

## T7350 Commercial Programmable Thermostat FOR SINGLE- OR MULTI-STAGE CONVENTIONAL/HEAT PUMP SYSTEMS

### SPECIFICATION DATA



### FEATURES

- Typically used in buildings (including: restaurants, shopping malls, office buildings and banks) under 55,000 square feet.
- For single zone rooftop units, split systems, heat pumps or hot/chilled water systems.
- 7-day programming.
- Two Occupied and two Not Occupied periods per day.
- Thermostat Interface Module (TIM) connections to thermostat from PDA for advanced configuration, programming, keypad lockout, etc. changes can be made with thermostat mounted.
- Individual heat and cool setpoints available for Occupied and Not Occupied periods.
- P+I+D control minimizes temperature fluctuations.
- Recovery ramp control automatically optimizes equipment start times based on building load.
- Convenient overrides allow temporary setpoint changes.
- Keypad multi-level lockout available with all models.
- Remote sensor capability for temperature (including outdoor air and discharge air) and humidity sensors.
- Auxiliary subbase contact typically interface with a Honeywell Economizer System (for total rooftop control integration) or act as dehumidification output.
- Universal Versaguard™ Thermostat guards available.
- T7350H provides networking capability on LonWorks® Bus using a Free Topology Transceiver (FTT).
- T7350H Conforms to LonMark® Space Comfort Profile for rooftop applications.

### APPLICATION

The T7350 Commercial Programmable Thermostat controls 24 Vac commercial single zone heating, ventilating and air conditioning (HVAC) equipment. The T7350 consists of a thermostat and subbase. The thermostat includes the keypad and display for 7-day programming. The subbase includes equipment control connections. The subbase mounts on the wall and the thermostat mounts to the subbase.

### Features Available via PDA Configuration

- 365 day clock with holiday programming.
- Automatic Daylight Saving Time adjustments.
- Selectable dehumidification limit control.
- Modulating output configuration.
- Occupancy input to control standby setpoint.
- Additional standby period used in low traffic areas.
- Sequential start option.
- Discharge air high/low limits.
- Selectable recovery ramp.
- Ambient lockout (with outdoor sensor).
- System monitoring.
- Application database with download and storing.

*continued*



## FEATURES *(continued from page 1)*

### Features via Optional Network Model-H

- Communications on LonTalk® network.
- Network Tools (LonSpec, CARE) have ability to configure all PDA available features.
- T7350 Network data inputs including outdoor air temperature, Occupancy Sensor, Electric Demand Shed/Restore, room temperature and humidity.
- Use T7350H to time-schedule up to 119 network connected XL10 + XL15c devices.
- Time synchronization with a network master clock or the T7350H configured as the network master clock.
- Remote manual occupancy changes to the T7350 via Command Display (S7760)
- View and modify weekly schedules and holidays via Command Display (S7760)
- Remote changes to the T7350 occupancy override, schedules, fan operation (on auto), system mode (off, auto, heat, cool) and room temperature setpoints via Workstation
- Remote unoccupied bypass controlled from another device.
- Remote T7350 data and alarm monitoring via Command Display or Workstation.
- Network Manual Mode allows a remote user to turn on/off or modulate each output via a network connection.
- LonMark plugin software to facilitate third party configuration tools and workstations.

## SPECIFICATIONS

### IMPORTANT

*The specifications given in this publication do not include normal manufacturing tolerances. Therefore, this unit might not exactly match listed specifications. This product is tested and calibrated under closely controlled conditions; minor performance differences can be expected if those conditions are changed.*

**Models:** See Table 1.

**Dimensions:** See Fig. 1.

**Finish (color):** Trident White.

**Batteries:** No batteries required.

Table 1. T7350 Thermostat Features.

