Honeywell
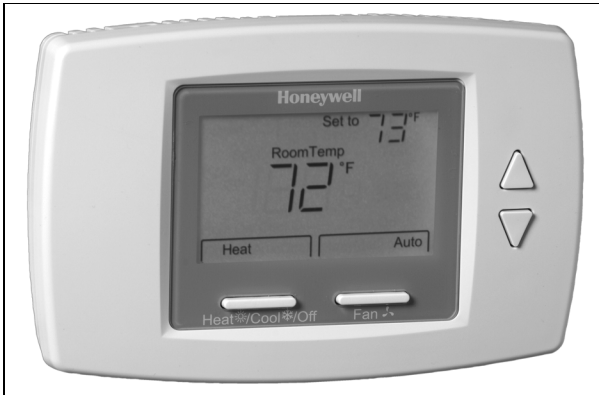
TB6575/TB8575 SuitePRO™ Digital Fan Coil Thermostats

PRODUCT DESCRIPTION

The SuitePRO™ is a family of Digital Fan Coil thermostats for residential and commercial applications such as hotels, condominiums, school classrooms, etc.

Four models are available for your application:
*   TB6575A1000 – 2-pipe or 4-pipe with seasonal/manual/ automatic heat/cool changeover; 120/240 Vac.
*   TB6575B1000 – 2-pipe with seasonal or manual heat/cool changeover; 120/240 Vac.
*   TB6575C1000 – 2-pipe or 4-pipe with seasonal/manual/ automatic heat/cool changeover; 277 Vac.
*   TB8575A1000 – 2-pipe or 4-pipe with manual and seasonal heat/cool changeover; 24Vac.

All four models are suitable for multiple applications. Changes in output wiring and external links between wiring terminals allow you to configure the thermostat for the appropriate application.

Valves and auxiliary electric heaters can be controlled using a relay or contactor controlled by the system switch.

FEATURES

*   **Simple, intuitive user interface.**
*   **Pre-installed lead wires for fast installation (**TB6575A**, TB6575B and TB6575C models only)**
*   **Backlight display permits easy viewing in any light.**
*   **Four buttons allow manual control of system operation, fan speed, and temperature setpoint adjustment.**
*   **Digital display of ambient temperature, setpoint, heating or cooling mode, fan status, and remote setback**
*   **Proportional plus Integral (P+I) control algorithm for precision temperature regulation.**
*   **Adjustable deadband for auto changeover using the Heat and Cool setpoint settings.**
*   **Adjustable maximum heating and minimum cooling setpoint limits using range stops.**
*   **Installer setup mode allows changes of operating parameters.**
*   **EEPROM permanently retains user settings, including setpoints, during power loss (no batteries required).**
*   **Selectable °C or °F display via Installer Setup.**
*   **Displayable pipe sensor temperature readout to aid in troubleshooting.**
*   **Automatic pipe purge of five minutes once every 24 hours to ensure unrestricted flow (only when used with optional pipe sensor).**
*   **Fan motor always begins on high speed to ensure sufficient torque at startup.**
*   **Option to wire a remote indoor temperature sensor.**
*   **Freeze protect algorithm turns on heat when needed.**
*   **Energy Saving Options:**
    *   **Activity Sensing sets back thermostat to economy mode when there is no activity with the thermostat (4, 12, or 24 hours selectable).**
    *   **Remote Setback Inputs receive dry contact input from a time switch, occupancy sensor, or hotel card key to set back thermostat to economy mode.**
    *   **Auto Fan Reset eliminates the fan from being run all the time by automatically setting the fan to auto (2 or 4 hour selectable).**
    *   **VersaSpeed™ fan ramp algorithm automatically adjusts fan speed (low, medium, and high).**

SPECIFICATIONS

Supply Voltages:
TB6575A1000 and TB6575B1000:
- 120 Vac ±10% at 50/60Hz
- 240 Vac -15% to +10% at 50/60Hz

TB6575C1000:
- 277 Vac ±10% at 50/60Hz

TB8575A1000:
- 20 to 30 Vac at 50/60Hz (using 24 Vac, Class 2, NEMA rated transformer)

Safety Fuse: 15 A, 250 Vac. If the safety fuse blows, the thermostat must be replaced. The fuse is not field replaceable.

Electrical Ratings:

Table 1. Electrical Ratings.

Component	Amps (inductive) for:			
	24 Vac	**120 Vac**	**240 Vac**	**277 Vac**
Fan Relay	1.0 A	6.0 A	3.0 A	2.4 A
Heat/Cool Relay	1.0 A	1.0 A	1.0 A	1.0 A

Environmental Ratings:
Temperature:
Operating Range: 18°C to 49°C (0°F to 120°F).
Shipping and Storage Range: -29°C to 49°C (-20°F to 120°F).
Humidity: 5% to 90% RH, non-condensing.

