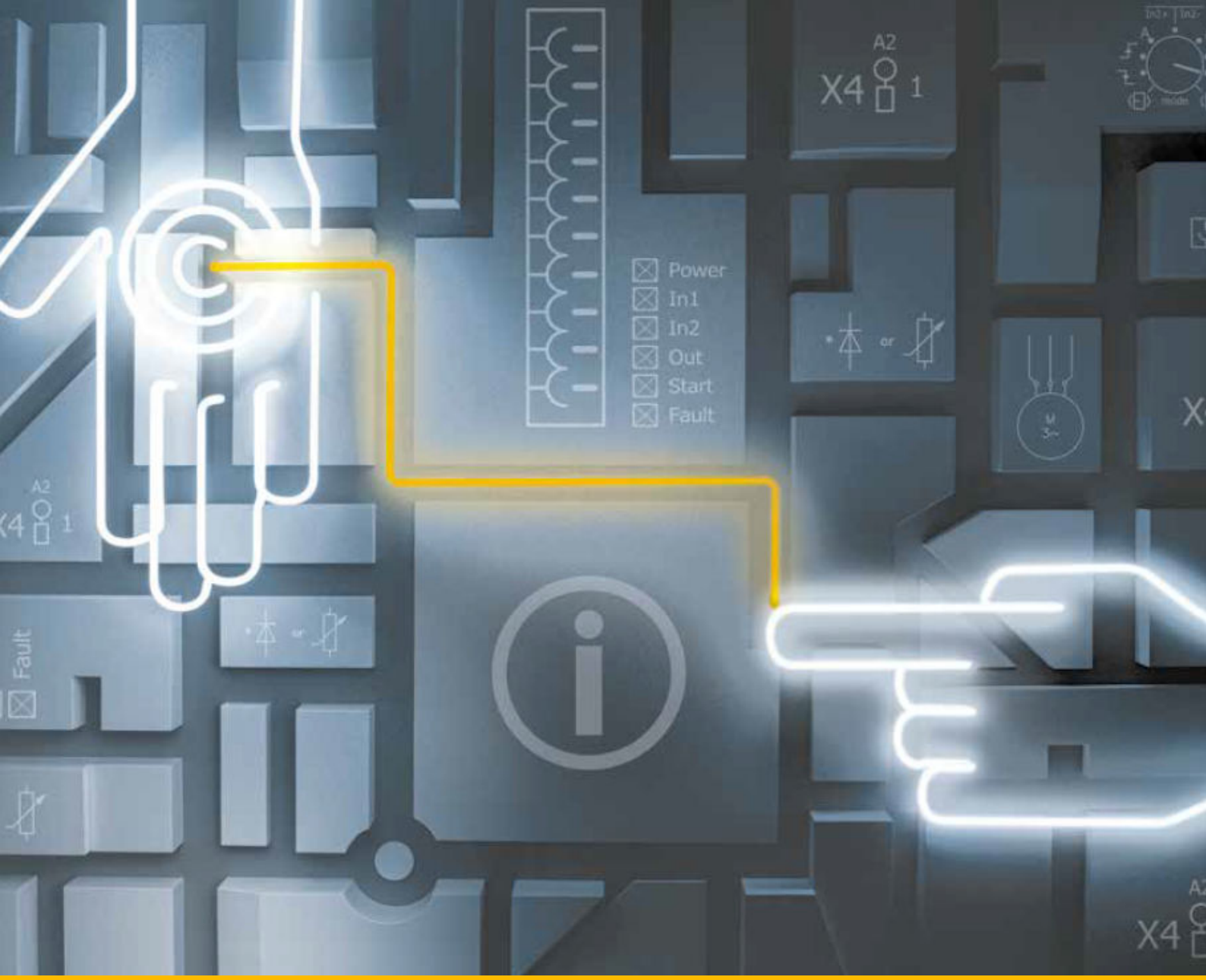

PNOZ s7

PILZ
THE SPIRIT OF SAFETY

Operating Manual-21399-EN-17
- Safety relays




This document is the original document.

Where unavoidable, for reasons of readability, the masculine form has been selected when formulating this document. We do assure you that all persons are regarded without discrimination and on an equal basis.

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SD means Secure Digital

Introduction

Validity of documentation

This documentation is valid for the product PNOZ s7. It is valid until new documentation is published.

This operating manual explains the function and operation, describes the installation and provides guidelines on how to connect the product.

Using the documentation

This document is intended for instruction. Only install and commission the product if you have read and understood this document. The document should be retained for future reference.

Definition of symbols

Information that is particularly important is identified as follows:

DANGER!

This warning must be heeded! It warns of a hazardous situation that poses an immediate threat of serious injury and death and indicates preventive measures that can be taken.

WARNING!

This warning must be heeded! It warns of a hazardous situation that could lead to serious injury and death and indicates preventive measures that can be taken.

CAUTION!

This refers to a hazard that can lead to a less serious or minor injury plus material damage, and also provides information on preventive measures that can be taken.

NOTICE

This describes a situation in which the product or devices could be damaged and also provides information on preventive measures that can be taken. It also highlights areas within the text that are of particular importance.

INFORMATION

This gives advice on applications and provides information on special features.

Safety

Intended use

The contact expansion module PNOZ s7 meets the requirements of EN 60947-5-1 and EN 60204-1. It is used to increase the number of instantaneous safety contacts available on a base unit. Base units are all safety relays with feedback loop.

The max. achievable safety level depends on the base unit. The expansion module may not exceed this. The safety-related characteristic values stated under safety-related characteristic data [20] can only be achieved if the base unit also exhibits these safety characteristic values.

Improper use

The following is deemed improper use in particular:

- Any component, technical or electrical modification to the product,
- Use of the product outside the areas described in this operating manual,
- Use of the product outside the technical details (see chapter entitled Technical Details [15]).

NOTICE

EMC-compliant electrical installation

The product is designed for use in an industrial environment. The product may cause interference if installed in other environments. If installed in other environments, measures should be taken to comply with the applicable standards and directives for the respective installation site with regard to interference.

Safety regulations

Safety assessment

Before using a device, a safety assessment in accordance with the Machinery Directive is required.

