T9000 Series
Wireless Fan-Coil Thermostat

PRODUCT DATA

APPLICATION

The T9000 wireless thermostat is the most flexible thermostat solution on the market today. Battery operated, the thermostat uses a 916.5MHz RF transceiver to send and receive control information to one or more Receiver Control Nodes (RCN). The system is unique in that it is capable of simultaneous control of completely unrelated, multiple heating and cooling HVAC loads through one thermostat, creating a virtual central heating and cooling control system.

The T9000 provides precision wireless thermostat control capability to a wide range of Fan-Coil applications. Configurations are available for the simplest and the most complex control situations:

- 2-pipe fan, fan/valve control
- 2-pipe with auxiliary heat
- 4-pipe single-stage, two-stage air conditioning

Fan-coils are common air conditioning systems used in commercial and residential buildings. In its simplest form, a central plant delivers hot or cold water to fan-coil units, typically located on a perimeter wall in the space to be heated or cooled. A fan draws air from the room, blows it over the heated or cooled water-to-air heat exchanger, (coil) and returns it to the room.

2-pipe fan-coil systems use a single heating/cooling coil, with supply water seasonally changed from hot to chilled water. 4-pipe fan-coils have separate heating and cooling coils. Provided the central plant supplies both heated and chilled water, a 4-pipe system allows year-round heating, cooling, and dehumidification. 2-pipe systems are common, particularly in residential multifamily applications and older buildings.

In most cases, fan-coil units allow the user to select from two or three fan speeds. Fan-coils are commonly sized to the cooling load, and are often oversized for heating. As such, heating fan speed is often low, except when ambient room temperature is significantly lower than the desired setpoint.

Fan-coil control can be as simple as just cycling the fan with (or instead of) the valve, or more complicated with separate heating and cooling valves, auxiliary electric heating elements, DX coils, and multiple fan speeds.

FEATURES

- **Simple to understand user interface controls.**
- **Styling for home, office, or hotel applications.**
- **Digital display of ambient temperature, and user setpoint temperature.**
- **Easy pushbutton adjustment of all functions.**
- **Accommodates external energy management inputs such as occupancy sensors and switches.**
- **Battery powered, no control wiring needed.**
- **Adjustable maximum heating and minimum cooling setpoint limits.**
- **Direct load control capable.**
- **Many other applications:**
  - **Electric Baseboard Heating**
  - **Packaged Terminal Air Conditioner**
  - **Packaged Terminal Heat Pump**
  - **Window A/C**
  - **Other**

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SPECIFICATIONS

Thermostat Enclosure:

High impact polycarbonate & ABS blend — 2-piece vented housing. Screw mount back plate, snap on cover. 6.5" x 4.75" x 1.25"

Display:

LCD, multi-function reflective, 12 o'clock viewing angle

Ambient Ratings:
Temperature
- Operating Range: 0°C to 45°C
- Shipping and Storage Range: -20°C to 55°C
- Humidity Range 5 to 95% rh, non-condensing

Communication:
- 916.5 MHz Amplitude Shift Keyed
- Packet Protocol ANSI 709.1-1999

Control Methodology:
On/Off - control typically ≤1.5°F at 50% duty cycle

Setpoint Range: 50°F to 90°F (10°C to 30°C)

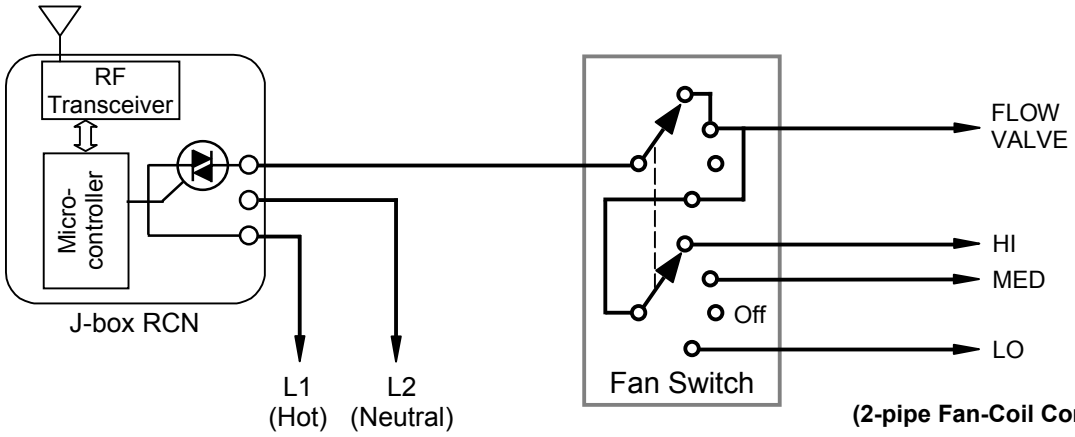
Temperature:
- Accuracy, ± 0.5°F
- Resolution, 1°F

