

T8000 Series

T8800 BACnet Touch Screen Thermostat

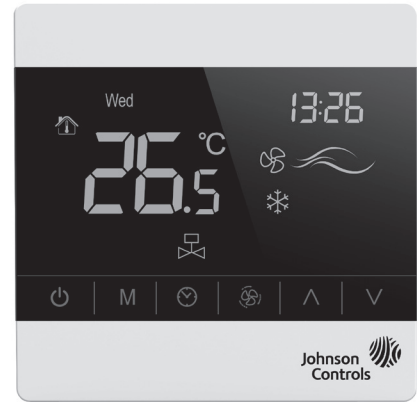


T8800 BACnet Touch Screen Thermostat

Application

The T8800 series touch screen fan coil thermostat controls the fan coil with the local temperature to create a comfortable environment. It allows the user to select the temperature units, set points, modes, and different values to control the Heating, Ventilating, and Air Conditioning (HVAC) system to maintain the desired room temperature. The optional Occupied/ Unoccupied feature saves energy.

T8800 features a microcomputer control, large LCD screen display which displays the status of work mode (cooling/heating/ventilation), fan speed, indoor temperature and set point etc. Capacitance touch screen enhances the ease of operation. Keypad includes: Power on/off (⏻), Mode selection (M), Fan speed selection (⚙️), Clock/Timer (🕒) and two adjustment buttons (⏴ & ⏵).



T8800 Thermostat

Features and Benefits

| | |
|---------------------------------------|---|
| Touch Screen | • Capacitance touch screen enhances the ease of operation |
| Backlit Liquid Crystal Display (LCD) | • Offer Easy-to-Read real-time control status of the environment, graphical messages with constant backlight that brightens during user interaction |
| 6 Function Keys | • All-in-One location function keys, simplified user to change the set point and parameter |
| | • Molded industrial standard graphical symbol |
| Appearance | • Attractively-style twin-ring streamline ABS plastic cover and base |
| | • All-in-One enclosure design without protrusion of power circuit |
| Energy Saving | • Features an unoccupied function |
| | • Internal memory retains the last events and parameter settings after a loss of power |
| Installation, Service and Maintenance | • Universal mounting with standard wall box |
| | • Quick replacement to reduce to downtime of service maintenance |

Function

| Type | Feature | T8800-TB20-9JS0-B0 | T8800-TF20-9JS0-B0 | T8800-TB21-9JS0-B0 |
|-------------|----------------------------------|--------------------|--------------------|--------------------|
| Application | 2-pipe heating or cooling | ● | | |
| | 4-pipe heating and cooling | | ● | |
| | 2-pipe modulating | | | ● |
| Output | ON/OFF | ● | ● | |
| | AO (0-10V) | | | ● |
| Function | Fan Speed (low, mid, high, auto) | ● | ● | ● |
| | Touch Screen | ● | ● | ● |
| | °C/°F Optional | ● | ● | ● |
| | Ventilation | ● | ● | ● |
| | Occupancy dry-contact input | ● | ● | ● |
| | Remote Sensor | ● | ● | ● |
| | Key Lock | ● | ● | ● |
| | Set point Limit | ● | ● | ● |
| | Auto changeover | ● | ● | ● |
| | RTC* | ● | ● | ● |
| | Time ON/OFF | ● | ● | ● |
| | Restart after power failure | ● | ● | ● |
| | Low-temperature protection | ● | ● | ● |
| | Time accumulation | ● | ● | ● |
| | Setting mode | ● | ● | ● |
| BACnet | MS/TP | ● | ● | ● |
| | Segmentation | ● | ● | ● |
| | Auto baud rate | ● | ● | ● |
| Certificate | CE | ● | ● | ● |
| | BACnet | ● | ● | ● |

* Equipped with battery for standby when power failure, lifetime of battery is about 1 year. Battery type CR1220.

Product Overview

The T8800 touch screen thermostat comes in 3-basic models, which cover all types of FCU standalone applications. There are models for 2-pipe cooling or heating, 4-pipe cooling and heating, and 2-wire valve control. The On-board high accuracy NTC sensor allows precision comfort control within an occupied space area.

The T8800 thermostat comes with a 24-hour timer that allows the user to schedule the On-time or Off-time for the fan coil depending on user needs.

88x88mm size allows for 75x75x35mm standard wall box installation.

Model T8800-TB20-9JS0-B0

The T8800-TB20-9JS0-B0 model comes with an LCD display (backlight). The fan coil unit thermostat is designed for a cooling or heating fan coil unit with 2-wire valve actuator application. The integrated system On/Off button allows the user to shut down the T8800 and cut off the output power for a fan (cut off the output power for valve actuator). The fan speed button allows users to select Auto-High-Med-Low fan speed. All fan relay outputs can withstand a maximum of 5 Amps (Res) operating current.

An Additional Dry-contact for Occupancy mode allows for better comfort control and greater energy-cost saving.