Model	Applications	Maximum Stages <sup>a</sup>		Features	Auxiliary Relay	LONWORKS® Capability?
		Heat	Cool			
T7350A	Conventional or Heat Pump	1 <sup>b</sup>	1 <sup>b</sup>		Yes	No
T7350B		2 <sup>b</sup>	2 <sup>b</sup>	Outdoor, Discharge Air Capability	Yes	
T7350D		3 (2) <sup>c</sup>	3 (4) <sup>c</sup>	Humidity, Occupancy, Outdoor, Discharge Air Capability	Yes	
T7350H1009	Modulating				Isolated Normally Open	Yes
T7350H1017		2 modulating, 2 <sup>b</sup> relay		Humidity, Occupancy, Outdoor, Discharge Air Capability, 4-20 mA output (2-10 Vdc with 500 ohm resistor)	Yes	No
T7350M					Yes	No

<sup>a</sup> All models are down-selectable and can be configured to control fewer stages than the maximum allowed.

<sup>b</sup> One extra stage (of either heat or cool) can be configured using the auxiliary relay.

<sup>c</sup> Heat pump applications for these models have a maximum of two heat stages and two cool stages.

### Mounting Means:

Mounts on subbase.

Subbase Mounts On:

Wall: Using two 5/8 in. (16 mm) long #6-32 screws (included).

Outlet Box: Using sheet metal screws.

### Throttling Range for Modulating Outputs:

Automatically adjusts based on heat/cool stages. Manually adjustable with PDA.

**Clock Accuracy (at 77°F [25°C]):** ±1 min./month (30 days).

### Minimum Stage Operation Time (fixed):

Minimum On

Heat: 1 minutes.

Cool: 3 minutes.

Minimum Off (Cool and Heat Pump): 1 minute.

### Electrical Ratings:

Power: 24 Vac, 50/60 Hz.; 20 to 30 Vac, 50/60 Hz.

Input:

Temperature: 20K ohms.

Humidity: 0-10 Vdc.

Outdoor: 3000 PTC.

Discharge Air: 20K ohms.

Occupancy Sensor: Dry contact switching 30 Vdc at 1 mA.

All Relay Outputs (at 30 Vac):  
 Running: 1.5A maximum.  
 Inrush: 7.5A maximum.  
 Modulating Output: 4 to 20 mA with 510 ohm maximum terminating resistance.  
 System Current Draw (without load):  
 5 VA maximum at 30 Vac, 50/60 Hz.

NOTE: Relays are N.O. Single-Pole, Single-Throw (SPST).

**Outdoor Sensor Wiring:** Requires 18 gauge wire.

**Humidity Ratings:** 5% to 90% RH, noncondensing.

**Emergency Heat Indication:**  
 Display indicates when Emergency Heat is activated (Em).

**Temperature:**  
 Ratings:  
 Operating Ambient: 30°F to 110°F (-1°C to 43°C).  
 Shipping: -30°F to +150°F (-34°C to +66°C).  
 Display Accuracy: ±1°F (±1°C).  
 Setpoint:  
 Range:  
 Heating: 40°F to 90°F (4°C to 32°C).  
 Cooling: 45°F to 99°F (7°C to 37°C).  
 Deadband: 2°F (1°C).  
 Default Settings: See Table 2.

**Loss of Power:** The thermostat maintains programmed times and temperatures for the life of the product. Clock and day information is retained for a minimum of 48 hours.

NOTE: To achieve the 48-hour power-loss clock retention, the T7350 must be powered for at least 5 minutes.

**Communicating Model T7350H:**  
 Connection Terminals for the LonWorks Bus.  
 Network jack for quick access by personal computer based tools.  
 Communications service-pin pushbutton to simplify startup.  
 LonMark Functional Profile: 8500\_20 Space Comfort Controller.  
 LonMark SCC Object Type: 8504 Rooftop See Fig. 2.  
 LonMark Program Identifier: 80:00:0C:55:04:03:04:2E.  
 LonMark Application Interoperability: version 3.3  
 Honeywell LonMark Plug-In file downloads:  
<http://plugin.ge51.honeywell.de/index.htm#>

**PDA System Requirements:**  
 Palm OS®: 3.5.x to 5.2.1  
 Dynamic Heap: 256K bytes.  
 Free RAM Space: 1000K bytes.  
 Serial Communications: RS-232.

