

DATA SHEET

NXT400 SERIES TOUCH PANEL ROOM THERMOSTAT

Product Description

The **NXT400 Series** of Touch panel/button Segment LED display Room Thermostats are designed to control FCU fans and valves in air conditioner applications by comparing the room temperature with the setting temperature with the objective of providing comfort and saving energy.

The **NXT400 Series** are micro-processor based thermostats with LCD display, factory programmed and field configurable. Available in multi choice of colors including Full White (WH), Black & White (BW) and Full Black (BK).

These thermostats can also be made available in any RAL color of your choice subject to minimum order quantity. Please contact us for further information.

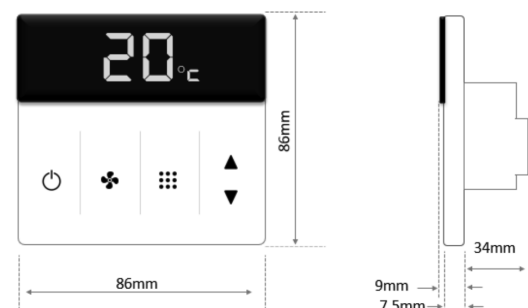
Technical Information

Sensor	NTC 10K ± 1%
Temperature Range	5 - 35°C
Timing error	<1%
Current Load	3A
Shell Material	PC (Fire proof)
Dimension	86 X 86 X 50mm
Installation Box	86 * 86mm or European 60mm
Ambient Temperature & Humidity	0 ~ 45°C, 5 ~ 95% RH (Non condensing)
Storage Temperature	-10° ~ 60°C
Accuracy	±0.5°C
Power Consumption	<1.5W
Power Supply	110 ~ 240V, 50 ~ 60Hz 24V AC, 50 ~ 60Hz (depends on model)

Key Features

- Modern and aesthetic design
- Scratch resistant acrylic lenses
- Simple touch button operation
- White color Segment LED display makes it easy to read even in zero light
- Precise comfort control keeps temperature within 0.5°C of the set level
- Option to select external sensor
- Restore the last setting after power cycle
- Optional models - Modbus RTU, WI-FI, keycard function, external sensor and door contact
- Conforming to BS 3 x 3 inch back box size

Dimensions



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For further information

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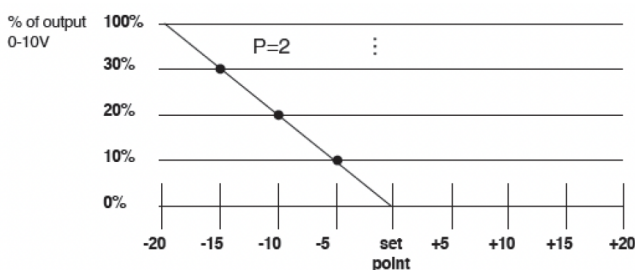
TOUCH SCREEN ROOM THERMOSTAT

Definition of P Valve

The proportional band is the amount of change required by the ambient temperature for the output to go from 0 to 100%. It can be adjusted from 1~10. Factory default is 2. The P value is bigger, the change of valve output will be bigger; The P value is smaller, the change of valve output will be smaller. For example, when P=2, the temperature difference between ambient temperature and set point is 5 C the valve to open about 10% when P=4, the temperature difference between ambient temperature and set point is 5C, the valve will open at 20%.

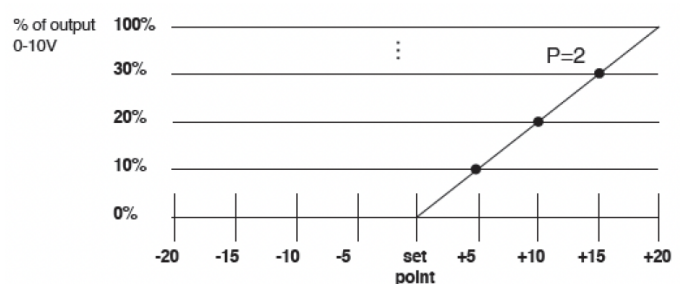
Cool Mode (P-band-1)

When the ambient temperature is above the set point the output is between 0~100%.



Heat Mode (P-band-2)

When the ambient temperature is below the set point the output is between 0~100%.



Modbus Protocol

This protocol takes standard Modbus as a reference, mainly for use for communication between thermostat and computer (PC). This protocol doesn't describe Modbus. For information about Modbus, please refer to the relevant standard documents.

