CALAIR-PR-1F/-2F PRESSURE REGULATOR 230V or 400V

With built-in pressure sensor, Modbus RTU communication, clock function, alarm relay and digital inputs. Complete with hose and hose nipples.

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CHARACTERISTICS

- **Clear OLED display**
- **Simple programming**
- **Modbus communication**
- **Built-in pressure sensor**
- **2 digital inputs**
- **Alarm relay – selectable settings**
- **Alarm log**
- **Control range: 0-2000 Pa**
- **Adjustable control rate**
- **Adjustment mode with selectable locked control signal**
- **Supplied complete with 2 m hose and 2 hose nipples**
- **Clock function with week schedule**

FUNCTION

The CALAIR-PR pressure regulator measures differential pressure and controls ventilation fans via a 0-10V signal. Compensation of set point for outdoor temperatures requires connecting an outdoor temperature sensor to the regulator. Outdoor temperature values can also be written to the CALAIR-PR via Modbus.

CALAIR-PR has two digital inputs which can be used for eg. changed setpoint. Other optional preprogrammed alarm functions include fan motor monitoring and input from fire alarm central. For these alarm functions, you can also choose output signal and whether to reset automatically or manually.

CALAIR-PR has an alarm relay with potential-free change-over contacts for different alarm indications, eg. high and low pressure alarms. The ten last alarms are recorded and saved in an alarm log.

CALAIR-PR can be read and programed via Modbus RTU (RS485).

Adjustable regulator speed allows customizing to various pressure control applications such as roof fans or air handling units.

Settings and programming are performed via three push buttons which are available even when the cover is removed. All settings / programing done using the menu system are saved even after power outage.

The function of the regulator is guaranteed with hose up to 100 m. After installation, check that air flows through the hose.

CALAIR-PR has a clock module for activating alternative setpoint. The clock module has battery backup to keep settings during power outage. Date, time and weekly schedule can be set. The shortest scheduling time is one hour.

USE

Pressure control of ventilation systems, roof fans etc.

TECHNICAL DATA

Supply voltage	
- CALAIR-PR-1F:	230V AC ±10%, 50 Hz
- CALAIR-PR-2F:	400V AC ±10%, 50 Hz
Power consumption:	Max 6 W
Output signal:	0-10V, (minimum input impedance 10 kΩ)
Built in glass fuse	
- CALAIR-PR-1F:	5x20 mm, 50 mA, delay action fuse
- CALAIR-PR-2F:	6.3x32 mm, 50 mA, delay action fuse or quick-acting fuse
Alarm relay:	Change-over 5 A, 250V
Communication:	Modbus RTU via RS485
- Selectable parity:	None, even or odd
- Selectable stop bits:	1 or 2
- Speed (baud rate, kbps):	9.6 / 19.2 / 38.4 /57.6 / 115.2
- Address:	1-247
Digital inputs:	2 inputs
Pressure range:	0-2000 Pa
Display:	OLED, yellow text on black background
Outdoor temp. sensor:	Pt1000, Ni1000 and NTC (as for previous CALAIR-PR)
Ambient temperature:	-30 to +50°C
Cable entries:	1xM20 (cable 8-13 mm), 3xM12 (cable 3-6 mm)
- 'Knockouts':	1xM16, 1xM12
Screw terminals cable dimension:	Supply voltage and alarm relay max 2.5 mm2, other terminals max 1.5 mm2
Dimensions (WxHxD):	109x195x52 mm
Weight:	Ca. 500 g
Protection:	IP54

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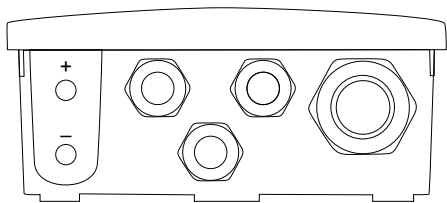
CE

MOUNTING

The CALAIR-PR is fitted with downward facing cable glands and hose connections. There are notches in the base of the CALAIR-PR for 3 attachment screws, which can be used to mount the unit.

