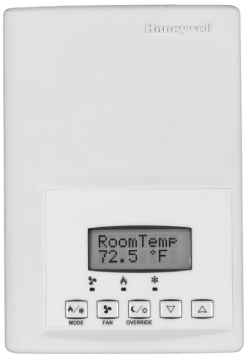
Honeywell

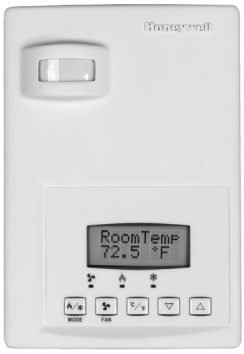
TB7300 Series Communicating Fan Coil Thermostats

24 VAC FOR COMMERCIAL AND LODGING HVAC APPLICATIONS

SPECIFICATION DATA



TB7300 Series Commercial Thermostat



TB7300 Series Hotel Thermostat with Occupancy Sensor

APPLICATION

The TB7300 PI thermostat family is specifically designed for fan coil control. The TB7300 Series are communicating thermostats with models available in BACnet® MS/TP protocol and can be easily integrated into a WEBs-AX building automation system based on the Niagara^{AX}® platform.

Thermostats equipped with an occupancy sensor cover provide advanced active occupancy logic, which will automatically switch occupancy levels from Occupied to Stand-By and Unoccupied as required by local activity being present or not. This advanced occupancy functionality provides advantageous energy savings during occupied hours without sacrificing occupant comfort. All thermostats are PIR ready and can be ordered with or without Honeywell occupancy sensor. The occupancy sensor cover is available to order separately if a PIR is needed at a later time.

FEATURES

- **Available in BACnet MS/TP protocol**
- **Backlit LCD display with dedicated function menu keys for simple operation**
- **Fully integrated advanced occupancy functionality with a PIR cover provides energy savings opportunity on select models; all other models are PIR ready and can have an optional occupancy sensor cover added**
- **Configurable sequences of operation**
- **Configurable fan button allows thermostat to meet more applications with a single model**
- **Password protection to minimize parameter tampering**
- **Six levels of keypad lockout to limit access to change user parameters such as setpoints, system mode, etc.**
- **Auto Fan speed mode increases occupant comfort in cooling mode by reducing humidity and reduces fan noise**
- **Available for 24 Vac on/off, floating or analog control meets advanced applications requirements**
- **Three inputs for monitoring and other advanced functions**
- **SPST auxiliary output that can be used for lighting or auxiliary reheat**
- **All wiring connections are made to removable terminal blocks simplifying installation**

More Information

To learn about additional products in this family visit http://customer.honeywell.com.

- TB7600 Series Communicating RTU/Heat Pump Thermostats (Form No. 63-2706)
- TB7200 Series Communicating Zone Thermostats Specification Data (Form No. 63-2708)
- Sensors Product Overview Brochure (Form No. 63-9285) for a complete listing of compatible sensors

63-2709-04

TB7300 Series Models

Product Number	Description	Outputs	Occupancy Sensor[1]
BACnet Models			
TB7300A5014B	Commercial Fan Coil Unit	2 digital + 1 Aux	Ready
TB7300A5514B	Commercial Fan Coil Unit	2 digital + 1 Aux	Yes
TB7300C5014B	Commercial Fan Coil Unit	2 floating + 1 Aux	Ready
TB7300C5514B	Commercial Fan Coil Unit	2 floating + 1 Aux	Yes
TB7300F5014B	Commercial Fan Coil Unit	2 analog + 1 Aux	Ready
TB7300F5514B	Commercial Fan Coil Unit	2 analog + 1 Aux	Yes
TB7305A5014B	Hotel Fan Coil Unit	2 digital + 1 Aux	Ready
TB7305A5514B	Hotel Fan Coil Unit	2 digital + 1 Aux	Yes
TB7305C5014B	Hotel Fan Coil Unit	2 floating + 1 Aux	Ready
TB7305C5514B	Hotel Fan Coil Unit	2 floating + 1 Aux	Yes
TB7305F5014B	Hotel Fan Coil Unit	2 analog + 1 Aux	Ready
TB7305F5514B	Hotel Fan Coil Unit	2 analog + 1 Aux	Yes
Accessories			
TB-PIR-FCU	FCU Occupancy Sensor Cover		
TB-WALL-1014	Room Sensor 10K NTC Type 2		
TB-WALLOVR-1014	Room Sensor with Override 10K NTC Type 2		

[1] Thermostats ordered without an occupancy sensor cover can be retrofitted with an occupancy sensor cover later if needed.

Theory of Operation

The TB7300 uses a proprietary adaptive logic algorithm to control the space temperature. This algorithm controls the heating / air conditioning system to minimize overshoot while still providing comfort. It provides exceptional accuracy due to its unique PI time proportioning control algorithm, which virtually eliminates temperature offset associated with traditional, differential-based on/off thermostats.

