



## **TONGDY PRODUCTS SUMMARY-2009**

### **Digital Thermostat and BACnet Thermostat**

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Please contact us if you need the summary of Tongdy's humidity products or IAQ products.



A.

## Digital Room Thermostats

### 1. FCU Thermostats



- Designed for control a 3-speed fan and one or two water valves
- Non-Programmable and Programmable
- Water valve control selectable: On/Off control/Floating control/proportional-action control
- Fan speed auto control or manual adjustment selectable.
- LCD displays working status
- Unique lockable function makes all keys locked to eliminate accidental operation.
- Many options meet more range applications
- RS485 communication interface optional
- CE-Approval




Item	Model	Characteristic	Pictures
<b>Non-Programmable FCU Series</b> 3-speed fan control and on/off output to control the water valve (Power supply: 230VAC/110VAC selectable)			
1	F2000LB-S-21	3-speed fan auto adjustment, 1*on/off output to a 2-wire/3 wire water valve cooling/heating manual switch	
2	F2000LB-S-21-K	3-speed fan auto adjustment, 1*on/off output to a 2-wire/3 wire water valve. Key-card option. cooling/heating manual switch	
3	F2000PS-21	3-speed fan auto or manual adjustment with each 5 amp rated load, 1X on/off output to one 2-wire water valve. cooling/heating manual switch	
4	F2000PS-22	3-speed fan auto or manual adjustment with each 5 amp rated load, 2X on/off outputs to two 2-wire water valves for 4 pipes systems cooling/heating changeover.	
5	F2000PS-22-K	3-speed fan auto or manual adjustment with each 5 amp rated load, 2X on/off outputs to two 2-wire water valves for 4 pipes systems. Cooling/heating changeover. Key-card option	
6	F2000PSC-21	3-speed fan auto or manual adjustment with each 5 amp rated load, 1X on/off output to one 2-wire water valve. RS485 communication interface.	
7	F2000PSC-22	3-speed fan auto or manual adjustment, 2X on/off outputs to two 2-wire water valves for 4 pipes systems. RS485 communication interface	
<b>Programmable FCU Thermostat</b> 3-speed fan control and on/off output to control the water valve, 7-day Programmable (Power supply: 230VAC/110VAC)			



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1	F06-NS -20/21	3-speed fan control, 1*On/Off output to a 2-wire/3 wire water valve for 2 pipes system.	
2	F06-NS -20/21-K	3-speed fan control, 1*On/Off output to a 2-wire/3 wire water valve for 2 pipes systems. "Key-card" function for occupancy & non-occupancy.	
3	F06-NSC-20/21	3-speed fan control, 1*On/Off output to a 2-wire/3 wire water valve for 2 pipes systems. RS485 communication interface	
4	F06-NS-22	3-speed fan control, 2X on/off outputs to 2X 2-wire water valves for 4 pipes systems	
5	F06-NS-22-K	3-speed fan control, 2X on/off outputs to 2X 2-wire water valves for 4 pipes systems. Key-card function for occupancy & non-occupancy.	
6	F06-NSC-22	3-speed fan control, 2X on/off outputs to 2X 2-wire water valves for 4 pipes systems. RS485 communication interface.	
<p><b>F2000PS-A Series</b> Proportional-Action Control for FCU (Power supply: 230VAC/110VAC/24VAC selectable)</p>			
1	F2000PS-A -01	1x0~10V output to a water valve control, 1x on/off output to a single fan control	
2	F2000PS-A -01E	1x0~10V output to a water valve control, 1xon/off output to a single fan control, 1xon/off output to control an electric heater	
3	F2000PS-A -02E	1x0~10V output to water valve controlling, 1xon/off output to single fan controlling, 2x on/off outputs to control two stages of electric heater	
4	F2000PS-A	3 speed fan controlling, 0~10V output to a water valve control	
5	F2000PS-A-E	3 speed fan controlling, 0~10V output to a water valve control. One electric heater control.	
6	F2000PS-A-5A	3 speed fan controlling with 5A switch current, 0~10V output to a water valve control.	
7	F2000PS-A-5A-E	3 speed fan controlling with 5A switch current, 0~10V output to a water valve control. One electric heater control.	
8	F2000PSC-A -01	1X 0~10V output to a water valve control, one on/off output to a fan control. RS485 communication.	
9	F2000PSC-A	3 speed fan controlling, 0~10V output to a water valve control. RS485 communication	
10	F2000PSC-A-E	3 speed fan controlling, 0~10V output to a water valve control. One electric heater control. RS485 communication.	
<p><b>F2000PS-F3 Series</b> For Floating Control (Power supply: 230VAC/110VAC/24VAC selectable)</p>			
1	F2000PS-F3-A1	One floating output for a 3-point floating valve, a 3-speed fan control. 230VAC Power supply; Fan output: 230VAC; 1 Valve output: 24VAC	