**Approvals:**  
 European Community Mark (CE) Listed.  
 UL 873 Recognized, NEC Class 2.  
 FCC Part 15 subpart J Class A.  
 cUL.

**Accessories:**  
 Duct Discharge Air Sensors: C7041B (6 or 12 in.) (152 or 305 mm), C7041C (18 in.), C7041J (12 ft averaging), C7770A (6 in. probe).  
 Outdoor Air Sensors: C7089A, C7170A, C7031G2014 (weatherproof).  
 Temperature Sensors (Remote): C7772A, T7770A1006, T7770B1046, T7770C1044, T7770D1000, T7771.  
 Economizer Logic Modules: W6210, W6215, W7210, W7212, W7215, W7459.  
 Humidity Sensors: H7625A,B; H7635A,B,C, H7655B.  
 PDA Units: Palm® V, M125, and i705 handhelds; TRGPro handheld; ZIRE™ 71 handheld; TUNGSTEN™ T handheld.  
 Others:  
 209541B FTT network termination module.  
 209651A Vertical Mounting Hardware Wallplate Adapter (Trident white).  
 50000083-001 Thermostat Interface Module (TIM).  
 50014064-001 Infra-Red TIM.  
 50000452-001 Troubleshooting Cable.  
 AK3797 Single pair network cable plenum rated, U.L. Type CMP.  
 AK3798 Single pair network cable, U.L. Type CMR.  
 AK3799 Double pair network cable plenum rated, U.L. Type CMP.  
 Q7740A FTT network 2-way repeater.  
 Q7740B FTT network 4-way repeater.  
 TG511, TG512 Universal Versaguard™ Thermostat guards.

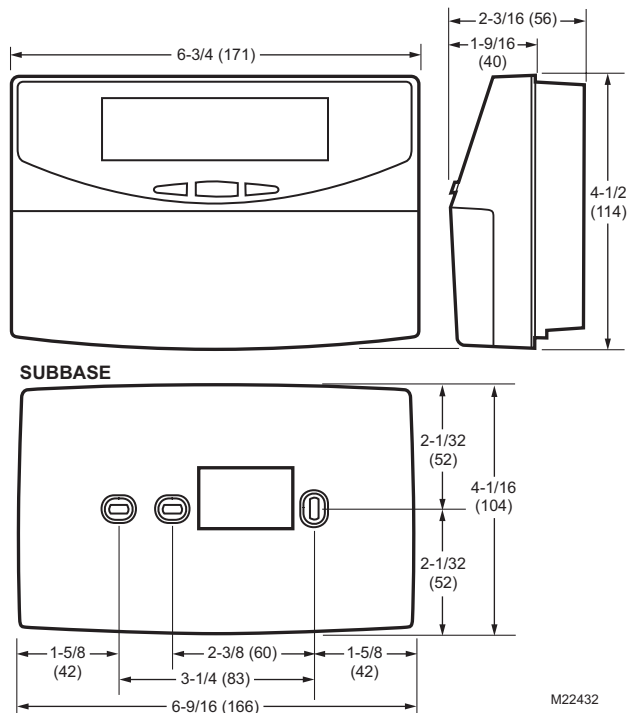


Fig. 1. Dimensions of thermostat and subbase in in. (mm).

Table 2. Default Setpoints.