Communication Setting

No	Parameter	Protocol provision
1	Operating mode	RS-485, master-slave; thermostat is the slave
2	Physical interface	A(+), B(-) two wire system
3	Baud rate	9600 bps (standard)
4	Byte Format	9 format (8 data bits+1 stop bit)
5	Modbus	RTU
6	Transmission mode	RTU Format (Please refer to the standard Modbus)
7	Thermostat address	1-255; (0 is broadcast address)
8	Command code	03, 06 and 16 (03 -read thermostat, 06-set thermostat, 16 set thermostat for several bytes)
9	CRC check code	CRC-16(Please refer to standard Modbus)
10	CRC Verification code	CRC-16(Please refer to standard Modbus)

Definition of I Valve

This feature allows you to set the integral action time for the integral to run from 0 to 100%. The value required depends on the reaction time

of the control loop. If the time is chosen too short, the control loop will become unstable and oscillate. If the time is chosen too long, the control

loop will become sluggish, It can be adjusted from 1S -60S.

Factory Default is 40S

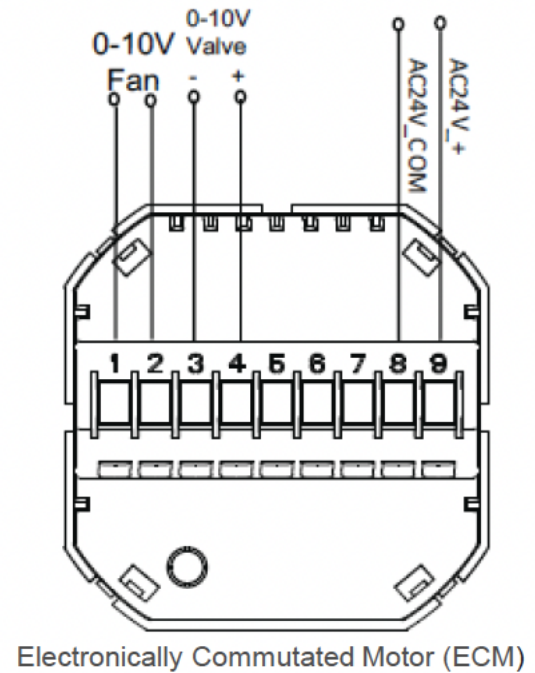
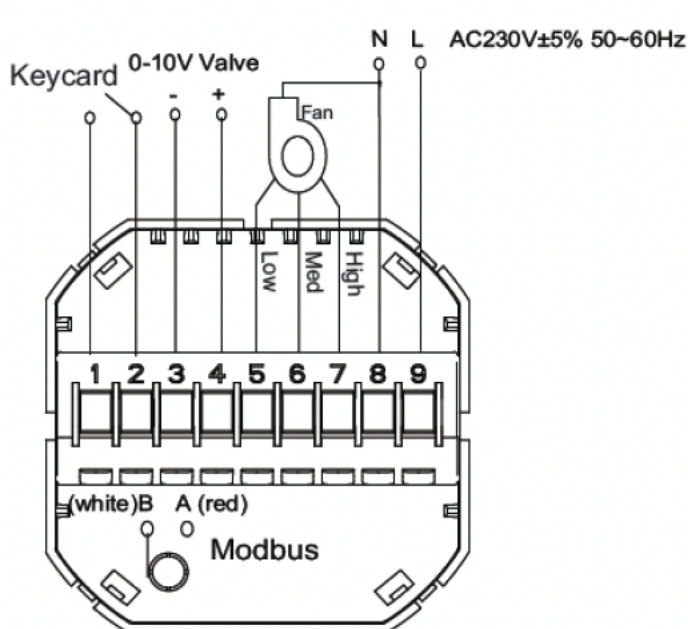
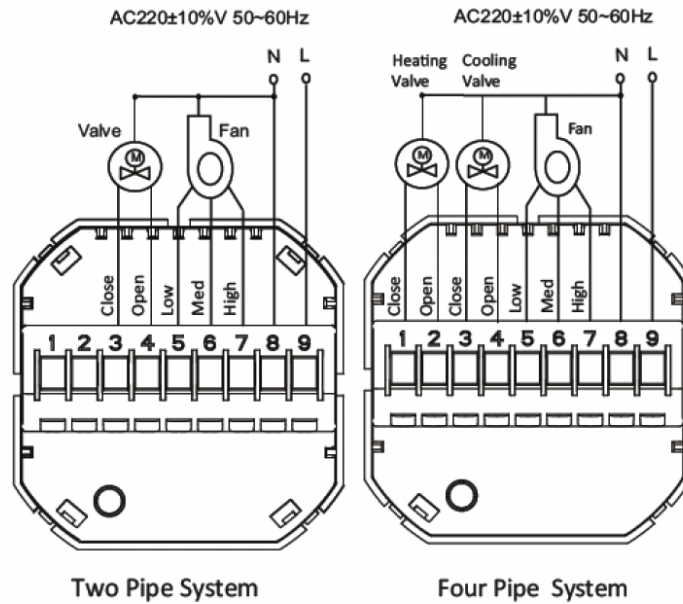
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Wiring diagram



