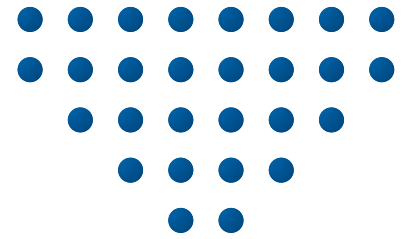


Controller

PRH



HVAC CONTROLS AND POWER

Constant Pressure Controller

PRH is a constant pressure controller primarily used for controlling fans by means of an analogue 0-10 V signal. It is typically used in domestic air extraction systems for bathrooms and cooker hoods.

The PRH controller could be installed in a stair well or similar location while the accompanying PTH pressure transducer is usually installed near by the most remote cooker hood.

With PRH, installation costs are low as the constant pressure controller is factory set for standard use. All that is required for the system to function when connected to mains voltage is that the pressure transducer and the fan control be connected to the constant pressure controller. The PRH controller is supplied complete with PTH pressure transducer, air tube and tube connector, all in the one package.

PRH FUNCTIONS

Single-button operation

All PRH functions are programmed by means of a single button. Just turn and press – it's as simple as that. Thanks to the back-lit LCD display with its two lines of 16 characters, you never get lost in the system.

Outside temperature setpoint compensation

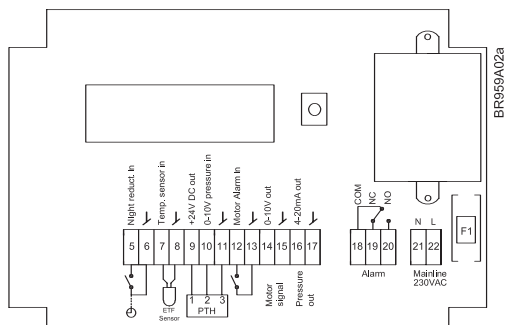
It is possible to connect an external temperature sensor, allowing the setpoint to be adjusted in relation to outside temperature. The controller can, for example, be set to reduce the setpoint by 25 Pa when outside temperature varies between +15°C and -10°C.

BMS integration

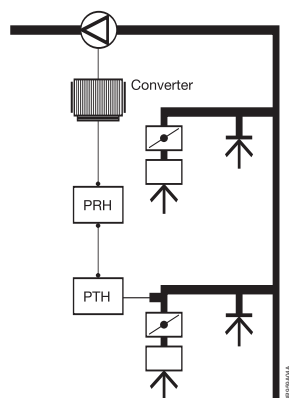
PRH facilitates BMS monitoring thanks to its built-in 4-20 mA output, indicating measured pressure. The output can, for example, be connected to a suitable LON module, allowing the pressure to be read via LonWorks communication.

Night setback

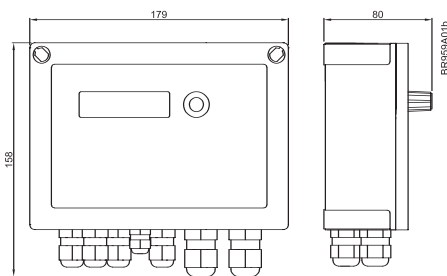
The required night setback is set by means of the turn/push button and is activated, for example, by connecting an external timer to the night setback input.



Connections



Application example



Dimensions

PRH FUNCTIONS

Built-in alarm

The controller continuously monitors whether pressure remains within preset alarm limits. Should pressure exceed the alarm limit, a pressure error message appears on the display. Should the motor cut out, a motor error message is displayed. Besides alarm situations, the built-in alarm relay is also activated if mains voltage is lacking.

Simple installation

The controller is very easily installed as the 24 V pressure transducer power supply is built into the unit and the factory settings are suitable for most applications.

TECHNICAL DATA

Supply voltage	230V AC $\pm 10\%$ 50Hz
Pressure input	0-10V DC
Pressure transducer ranges	0/150Pa, 0/300Pa, 0/500Pa, 0/1000Pa, 0/1600Pa
Pressure transducer power supply	24V DC, max 150mA
Control output	0-10V DC, max 1.5mA
Pressure output	4-20mA DC, < 500 Ω
Temperature range	-20/+50°C
Temperature sensor input	NTC (ETF-x33/44/55)
Temperature compensation	Day setpoint input 10-200Pa Max. at 0/+30°C Min. at -20/+0°C
Alarm relay	SPDT, 5A, 250V
Ambient temperature	-20/+50°C Operation 0/+50°C Display -50/+70°C Storage
Power consumption	20W
Enclosure	IP54
Dimensions (WxDxH)	179 x 158 x 80 mm
Weight	750 g

CE MARKING

EMC DIRECTIVE	LOW VOLTAGE DIRECTIVE
EN 61000-6-2 EN 61000-6-3	EN 60730-1

INSTALLATION

PRH installation

The PRH constant pressure controller should be mounted on a wall using screws in the corners of the unit. The surface on which the unit is mounted must be plane. The PTH pressure transducer should normally be installed near by the most remote cooker hood and connected to the ventilation duct using the accompanying air tube and tube connector. To obtain the best possible results, pressure must be measured where there is least risk of turbulence, i.e. in the centre of the ventilation duct and at a distance of at least twice the width of the duct from bends and branches.

Control signal cable installation

The transducer cable and any other control signal cables may be up to 50 m in length. Control signal cables should not be run parallel to mains carrying cables as voltage signals from these may affect the correct functioning of both the constant pressure controller and the pressure transducer.

PRODUCT PROGRAMME

TYPE	PRODUCT
PRH-1212	Constant pressure controller, 230V, 0-10V, IP54