Control	Occupied	Not Occupied	Standby
Heating	70°F (21°C)	55°F (13°C)	67°F (19°C)
Cooling	75°F (24°C)	85°F (29°C)	78°F (26°C)

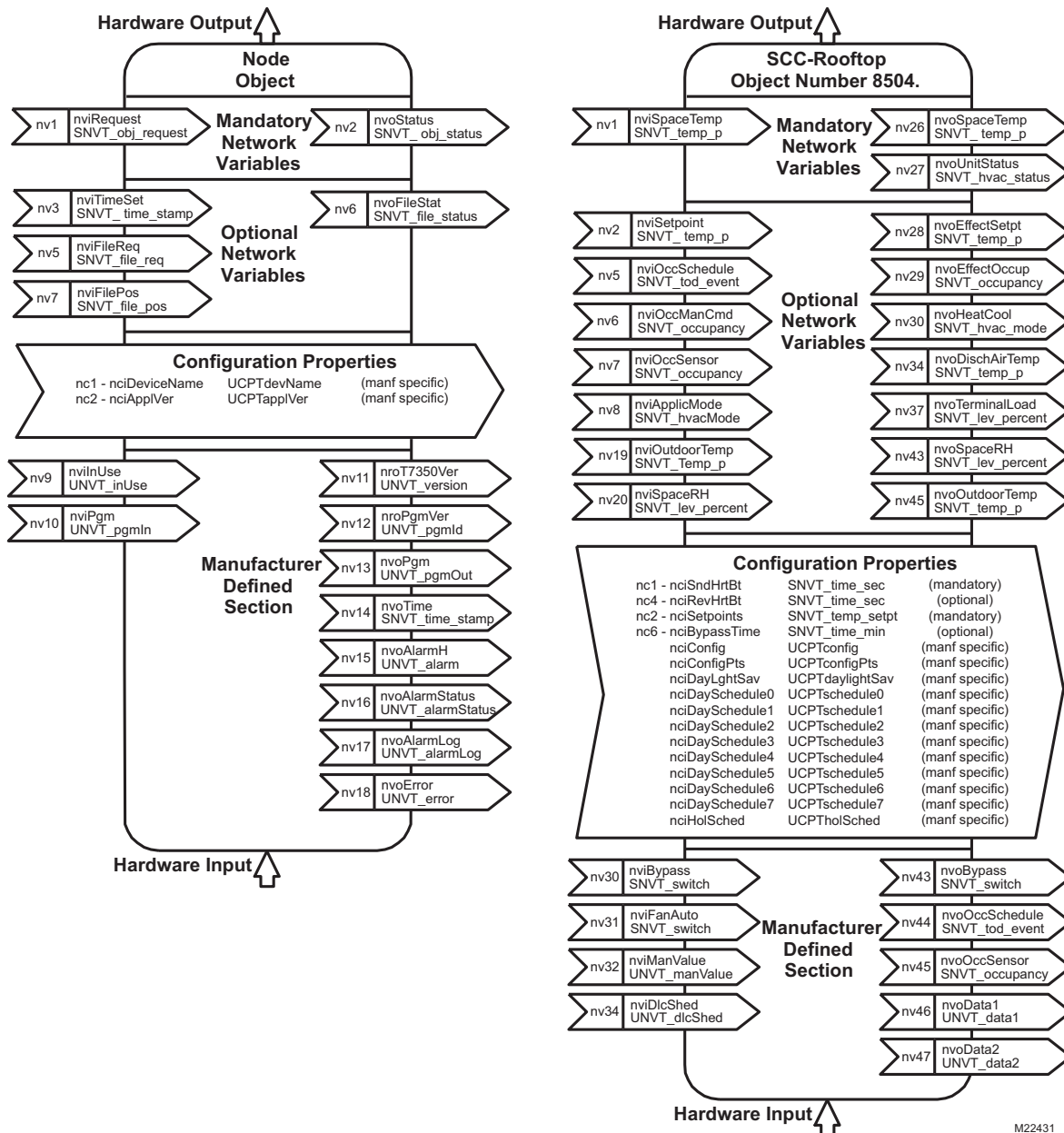


Fig. 2. T7350H LonMark Space Comfort Controller Rooftop Object (8504) with Node Object.

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