The product as an individual component fulfils the functional safety requirements in accordance with EN ISO 13849 and EN IEC 62061. However, this does not guarantee the functional safety of the overall plant/machine. To achieve the relevant safety level of the overall plant/machine's required safety functions, each safety function needs to be considered separately.

Use of qualified personnel

The products may only be assembled, installed, programmed, commissioned, operated, decommissioned and maintained by persons who are competent to do so.

A competent person is a qualified and knowledgeable person who, because of their training, experience and current professional activity, has the specialist knowledge required. In order to inspect, assess and handle products, devices, systems, plant and machinery, this person must be familiar with the state of the art and the applicable national, European and international laws, directives and standards.

It is the company's responsibility only to employ personnel who

- Are familiar with the basic regulations concerning health and safety / accident prevention,
- Have read and understood the information provided in the section entitled Safety
- Have a good knowledge of the generic and specialist standards applicable to the specific application.

Warranty and liability

All claims to warranty and liability will be rendered invalid if

- The product was used contrary to the purpose for which it is intended,
- Damage can be attributed to not having followed the guidelines in the manual,
- Operating personnel are not suitably qualified,
- Any type of modification has been made (e.g. exchanging components on the PCB boards, soldering work etc.).

Disposal

- In safety-related applications, please comply with the mission time T_M stated in the safety-related characteristic data.
- When decommissioning, please comply with local regulations regarding the disposal of electronic devices (e.g. Electrical and Electronic Equipment Act).

For your safety

The unit meets all the necessary conditions for safe operation. However, please note the following:

- Note for overvoltage category III: If voltages higher than low voltage (>50 VAC or >120 VDC) are present on the unit, connected control elements and sensors must have a rated insulation voltage of at least 250 V.

Unit features

- Positive-guided relay outputs:
  - 4 safety contacts (N/O), instantaneous
  - 1 auxiliary contact (N/C), instantaneous
- LED for:
  - Input status, channel 1
  - Input status, channel 2
  - Switch status of the safety contacts

  – Fault
- Plug-in connection terminals (either spring-loaded terminal or screw terminal)
- See order reference for unit types

Safety features

The unit meets the following safety requirements:

- The contact expansion module expands an existing circuit. As the output relays are monitored via the base unit's feedback loop, the safety functions on the existing circuit are transferred to the contact expandsion module.
- The safety function remains effective in the case of a component failure.
- Earth fault in the feedback loop:
  Detected, depending on the base unit that is used.
- Earth fault in the input circuit:
  The output relays de-energise and the safety contacts open.

Block diagram/terminal configuration

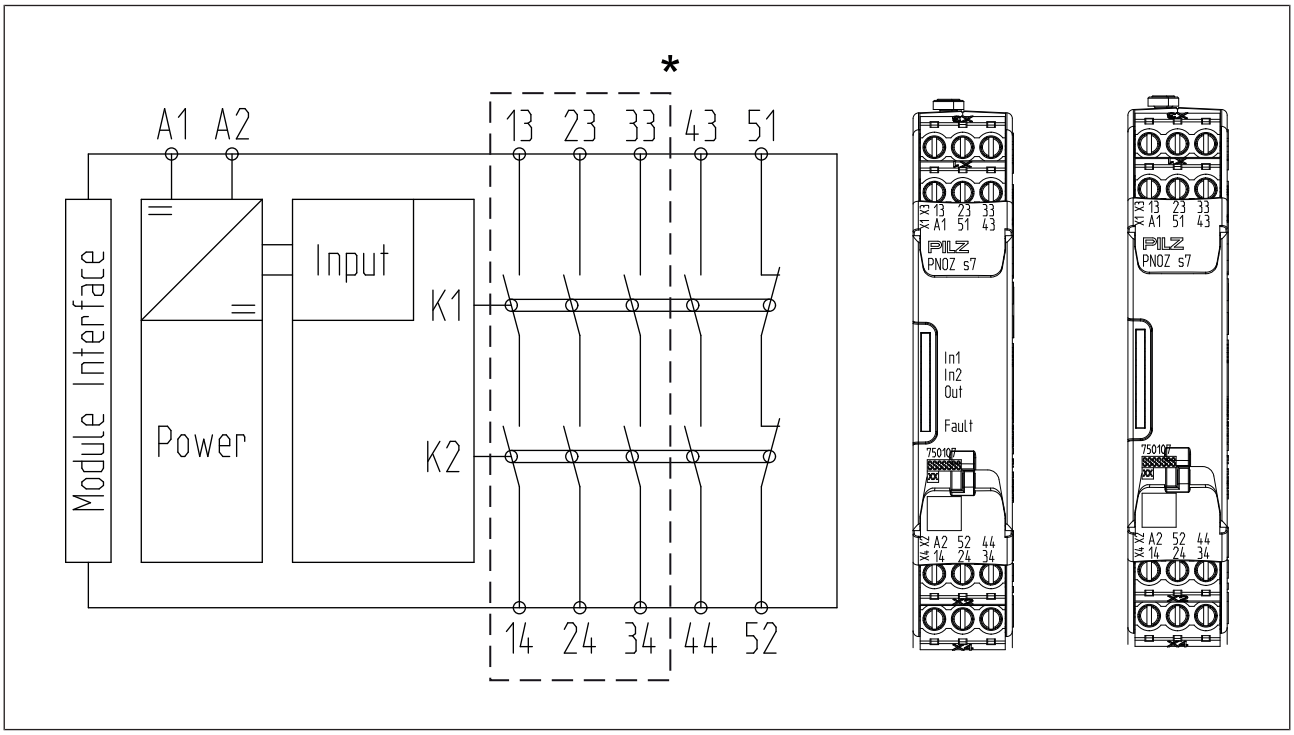


Fig.: Centre: Front view with cover, right: Front view without cover

*Safe separation from non-marked area in accordance with EN 60947-1, 6 kV, basic insulation between all safety contacts.

Function description

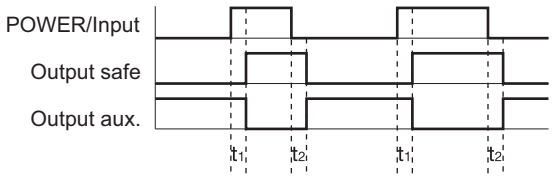
with PNOZsigma base unit:

- Dual-channel operation via PNOZsigma connector

without PNOZsigma base unit:

- Single-channel operation: one input circuit affects the output relays

Timing diagram



Legend

- POWER/Input: Supply voltage/input circuit
- Output safe: Safety contacts
- Output aux.: Auxiliary contacts
- t_1: Switch-on delay
- t_2: Delay-on de-energisation

Installation

Install contact expansion module without base unit:

- Ensure that the plug terminator is inserted at the side of the unit.