Supply Voltages:
- Thermostat, 2 or 4 AA batteries
  (Photovoltaic ambient light opportunity charging)
- Line-voltage RCN, 120, 208, 240vac
- Low-voltage RCN, 24vac control voltage

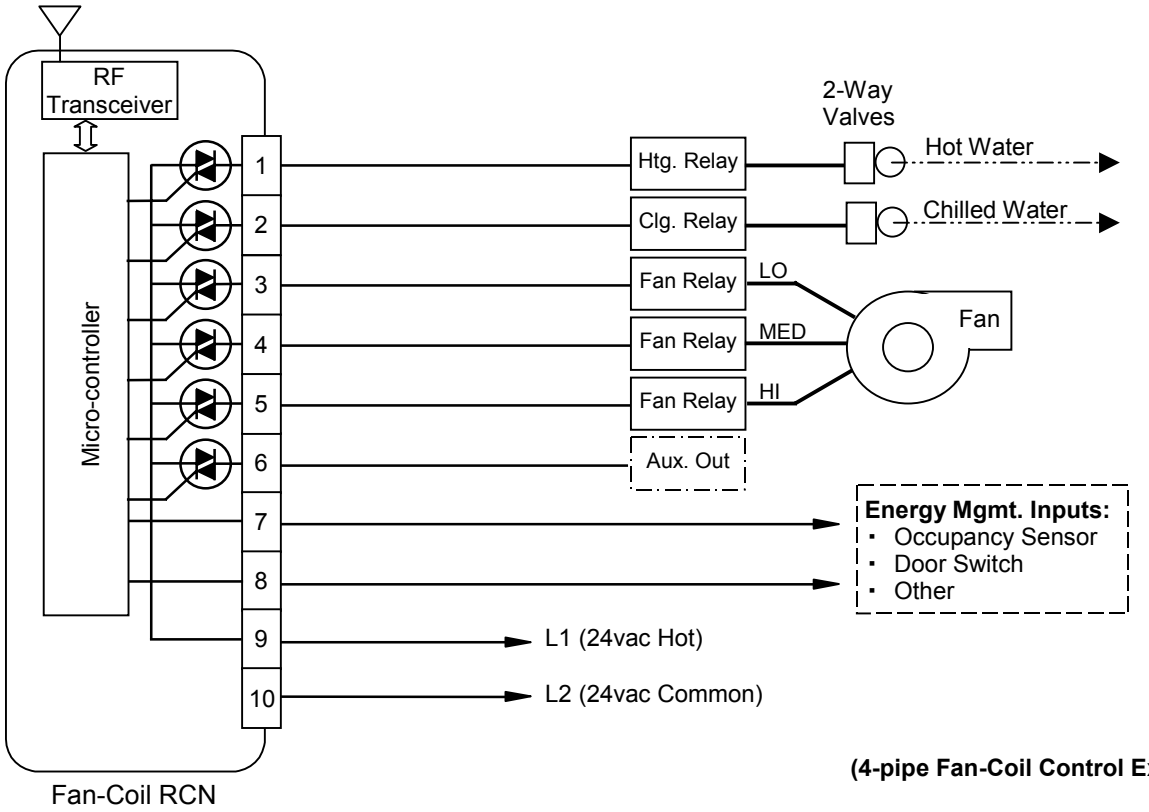
RCN Output:
Pilot duty solid-state relay outputs @ 0.5A max.

RCN Wiring:
Low-voltage RCN, 0.25" quick connect
Line-voltage RCN, color-coded flying leads

Energy Management Inputs:
(2) Dry form-A contacts with 5vdc pull-up



(2-pipe Fan-Coil Control Example)



(4-pipe Fan-Coil Control Example)