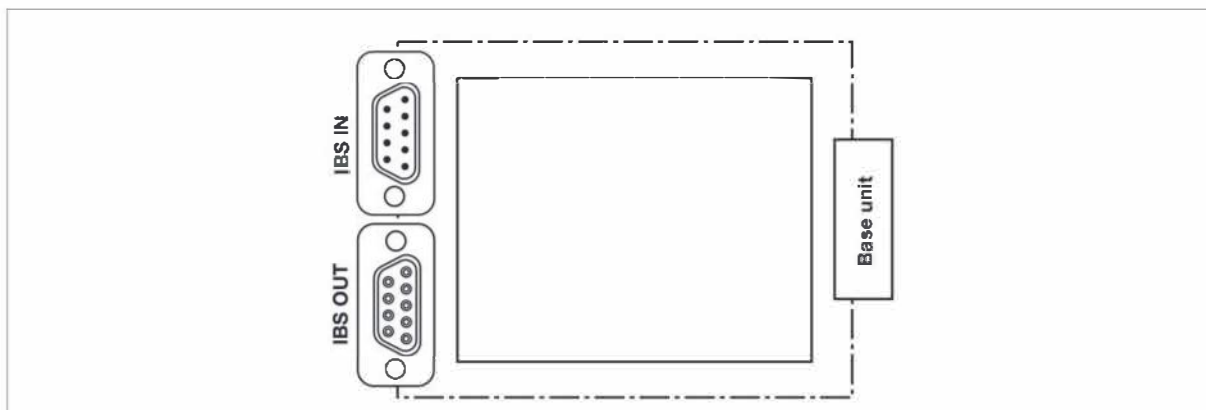
INTERBUS is designed for fast data exchange at field level. The PNOZ mc5p expansion module is a passive INTERBUS subscriber (Slave). The basic functions of communication with INTERBUS conform to EN 50254. The central controller (Master) reads input information from the slaves and writes output information to the slaves as part of each cycle. As well as the cyclical transfer of usable data, the PNOZ mc5p can also be used for diagnostics and commissioning functions.

The expansion module may not be used for safety-related functions.

System requirements

- ▶ PNOZmulti Configurator: from Version 3.0.0
 - ▶ Base unit PNOZ m1p: from Version 3.0
- Please contact Pilz if you have an older version.

Block diagram



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Function description

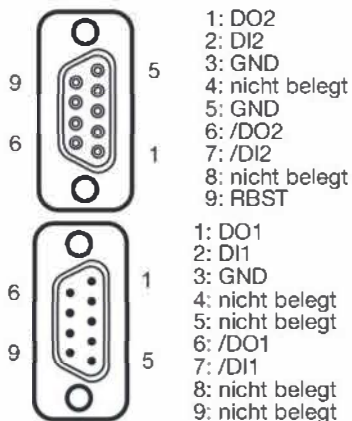
The data to be transferred via INTERBUS is selected and configured in the

PNOZmulti Configurator. The base unit and the PNOZ mc5p are connected via a jumper. The PNOZ mc5p is also supplied with voltage via this

jumper. After the supply voltage is switched on or the PNOZmulti safety system is reset, the PNOZ mc5p is configured and started automatically.

Wiring

The wiring is defined in the circuit diagram of the PNOZmulti Configurator. It is possible to define which outputs on the safety system will communicate with INTERBUS. The connection to INTERBUS is made via two female 9-pin D-Sub screw connectors



Please note:

- ▶ Information given in the "Technical details" must be followed.
- ▶ Use copper wire that can withstand 75 °C.

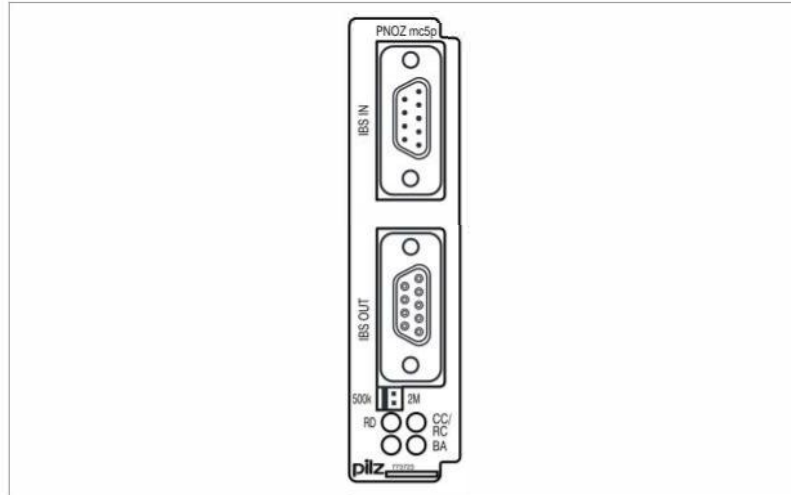
Please note the following when connecting to INTERBUS:

