H7711 Series Digital Thermostat.

Data sheet for H7711, Issue 0916



H7711 series thermostats are used to control room temperature in industrial, commercial and residential environment via controlling electric modulating valve with 0-10VDC (4-20mA) control signal or floating control as well as damper actuator of VAV system.

Electronic control technology is adopted, with green backlit LCD display of: working mode (cooling "❄", heating "☀", ventilating "🌀", auto "△"); fan speed (low "🌬", med "🌬", high "🌬", auto "🔄"); room temperature; setting temperature etc. push button: On/Off "⏻"; mode changeover "Ⓜ"; fan speed choose "🌬" and temperature adjustment "▲" and "▼".

Shell: PC + ABS retardant material.

Function :

- Detect and Display room temperature
- Room temperature setting
- Fahrenheit or Celsius degree display
- Timing sleep
- Control On/Off of cooling and heating equipment
- Selectable single speed or three speed fan control

Order Guide:

Model	Output signal		Fan (Single/3-speed)	RS485 Network	Input Control	Remote Sensor
	Floating	Modulation				
H7711A	Cooling/Heating				√	√
H7711AN	Cooling/Heating			√	√	√
H7711B		Cooling/Heating			√	√
H7711BN		Cooling/Heating		√	√	√
H7711C	Cooling/Heating		√		√	√
H7711CN	Cooling/Heating		√	√	√	√
H7711D		Cooling/Heating	√		√	√
H7711DN		Cooling/Heating	√	√	√	√
H7711E	Cooling	Heating	√		√	√
H7711EN	Cooling	Heating	√	√	√	√
H7711F	Heating	Cooling	√		√	√
H7711FN	Heating	Cooling	√	√	√	√
H7711I	Cooling&Heating		√		√	√
H7711IN	Cooling&Heating		√	√	√	√
H7711K		Cooling&Heating	√		√	√
H7711N		Cooling&Heating	√	√	√	√

Fan: thermostat with fan functions, can be selected with single speed fan or three speed fan by setting parameter.

Remote Control: input signal can be selected by setting parameter.

Specification :

- Set temperature range: 0 - 99.5℃ adjustable
- Accuracy displayed: 0.1℃
- Accuracy: ±0.5℃
- Rated Power: < 1 W
- Sensor type: NTC
- Display: LCD
- Power: AC 24V±10%, 50Hz/60Hz
- Output signal: AC 24V×2 (0.5A resistive) , 0 - 10VDC(5mA) / 4 - 20mA (600Ω)
- Input signal: dry contact (NO)
- Dimensions: 86×86×23mm (W×H×D)
- Fixing screw width : 60mm (Standard)

Operations:

- **On/Off:** Press "⏻" buttons to turn on; press "⏻" again to turn off.
- **Setpoint:** With thermostat on, press "▼" to reduce the setpoint, press "▲" to increase the setpoint, the setpoint step is 0.5℃, the setpoint will be confirmed automatically after 5 seconds, and then return to dispay status, press "▲" or "▼" to check setpoint.
- **Mode:** With thermostat on, press "Ⓜ" to change the working mode – Cooling "❄", Heating "☀", Vent "", Auto "" (Auto is available from H7711E to H7711K).
- **Fan Speed:** With thermostat on, press "" to select the desired speed – low speed "", Med speed "", High speed "", auto "". If single speed fan available, there's only med speed "".

  Under auto speed fan, the fan speed will be changed automatically as below: in low speed when room temperature is 1℃ difference with setpoint;in med speed when room temperature is 2℃ difference with setpoint; in High speed when room temperature is 3℃ difference with setpoint.
- **Sleep:** Thermostat will get into sleep function after programming.The set Temperature should to be.

  To set：Press "Ⓜ" button for 3 seconds till "" display, there's a number of count down in the center of LCD, Use "▲" or "▼" to adjust the desired sleep time: the max. = 48 hours; thermostat will return to the working status after 5 seconds, "" is flashing to start counting down. The setpoint should be replaced by the sleep setpoint.