Connect base unit and PNOZsigma contact expansion module:

- Remove the plug terminator at the side of the base unit and at the contact expander module
- Connect the base unit and the contact expansion module using the connector supplied, before mounting the units to the DIN rail.

Control cabinet installation

- Install the safety relay in a control cabinet with a protection type of at least IP54.
- Use the notch on the rear of the unit to attach it to a DIN rail (35 mm).
- When installed vertically: Secure the unit by using a fixing element (e.g. retaining bracket or end angle).
- Push the unit upwards or downwards before lifting it from the DIN rail.

Wiring

Please note:

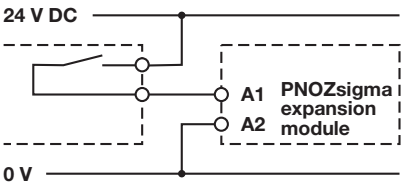
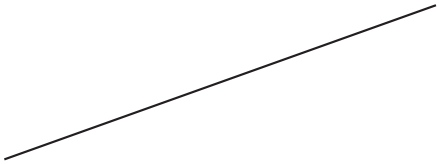
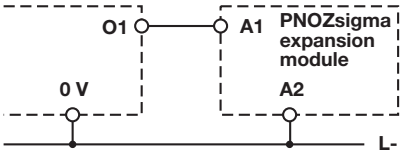
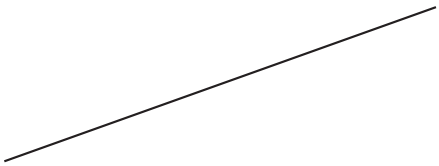
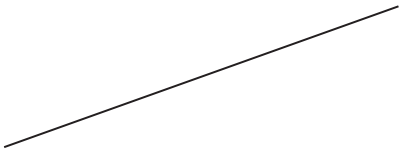
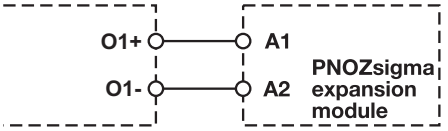
- Information given in the "Technical details [📖 15]" must be followed.
- Outputs 13-14, 23-24, 33-34, 43-44 are safety contacts; outputs 51 -52 are auxiliary contacts (e.g. for display).
- Auxiliary contact 51-52 should **not** be used for safety circuits!
- To prevent contact welding, a fuse should be connected before the output contacts (see Technical details [📖 15]).
- Calculation of the max. cable length l_{max} in the input circuit:

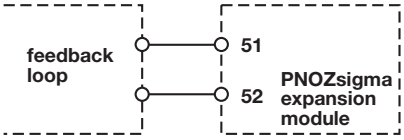
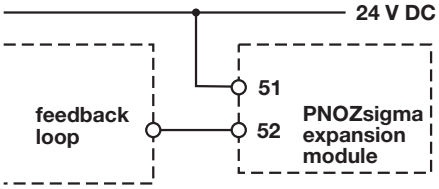
$$l_{max} = \frac{R_{lmax}}{R_l / km}$$

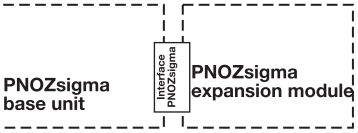
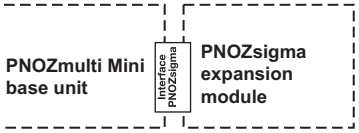
R_{lmax} = max. overall cable resistance (see Technical details [📖 15])
R_l / km = cable resistance/km

- Use copper wiring with a temperature stability of 75 °C.
- To prevent EMC interferences (particularly common-mode interferences) the measures described in EN 60204-1 must be executed. This includes the separate routing of cables of the control circuits (input, start and feedback loop) from other cables for energy transmission or the shielding of cables, for example.
- Adequate protection circuit must be provided on all output contacts with capacitive and inductive loads.
- The power supply must comply with the regulations for extra low voltages with protective electrical separation (SELV, PELV) in accordance with VDE 0100, Part 410.

Preparing for operation

Input circuit	Single-channel	Dual-channel
Base unit: Safety relay PNOZ X		
Base unit: Safety relay or programmable safety system, control via semiconductor outputs (24 V DC), e.g. PNOZelog, PNOZmulti, PSS		
Base unit: Programmable safety system, control via dual-pole semiconductor outputs (24 V DC/0 V DC), e.g. PNOZmulti, PSS		

Feedback loop	Base unit: Safety relay PNOZ X	Base unit: Safety relay or programmable safety system with semiconductor input, e.g. PNOZelog, PNOZmulti, PSS
The inputs that evaluate the feedback loop will depend on the base unit and application		

Connection to PNOZsigma base unit/PNOZmulti Mini base unit	Base unit: Safety relay PNOZsigma	Base unit: Small control system PNOZmulti Mini
The feedback loop is connected and evaluated via the connector		