2	F2000PS-F3-A2	One floating output for a 3-point floating valve, a 3-speed fan control. 230VAC Power supply; Fan output&1 Valve output: 230VAC	
3	F2000PS-F3	One floating output for a 3-point floating valve, a 3-speed fan control. 24VAC Power supply; Fan output&1xValve output: 24VAC	
4	F2000PS-F3-E	One floating output, a 3-speed fan control, one electric heater control. 230VAC Power supply; Fan output& Aux. electric heater: 230VAC; 1xValve output: 24VAC	
5	F2000PS-DF3-A1	Two floating outputs for two valves , 3-speed fan control manually; heating and cooling changeover automatically with dead zone setting 230VAC Power supply;; Fan output: 230VAC; 2xValve output: 24VAC	
6	F2000PS-DF3-A2	Two floating outputs for two valves , 3-speed fan control manually; heating and cooling changeover automatically with dead zone setting 230VAC Power supply;; Fan output&2xValve output: 230VAC	
7	F2000PS-DF3	Two floating outputs for two valves , 3-speed fan control manually; heating and cooling changeover automatically with dead zone setting 24VAC Power supply;; Fan output&2xValve output: 24VAC	

## 2. VAV Room Thermostat

- Designed to control the room temperature for VAV terminals
- 1X0~10 VDC output for cooling/heating air damper or 2X0~10 VDC outputs to cooling and heating dampers.
- One or two relay outputs to control one or two stages electric aux. heater.
- 12 Hours Timer option can be preset 0.5~12 hours to turn off the thermostat automatically
- Many options meet more range applications
- RS485 communication interface optional

<b>F2000LV-A Series</b>			
Room Thermostat for VAV Terminal (Power supply: 24VAC)			
1	F2000LV-A-N	1X 0-10 VDC output to control a VAV air damper or used as a transmitter of room temperature	
2	F2000LV-A01	1X 0-10 VDC output to control a VAV air damper. 1X on/off output with 2amp to control a aux. heater	
3	F2000LV-A02	1X0-10 VDC output to control a VAV air damper.2X on/off output with 2amp to control two stages heating device	



4	F2000LV-A-Pro	1X 0~10V output for an actuator, an external sensor detect air duct temperature to change over cooling/heating cool/heat changeover or manual switch can be selected.
5	F2000LV-A01-Pro	1X 0~10V output for an actuator, 1X on/off dry contact output to a heater with an external sensor detect air duct temperature to change cool/heat automatically. Cool/heat changeover or manual switch can be selected.
6	F2000LV-A-D	2X 0~10V outputs for cooling and heating dampers
7	F2000LV-A01-D	2X 0~10V outputs for cooling and heating dampers, 1X on/off dry contact output to an aux. heater.

### 3. Multistage Thermostat

- Designed for control multistage cooling/heating systems with a heat pump
- Non-programmable or 7- day Programmable
- Control up to 2 stages cooling /3 stages heating with an aux. electric heater
- A single speed or 3-speed interior fan control selectable.
- Compressor shortest cycle protection makes the AC system safeguard and life longer.
- Fan auto or fan manual operation selectable.
- Heat/cool switch or auto changeover.
- Many options meet more range applications
- RS485 communication interface optional
- CE-Approval