  To quit: When thermostat get into Sleep function, "" will flash, press "▲" or "▼" to quit.
- **Keypad lock:** press "▲" and "▼" for 10 seconds till to "" display to activate, under this function, any keypad is locked. Press "▲" and "▼" for 10 seconds till "" disappear to quit the function.
- **Set Parameters:** With thermostat off, press "Ⓜ" for 10 seconds to enter menu to set the parameters.

Parameter table：

Paramete	Description	Default	Range	Step
1	Power on status (0: Off; 1: On; 2: Hold)	2	0 - 2	
2	Fan speed (0: Single Speed; 1: Three Speed)	1	0 - 1	
3	Fan mode (DA; DB)	0		
4	Sensor selection (0: Internal; 1: Remote)	1	0 - 1	
5	Temperature format (0: Celsius; 1: Fahrenheit)	0	0 - 1	0.1
6	Temperature calibration	0	-20.0 - ＋20.0	0.1
7	Minimum setpoint	5℃/41℉	0 - 99.5	0.5
8	Maximum setpoint	35℃/96	0 - 99.5	0.5
9	Dead band (from 7711E to 7711K)	2	0 - 10	0.5
10	Heating & Auto sleep setpoint	7℃/45℉	0 - 99.5	0.5
11	Cooling sleep setpoint	28℃/82	0 - 99.5	0.5
12	Comms# (7711XN)	1	1 - 32	1
13	Input Signal Mode 0: Invalid 1: Changeover(from 7711A to 7711D) 2: thermostat will be sleep without input signal 3: thermostat will be Off without input signal	0	0 - 3	
14	Heating reset time	90 sec.	10 - 300 sec.	10 sec.
15	Cooling reset time	90 sec.	10 - 300 sec.	10 sec.
16	Ports mode (0: Modulation & Floating; 1: On/Off)	0	0 - 1	
17	Valve status as turn off (0: Close; 1:Hold; 2: Open)	0	0 - 2	
18	Port1 Modulation direction(0:10V Open; 1:10V Close)	0	0 - 1	
19	Port1 Modulation minimum signal	0Bit	0-128Bit(5V/10mA)	0.04V/Bit(0.08mA/Bit)

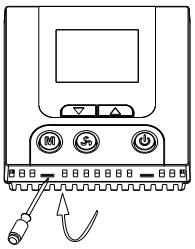
20	Port1 Modulation proportional	2	1 - 20	0.5
21	Port2 Modulation direction(0:10V Open;1:10V Close)	0	0 - 1	
22	Port2 Modulation minimum Signal	0 Bit	0-128Bit(5V/10mA)	0.04V/Bit(0.08mA/Bit)
23	Port2 Modulation proportional	2	1 - 20	0.5
24	Port1 Floating minimum time	1 sec.	1 - 9 sec.	1 sec.
25	Port1 Floating maximum time	30 sec.	10 - 300 sec.	10 sec.
26	Port1 Floating minimum time	1 sec.	1-9 sec.	1 sec.
27	Port1 Floating maximum time	30 sec.	10 - 300 sec.	10 sec.
28	Disable / Enable bypass PID control (0: Disable; 1: Enable)	0	0 - 1	
29	Override output value when bypass PID control Display output value when enable PID control		0 - 255	
30	Override output value when bypass PID control Display output value when enable PID control		0 - 255	
31	Input signal management: 0: Input valid 1: Override Input: open 2: Override Input: close	0	0 - 2	
32	Display room temperature or set-point 0: Room temperature 1: Set-Point	0	0 - 1	
33	Configuration external sensor 0: B = 3950; 1: B = 3450; 2: B = 3900 3: User define (via network. default B = 3950)	0	0 - 3	
34-38	N/A			
39	Start temperature of Low temperature protection	5℃/42℉	0-15℃/42-62℉	1℃/2℉
40	Stop temperature of Low temperature protection	7℃/46℉	2-17℃/46-66℉	1℃/2℉

It will confirm itself 20 seconds later after setting and return to Off state.

