konveka

ROOM THERMOSTAT

Konveka FC280

Installation and user guide



FAN COIL · FLOOR HEATING · 2/4-PIPE · RS485 · 220 VAC

PRODUCT OVERVIEW

Konveka FC280 is a touch thermostat. It detects the difference between the room temperature and the set temperature and, by controlling the fan and the on/off valve, keeps the room at a comfortable and constant temperature.

IT CAN CONTROL

- 2-pipe or 4-pipe fan coils
- 2-wire or 3-wire motorized valves
- Water floor heating
- Fan coil + water floor heating

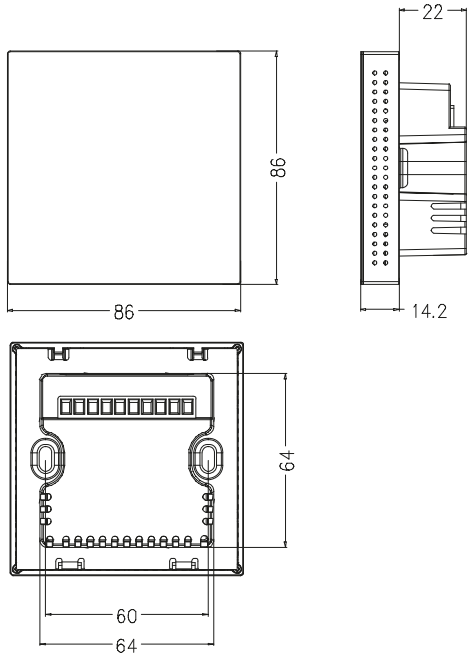
FEATURES

- High strength tempered glass lens, elegant design
- Capacitive touch buttons
- Temperature precision 0.1 °C
- Control of 2-wire or 3-wire motorized valves
- Room temperature display, temperature offset, adjustable minimum and maximum set temperature limits
- Child lock
- Real time setting and display, 6 days of power failure memory
- For fan coil, water floor heating or both; frost protection function
- Power failure memory and storage function
- Fan and valve linkage function
- RS485 connection for centralized control

TECHNICAL SPECIFICATIONS

Rated voltage	220 VAC ±10 %, 50 Hz
Load current	< 3 A
Working temperature	0 to +50 °C
Dimensions	86 × 86 × 14.2 mm
Temperature precision	0.1 °C
Set temperature range	16-30 °C (factory default, parameters 6 and 7)
Buttons	Capacitive touch buttons
Front panel	Tempered glass
Communication	RS485, Modbus address 1-247
Mounting	86 type wiring box, M4 screws

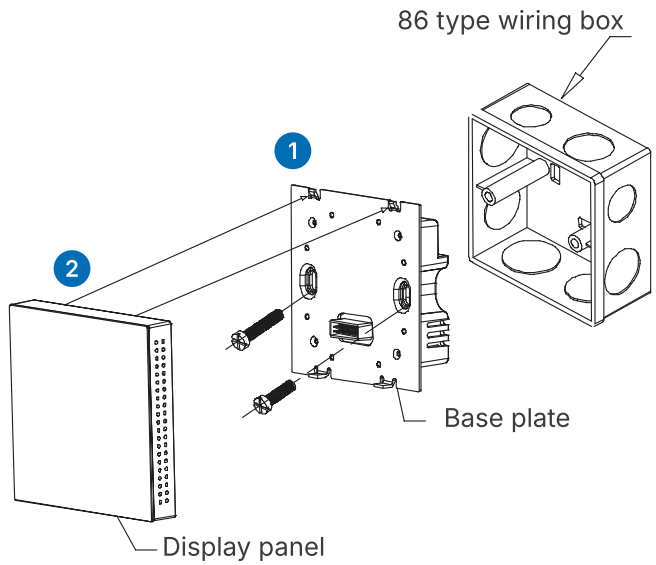
DIMENSIONS



All dimensions in mm.