<b>F2000LX/PX Non-programmable Series</b>		
For AC unit/ DX system (Power supply: 24VAC)		
1	F2000LX-HP11-K	1 stage heating/cooling, heat pump, one aux. contact
2	F2000LX-HP21-K	1 stage cooling/2 stages heating (one is aux. heating), heat pump, 1x aux. contact
3	F2000LX-HC11-K	1 stage cooling/heating, 1x aux. contact
4	F2000PX-HC11	1 stage cooling/heating, a single fan
5	F2000PX-HP11	1 stage cooling/ heating with a heat pump
6	F2000PX-HC22	2 stages cooling/ heating
7	F2000PX-HP22	2 stages cooling/ two stages heating with a heat pump
8	F2000PX-HP31	1 stage cooling/heating with a heat pump, 2 stages electric heater
9	F2000PX-S-HC01	1 stage cooling, 3-speed fan










10	F2000PX-S-HC11	1 stage cooling/heating, 3-speed fan	
11	F2000PX-S-HP11	1 stage cooling/heating, heat pump, 3-speed fan	
12	F2000PX-S-HC02	2 stages cooling, 3-speed fan	
13	F2000PXC-HC11	1 stage cooling/ heating, single fan, RS485 communication	
18	F2000PXC-HC22	2 stages cooling/ heating, single fan, RS485 communication	
<b>F06-NX Programmable Series</b> For AC unit/ DX system, 7-day Programmable (Power supply: 24VAC)			
1	F06NX -HP11	For one stage heating/ one stage cooling with a heat pump, It also can be used as: F06NX-HC11 (one stage heating/ one stage cooling) F06NX-HC10 (one stage heating only) F06NX-HC01 (one stage cooling only)	
2	F06NXC-HP11	F06NX -HP11 with RS485 communication interface	
3	F06NX-HP22	For two stages heating/ two stages cooling with a heat pump. It also can be used as: F06NX-HC22 (two stages heating/ two stages cooling) F06NX-HC12 (one stage heating/two stages cooling) F06NX-HC21 (two stages heating/one stage cooling)	
4	F06NXC-HP22	F06NX-HP22 with RS485 communication interface	

#### 4. Thermostat for heating boiler and floor heating

- Deluxe design for control heating boilers and floor heating systems.
- Non-programmable or 7- day Programmable
- Special design of double temperature modification provides more accurate temperature control.
- Two parts design makes electric load separate from the thermostat.
- Related switch current up to 16amp
- Both Internal and external sensor are available to control room temperature and the highest limit of the floor temperature
- Unique holiday mode and lockable function
- Low temperature protection
- 230VAC or 110VAC power supply, also battery power supply
- RS485 communication interface optional
- CE-Approval





<b>F2000LB- G Series</b> For Heating Boiler			
1	F2000LB-G-01	1 on/off relay (dry contact) to gas boiler, switch current rating< 2A (resistive load)	 
2	F2000LC-G	1X on/off output (dry contact), switch current rating< 2A(resistive load) RS485 communication interface	
3	F2000LB-G-CK4-DC3V-2A	1 on/off switch contact to gas boiler, rating load is 2 amp. 2/5 days programmable. Battery power supply.	
4	F2000LB-G-CK4-DC3V-5A	1 on/off switch contact to gas boiler, rating load is 5 amp. 2/5 days programmable. Battery power supply.	
5	F2000LB-G-CK4-W-DC3V-2A/5A	1 on/off switch contact to gas boiler, rating load is 2A/5A . 2/5 days programmable and an external sensor. .Battery power supply.	
<b>F2000LB-Ea Series</b> For Floor Heating or Electric Diffuser			
1	F2000LB-E1a	One on/off switch contact, rating resistance load: 16amp.It controls the live wire of load directly Power supply	
2	F2000LB-E2a	Two on/off switch contacts, rating resistance load: 8amp. It can cut off the two wires (L,N) of load.	
3	F2000LC-E1a-CK4	One on/off switch contact, rating resistance load: 16amp.It controls the live wire of load directly. 5/2 days programmable.RS485 communication.	
4	F2000LC-E2a-CK4	Two on/off switch contacts, rating resistance load: 8amp. It can cut off the two wires (L,N) of load. 5/2 days programmable. RS485 communication interface	
5	F2000LB-E1a-CK4-DC3V-16A	One on/off switch contact, rating resistance load is16amp. 5 days/2 days programmable. 2x1.5VDC batteries power supply	
<b>F06-NE Programmable Series</b> 7-Day Programmable Thermostat For Floor Heating or Electric Diffusers (Power supply: 230VAC/110VAC)			
1	F06NE	Room thermostat for electric diffuser and floor heating. Programmable with a week 7 days to four time periods and temperatures each day. Holiday mode.	
2	F06NE-DW	Room thermostat for electric diffuser and floor heating. Programmable with a week 7 days to four time periods and temperatures. Holiday mode. Internal and external sensors can be used to control room temperature and the highest limit of floor temperature.	