The T8800-TB20-9JS0-B0 can connect to a remote NTC sensor (ordered separately), and the built-in NTC sensor will be disabled when the remote sensor is connected.

Model T8800-TF20-9JS0-B0

The T8800-TF20-9JS0-B0 model comes with an LCD display (backlight). The fan coil unit thermostat is designed for a cooling or heating fan coil unit with a 4-wire valve actuator application. An integrated system On/Off button allows the user to shut down the T8800 and cut off the output power for fan and valve actuator. The fan speed button allows users to select Auto-High-Med-Low fan speed. All fan relay outputs can withstand a maximum of 5 Amps (Res) operating current.

An Additional Dry-contact for Occupancy mode allows for better comfort control and greater energy-cost saving.

The T8800-TF20-9JS0-B0 can connect to a remote NTC sensor (ordered separately), and the built-in NTC sensor will be disabled when the remote sensor is connected.

Model T8800-TB21-9JS0-B0

The T8800-TB21-9JS0-B0 model comes with an LCD display (backlight). The fan coil unit thermostat is designed for a cooling or a heating fan coil unit with modulating valve actuator application. An integrated system On/Off button allows the user to shut down the T8800 and cut off the output power for the fan and valve actuator. The fan speed button allows users to select Auto-High-Med-Low fan speed. All fan relay outputs can withstand a maximum of 5 Amps (Res) operating current.

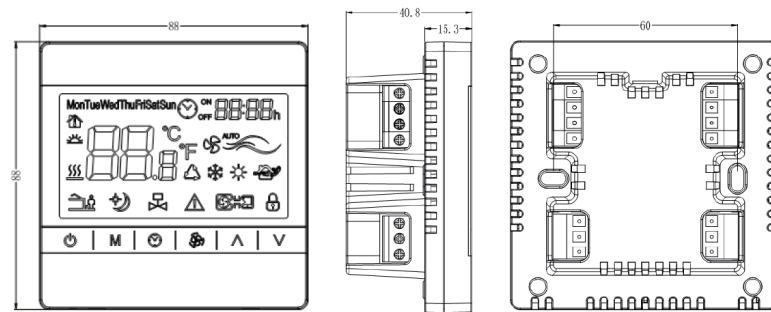
An Additional Dry-contact for Occupancy mode allows for better comfort control and greater energy-cost saving.

The T8800-TB21-9JS0-B0 can connect to a remote NTC sensor (ordered separately), and the built-in NTC sensor will be disabled when the remote sensor is connected.

IMPORTANT

Use this T8800 series thermostat only for operating control. Where failure or malfunction of the T8800 series thermostat could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the system. Incorporate and maintain other devices such as supervisory/alarm systems or safety/limit controls intended to warn of, or protect against, failure or malfunction of the T8800 series thermostat.

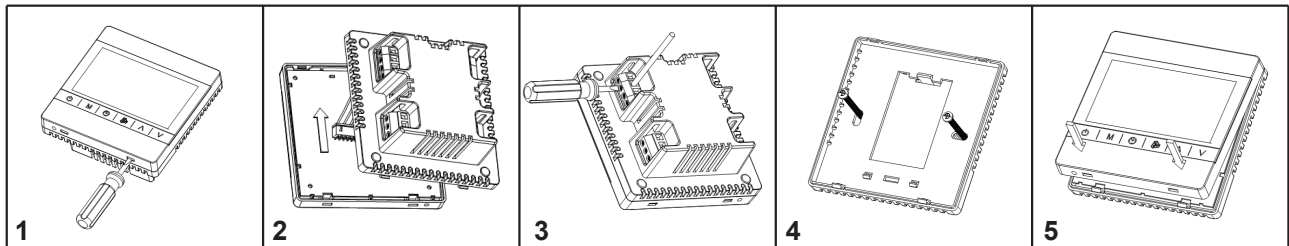
Dimensions



T8800-TB20-9JS0-B0, T8800-TF20-9JS0-B0, T8800-TB21-9JS0-B0 (mm)

Installation

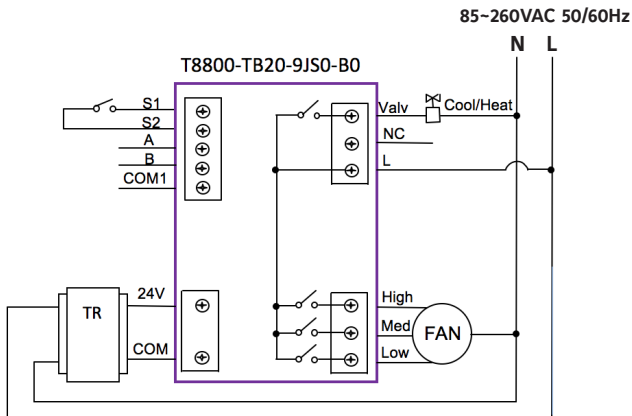
T8800 thermostats allow for 75x75x35mm standard wall box installation.