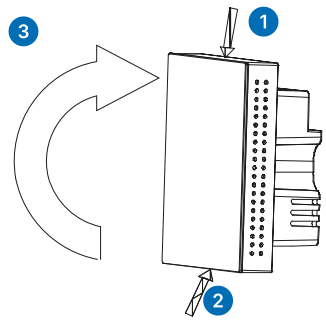
INSTALLATION

Warning! Before installation or maintenance make sure the power supply is disconnected. Do not press the LCD panel too hard.



1. Fix the thermostat base plate to the 86 type wiring box through the two screw holes with M4 screws.
2. Hang the top groove of the display panel on the hook of the base plate; the magnet at the bottom of the display panel attaches it to the base plate.

Disassembling

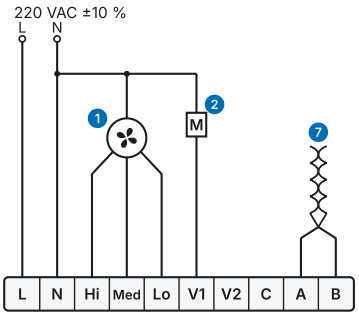


1. Press on the top of the thermostat with the index, middle and ring fingers.
2. With the thumb, pull the thermostat in the upward direction.
3. Pull the thermostat in the direction shown; the display panel and the base plate separate easily.

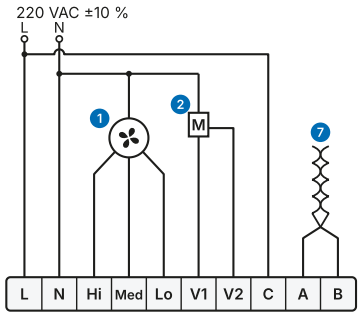
Installation notes

- The thermostat must be installed by qualified technical personnel. Make sure the power supply is cut off before installation.
- Install the thermostat in a place with good air circulation at room temperature, away from heat sources, windows and doors, and avoid direct sunlight.
- Do not punch holes in the thermostat. Do not hit the LCD screen with hard objects and do not press it with strong force, to avoid breaking it.
- Strictly follow the wiring diagram, otherwise the thermostat may be damaged.

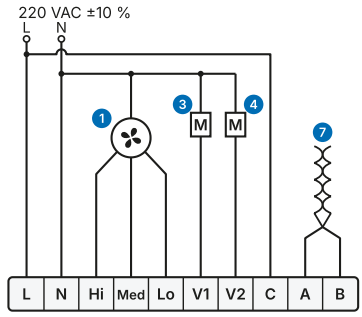
WIRING



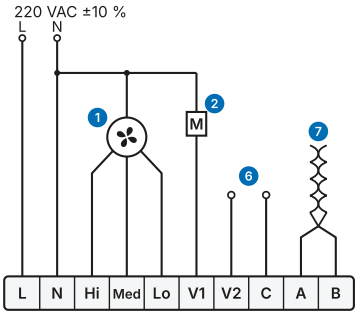
1 2-pipe, 2-wire motorized valve



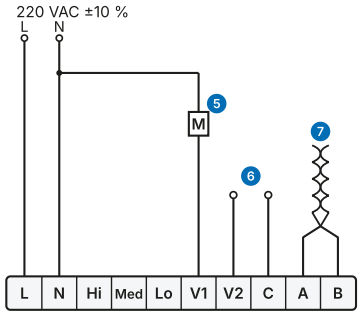
2 2-pipe, 3-wire motorized valve



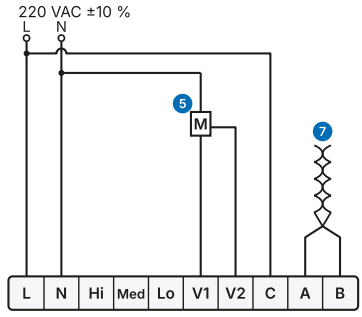
3 4-pipe, 2-wire motorized valves



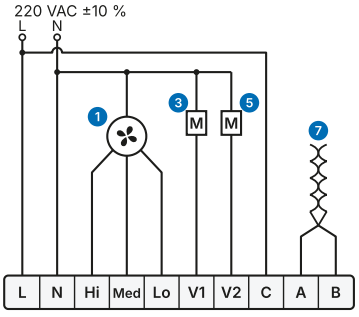
4 2-pipe, 2-wire motorized valve + dry contact output