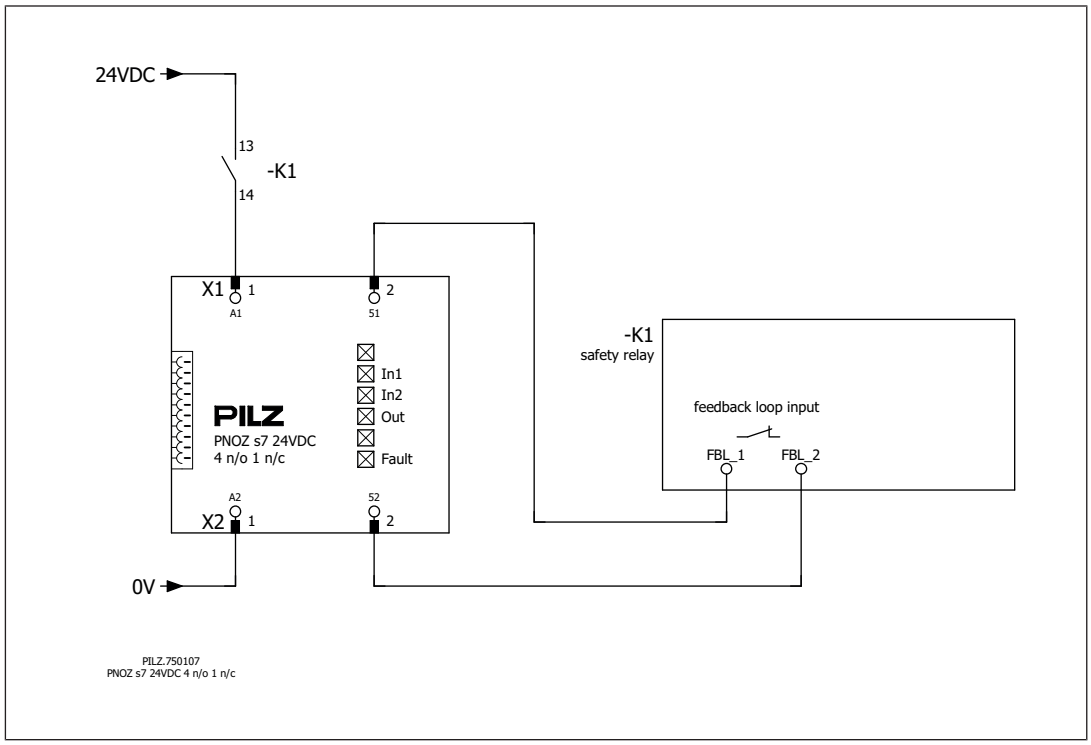
INFORMATION

If a base unit and a contact expansion module are linked via the connector, no additional wiring is necessary.
Do not connect A1/A2 to the contact expansion module!

Application examples

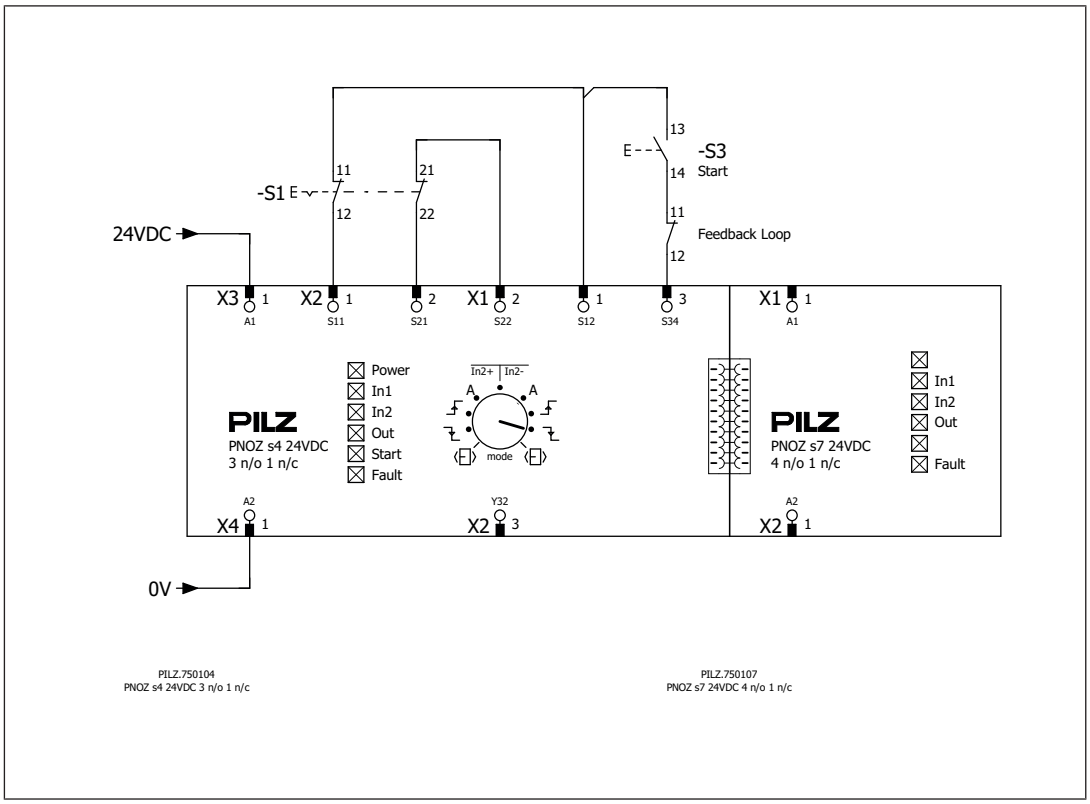
Single device

- Single-channel
- Driven via safety relay with safety contacts



Contact expansion for PNOZ s4

- Emergency stop
- Dual-channel
- with detection of shorts across contacts
- Monitored start
- falling edge with feedback loop monitoring



Operation

When the relay outputs are switched on, the mechanical contact on the relay cannot be tested automatically. Depending on the operational environment, measures to detect the non-opening of switching elements may be required under some circumstances.

When the product is used in accordance with the European Machinery Directive, a check must be carried out to ensure that the safety contacts on the relay outputs open correctly. Open the safety contacts (switch off output) and start the device again, so that the internal diagnostics can check that the safety contacts open correctly

- for SIL 3/PL e at least 1x per month
- for SIL 2/PL d at least 1x per year

NOTICE

The safety functions should be checked after initial commissioning and each time the plant/machine is changed. The safety functions may only be checked by qualified personnel.

LEDs indicate the status and errors during operation:

☼ LED on

Status indicators

☼ **IN1**
Channel 1 actuated.

☼ **IN2**
Channel 2 actuated.

☼ **IN1, IN2, OUT**
Safety contacts are closed.