Onboard Temperature Sensor:
Type: 10K NTC
Working Range: 18°C to 49°C (0°F to 120°F)
Display Range: 0°C to 37°C (32°F to 99°F)
Accuracy ±2.0°F at 70°F

Remote Temperature Sensor (*optional*):
Type: 20K NTC
Working Range: 18°C to 49°C (0°F to 120°F)
Display Range: 0°C to 37°C (32°F to 99°F)
Accuracy ±2.0°F at 70°F

Remote Pipe Sensor (*optional*):
Type: 20K NTC
Working Range: 0°C to 93°C (32°F to 199°F)
Display Range: 0°C to 93°C (32°F to 199°F)
Accuracy ±5.0°F over the temperature sensing range

Remote Setback Input: Dry contact, maximum resistance of 100 ohms. TB6575 – 9Vdc, < 4 mA; TB8575 – 16 Vdc, < 5 mA.

Remote Setback Range:
Heating: 10°C to 21°C (50°F to 70°F).
Cooling: 22°C to 32°C (72°F to 90°F).

Enclosure: Plastic (cover, sub-base, and *optional* adaptor plate)

Junction Box Mounting: Direct mounting on a horizontal single gang NEMA 2 x 4 in. surface mount electrical box, or on 4 x 4 in. box or vertical 2 x 4 in. surface mount electrical box with the *optional* 50033847-001 adapter plate

Dimensions: See Fig. 1 on page 3.

Wiring: 11 screw-in terminals located on the sub-base capable of accepting up to 2 x 18 AWG (0.8 sq. mm), 1 x 16 AWG (1.3 sq. mm), or 1 x 14 AWG (2.1 sq. mm) wires. Accepts stranded or unstranded 14-28 gauge wire.

NOTES:
1. The TB6575A1000 and TB6575C1000 models are pre-fitted with color-coded fly leads (16 AWG) attached to seven terminals.
2. The TB6575B1000 model is pre-fitted with color-coded fly leads (16 AWG) attached to six terminals.
3. The TB8575A1000 model does not have fly leads attached to any terminals.
4. Refer to the *TB6575/TB8575 SuitePRO™ Digital Fan Coil Thermostats* – Installation Instructions (form (62-0278) for fly lead usage.

Minimum Operational Life (at maximum load):
Thermostat contacts: 100,000 cycles

Approvals:
CSA Certified C/US for Canada and the U.S.A. Meets the same requirements as UL-873.
FCC Part 15 Class B

Accessories:
- 50033847-001 – Adapter plate for mounting on a vertical 2 x 4 in. single-gang or double-gang NEMA standard vertical switch box.
- TR21 – 20K Ohm NTC Non-Linear Remote temperature sensor.
  Other acceptable remote temperature sensors are —
  - 20K Ohm: C7041B2005, C7041B2013, C7041C2003, C7041P2004, C7770A1006, C7772A1004, and C7772A1012.
  - 10K Ohm (for averaging only): TR21-A
- PS20 (535-34AB08-203) – Remote pipe sensor (20K Ohm)
- W6380B1005 – Fan Coil Unit Relay Control Center

Models, Applications, and Features

Table 2 identifies the applications and features of each model.

Table 2. Applications and Features

Models	Applications		Features							
	Heat/Cool/Auto	Pipes	Voltage	Number of Relays[a]	Energy Savings Input	Fan: On, Auto, or 3 speed	Manual/Auto Changeover	Remote Sensor	Back Light	Pipe Sensor[b]
TB6575A1000	All	2 or 4	120 or 240 Vac	5	Yes	Yes	Yes	Yes	Yes	Yes
TB6575B1000	Heat or Cool	2	120 or 240 Vac	4						
TB6575C1000	All	2 or 4	277 Vac	5						
TB8575A1000	All	2 or 4	24 Vac	5						

[a] The five relays are wired via terminals W, Y, Gh, Gm, and Gl. Relay 1 controls Heat open (W) or Cool open (Y). Relay 2 controls Cooling open or Electrical heater output (Y/A). Relays 3, 4, and 5 control the High, Medium, and Low fan speeds respectively (Gh, Gm, and Gl).
   NOTE: In 2-pipe configurations without Auxiliary Heat, only 4 relays are used; relay 2 (Y/A) is not used.

[b] Pipe sensor is optional.

Dimensions
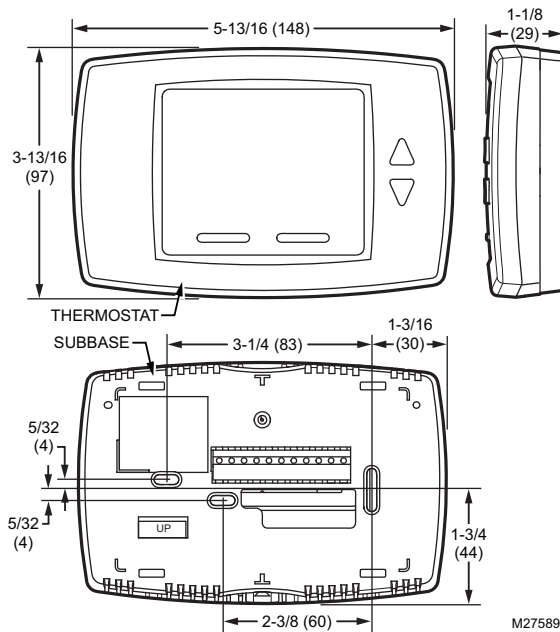
Fig. 1. Dimensions in inches and mm.

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