5 Floor heating, 2-wire motorized valve



6 Floor heating, 3-wire motorized valve



7 Fan coil + floor heating, 2-wire motorized valves

Legend

1. Fan (High, Med, Low speed)
2. Cool/heat valve
3. Cool valve
4. Heat valve
5. Floor heating valve
6. Dry contact output
7. RS485 twisted shielded pair

Terminals

L, N - power supply 220 VAC ±10 %

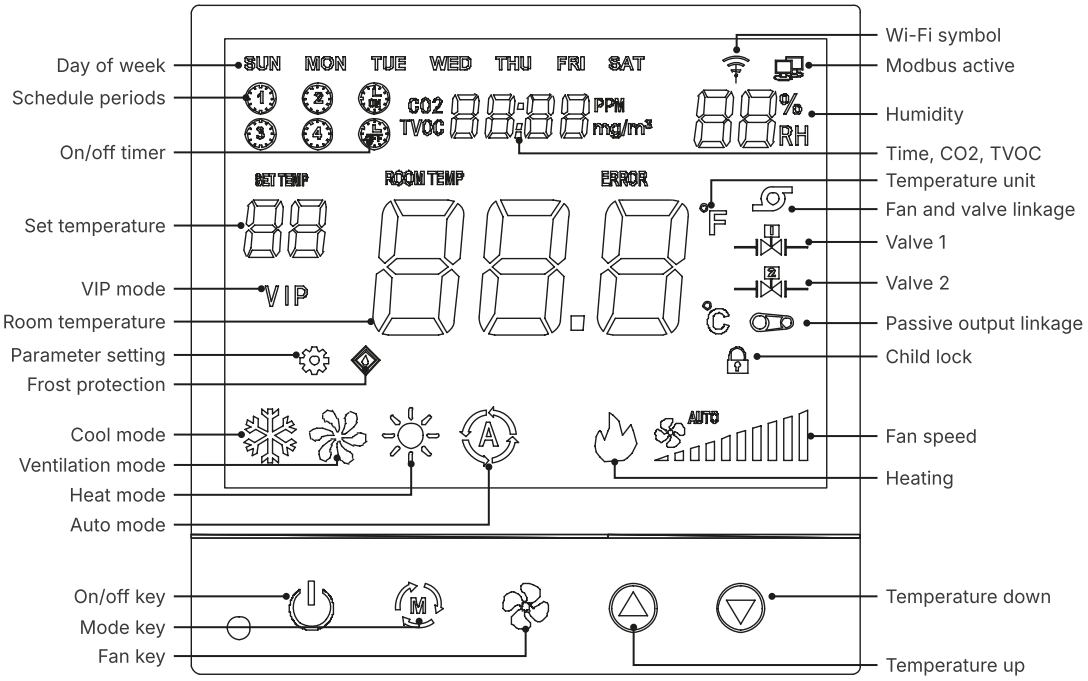
Hi, Med, Lo - fan speed outputs

V1, V2 - valve outputs (3-wire valve: V1 on, V2 off)

C - common terminal (see diagrams)

A, B - RS485

THERMOSTAT CONTROL



1 Power key

Press ⏻ to switch the thermostat on or off. When it is on, the fan coil runs and the motorized valve opens or closes according to the temperature. When it is off, the fan coil and the motorized valve stop.

2 Mode key

Press ⟲ to switch between four operation modes: cool, ventilation, heat and auto. In cooling mode the motorized valve opens if the room temperature is higher than the set temperature, otherwise it closes. In heating mode the valve opens if the room temperature is lower than the set temperature, otherwise it closes.

3 Fan key

Press ✣ to change the fan speed: Low - Med - High - Auto - Low.

4 Temperature up and down keys

Press △ to increase or ▽ to decrease the set temperature by 1 °C (factory default setting range 16-30 °C).

