WARNING
Switch off the supply voltage before working on the relay or connecting or disconnecting it with other devices or PC. Switch the supply voltage on only after all works have been completed.

CAUTION
Observe power supply polarity when connecting the relay to 24 V DC power source. Reverse polarity may cause the relay damage.

CAUTION
The program loaded to the relay runs immediately after switching the relay ON or the relay reset. It is highly recommended to make sure all connections to peripheral device are safe. Otherwise make sure that all peripheral devices are disconnected from relay outputs before loading the program.

1. Specifications

Table 1 General specification

Parameter	Value
Power supply	
Voltage range	19…29 V DC
Nominal supply voltage	24 V DC
Power consumption, max.	10 W
Reverse polarity protection	yes
Digital inputs	
Number	8
Nominal supply voltage	24 V DC
Maximum permissible supply voltage	30 V DC
Digital / Analog inputs	
Number	4
Signal type	4...20 mA, 0...10 V, 0...300 kΩ
Digital outputs	
Number	8
Type	Relay (NO)
Analog outputs	
Number	2
Signal type	4...20 mA and 0...10 V
Network interfaces	
Types	Ethernet and RS485
General	
Mounting	In a control board
Dimensions	100 × 100 × 71 mm
IP Code	IP20
Weight	approx. 500 g
Average service life	10 years

2. Operating conditions

The device is designed for natural convection cooling that should be taken into account when choosing the installation site.

The following environmental conditions must be observed:

- clean, dry and controlled environment, low dust level
- closed non-hazardous areas, free of corrosive or flammable gases

Table 2 Environmental conditions

Condition	Permissible range
Ambient temperature	-20…+55 °C
Relative humidity	up to 80 % (at +35 °C, non-condencing)
Transportation and storage temperature	-25…+55 °C
Altitude	up to 2000 m above sea level
EMC immunity	conforms to IEC 61000-6-2
EMC emission	conforms to IEC 61000-6-4

3. Installation

To install the device:

1. Prepare an installation cut-out in the control board (see *Fig. 2*).
2. Make sure that the gasket is not damaged and seated properly on the device housing.
3. Insert the device into the installation cut-out.
4. Insert the supplied brackets into the holes on the upper and lower surfaces of the device.
5. Screw the supplied screws into the holes of each bracket so that the device is firmly and evenly pressed against the front side of the board.

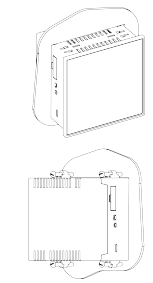


Fig. 1 – Installation

Reverse the procedure to dismantle the device.

