

## Programmable controller HMI User Guide



### Welcome

Thank you for buying the product! Your new controller will provide years of reliable service. Using this digital device will provide more uniform comfort in your home through the seasons. Please read this manual for complete instructions on installing and operating your device. If you require further assistance, please feel free to contact directly with Reventon Group Sp. z o.o.

### In the box you will find

- programmable controller HMI
- user guide
- external sensor NTC
- screws (2 pieces)

### Service

We offer the warranty of 24 months from the sales day. Please become acquainted with the Warranty Terms on the website <http://www.reventongroup.eu/en/complaints>.

### Technical data

Sensor: NTC 10k Accuracy:  $\pm 0.5^{\circ}\text{C}$   
 Temp. range: 5 - 35°C Power consumption: < 1.5 W  
 Timing error: <1%  
 Power supply: 95 ~ 240 VAC, 50 ~ 60 Hz  
 Maximal current load:
 

- fan: 5 A (inductive)
- valve actuator: 3 A

 Shell material: PC (fireproof)  
 Dimensions: 86 x 86 x 13,3 mm  
 Installation box: 86 x 86 mm lub  $\varnothing$  60 mm  
 Ambient temperature:  $t = 0 - 45^{\circ}\text{C}$ ,  $\varphi = 5-95\%$   
 Storage temperature:  $-5 - 55^{\circ}\text{C}$   
 RS485/Modbus RTU communication  
 Degree of protection (housing): IP 20  
 Degree of protection (external sensor): IP 68

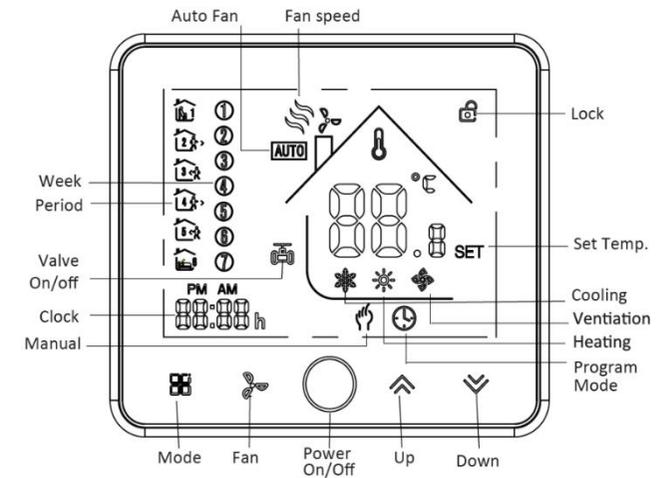
### About device

Programmable controller HMI is designed to on/off control the fans and valves in fan coil unit applications via comparison of the room temperature and setting temperature as reaching the aim of comfort and saving energy. It can work in heating, cooling or ventilation mode. The item is microprocessor based device with LCD display.

### Features of the controller

- Modern design similar as a cell phone
- Beautiful Frame CHROME creates elegant life
- Acrylic lenses to avoid the finger scratch
- Touch Button makes simple operation
- Large screen display with backlight is easy to read - even in the dark
- Six periods program schedules maximize comfort and economy
- One-touch temp control overrides program schedule
- Precise comfort control keeps temperature within 0.5°C of the level you set
- Internal and external sensor selectable is suitable for any place
- Data memory when device is off
- Easy installation
- 86 x 86 mm hidden box and european 60 mm round box is available

### Home screen quick reference



### Operation

#### 1. Setting the temperature

- In the mode of programmable set temperature could not be adjusted. If the user want to change, please reprogram.
- In the mode of manual, press  or  to set temperature. Manual mode is signalled by icon .

#### 2. Setting lock

Press and hold  and  for 5 sec. to lock the screen. The icon  will display on the screen. Press and hold  and  again for 5 sec. to unlock the screen.

#### 3. Setting the fan

Press  to select the fan speed AUTO (depending on temperature difference between set and current temperature, fan automatically adjusts the stage), HIGH, MED, LOW.

#### 4. Setting the system mode

Press  to change the system mode COOLING, HEATING and VENTILATION. In the mode of VENTILATION, the valve is off but the fan runs.

## 5. Manual and program mode

Press and hold (till icons and starts to flash) and subsequently:

- press to activate manual mode
- press to activate program mode
- press to define time, data and supply schedule with and

## 6. Set weekly schedule

Adjusting/setting the schedules can only be carried out when thermostat is in programable mode.

