

### BASIC DESCRIPTION

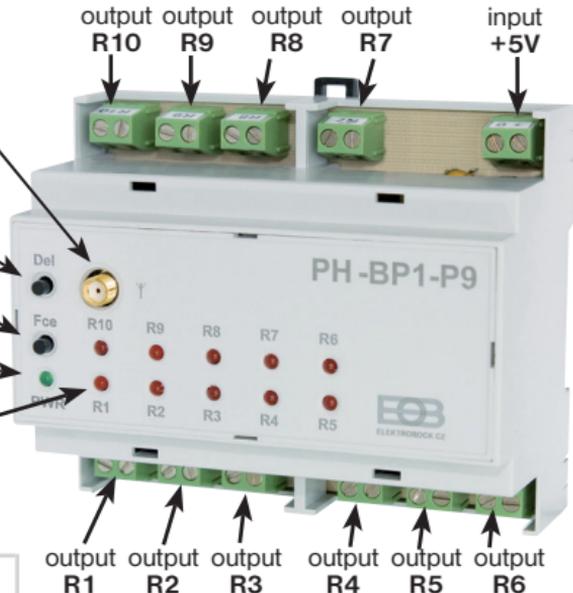
antenna with SMA connector at 433.92 MHz

Del button to delete codes

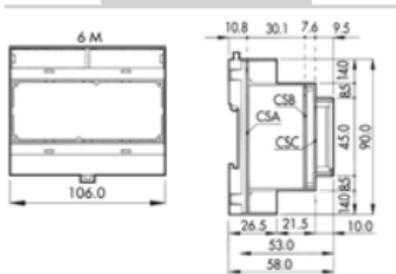
Fce button to choose channel R1-R9

PWR diode power supply indication

R1-R10 diodes status indication of output contacts R1-R10



### DIMENSIONS



output R1 output R2 output R3 output R4 output R5 output R6

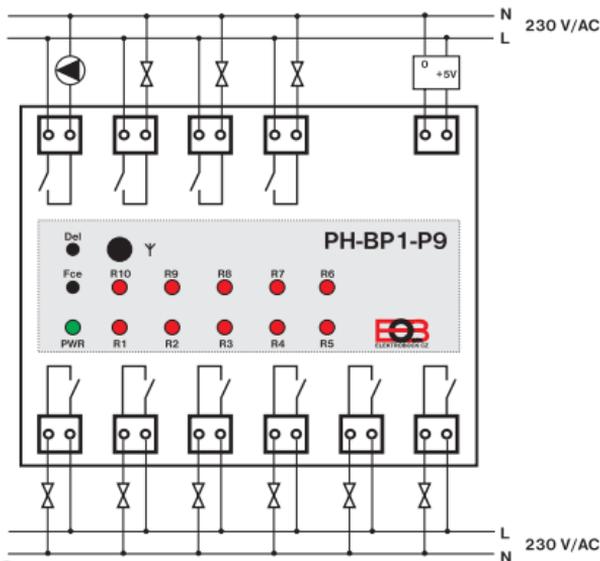
- R1-R10 output contacts are potential-free (voltage-free)
- Max. number of 10 thermo-valves can be connected to one output
- The receiver is able to receive signals from 9 transmitters (thermostats) at the most

## FUNCTION

The 9-channel receiver PH-BP1-P9 in connection with the PH-BP1-V transmitters is used for wireless control of individual rooms (zone control) in a floor heating system. There is no need to install any connecting cables between the receiver and transmitters (room thermostats)! The entire set can be included in the PocketHome® system and all zones controlled from a single point by means of a central unit and/or through a PC. In that case it is first necessary to activate the PH-BP1-V transmitter in the central unit (see the PH-BP1-V manual)! In objects which do not necessitate central control the assembly can also work autonomously without a central unit.

The main function of the receiver is controlling the distributor thermo-valves according to the requirements received from the corresponding transmitters. The receiver is able to receive signals from 9 transmitters at the most. If a heating requirement is sent from a certain zone, a relay switches at the pertinent output to control a thermo-valve. Simultaneously, the R10 pump relay is switched. If all thermo-valves are shut off, the pump switches off automatically.

## WIRING DIAGRAM



### Power supply +5V:

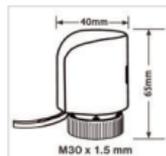
We recommend using

- 1) The AD05, +5V/2.5A/DC, for socket installation
- 2) AD05-DIN, +5V/2.5A/DC on the DIN-bar

### Thermo-valves:

Use thermo-valves of the NC type (closed without current).

Example: type **SEH30.23**



### Pump:

Connect according to the pump type in conformity with the manufacturer's instructions!

## INSTALLATION

### **! Caution:**

- 1) Install the receiver (indoors) as far as possible (at least 0.5 m) from big metal objects and from power lines to avoid interference of signal reception!
- 2) The installation must be done in a voltage-free state!
- 3) We recommend that the installation be done by a person adequately qualified in electrical engineering!
- 4) To prevent interference and affection of systems, every system is protected by its unique code factory-saved in the PH-CJ37 / PHCJ37 Plus central unit (or in the PH-BP1-V transmitter for autonomous systems)!
- 5) For correct communication of all elements in the PocketHome® system with the PH-CJ37 / PH-CJ37 Plus central unit, the code must be learned – every element added to the system ACTIVATED!!
- 6) As the entire system works at two-way radio frequency of 433.92 MHz, follow the installation and location instructions!