Error indicators

☼ **FAULT**

Diagnostics: Plug terminator not connected

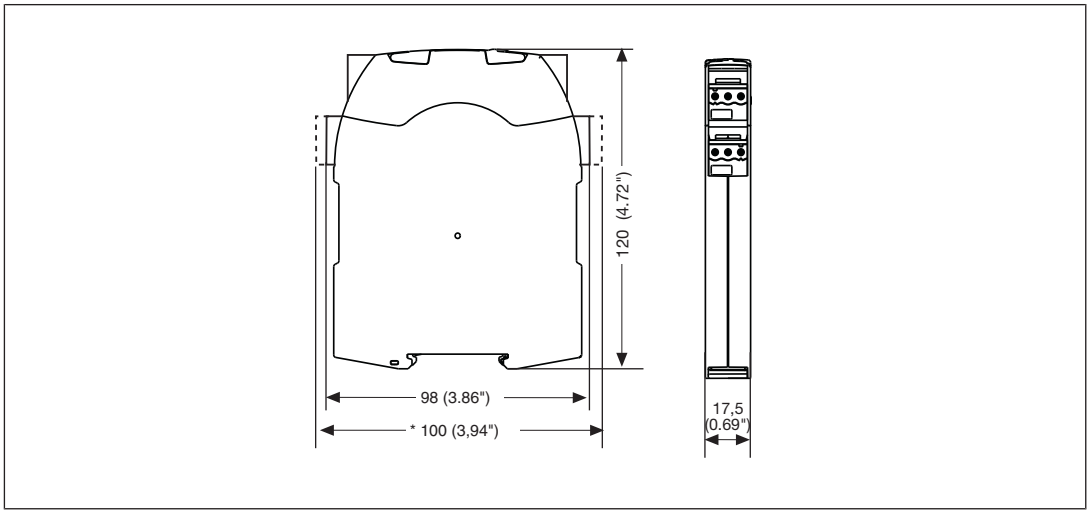
- Remedy: Insert plug terminator, switch supply voltage off and then on again.

Faults - malfunctions

- Contact malfunctions: If the contacts have welded, reactivation will not be possible after the input circuit has opened.

Dimensions in mm

*with spring-loaded terminals



Technical details

Where standards are undated, the 2022-09 valid editions apply.

General	750107	751107	751187
Certifications	CCC, CE, EAC, KOSHA, TÜV, UKCA, cULus Listed	CCC, CE, EAC, KOSHA, TÜV, UKCA, cULus Listed	CCC, CE, EAC, KOSHA, TÜV, UKCA, cULus Listed
Electrical data	**750107**	**751107**	**751187**
Supply voltage			
Voltage	24 V	24 V	24 V
Kind	DC	DC	DC
Voltage tolerance	-20 %/+20 %	-20 %/+20 %	-20 %/+20 %
Output of external power supply (DC)	2 W	2 W	2 W
Residual ripple DC	20 %	20 %	20 %
Duty cycle	100 %	100 %	100 %
Inputs	**750107**	**751107**	**751187**
Quantity	1	1	1
Voltage at			
Input circuit DC	24 V	24 V	24 V
Current at			
Input circuit DC	70 mA	70 mA	70 mA
Max. inrush current impulse			
Current pulse, input circuit	2,7 A	2,7 A	2,7 A
Pulse duration, input circuit	0,1 ms	0,1 ms	0,1 ms

Inputs	750107	751107	751187
Max. overall cable resistance Rlmax			
Single-channel at UB DC	30 Ohm	30 Ohm	30 Ohm
Relay outputs	**750107**	**751107**	**751187**
Number of output contacts			
Safety contacts (N/O), instantaneous	4	4	4
Auxiliary contacts (N/C)	1	1	1
Max. short circuit current IK	1 kA	1 kA	1 kA
Utilisation category			
in accordance with the standard	EN 60947-4-1	EN 60947-4-1	EN 60947-4-1
Utilisation category of safety contacts			
AC1 at	240 V	240 V	240 V
Min. current	0,003 A	0,003 A	0,003 A
Max. current	6 A	6 A	6 A
Min. power	0,04 VA	0,04 VA	0,04 VA
Max. power	1.500 VA	1.500 VA	1.500 VA
DC1 at	24 V	24 V	24 V
Min. current	0,003 A	0,003 A	0,003 A
Max. current	6 A	6 A	6 A
Min. power	0,04 W	0,04 W	0,04 W
Max. power	150 W	150 W	150 W
Utilisation category of auxiliary contacts			
AC1 at	240 V	240 V	240 V
Min. current	0,003 A	0,003 A	0,003 A
Max. current	2 A	2 A	2 A
Min. power	0,04 VA	0,04 VA	0,04 VA
Max. power	500 VA	500 VA	500 VA
DC1 at	24 V	24 V	24 V
Min. current	0,003 A	0,003 A	0,003 A
Max. current	2 A	2 A	2 A
Min. power	0,04 W	0,04 W	0,04 W
Max. power	50 W	50 W	50 W
Utilisation category			
in accordance with the standard	EN 60947-5-1	EN 60947-5-1	EN 60947-5-1

Relay outputs	750107	751107	751187
Utilisation category of safety contacts			
AC15 at	**230 V**	**230 V**	**230 V**
Max. current	**5 A**	**5 A**	**5 A**
DC13 (6 cycles/min) at	**24 V**	**24 V**	**24 V**
Max. current	**5 A**	**5 A**	**5 A**
Utilisation category of auxiliary contacts			
AC15 at	**230 V**	**230 V**	**230 V**
Max. current	**2 A**	**2 A**	**2 A**
DC13 (6 cycles/min) at	**24 V**	**24 V**	**24 V**
Max. current	**2 A**	**2 A**	**2 A**
Utilisation category in accordance with UL			
Voltage	**240 V AC G.U. (same polarity)**	**240 V AC G.U. (same polarity)**	**240 V AC G.U. (same polarity)**
with current	**6 A**	**6 A**	**6 A**
Voltage	**24 V DC G. U.**	**24 V DC G. U.**	**24 V DC G. U.**
with current	**6 A**	**6 A**	**6 A**
External contact fuse protection, safety contacts			
in accordance with the standard	**EN 60947-5-1**	**EN 60947-5-1**	**EN 60947-5-1**
Max. melting integral	**260 A²s**	**260 A²s**	**260 A²s**
Blow-out fuse, quick	**10 A**	**10 A**	**10 A**
Blow-out fuse, slow	**6 A**	**6 A**	**6 A**
Blow-out fuse, gG	**10 A**	**10 A**	**10 A**
Circuit breaker 24V AC/DC, characteristic B/C	**6 A**	**6 A**	**6 A**
External contact fuse protection, auxiliary contacts			
Max. melting integral	**160 A²s**	**160 A²s**	**160 A²s**
Blow-out fuse, quick	**4 A**	**4 A**	**4 A**
Blow-out fuse, slow	**2 A**	**2 A**	**2 A**
Blow-out fuse, gG	**4 A**	**4 A**	**4 A**
Circuit breaker, 24 V AC/DC, characteristic B/C	**2 A**	**2 A**	**2 A**
Contact material	**AgCuNi + 0,2 µm Au**	**AgCuNi + 0,2 µm Au**	**AgCuNi + 0,2 µm Au**