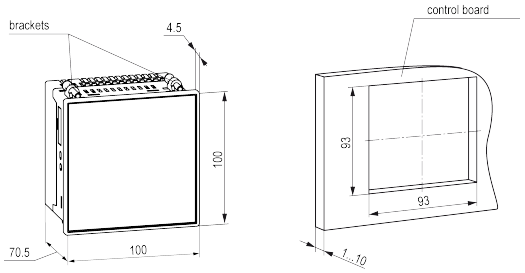


Fig. 2 – Overall and cut-out dimensions

4. Digital inputs

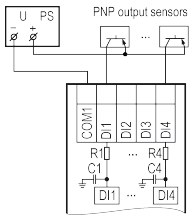


Fig. 3 – PNP transistor wiring

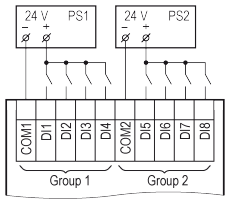


Fig. 4 – Switch contacts wiring

5. Analog inputs

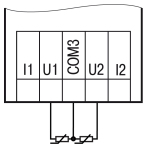


Fig. 5 – RTD sensors wiring

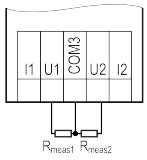


Fig. 6 – Resistance sensors wiring

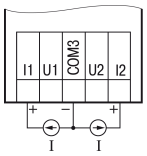


Fig. 7 – Current sensors wiring

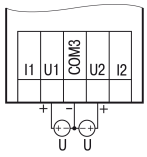


Fig. 8 – Voltage sensors wiring

6. Output wiring

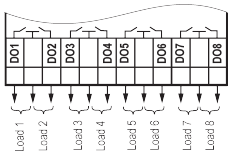


Fig. 9 – Relay outputs

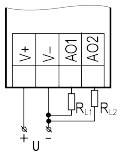


Fig. 10 – Current output wiring

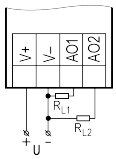


Fig. 11 – Voltage output wiring

7. Ethernet interface

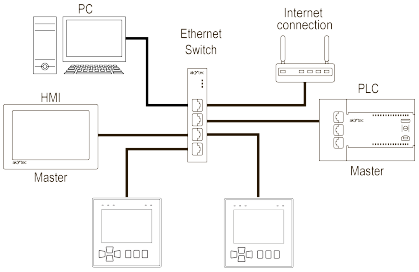


Fig. 12 – Star topology

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8. RS485 interface

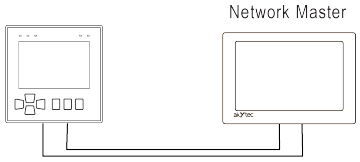


Fig. 13 – PR225 as Slave

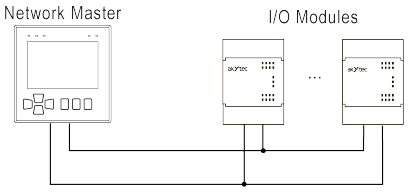


Fig. 14 – PR225 as Master

9. Controls and interfaces



Fig. 15 – Front panel

Table 3 Buttons

Button	Description
View mode	
and	Screen navigation. Move to the next screen when the selected area is on the border of the current screen.
OK	Press and hold for 6 seconds to enter the system menu.
ESC	Press and hold for 6 seconds to exit the system menu.
SEL + ESC	Move to the Error panel.
Edit mode	
SEL	Enter the edit mode on the current screen. When pressed, the first editable element on the screen becomes available for editing and starts flashing. Apply a value and move to the next parameter.
and	Change the parameter value. Press and hold to accelerate the value change.
and	Move to a higher level. When moving to the maximum level, it jumps to the lowest one.
+	Move to a lower level.
+	Move to a higher level.
ESC	Exit the edit mode without saving the edited value.
OK	Exit the edit mode and save the edited value.

Table 4 Functional assignment of LED indicators

LED	Color	Status	Description
⏻	green	ON	Power is on
⚠	red	ON	Failure in the device. Contact the service center
		Flashing	
F1	green	—	To be defined by user's program
F2	red		
⏀	red green	OFF Flashing	The RUN/STOP switch is in the **STOP** position
	red green	ON OFF	No power on terminals 13 and 14. Powered by USB
	red green	OFF ON	The RUN/STOP switch is in the **RUN** position
	red green	Flashing* ON	The RUN/STOP switch is in the **RUN** position
	red green	OFF Flashing*	The RUN/STOP switch is in the **STOP** position
	red green	Flashing with a period ON	Error
	red green	Flashing Flashing	Boot is in progress

* Flashing together with ⚠ means that the RTC battery is discharged.

Side surfaces of the device include:

1. RTC battery slot
2. Run/Stop switch (see *Table 5*)
3. Service button (see *Table 6*)
4. Ethernet connector
5. USB type-C port for programming the device

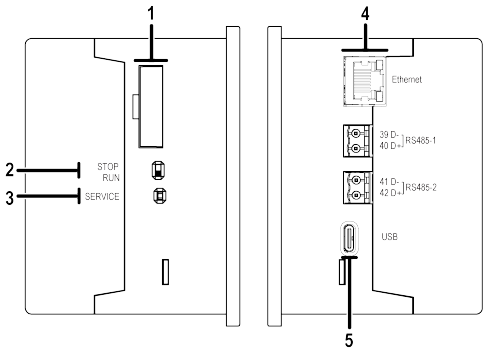


Fig. 16 – Side surfaces

Table 5 RUN/STOP switch

Position	Function
RUN	When the device is powered on, the user program starts.
STOP	When the device is powered on, it functions as an I/O module. The user program is stopped.

Table 6 Service button

Duration of pressing	Function
12 s	Restoration of the device factory settings

10. Device menu

The device has a user menu and a system menu. The user menu is created in ALP with the help of **Display Manager**. To specify "jumps", use buttons or change a variable. The system menu is always present in the device, even if there is no user program written to it.

It is possible to work with the menu in View and Edit modes. In the **View** mode, you can view the device parameters or the user menu. In the **Edit** mode, you can edit the device parameters in the system menu or the user program from the front panel without stopping the device. When you re-enter the Edit mode, the last edited element is selected.

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akYtec GmbH · Vahrenwalder Str. 269 A · 30179 Hannover · Germany
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