3	F06NEC	F06NE with RS485 interface	
4	F06NE-PO	Room thermostat for electric diffuser and floor heating Programmable with a week 7 days of two time periods with turning-on/turning -off	
5	F06NEC -PO	F06NE-PO with RS485 interface	

**5. Dew-Proof Thermostat & Zone Temperature Controller**




<b>F06-DP Series</b> Dew-Proof Thermostat for Hydronic Radiant Floor Cooling/Heating AC System. <b>NEW</b> (Power supply: 24VAC)			
1	F06-DP11-K	Dew-proof thermostat for hydronic radiant floor cooling/heating AC systems. 2xon/off outputs to a water valve and a humidity device (humidifier or dehumidifier). 1Xoutside on/off or analog signal input. 24VAC power supply.	
2	F06-DP11-C	Dew-proof thermostat for hydronic radiant floor cooling/heating AC systems. 2xon/off outputs to a water valve and a humidity device (humidifier or dehumidifier). RS485 interface. 24VAC power supply.	
3	F06-DP12-K	Dew-proof thermostat for hydronic radiant floor cooling/heating AC systems. 3xon/off outputs to a water valve, a humidifier and a dehumidifier. 1Xoutside on/off or analog signal input. 24VAC power supply.	
4	F06-DP12-C	Dew-proof thermostat for hydronic radiant floor cooling/heating AC systems. 3xon/off outputs to a water valve, a humidifier and a dehumidifier. RS485 interface. 24VAC power supply.	
<b>Digital Zone Temperature Controller</b> (Power supply: 24VAC)			
1	F2000LB-HC11-K	Digital zone temperature controller One stage cooling and one stage heating One on/off input signal from cooling device	



**B.**

**BACnet Commercial Thermostat** *NEW*

- Typical used in HVAC systems of FCU and VAV or AC unit
- Designed for BACnet building automatic systems
- BACnet MS/TP network with a PIC statement to further facilitate integration.
- A PIC statement is supplied to be easily mapped back to a graphical user interface.
- Self configuring / adjustable baud-rate senses the communication conditions of the current MS/TP network and match them.
- LCD can display working status
- All models feature user-friendly setting buttons
- Blue backlight display optional
- Infrared remote control optional

Product Name	Model	Description	Picture
BACnet Thermostat for FCU systems  Power supply: 24VAC	F08-PSB-21	For a 3-speed fan control, 1xOn/Off output to control a water valve.	
	F08B-PS-22	For a 3-speed fan control, 2xOn/Off outputs to control two water valves.	
	F08-PSB-A	For a 3-speed fan control, 1x0~10VDC output to control a water valve.	
	F08-PSB-A-01E	For a single speed fan control, 1x 0~10VDC output to a water valve, 1xOn/Off output to an electric heater	
	F08-PSB-A-02E	For single speed fan control, 1x 0~10VDC output to a water valve, 2xOn/Off outputs to two stage electric heater	
BACnet Thermostat for Multistage system  Power supply: 24VAC	F08-NXB-HC11	1 stage cooling/ 1 stage heating Single fan speed control	
	F08NXB-HP11	For one stage heating/ one stage cooling with a heat pump	
	F08NXB-HC11-W	For one stage heating/ one stage cooling control. The temperature sensor is external	
	F08-NXB-HC22	2 stage cooling/ 2 stage heating Single fan speed control	
BACnet Thermostat for VAV system  Power supply: 24VAC	F08-LVB-N	1X 0~10V output for an actuator of VAV terminal with cooling/heating switch	
	F08-LVB-A01	1X 0~10V output for an actuator, 1X on/off contact output to a heater. Cooling/heating switch.	
	F08-LVB-A02	1X 0~10V output for an actuator, 2X on/off contact outputs for 2-stage heater. Cooling/heating switch	
	F08-LVB-D	2X 0~10V outputs for cooling and heating	
	F08-LVB-D01	2X 0~10V outputs for cooling and heating, 1xon/off contact output for an aux. heater	