Conventional thermal current while loading several contacts	750107	751107	751187
Ith per contact at UB DC; AC1: 240 V, DC1: 24 V			
Conv. therm. current with 1 contact	**6 A**	**6 A**	**6 A**
Conv. therm. current with 2 contacts	**5,5 A**	**5,5 A**	**5,5 A**
Conv. therm. current with 3 contacts	**4,5 A**	**4,5 A**	**4,5 A**
Conv. therm. current with 4 contacts	**4 A**	**4 A**	**4 A**
Times	**750107**	**751107**	**751187**
Switch-on delay			
with automatic start after power on typ.	**30 ms**	**30 ms**	**30 ms**
with automatic start after power on max.	**50 ms**	**50 ms**	**50 ms**
Delay-on de-energisation			
with E-STOP typ.	**18 ms**	**18 ms**	**18 ms**
with E-STOP max.	**30 ms**	**30 ms**	**30 ms**
with power failure typ.	**18 ms**	**18 ms**	**18 ms**
with power failure max.	**30 ms**	**30 ms**	**30 ms**
Environmental data	**750107**	**751107**	**751187**
Climatic suitability	**EN 60068-2-78**	**EN 60068-2-78**	**EN 60068-2-78**
Ambient temperature			
Temperature range	**-10 - 55 °C**	**-10 - 55 °C**	**-10 - 55 °C**
Storage temperature			
Temperature range	**-40 - 85 °C**	**-40 - 85 °C**	**-40 - 85 °C**
Climatic suitability			
Humidity	**93 % r. h. at 40 °C**	**93 % r. h. at 40 °C**	**93 % r. h. at 40 °C**
Condensation during operation	**Not permitted**	**Not permitted**	**Not permitted**
EMC	**EN 60947-5-1, EN 61000-6-2, EN 61000-6-4, EN 61326-3-1**	**EN 60947-5-1, EN 61000-6-2, EN 61000-6-4, EN 61326-3-1**	**EN 60947-5-1, EN 61000-6-2, EN 61000-6-4, EN 61326-3-1**
Vibration			
in accordance with the standard	**EN 60068-2-6**	**EN 60068-2-6**	**EN 60068-2-6**
Frequency	**10 - 55 Hz**	**10 - 55 Hz**	**10 - 55 Hz**
Amplitude	**0,35 mm**	**0,35 mm**	**0,35 mm**
Airgap creepage			
in accordance with the standard	**EN 60947-1**	**EN 60947-1**	**EN 60947-1**
Overvoltage category	**III**	**III**	**III**
Pollution degree	**2**	**2**	**2**
Rated insulation voltage	**250 V**	**250 V**	**250 V**

Environmental data	750107	751107	751187
Rated impulse withstand voltage	**6 kV**	**6 kV**	**6 kV**
Protection type			
Housing	**IP40**	**IP40**	**IP40**
Terminals	**IP20**	**IP20**	**IP20**
Mounting area (e.g. control cabinet)	**IP54**	**IP54**	**IP54**
Mechanical data	**750107**	**751107**	**751187**
Mounting position	**Any**	**Any**	**Any**
Mechanical life	**10,000,000 cycles**	**10,000,000 cycles**	**10,000,000 cycles**
Material			
Bottom	**PC**	**PC**	**PC**
Front	**PC**	**PC**	**PC**
Top	**PC**	**PC**	**PC**
Connection type	**Screw terminal**	**Spring-loaded terminal**	**Spring-loaded terminal**
Mounting type	**plug-in**	**plug-in**	**plug-in**
Conductor cross section with screw terminals			
1 core flexible	**0,25 - 2,5 mm², 24 - 12 AWG**	–	–
2 core with the same cross section, flexible with crimp connectors, no plastic sleeve	**0,25 - 1 mm², 24 - 16 AWG**	–	–
2 core with the same cross section, flexible without crimp connectors or with TWIN crimp connectors	**0,2 - 1,5 mm², 24 - 16 AWG**	–	–
Torque setting with screw terminals	**0,5 Nm**	–	–
Stripping length with screw terminals	**7 mm**	–	–
Conductor cross section with spring-loaded terminals: Flexible with/without crimp connector	–	**0,2 - 2,5 mm², 24 - 12 AWG**	**0,2 - 2,5 mm², 24 - 12 AWG**
Spring-loaded terminals: Terminal points per connection	–	**2**	**2**
Stripping length with spring-loaded terminals	–	**9 mm**	**9 mm**
Dimensions			
Height	**98 mm**	**100 mm**	**100 mm**
Width	**17,5 mm**	**17,5 mm**	**17,5 mm**
Depth	**120 mm**	**120 mm**	**120 mm**
Weight	**170 g**	**170 g**	**170 g**

Safety characteristic data

NOTICE

You must comply with the safety characteristic data in order to achieve the required safety level for your plant/machine.

Operating mode	EN ISO 13849-1: 2015 PL	EN ISO 13849-1: 2015 Category	EN IEC 62061 SIL CL/max. SIL	EN IEC 62061 61508 PFH [1/h]	EN/IEC 61511 61508 SIL	EN/IEC 61511 61508 PFD	EN ISO 13849-1: 2015 T_M [year]
Safety contacts, instantaneous	**PL e**	**Cat. 4**	**SIL 3**	**2,31E-09**	**SIL 3**	**2,03E-06**	**20**

Explanatory notes for the safety-related characteristic data:

- T_M is the maximum mission time in accordance with EN ISO 13849-1. The value also applies as the retest interval in accordance with EN/IEC 61508-6 and EN/IEC 61511 and as the proof test interval and mission time in accordance with EN IEC 62061

All the units used within a safety function must be considered when calculating the safety characteristic data.

