1. Safety

WARNING
Power off the module and all connected devices before installation.
Voltage on the terminals can be dangerous!

2. Specifications

Table 1 General specifications

Device		PRM-230.1	PRM-24.1
Power supply		~230 (90…264) V AC, 50 Hz ~230 (127…373) V DC	=24 (19 … 30) V DC
Power consumption, max.		8 VA	4 W
Galvanic isolation		2830 V	1780 V
Reverse polarity protection		—	yes
Inputs	Digital	8	
	Analog	—	
Outputs	Digital	8	
	Analog	—	
Internal bus	Frequency	2.25 MHz	
	Packet rate (each 16 bit)	4000 packet/s	
	Max. module number	2	
Programming software		akYtec ALP	
IP Code		IP20	
Dimensions		88 × 90 × 58 mm	
Mounting		DIN rail (35 mm)	
Weight, max.		400 g	

Table 2 Digital inputs (DI)

Parameter	Value	
Power supply	230 V AC (max. 264 V AC)	24 V DC (max. 30 V DC)
Signal type	Switch contact	Switch contact PNP
HIGH level	159…264 V / 0.75…1.5 mA	15…30 V / 2…5 mA
LOW level	0…40 V / 0…0.5 mA	-3…+5 V / 0…1 mA
Pulse length, min.	50 ms	5 ms*
Response time, max.	100 ms	30 ms
Galvanic isolation against other circuits	2830 V	2830 V
* Maximum signal frequency depends on user program cycle, duty cycle and set filter time.		

Table 3 Digital outputs (DO)

Parameter		Value
Type		relay (NO)
Switching capacity	AC	5 A, 250 V AC and cos(φ) > 0.95) (resistive load)
	DC	3 A, 30 V DC (resistive load)
Load current at 5 V DC, min.		10 mA
Service life, electrical		200 000 switching cycles: 5 A, 250 V AC 50 000 switching cycles: 7 A, 250 V AC 100 000 switching cycles: 3 A, 30 V DC (resistive load)
Galvanic isolation		2830 V

3. Environmental conditions

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

The following environment conditions must be observed:

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

Table 4 Environmental conditions

Conditions	Permissible range
Ambient operating temperature	-20…+55°C
Storage temperature	-20…+55°C
Relative humidity	up to 80% (non-condensing)
Altitude	up to 2000 m above sea level
EMC immunity	conforms to IEC 61000-6-2
EMC emission	conforms to IEC 61000-6-4

4. Terminal assignment

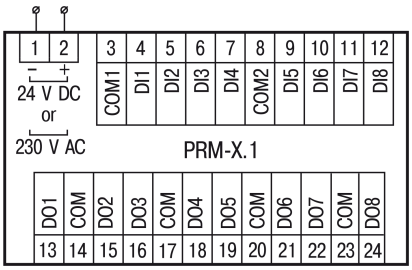


Fig. 1 – Terminal assignment

5. Galvanic isolation

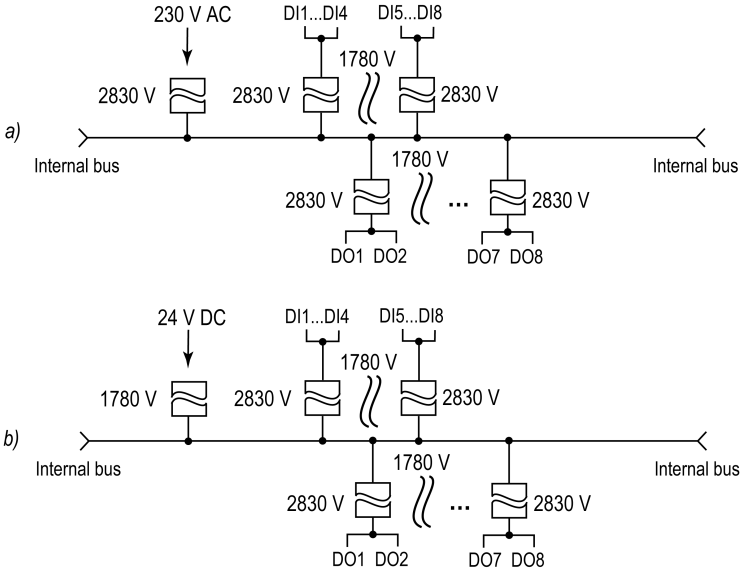


Fig. 2 – Galvanic isolation PRM-230 (a) and PRM-24 (b)

6. Switch contact

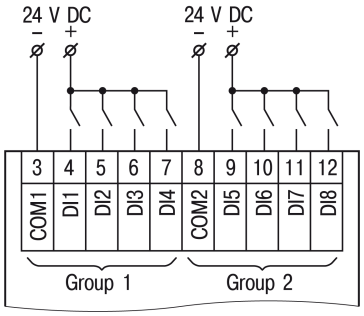


Fig. 3 – Switch contact wiring (PRM-24)

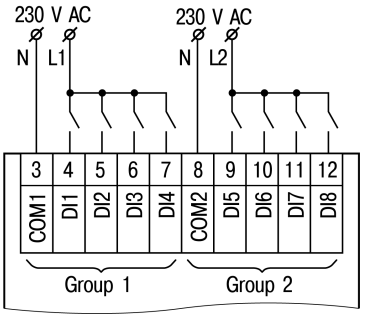


Fig. 4 – Switch contact wiring (PRM-230)

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7. PNP output sensors

For PRM-24, it is allowed to connect sensors with switch contacts and transistor outputs within the same input group. One voltage source can be used for two input groups.