Press to define periods and set the temperature for weekdays ("1 2 3 4 5" will show along) as following:

minute → hour → temperature adjusting

Then do the same for weekend ("6" & "7" will show along the left of the screen) by using , and . An example of weekly schedule you can find in table below.

| Time display | WEEKDAY (MONDAY – FRIDAY)<br>(1 2 3 4 5 shows on screen) |       | WEEKEND (SATURDAY)<br>(6 shows on screen) |       | WEEKEND (SUNDAY)<br>(7 shows on screen) |       |
|--------------|--|-------|---|-------|---|-------|
|              | Time   | Temp. | Time                                      | Temp. | Time                                    | Temp. |
| Period 1     | 06:00  | 20°C  | 06:00                                     | 20°C  | 06:00                                   | 20°C  |
| Period 2     | 08:00  | 15°C  | 08:00                                     | 20°C  | 08:00                                   | 20°C  |
| Period 3     | 11:30  | 15°C  | 11:30                                     | 20°C  | 11:30                                   | 20°C  |
| Period 4     | 13:30  | 15°C  | 13:30                                     | 20°C  | 13:30                                   | 20°C  |
| Period 5     | 17:00  | 22°C  | 17:00                                     | 20°C  | 17:00                                   | 20°C  |
| Period 6     | 22:00  | 15°C  | 22:00                                     | 15°C  | 22:00                                   | 15°C  |

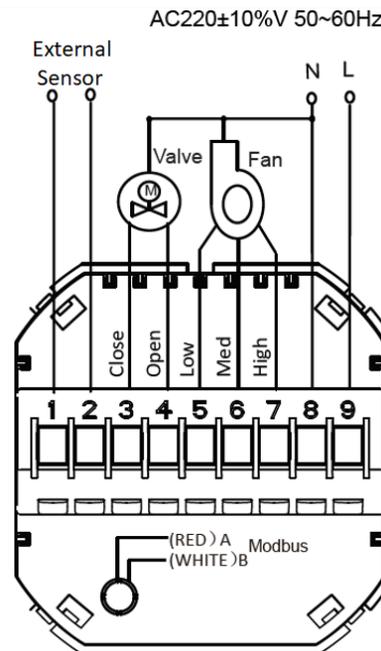
## 7. Setting functions and options

During power off, press and hold and at the same time for 5 sec. to go to system functions. Then press to change the different items. Press or to set the relative values according to the table.

| No. | Function          | Settings & Options  | Default |
|-----|-------------------|---|---------|
| 1   | Temp. calibration | -9 - 9°C  | -2°C*   |
| 2   | Fan control       | 00: When room temp. reaches the setpoint, the fan will turn off<br>01: When room temp. reaches the setpoint, the fan will turn to the set speed | 00      |
| 3   | Lock              | 00: All buttons are locked except POWER<br>01: All buttons are locked   | 01      |
| 4   | Heating / Cooling | 00: Cooling only<br>01: Heating / Cooling<br>02: Heating only   | 01      |
| 5   | Min. set. temp.   | 5 - 15°C  | 5°C     |
| 6   | Max. set. temp.   | 5 - 35°C  | 35°C    |
| 7   | 12 / 24 Clock     | 00: 12 h; 01: 24 h  | 01      |
| 8   | Display mode      | 00: Display both set temp. and room temp.<br>01: Display set temp. only   | 00      |
| 9   | Deadzone temp.    | 1 - 5°C   | 1°C     |
| A   | Modbus IP address | 0X00-0XFF   | 01      |
| B   | baudrate          | 01: 9600; 02: 19200; 03: 38400;<br>04: 56000; 05: 115200  | 1       |

\* when you using external sensor change the value to 0°C

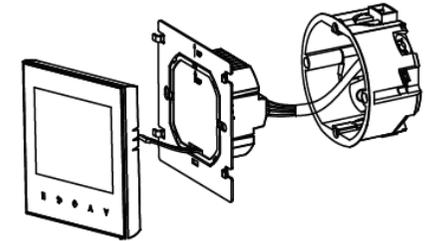
## Wiring diagram



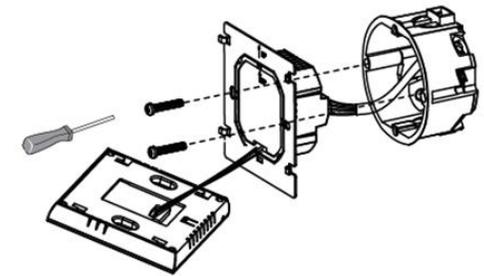
## Installing

This product is suitable for box 86 x 86 mm or Ø 60 mm.

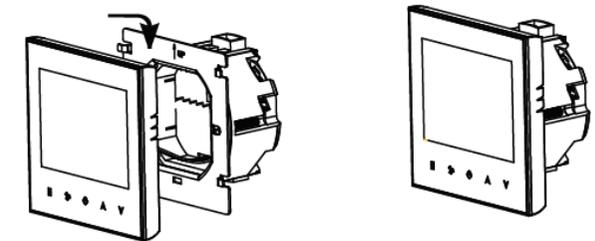
1. Connect the wire of power and other equipment into the terminals.



2. Fix the wall plate into the wall box by a screwdriver.



3. Connect the LCD board into the wall plate.



**WARNING:** Please arrange the professional technician to install this product according to installation drawing and instruction.

**RISK OF ELECTRICAL SHOCK:** Disconnect power supply before making electrical connection. Contact with components carrying hazardous voltage can cause electrical shock and may result in severe personal injury or death.