### **Receiver**

Adapted to installation on the DIN bar. The operating voltage is +5 VDC. Connect the adapter (AD05 for socket installation or AD05-DIN for DIN bar installation) to terminals 0 and +5V. Connect the adapter to 230 VAC.

### **External antenna**

To increase coverage, an external antenna of 433.92 MHz can be used. Disconnect the antenna supplied as standard and connect the external one to the SMA connector, and locate the antenna outside the wiring box.

### **Connection of thermo-valves**

The cable is connected to corresponding thermo-valve terminals marked R1 to R9. Observe the maximum number of thermo-valves connected to a single output. If more thermo-valves are connected to one output, the individual conductors must be protected against short circuit (or connected outside the receiver). The R1-R9 outputs are potential-free, and only the NC-type thermo-valves can be connected to them (closed without current)!

### **Pump connection**

The R10 output is also potential-free, intended for connecting the pump (see the diagram).

## PUTTING INTO OPERATION - ENCODING

Having installed and connected all thermo-valves and pumps, switch on the main circuit breaker – the green PWR diode lights up and the receiver is ready for further use.

### a) CLEARING MEMORY OF ALL CHANNELS

- Push simultaneously the **Fce** and **Del** buttons on the receiver and hold them for 5 s; the memory of all channels will be erased at once (the R1 to R9 diodes light up simultaneously).

### b) ENCODING CHANNEL 1

- Push once the **Fce** button on the receiver (for approx. 1.5 s), the R1 diode starts flashing = channel (circuit) 1 is in the LEARNING MODE
- Push the **Fce** button on the corresponding transmitter (thermostat PH-BP1-V); select the **UA:dr** function with the **-/+** button and confirm with the **i←** button.
- A unique number appears on the transmitter display
- Push again the **i←** button on the transmitter; thus a signal will be sent to the receiver
- The “**tE:St**” message appears on the transmitter display, connection will be tested between the transmitter and the R1 circuit selected on the receiver (the output contact R1 will be switched on/off several times); thus the code has been learned.

### c) ENCODING FURTHER CHANNELS

- Push repeatedly the **Fce** button on the receiver until the diode of the circuit to learn starts flashing (e.g., push the **Fce** button twice for circuit 2; push the **Fce** button seven times for zone 7, etc.) = the circuit selected is in the LEARNING MODE.
- Push the **Fce** button on the corresponding transmitter (thermostat PH-BP1-V); select the **UA:dr** function with the **-/+** button and confirm with the **i←** button.
- A unique number appears on the transmitter display
- Push again the **i←** button on the transmitter; thus a signal will be sent to the receiver
- The “**tE:St**” message appears on the transmitter display, connection will be tested between the transmitter and the R2-R9 circuit selected on the receiver (the output contact R2-R9 will be switched on/off several times); thus the code has been learned.

Unless a code is sent from the transmitter within 30 s, the receiver resumes the BASIC MODE.

#### d) DELETING CODE OF A SELECTED CHANNEL

- Use only in the case of incorrect encoding
- Push repeatedly the **Fce** button on the receiver until the diode starts flashing for the circuit the code of which you want to delete
- Push the **Del** button on the receiver to delete the code (the codes of other channels remain in the memory)!

#### DIODE INDICATION

GREEN **PWR** diode

LIT = indicates power supply of PH-BP1-P9

RED **R1-R10** diodes

LIT = indicates switching of the given circuit

FLASHING 1/1 s = LEARNING MODE

FLASHING 1/4 s = NO CODE LEARNED

UNLIT = indicates that the given circuit is off

#### UTILITY TABLE

OUTPUT CHANNEL	ROOM WITH PH-BP1-V (where a room thermostat is located)	DISTRIBUTOR output number
1		
2		
3		
4		
5		
6		
7		
8		
9		

In connection with up to 9 transmitters PH-BP1-V, PH-BP1-P9 means a system for complete control of floor heating.

### Advantages:

- In the PocketHome® system, the transmitter detects current room temperature, receives information on the required temperature from the central unit, and sends requirements to the receiver according to the temperature difference.
- By request, the receiver controls the distributor thermo-valves and the pump.
- The system is also able to work in autonomous mode without the central unit.
- The E-EPROM memory keeps the codes even in the case of power failure.

Technical parameters	
Power supply	5 V/DC, max. 900 mA (AD05, AD05-DIN)
Frequency	433.92 MHz
Range	300 m (in free area), 35 m (in built-up area)
Sensitivity	< -102 dBm
Number of output channels	9+1 (potential-free contacts)
Output relay	16 A
Protection class	IP20
Working temperature	0°C to +40°C

The guarantee period is 2 years. In the case of guarantee or post-guarantee service, send the product to the manufacturer's address.  
The manual and guarantee certificate are enclosed.

### DECLARATION OF CONFORMITY

We, ELEKTROBOCK CZ s.r.o., herewith declare that the product PH-BP1-P9 is in conformity with basic requirements and other corresponding provisions of the directive 1999/5/EC.  
Kurim 1.8.2009 on [www.elbock.cz](http://www.elbock.cz)



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