5 Operation mode

The fan coil type (2-pipe or 4-pipe) is set with parameter 8. Press ; the operation modes change in this order:

2-pipe	Cool → Ventilation → Heat → ↻
4-pipe	Cool → Ventilation → Heat → Auto → ↻
Floor heating	Heat — Heat only, no fan speed
Fan coil + floor heating	Cool → Ventilation → Floor heating → ↻

In auto mode (4-pipe only) the thermostat switches between cooling and heating automatically according to the difference between the room temperature and the set point. The floor heating and fan coil + floor heating types are also set with parameter 8.

6 Ventilation mode

In ventilation mode the valve stays closed and only the fan runs.

7 Valve and fan linkage

- By factory default there is no linkage: when the thermostat is on, the fan runs at the set speed whether the valve is open or not.
- With parameter 10 the linkage can be switched on: the fan runs at the set speed while the valve is open; when the valve closes, the fan is forced to stop too.

8 Passive linkage

Disabled by factory default (parameter 11). When the thermostat is on and passive linkage is enabled, the valve opens and external equipment (e.g. an air conditioner) is also switched on. When the thermostat is off, the valve and the external equipment switch off at the same time. Effective only for 2-pipe fan coil and water floor heating.

9 Frost protection

When the thermostat is off and the room temperature is below 5 °C, the valve opens automatically; when the room temperature rises above 8 °C, the valve closes automatically and frost protection ends. Set with parameter 9.

10 Automatic address assignment

Hold and for 3 seconds and enter the password "153647" (press after each digit) to start automatic address assignment. While entering the password, press to exit; without any action the thermostat exits automatically after 30 seconds. Once in the address assignment state, wait a few minutes; the thermostat exits automatically when the assignment is complete.

11 Wi-Fi connection

Hold ✣ for 3 seconds: the buzzer sounds long and the Wi-Fi configuration connection status is reset.

12 Parameter setting

Hold M for 3 seconds, enter the first digit 9, press M, enter the second digit 8, press M, enter the third digit 7 to open the parameter setting. The two left digits show the parameter number and the three right digits the parameter value. Press M to change the parameter number and △ or ▽ to set the value. Press ✣ to exit; without any action the thermostat exits automatically after 30 seconds.

No.	Name	Setting	Default
1	Modbus address	1-247	1
2	Temperature offset	-10 to 10 °C	0
3	Humidity offset	-20 to 20 % RH	0
4	Key lock	Locked keys by value: 0 all locked 1 ⏻ 2 M 3 M+⏻ 8 ✣ 9 ✣+⏻ 10 ✣+M 11 ✣+M+⏻ 16 △+▽ 17 △+▽+⏻ 18 △+▽+M 19 △+▽+M+⏻ 24 △+▽+✣ 25 △+▽+✣+⏻ 26 △+▽+✣+M 27 △+▽+✣+M+⏻	0
5	Power-on restart status	0 - stays off after power-on restart 1 - returns to the last state after a power failure 2 - forced on after power-on restart	0
6	Set temperature upper limit	20-40 °C (68-99 °F)	30
7	Set temperature lower limit	5-20 °C (41-68 °F)	16
8	Fan coil type	2 - 2-pipe 3 - water floor heating 4 - 4-pipe 5 - fan coil + water floor heating	2
9	Frost protection	0 - off, 1 - on	0
10	Valve and fan linkage	0 - off, 1 - on	0
11	Passive linkage	0 - off, 1 - on	0
12	Temperature unit	0 - °C, 1 - °F	0
13	On/off timer	0 - off, 1 - on	0
14	VIP	0 - off, 1 - on	0
15	Screensaver	0 - off 1 - humidity display 2 - full screen brightness decreases 3 - blank screen	1
16	Firmware version	Displays the current firmware version	
17	Hour setting	0-23	
18	Minute setting	0-59	
19	Day of week setting	Monday-Sunday	

WARRANTY

The thermostat comes with a **24-month warranty**. If the thermostat breaks down either during the warranty period or afterwards, or if you have any uncertainties, please contact us:

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