

Datasheet

Subject to technical alteration
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Application

Modern design flush mounting fan coil room thermostat, used for individual control of temperature in commercial, industrial and residential buildings. It is tailored for two-pipe and four-pipe fan coil units with two-wire electric valves. The device combines digital technology with a large LCD touch screen display, which enables the single room controller to be used intuitively. Integrated 7 day time clock with 4 time programs.

Security Advice – Caution

The installation and assembly of electrical equipment must be performed by a skilled electrician.



The modules must not be used in any relation with equipment that threatens, directly or indirectly, human health or life or with applications that can result in danger for people, animals or assets.

Before connecting devices with electrical power supply the installation must be isolated from the power source!

Notes on Disposal

The product is considered electrical and electronic waste and must be disposed accordingly. Special treatment for specific components may be legally binding or ecologically sensible. The local and current applicable legislation must be followed.

Electrical Connection

The devices are powered by mains voltage (normally between 90 and 265 V). Please follow the technical data instructions on how to correctly power each device.

With regards to passive sensors with 2-wire conductor versions, the wire resistance of the supply wire has to be considered. If necessary the wire resistance should be compensated by the heat gain from the electronics. Due to self-heating, the wire current affects the measurement accuracy. So it should not exceed 1 mA.

The ambient temperature of the transducer electronics should be kept constant.

The transducers must be operated at a constant supply voltage ($\pm 0,2$ V). When turning the supply voltage on/off, onsite power surges must be avoided.

When using lengthy wiring (depending on the cross section used) the supply may be compromised due to a voltage drop at the common GND-wire (caused by the voltage current and the line resistance). In this case, 2 GND-wires must be wired to the sensor - one for supply voltage and one for the measuring current.

Remarks to Room Sensors

Location and Accuracy of Room Sensors

The room sensor should be mounted in a suitable location for measuring accurate room temperature. The accuracy of the temperature measurement also depends directly on the temperature dynamics of the wall. It is important, that the back plate is completely flush to the wall so that the circulation of air occurs through the vents in the cover. Otherwise, deviations in temperature measurement will occur due to uncontrolled air circulation. Also the temperature sensor should not be covered by furniture or similar devices. Mounting next to doors (due to draught) or windows (due to colder outside wall) should be avoided.

The temperature dynamics of the wall will influence the temperature measurement. Various wall types (brick, concrete, dividing and hollow brickwork) all have different behaviours with regards to thermal variations.

Surface and Flush Mounting

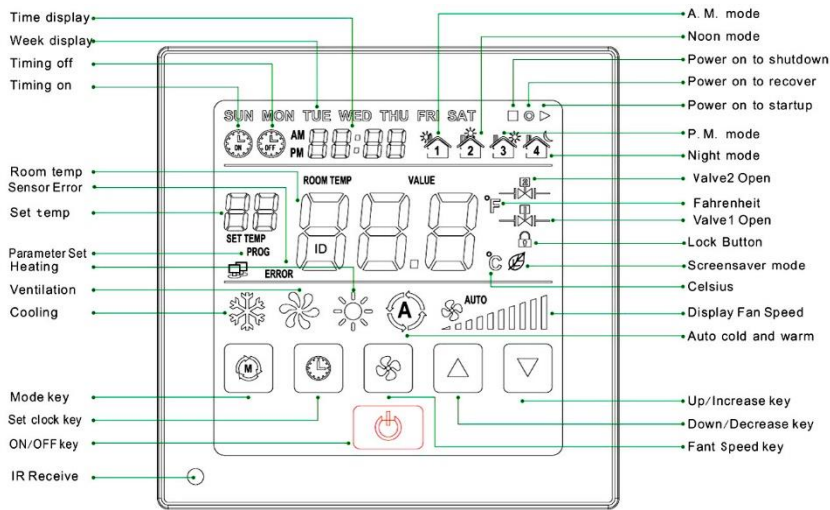
The temperature dynamics of the wall influence the measurement result of the sensor. Various wall types (brick, concrete, dividing and hollow brickwork) have different behaviours with regard to thermal variations. A solid concrete wall responds to thermal fluctuations within a room in a much slower way than a light-weight structure wall. Room temperature sensors installed in flush boxes have a longer response time to thermal variations. In extreme cases they detect the radiant heat of the wall even if the air temperature in the room is lower for example. The quicker the dynamics of the wall (temperature acceptance of the wall) or the longer the selected inquiry interval of the temperature sensor, the smaller the deviations limited in time are.