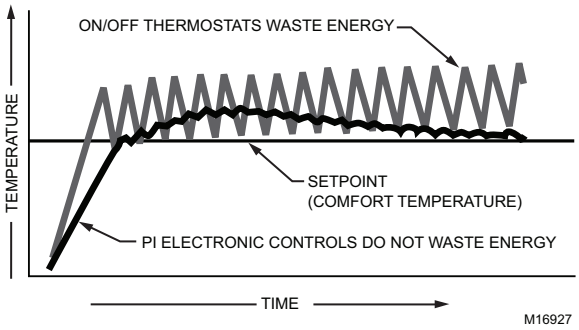


Fig. 1. On/Off mechanical control vs. PI electronic control.

SPECIFICATIONS

Network Protocol: Models available in BACnet MS/TP

WEBs-AX Controllers: Compatible with WEB-2xx, WEB-6xx, and WEB-7xx

Platform:

WEB-2xx and WEB-6xx - WEBStation-AX 3.0 or later
WEB-7xx - WEBStation-AX 3.5 or later

Thermostats Per Controller

BACnet: 126 thermostats (BACnet allows 128 but 1 node is used by the controller, and when more than 64 devices are on the network a repeater is required so 1 node used by the repeater).

Thermostat power requirements: 19-30 Vac 50 or 60 Hz; 2 VA Class 2

Operating conditions:

32 F to 122 F (0 C to 50 C)
0% to 95% R.H. non-condensing

Storage conditions:

-22 F to 122 F (-30 C to 50 C)
0% to 95% R.H. non-condensing

Temperature sensor: 10 K NTC thermistor on board

Temperate sensor resolution: ± 0.2 F (± 0.1 C)

Temperature control accuracy: ± 0.9 F (± 0.5 C) @ 70 F (21 C) typical calibrated

Occ. Stand-By and Unocc cooling setpoint range: 54 to 100 F (12.0 to 37.5 C)

Occ. Stand-By and Unocc heating setpoint range: 40 F to 90 F (4.5 C to 32 C)

Room and outdoor air temperature display range -40 F to 122 F (-40 C to 50 C)

Proportional band for room temperature control: Cooling and Heating: 3.2 F (1.8 C)

Binary inputs: Dry contact across terminal BI1, BI2 and UI3 to Scom

Contact output rating:
Fan relay output: 30 Vac, 1 Amp. Maximum, 3 Amp. in-rush
Valve triac output: 30 Vac, 1 Amp. Maximum, 3 Amp. in-rush
Valve analog: 0 to 10 Vdc into 2KW resistance min.

Wire gauge 18 gauge maximum, 22 gauge recommended

Dimensions: see Fig. 2.

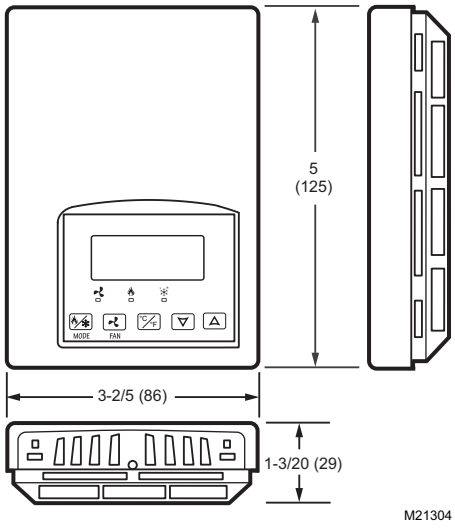


Fig. 2. Thermostat dimensions in inches (mm).

Approximate shipping weight: 0.75 lb (0.34 kg)

Agency Approvals all models:
UL: UL 873 (US) and CSA C22.2 No. 24 (Canada), File E27734 with CCN XAPX (US) and XAPX7 (Canada)
Industry Canada: ICES-003 (Canada)
FCC: Compliant to CFR 47, Part 15, Subpart B, Class A (US)
CE: EMC Directive 89/336/EEC (Europe Union)
C-Tick: EN55022:2006, IEC 61326-1:2005

Agency Approvals wireless models
FCC: Compliant to: Part 15, Subpart C
This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Agency Approvals on BACnet models
BTL

IMPORTANT

All TB7300 series controls are for use as operating controls only and are not safety devices. These instruments have undergone rigorous tests and verifications prior to shipment to ensure proper and reliable operation in the field. Whenever a control failure could lead to personal injury and/or loss of property, it becomes the responsibility of the user/installer/electrical system designer to incorporate safety devices (such as relays, flow switch, thermal protections, etc.) and/or alarm system to protect the entire system against such catastrophic failures. Tampering of the devices or miss application of the device will void warranty.

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63-2709—04 M.S. Rev. 12-14
Printed in United States