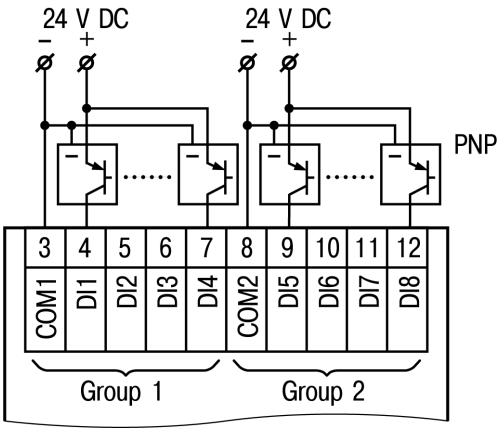


Fig. 5 – 3-wire sensor with PNP output wiring

8. Relay output

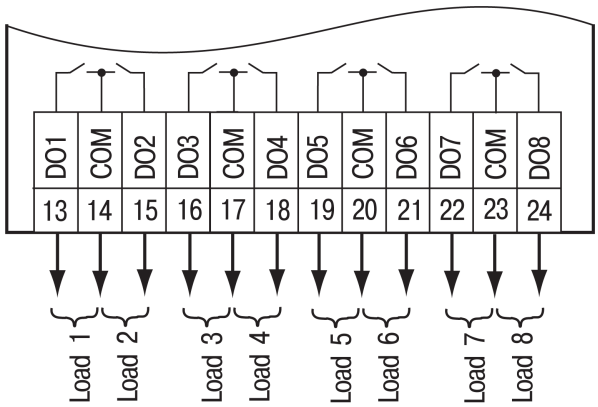


Fig. 6 – Relay output wiring

9. Internal bus

CAUTION
The device must be powered off before connecting to internal bus or I/O devices.

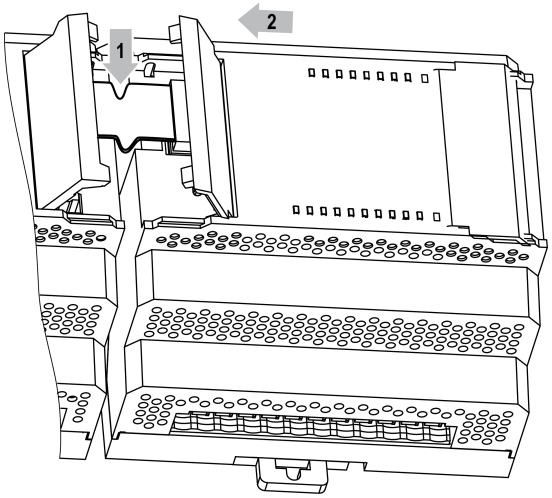


Fig. 7 – Internal bus connection

10. Dimensions

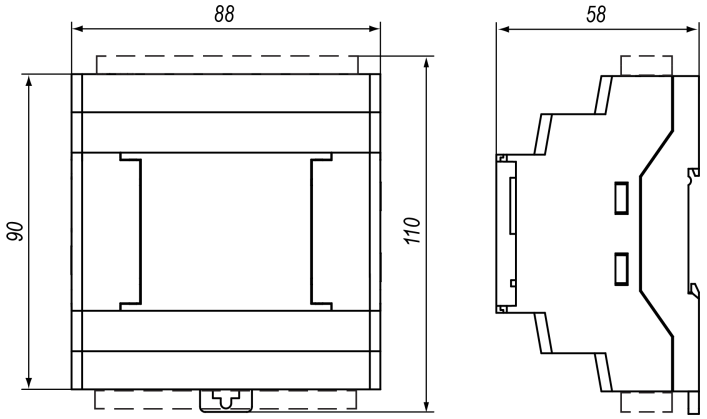


Fig. 8 – Dimensions

11. Transportation and storage

Pack the device in such a way as to protect it reliably against impact for storage and transportation. The original packaging provides optimum protection.

If the device is not taken immediately after delivery into operation, it must be carefully stored at a protected location. The device should not be stored in an atmosphere with chemically active substances.

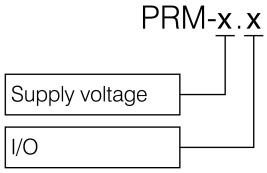
Permitted storage temperature: -20...+55 °C.

NOTE
The device may have been damaged during transportation. Check the device for transport damage and completeness! Report the transport damage immediately to the shipper and akYtec GmbH!

12. Scope of delivery

PRM	1
Short guide	1
Cable	1
Terminals blocks (set)	1

13. Ordering information



Supply voltage	230	230 (90…264) V AC
	24	24 (19…30) V DC
I/O	1	8 DI, 8 DO

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