Technical Data

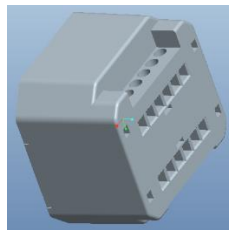
Power supply:	90..265 V ~ 50/60 HZ
Power consumption:	<0,9 W
Temperature sensor:	NTC 10 K
Set point adjustment:	+1..+50 °C (default +16..+30 °C)
Accuracy:	± 1 °C
Display:	LCD touch screen
Material:	ABS, scratch-resistant acrylic
Output:	Heating/cooling: Relay 250 V ~ / 30 V =, 5 A Fan stage: Relay 250 V ~ / 30 V =, 5 A

Cable entry:	from the rear
Clamps:	Terminal screw max 1,5 mm ²
Protection:	IP20 according to EN 60529
Working condition:	-10..50 °C, 5..95% rF non cond.
Storage temperature:	-25..65 °C
Dimensions (LxWxD):	86x86x15,5 mm
Weight:	160 g

Display

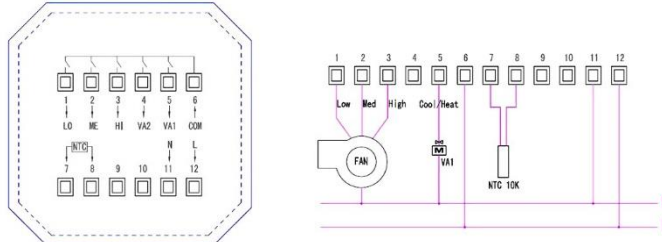


Terminal Connection Plan

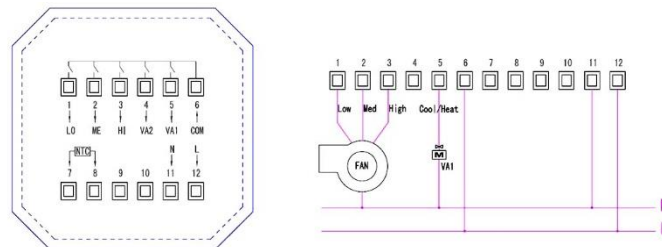


ATTENTION: 90..265 V

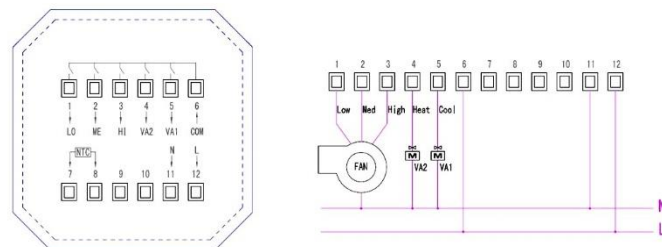
LCF Touch Standard – Auto mode wiring diagram for 2-pipe fan coil:



LCF Touch Standard – Manual mode wiring diagram for 2-pipe fan coil:



LCF Touch Standard –wiring diagram for 4-pipe fan coil:



Fan stage/Valve control selection:

Under Fan operation “INDEPENDENT”, the fan will always operate according to the selected or automatically assigned fan stage; under Fan operation “DEPENDENT”, the fan will be tuned off in case the valve is closed. If the valve is open, the fan will operate according to the selected or automatically assigned fan stage.

By using parameter No. 16, the “INDEPENDENT” or “DEPENDENT” mode can be selected.

Key lock selection (No. 2), power failure selection (No. 3), screen save mode (No. 6) can be set by Parameters.

Also in parameter No. 7 you are able to read the LCD display status.

Sensor failure alarm:

If the temperature sensor is out of range, the thermostat will switch off the fan and close the valve, error code “E01” will be shown.

Language selection

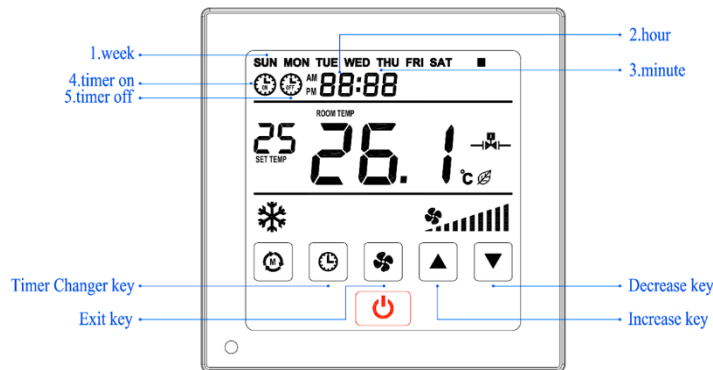
You can change the display language with parameter No. 11.