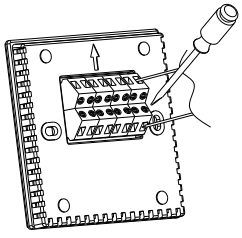
Switch: There is a 5 poles switch on PCB. The meaning is below:

Location	ON	OFF
1	120 ohm Resistance between AB wires	No Resistance between AB wires
2	Port 1 Modulation 0 - 20mA	Off
3	Port 1 Modulation 0 - 10VDC	Off
4	Port 2 Modulation 0 - 20mA	Off
5	Port 3 Modulation 0 - 10VDC	Off

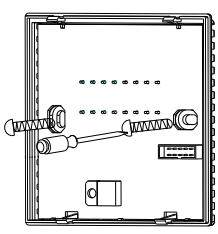
Mounting:



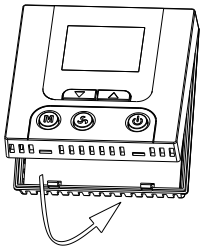
1. Open the back panel with screwdriver.



2. Connect the wires follow the diagram.

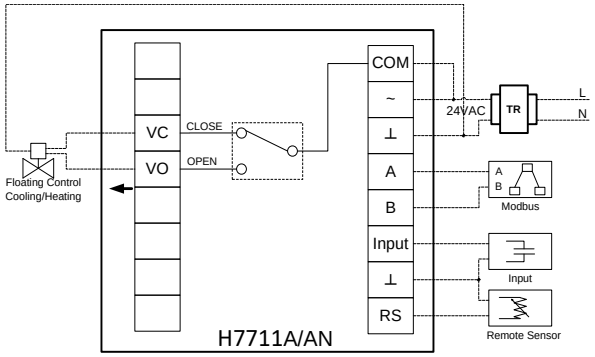


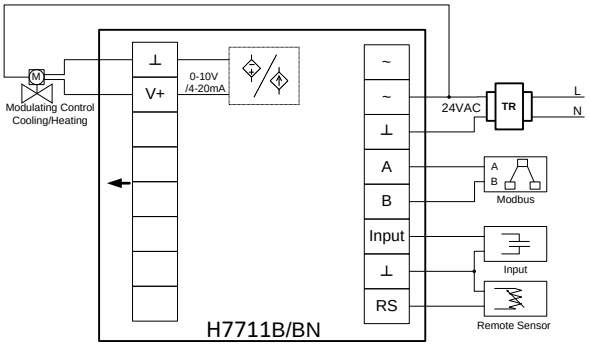
3. Fix the base with screw.

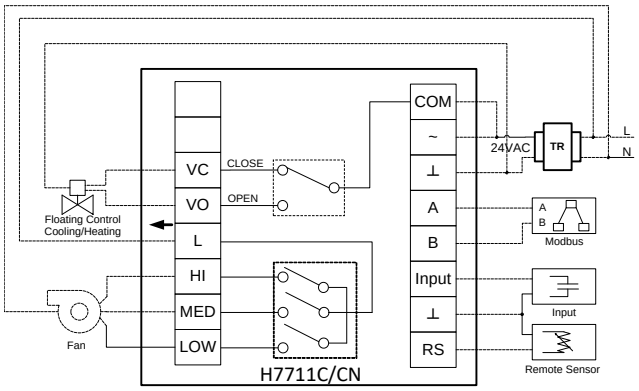


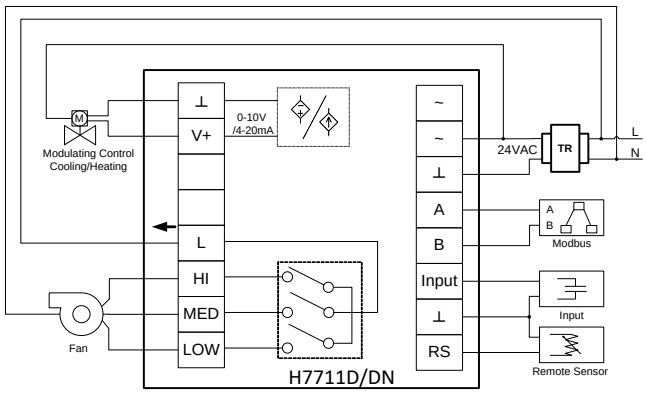
4. Fix the front panel and finish the installation.