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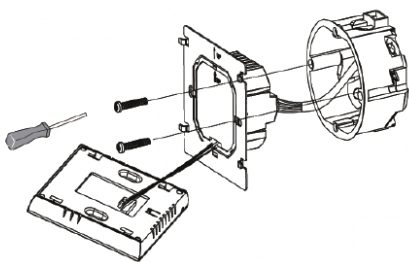
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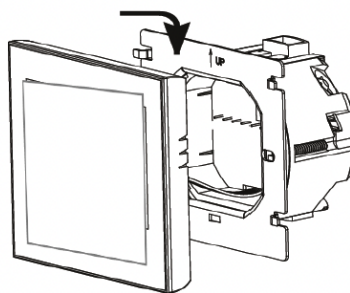
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Installation detail

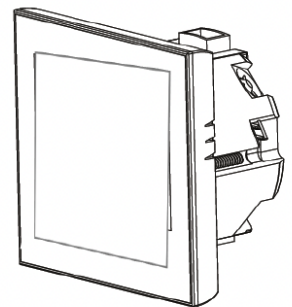
1. Fix the wall plate into the wall box by a screw driver



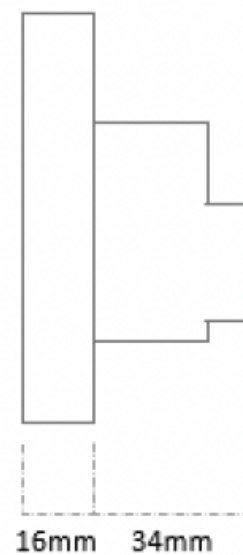
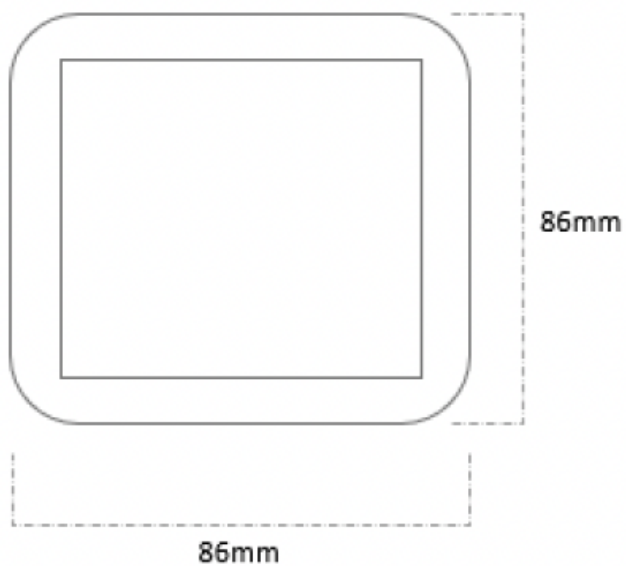
2. Connect the LCD Board onto the wall plate



3. Finished



Dimensions



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Warning

Must only be installed by a professional technician. Installation must be according to the installation drawing and instructions must be followed.

Risk of Electrical Shock: Disconnect power supply before making the electrical connection. Contact with components carrying high voltage can cause electrical shock and may result in severe personal injury or loss of life.

Product Variant

Model/ Series	NXT400
Shape	Square
Screen	LCD, Touch screen
No. Of Pipes	2 pipe, 4-pipe
Backlight Color	White, Blue
Communication	Modbus, Wi-Fi
Value Control	On/Off, 0-10 VDC
Fan Speed	3-Speed / ECM
Operations Voltage	110-240 VAC
Energy Saving Mode	Optional
Time Clock	Optional: Available (available only on Modbus RTU Model)
Schedules	Optional: Weekly programmable (available only on Modbus RTU Model)
Color	Black, White, Gold, Silver, Pink, Brushed, Stainless Steel
Special Function	Amazon Echo, Google Home, (available on WIFI Model)

Colors can also be customized to any RAL Color subject to quantity

Ordering Code

A1: Two pipe; Control Fan Coil Unit & Two wired Motorized valve. (when room temperature reaches the set point, both will turn off)

A2: Two pipe; Control Fan Coil Unit & Two wired Motorized valve.(when room temperature reaches the set point, valve will turn off but fan will turn to low speed)

B: Two pipe; Control on/off Motorized Damper

C: Two Pipe; Control Fan Coil Unit & Three wired Motorized valve

M: Two pipe; Control 0-10V Motorized Valve

F: Four pipe; Control Fan Coil Unit and Two wired Heat and Cool motorized valve

Y: Two pipe; 0-10V for Fan Speed (ECM) and Motorized Valve

T: Clock

L: Backlight

P: Weekly Programmable

N: RS485/MODBUS RTU communication

K: Keycard

E: External sensor

For example: **NXT400 A1 B M L K...** (Please add choice of color)

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