Set time format

With parameter No. 8 the time format to 12h or 24h can be defined.

Time setting

Press the “🕒” button, to set the time. The changing parameter is blinking, press “▲” or “▼”-button to set:
 Order: Week→hour→minute→Timer on→Timer off→week→hour→...



Set timer

Press the “🕒”-button, the parameter to be changed is flashing, the timer will be set on or off.

Finish: Timer on, LCD display

Finish: Timer off, LCD display

To delete timer on/off, press the “🕒” button, the parameter to be changed is flashing. Then select “🕒 ON” or “🕒 OFF”, set the time like the following image to leave the timer mode: “AM - - : - - ”.
 The system saves the user settings to set the timer on / off automatically.

Selection timer on / off

The timer on/off has 2 options to be selected: single action or rule.

To set, please look up parameter No. 9 in the parameter table.

7 days 4 periods programmable timer

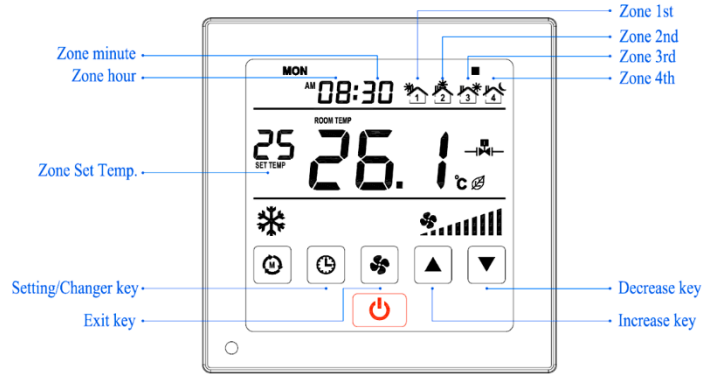
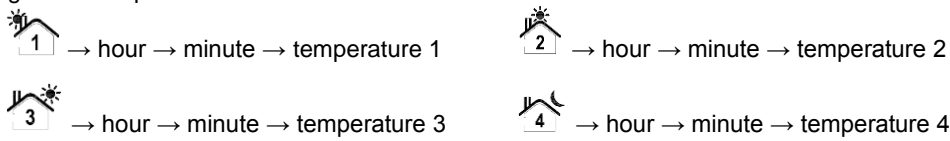
One day is split into 4 periods. The user can set temperature for every period individually.

To set the time zones, please look up parameter No. 10 in the parameter table.

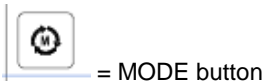
If the user has set a set temperature during operation, the current period runs with the last set temperature. The next period will adopt the changed settings.

Please follow the instructions below:

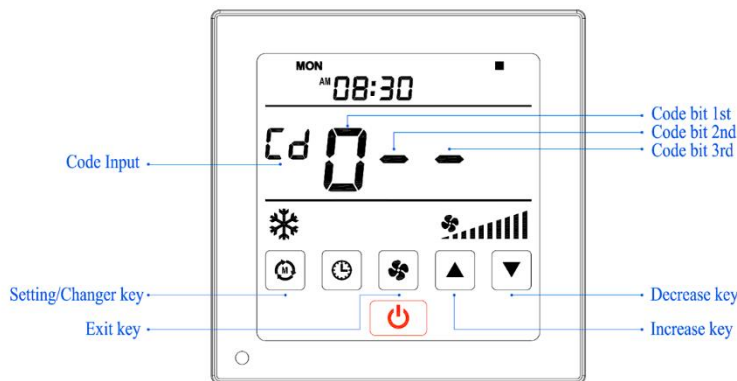
Press the “🕒” button for more than 5 seconds, the parameter to be changed is flashing. Now you can set the 4 programmable periods.