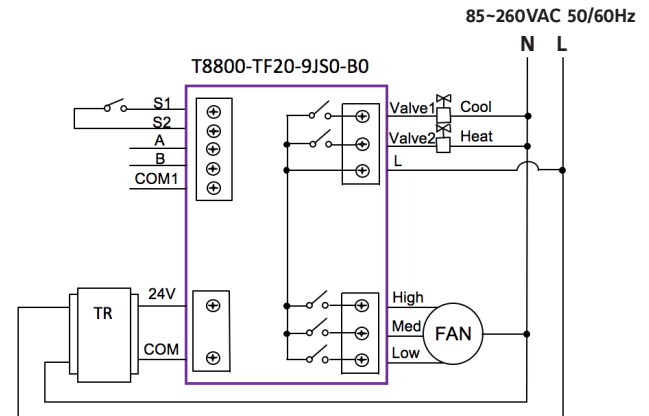
* Remove the insulating strip before installation

Wiring Diagram

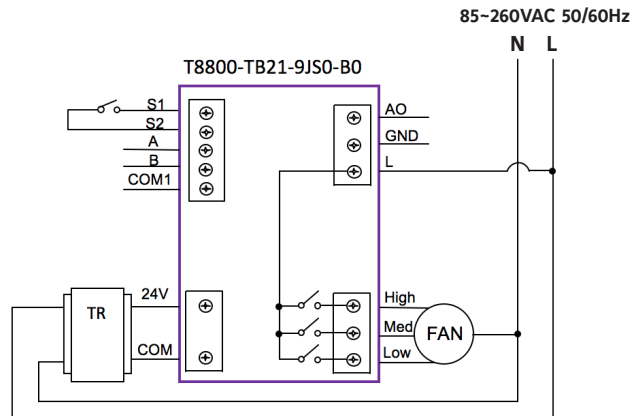
T8800-TB20-9JS0-B0



T8800-TF20-9JS0-B0



T8800-TB21-9JS0-B0



*If a remote 10K NTC temperature sensor will be connected to T8800-TB20-9JS0-B0, T8800-TF20-9JS0-B0, T8800-TB21-9JS0-B0, please use the S1 and S2 terminal blocks. When a remote NTC temperature sensor is connected, the occupied mode will be disabled.

*When T8800 is installed as the last device on a BACnet network, please add additional terminal resistor ($\frac{1}{2}$ W) at the end, across terminal A & B

Ordering Information

To order the replacement for the T8800 series thermostat, please contact our Johnson Controls representative. Please specify the desired product code number according to table of "Function" and "Model Selection Guide".

"IMPORTANT": The power supply to the thermostat must include overload protection. Failure to include overload protection may result in damage to the thermostat.

| | |
|------------------------------|--|
| Product | T8800-TB20-9JS0-B0 Backlit LCD 2-pipe Cooling/Heating application, On/Off control, BACnet |
| | T8800-TF20-9JS0-B0 Backlit LCD 4-pipe Cooling and Heating application, On/Off control, BACnet |
| | T8800-TB21-9JS0-B0 Backlit LCD 2-pipe Cooling/Heating application, 0-10V Modulating control, BACnet |
| Power Requirements | 24 VAC (20 VAC - 30 VAC), 50/60 Hz |
| Accuracy | ±1°C |
| Display Range | 0 to 55°C |
| Setpoint Range | 5 to 35°C |
| Unoccupied Mode | T8800...9JS0-B0 External Voltage-Free Contact Input Signal |
| Remote Sensor | T8800...9JS0-B0 Could Connect with 10K NTC Remote Sensor. Remote Sensor need to be ordered Separately, Product Code: TE-636S-1 |
| Termination | Screw terminals |
| Valve Control | T8800-TB20-9JS0-B0 1 x Single-Pole, Single Throw (SPST), 5A (Res.), Relay Output |
| | T8800-TF20-9JS0-B0 2 x Single-Pole, Single Throw (SPST), 5A (Res.), Relay Output |
| | T8800-TB21-9JS0-B0 0-10V Modulating Output |
| Fan Control | 3 x Single-Pole, Single Throw (SPST), 5A (Res.) at 250VAC (Maximum); Relay Output for High-Med-Low Fan) |
| Ambient Operating Conditions | 0 to 45°C 90% Non-condensing RH |
| Ambient Storage Conditions | -10 to 60°C 90% Non-condensing RH |
| Housing Material | PC: UL 94-V0 |
| Protection Class | IP20 |
| Certification | CE, BTL |
| Dimension | 88x88 mm |
| Shipping Weight | Appr. 214g |
| Network Communications | 3-Wire isolated RS-485. Allows up to 100 Thermostats on one communication bus. |

* When connected, the On/Off switch does not disconnect power to the unit; it only turns off or on the LCD and functions.

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Johnson Controls Building Efficiency delivers products, services and solutions that increase energy efficiency and lower operating costs in buildings for more than one million customers worldwide. Operating from 500 locations globally, the company is committed to growing the BE business. In 2014, we acquired Air Distribution Technologies and in 2015, we obtained a majority stake in the joint venture with Hitachi Appliances.

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