- ▶ Only use metal plugs or metallised plastic plugs
- ▶ Twisted pair, screened cable must be used to connect the interfaces

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Terminal configuration

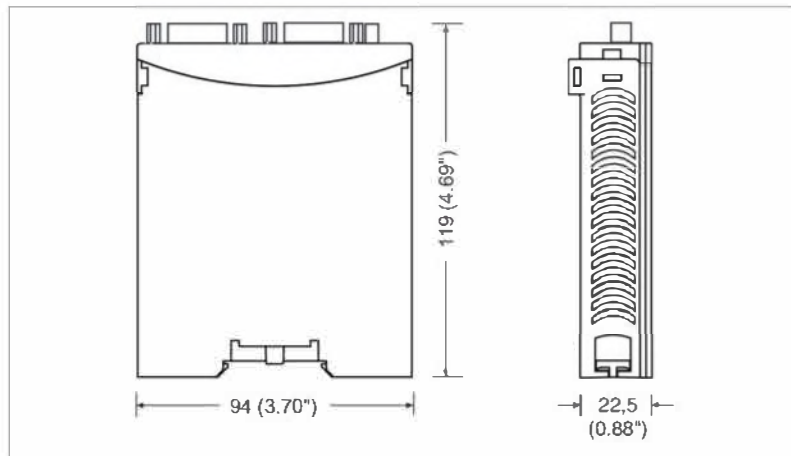


Installation

- ▶ The safety system should be installed in a control cabinet with a protection type of at least IP54. Fit the safety system to a horizontal DIN rail. The venting slots must face upward and downward. Other mounting positions could damage the safety system.
- ▶ Use the notches on the back of the unit to attach it to a DIN rail. Connect the safety system to the DIN rail in an upright position, so that the earthing springs on the safety system are pressed on to the DIN rail.
- ▶ To comply with EMC requirements, the DIN rail must have a low impedance connection to the control cabinet housing.

The expansion module must always be installed to the left of the base unit. A distance of at least 20 mm must be maintained between the expansion module and any external heat sources.

Dimensions



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Notice

This data sheet is only intended for use during configuration. For installation and operation, please refer to the operating instructions supplied with the unit.

Technical details

Electrical data

Supply voltage (U _g) via base unit	24 VDC
Power consumption at U _g	Max 2.5 W

Times

Supply interruption before de-energisation	Min. 20 ms
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INTERBUS

Application range	Non-safety-related applications
Device type	Slave
Status indicator	LED
Transmission rate	500 kBit/s, 2 MBit/s
Connection IBS IN	Male 9-pin D-Sub connector
IBS OUT	Female 9-pin D-Sub connector
Galvanic isolation	Yes
Test voltage	500 VAC

Environmental data

Vibration in accordance with EN 60068-2-6, 04/95	
Frequency:	10 ... 55 Hz
Amplitude:	0.35 mm
Climatic suitability	DIN IEC 60068-2-3, 12/86
EMC	EN 61000-6-2, 10/01
Ambient temperature	0 ... + 55 °C
Storage temperature	-25 ... + 70 °C

Mechanical data

Protection type	
Mounting (e.g. cabinet)	IP54
Housing	IP20
Terminals	IP20
DIN rail	
Top hat rail	35 x 7.5 EN 50022
Inner width	27 mm
Housing material	
Housing	PPO UL 94 V0
Front	ABS UL 94 V0
Dimensions (H x W x D)	94 x 22.5 x 119 mm
Weight with connector	153 g

Order reference

Type	Features	Order no.
PNOZ mc5p	Expansion module Fieldbus module, INTERBUS	773 723