Refer to the installation instructions supplied with the product for more information.
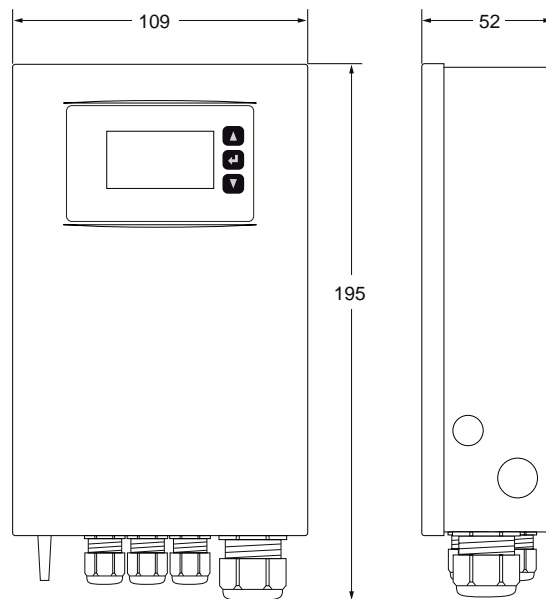
MAINTENANCE

CALAIR-PR-230V is maintenance free. Zero pressure calibration can be carried out where necessary. Refer to the installation instructions which are supplied with the product.
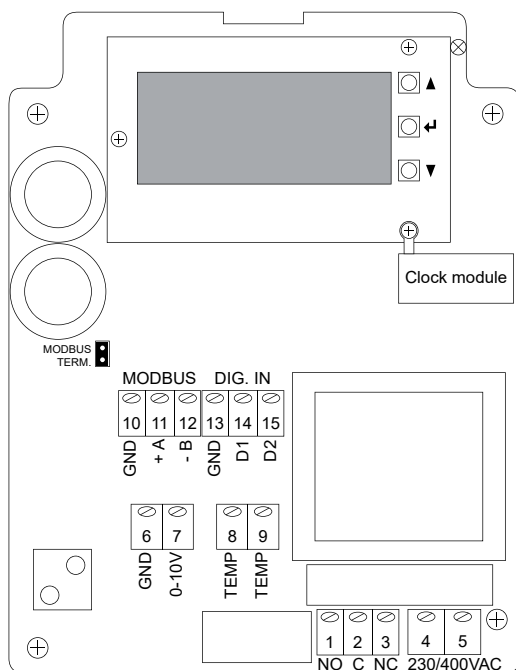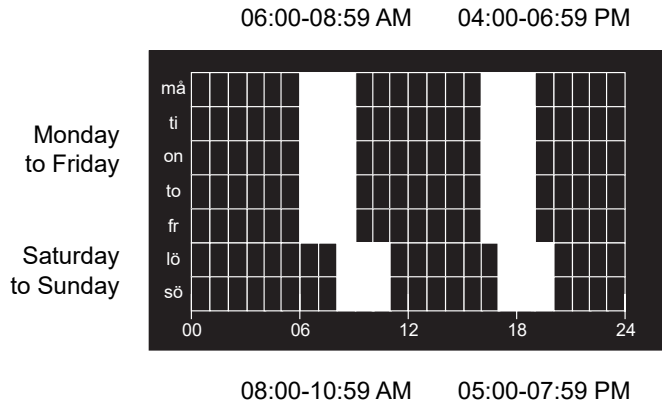
HOSE CONNECTION

DIMENSIONS
(mm)

109
52
195

WIRING DIAGRAM

Clock module

MODBUS TERM.

MODBUS   DIG. IN
10 11 12   13 14 15
GND + A - B   GND D1 D2

6   7   8   9
GND 0-10V   TEMP TEMP

1   2   3   4   5
NO C   NC   230/400VAC

SCHEDULE CLOCK FUNCTION

Example of a week schedule.

06:00-08:59 AM   04:00-06:59 PM

Monday to Friday

Saturday to Sunday

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00   06   12   18   24

08:00-10:59 AM   05:00-07:59 PM

ORDERING EXAMPLE

Item code	Description
CALAIR-PR-1F	Pressure regulator 230V
CALAIR-PR-1F-PKT	Pressure regulator 230V incl. outdoor temp. sensor
CALAIR-PR-2F	Pressure regulator 400V
CALAIR-PR-2F-PKT	Pressure regulator 400V incl. outdoor temp. sensor

ACCESSORIES

Item code	Description
CTS-OW-PT1000	Outdoor temperature sensor with spacer bracket

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