reventon
INDUSTRIAL SOLUTIONS

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

Technical data

Sensor: NTC 10k Accuracy: ± 0.5°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)
- L1&L2: 5A(inductive)

Shell material: PC (fireproof)
Dimensions: 86 x 86 x 13,3 mm
Installation box: 86 x 86 mm lub Ø 60 mm
Ambient temperature: t = 0 - 45°C, φ = 5-95%
Storage temperature: -5 - 55°C
RS485/Modbus RTU communication
Degree of protection (housing): IP 20
Degree of protection (external sensor): IP 68

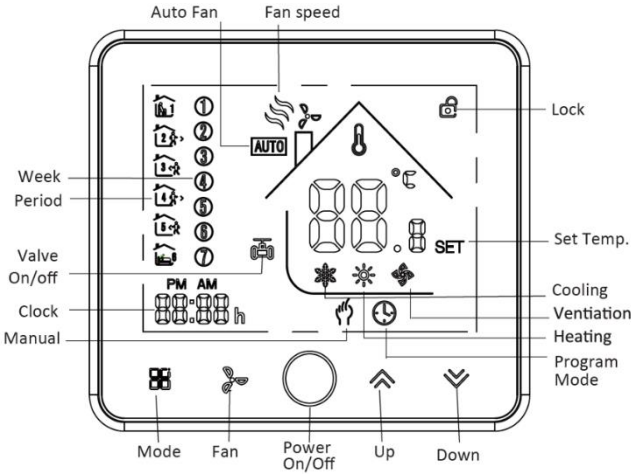
About device

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

a. In the mode of programmable set temperature could not be adjusted. If the user want to change, please reprogram.

b. In the mode of manual, press ⌃⌃ or ⌄⌄ to set temperature. Manual mode is signalised 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 in programable mode.

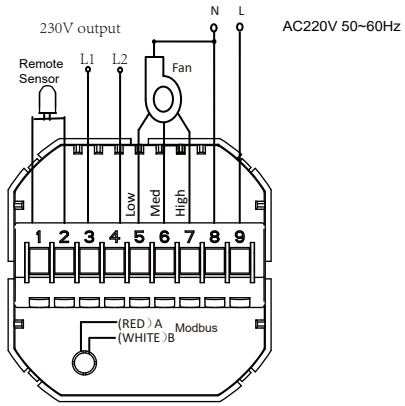
Press ⊞ to define periods and set the temperature for weekdays (“1 2 3 4 5” will show along) as following:

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) (1 2 3 4 5 shows on screen)		WEEKEND (SATURDAY) (6 shows on screen)		WEEKEND (SUNDAY) (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

Wiring diagram



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 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 01: All buttons are locked	01
4	Heating / Cooling	00: Heating only 01: Heating / Ventilation	00
5	Min. set. temp.	5 - 15°C	5°C
6	Max. set. temp.	15 - 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. 01: Display set temp. only	00
9	Tset - Tin temp. range	0-10°C	3°C
10	Modbus IP address	1-255	1
11	baudrate	01: 9600; 02: 19200; 03: 38400; 04: 56000; 05: 115200	1
12	fan delay off time	0-60S	45
13	Heaters control	00: Work logic 1 01: Work logic 2 02: Work logic 3	00
14	Version number		601

Work logic 1:

- if Tset - Tin <= 3°C, turn on L1 output (230V)
- if Tset - Tin > 3°C, turn on L1 and L2 outputs (230V)

The difference temperature which wrote above (3°C) would be settable, user can set from parameter No. 9.

Work logic 2:

- if Tset ＞ Tin , only L1 on (L2 off)

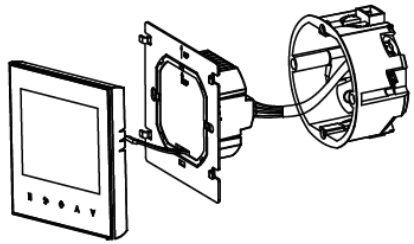
Work logic 3:

- if Tset ＞ Tin , both L1 and L2 on

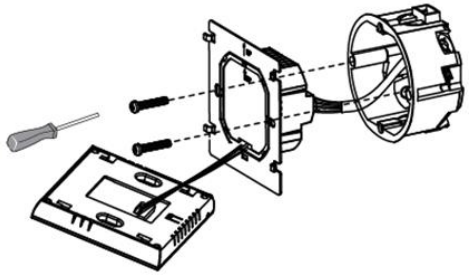
Installing

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

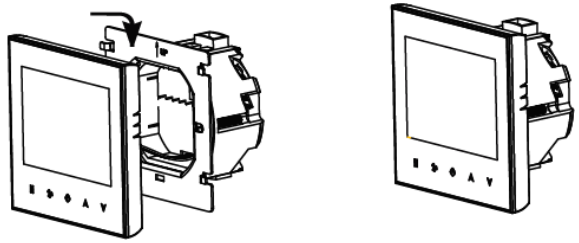
1. Connect the wire of power and other equipment into the terminals.



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.