INFORMATION

A safety function's SIL/PL values are **not** identical to the SIL/PL values of the products used and may differ from these.

Classification according to ZVEI, CB24I

The following tables describe the classes and specific values of the product interface and the classes of interfaces compatible with it. The classification is described in the ZVEI position paper "Classification of Binary 24 V Interfaces - Functional Safety aspects covered by dynamic testing".

Input	
Interfaces	
Drain	
Interface	**Module**
Class	**C0**
Source	
Interface	**Sensor**
Class	**C1, C2, C3**
Drain parameters	
Max. test pulse duration	**2 ms**
Min. input resistance	**0,3 kOhm**
Max. capacitive load	**10 nF**

Relay outputs	
Interfaces	
Source	
Interface	**Module**
Class	**A**
Drain	
Interface	**Actuator**
Class	**A**
Source parameters	
Min. switching voltage	**12 V**
Max. switching voltage	**250 V**
Min. switching current	**0,003 A**
Max. switching current	**6 A**
Potential isolation	**Yes**

Supplementary data

CAUTION!

It is essential to consider the relay's service life graphs. The relay outputs' safety-related characteristic data is only valid if the values in the service life graphs are met.

The PFH value depends on the switch frequency and the load of the relay output.
If the service life graphs are not accessible, the stated PFH value can be used irrespective of the switch frequency and the load, as the PFH value already considers the relay's B10d value as well as the failure rates of the other components.

Service life graph

The service life graphs indicate the number of cycles from which failures due to wear must be expected. The wear is mainly caused by the electrical load; the mechanical load is negligible.

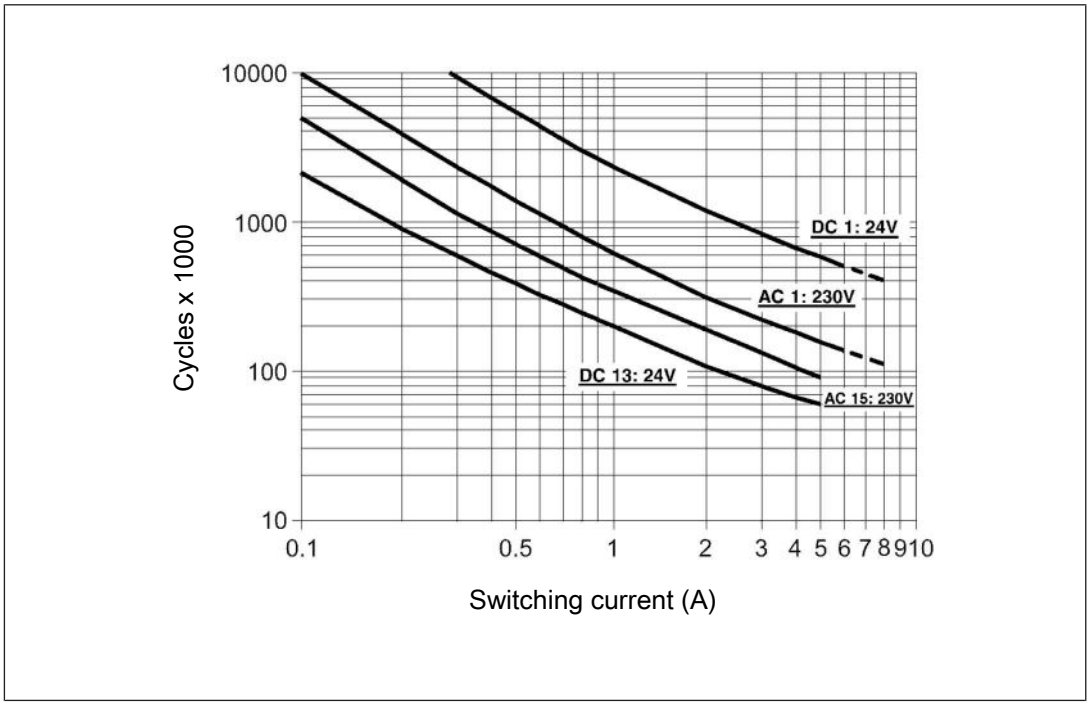


Fig.: Service life graphs at 24 V DC and 230 V AC

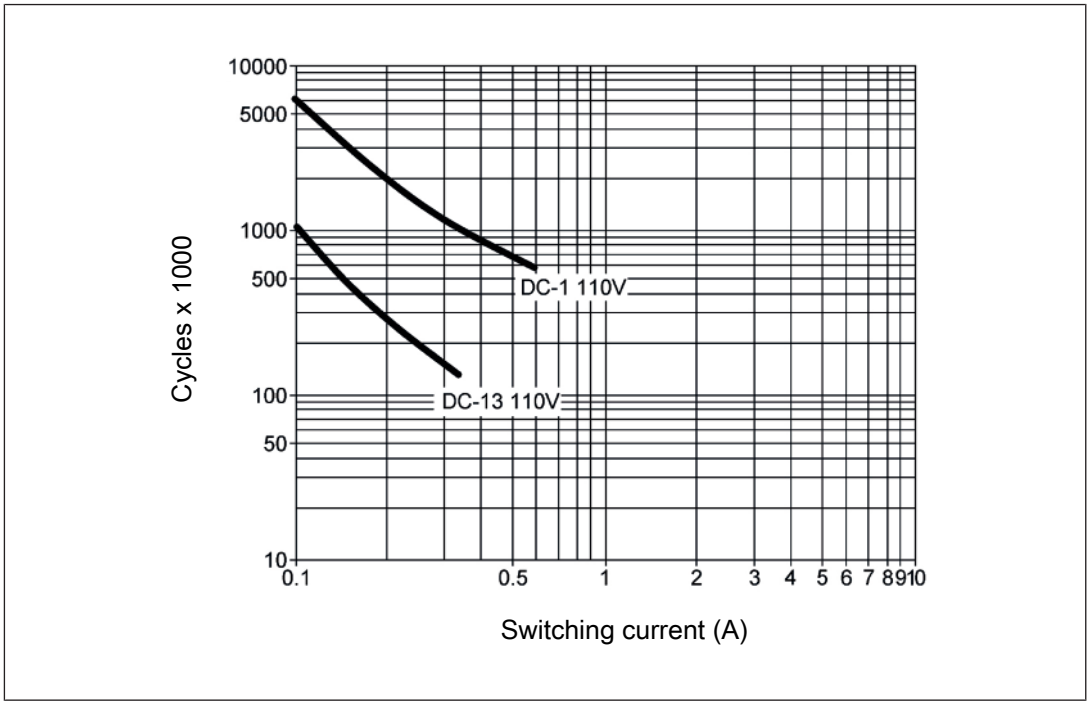


Fig.: Service life graphs at 110 V DC

Example

- Inductive load: 0.2 A
- Utilisation category: AC15
- Contact service life: 2 000 000 cycles

Provided the application to be implemented requires fewer than 2 000 000 cycles, the PFH value (see Technical details [📖 15]) can be used in the calculation.