Parameters:

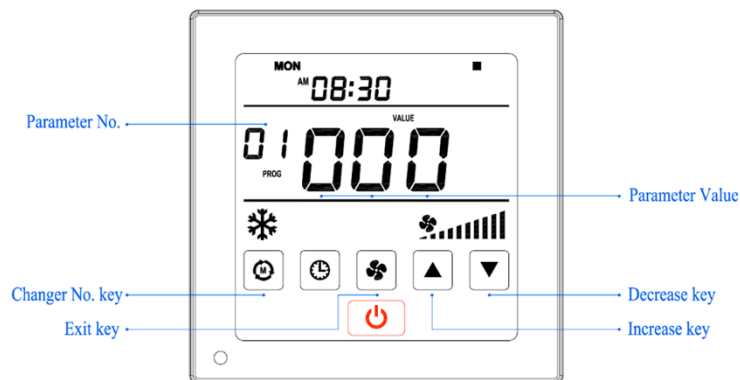


In order to change the parameters, please press the MODE button for more than 5 seconds. Please follow figure below. If you are asked to enter the password, use “▲” or “▼” key to enter each digit of the password. Press MODE button to switch to the next digit.



The standard password is 260.

If the password has been entered correctly, you will see the parameter settings screen as below shown:



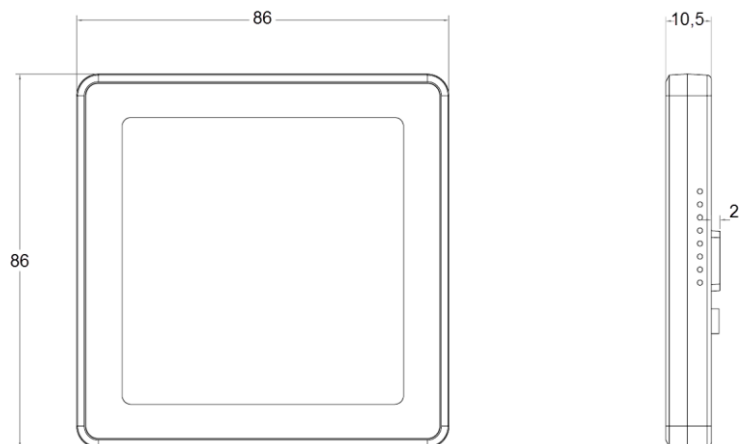
Press the MODE button to select the parameter you would like to change. Then use “▲” or “▼” to change the parameter. Please refer to the parameter table on the following page 7:

No.	Name of parameter	Parameter definition	Factory default
1	Temperature offset:	Range -20..+20 K	0
2	Key-lock:	0- unlocked 1- lock on / off 2- lock mode 3- lock clock 4- lock fan speed 5- lock temperature setting 6- lock all keystrokes	0
3	Power failure:	0- stay power off 1- restore last status before power failure 2- turn power on after power failure	0
4	Upper temperature limit:	Range: +1..+50 °C / +34..99 °F	30 °C / 86 °F
5	Lower temperature limit:	Range: +1..+50 °C / +34..99 °F	16 °C / 60 °F
6	LCD backlight delay:	10..150 seconds	20 seconds
7	Screensaver mode:	0- display on / off 1- room temperature and on / off 2- display clock, room temperature and on / off 3- display all status	0
8	Time format:	12- 12 hours 24- 24 hours	12
9	Timer on / off:	0- once 1- loop	0
10	7 days, 4 periods programmable:	0- forbidden 1- allowed	0
11	Display language:	1- English	1
12	Temperature format:	0- °C 1- °F	0
13	Selection Fan Coil:	2- 2-pipe Fan Coil 4- 4-pipe Fan Coil	2
14	Auto cooling & heating modus:	0- deactivated 1- activated	0
15	Fan modus:	0- deactivated 1- activated	1
16	Selection fan on / off:	0- independent 1- dependent	0
17	Temporarily not defined		0

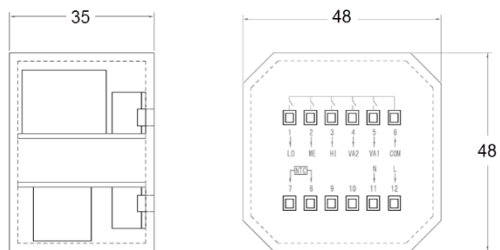
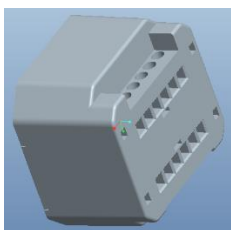
All parameters are stored within an EEPROM (electrically erasable programmable ROM), ensuring no data loss if the Thermostat is powered off.

Dimensions (mm)

Display unit:



Base plate:



Optional Accessories

Screws Ø3x18 WA

2 pieces