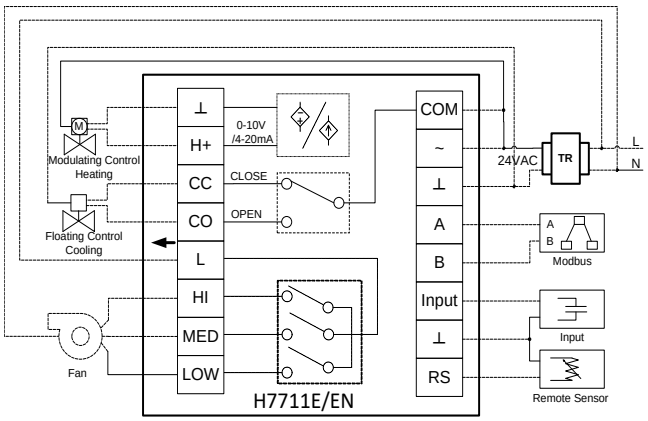
Wiring diagram：

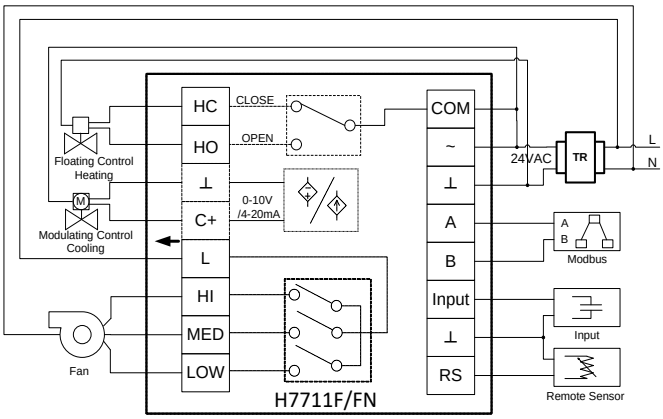


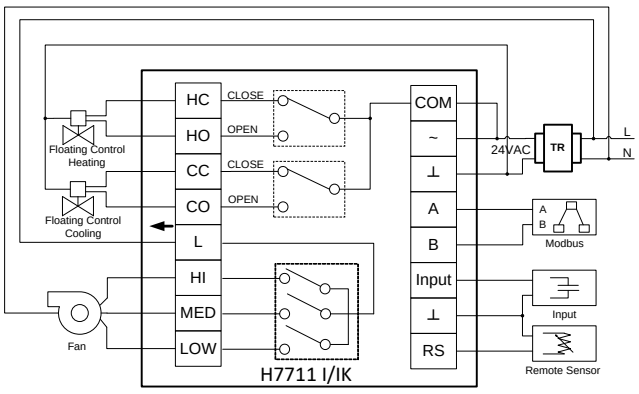


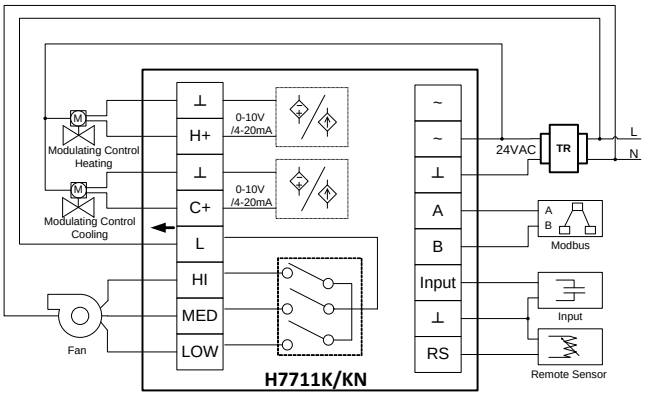












Note: Be sure to connect all the wires as per the wiring diagrams and keep it away from water, mud and other material so as to prevent the unit being spoiled!

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