To increase the service life, sufficient spark suppression must be provided on all output contacts. With capacitive loads, any power surges that occur must be noted. With DC contactors, use flywheel diodes for spark suppression.

Operating height in accordance with EN 60664-1

The values stated in the technical details apply to the use of the product in operating heights up to max. 2000 m above sea level. When used in greater heights, constraints have to be taken into account:

- Permitted maximum operating height 5000 m
- Reduction of rated insulation voltage and rated impulse withstand voltage for applications with safe separation:

Maximum operation height	Rated insulation voltage	Overvoltage category	Max. rated impulse withstand voltage
3000 m	150 V	II	2.5 kV
	100 V	III	2.5 kV
4000 m	150 V	II	2.5 kV
	100 V	III	2.5 kV
5000 m	150 V	II	2.5 kV
	100 V	III	2.5 kV

- Reduction of rated insulation voltage and rated impulse withstand voltage for applications with basic insulation:

Maximum operation height	Rated insulation voltage	Overvoltage category	Max. rated impulse withstand voltage
3000 m	250 V	II	2.5 kV
	150 V	III	2.5 kV
4000 m	250 V	II	2.5 kV
	150 V	III	2.5 kV
5000 m	250 V	II	2.5 kV
	150 V	III	2.5 kV

- From an operating height of 2000 m the max. permitted ambient temperature is reduced by 0.5 °C/100 m

Operating height	Permitted ambient temperature
3000 m	50 °C
4000 m	45 °C
5000 m	40 °C

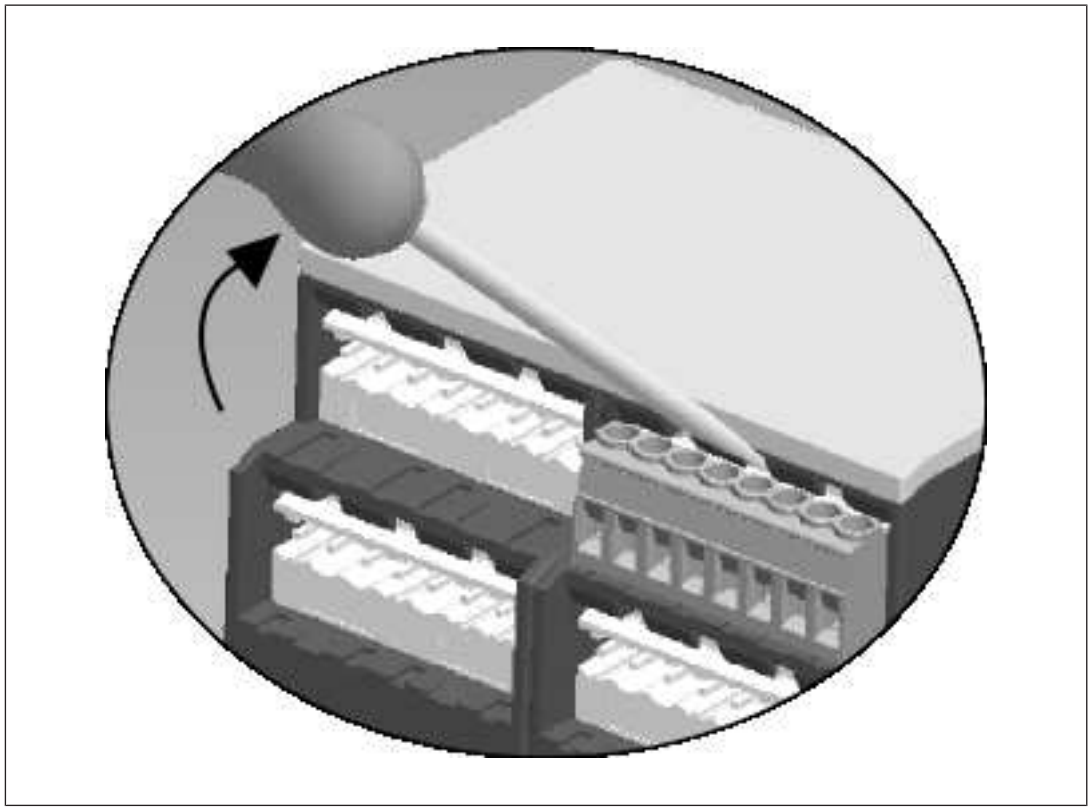
Remove plug-in terminals

Procedure

- Insert a suitable screwdriver into the housing recess behind the terminal.

Do **not** remove the terminals by pulling the cables!

- Lever the terminal out.



Order reference

Product type	Features	Terminals	Order no.
PNOZ s7	24 V DC	Screw terminals	750107
PNOZ s7 C	24 V DC	Spring-loaded terminals	751107
PNOZ s7 C (coated version)	24 V DC	Spring-loaded terminals	751187

EC declaration of conformity

This product/these products meet the requirements of the directive 2006/42/EC on machinery of the European Parliament and of the Council. The complete EC Declaration of Conformity is available on the Internet at www.pilz.com/downloads.
Representative: Pilz GmbH & Co. KG, Felix-Wankel-Str. 2, 73760 Ostfildern, Germany

UKCA-Declaration of Conformity

This product(s) complies with following UK legislation: Supply of Machinery (Safety) Regulation 2008.
The complete UKCA Declaration of Conformity is available on the Internet at www.pilz.com/downloads.

Representative: Pilz Automation Technology, Pilz House, Little Colliers Field, Corby, Northamptonshire, NN18 8TJ United Kingdom, eMail: mail@pilz.co.uk

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