T7350 SERIES PROGRAMMABLE COMMERCIAL THERMOSTATS AND W7350 CONTROLLER
T7350, W7350 SERIES

DESCRIPTION

The **Honeywell T7350 Commercial Programmable Thermostat** controls 24 VAC single zone heating, ventilating and air conditioning (HVAC) equipment. The **T7350** consists of a thermostat and a subbase. The thermostat includes the keypad and display for 7-day programming and the subbase includes equipment control connections. **T7350M** models have 2 modulating outputs for heat and/or cool, and the **T7350H** models have LonWorks® capability.

The **W7350 WebStat** is a web-based building manager that allows contractors and facility managers to view and command **T7350H Commercial Programmable Thermostats**. It communicates over the LonWorks® network to perform building management control of the **T7350H** thermostats through a web browser. It runs building management applications such as trending, scheduling and alarming. The WebStat Bundle (W7350A1000) includes the WebStat controller, a LON® card, and a power supply.

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Honeywell

T7350 Series

FEATURES

- **7-day programming with two Occupied and two Not Occupied periods per day**
- **Individual heat and cool setpoints for Occupied and Not Occupied periods**
- **Advanced configuration using TStatSpec software or PDA**
- **PID control minimizes temperature fluctuations**
- **Recovery ramp control automatically optimizes equipment start times based on building load**
- **Keypad multi-level lockout available with all models**

- **Remote sensor capability for temperature (including outdoor air and discharge air) and humidity sensors**
- **T7350M provides 2 modulating heat and/or cool outputs**
- **T7350H provides networking capability on LonWorks® bus using Free Topology Transceiver (FTT)**
- **T7350H conforms to LonMark® Space Comfort Profile for rooftop applications**
- **W7350 web-based controller supports up to 20, T7350H thermostats**

SPECIFICATIONS

T7350 Models		All Relay Outputs (at 30 Vac)	
Mounting Means	Mounts on subbase; subbase mounts on wall using two 5/8" long #6-32 screws (included).	**Running**	1.5A maximum
		Inrush	7.5A maximum
Throttling Range for Modulating Outputs		**Modulating Output**	4 to 20 mA with 510 ohm maximum terminating resistance
	Automatically adjusts based on heat/cool stages.	**System Current Draw (without load)**	
	Manually adjustable with TStatSpec software or PDA		5 VA maximum at 30 Vac, 50/60 Hz
Clock Accuracy (at 77°F [25°C])		**NOTE:** Relays are N.O. Single-Pole, Single-Throw (SPST).	
	±1 min./month (30 days)	**Outdoor Sensor Wiring**	Requires 18 gauge wire
Minimum Stage Operation Time (fixed)		**Humidity Ratings**	5% to 90% RH, noncondensing.
Minimum On	Heat: 1 minute; cool: 3 minutes	**Emergency Heat Indication**	
Minimum Off (Cool and Heat Pump)			Display indicates when Emergency Heat is activated (Em)
	1 minute	**Temperature Ratings**	
Power	24 VAC, 50/60 Hz.; 20 to 30 VAC, 50/60 Hz	**Operating Ambient**	30° to 110°F (-1° to 43°C)
Input		**Shipping**	-30° to +150°F (-34°°C to +66°C)
Temperature	20KΩ	**Display Accuracy**	±1°F (±1°C)
Humidity	0-10 VDC	**Setpoint**	
Outdoor	3000 PTC	**Range**	Heating: 40° to 90°F (4° to 32°C)
Discharge Air	20KΩ	**Cooling**	45° to 99°F (7° to 37°C)
Occupancy Sensor	Dry contact switching 30 VDC at 1 mA	**Deadband**	2°F (1°C)
		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.

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SPECIFICATIONS (continued)

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:

plugin.ge51.honeywell.de/index.htm#

TStat Spec System Requirements

Windows XP or Windows 7

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.

Dimensions

T7350 models	6-3/4"W x 4-1/2"H x 2-3/16"D (17.1 x 11.4 x 5.6 cm)
W7350 model	6-23/32"W x 4"H x 2-3/16"D (17.1 x 10.2 x 5.6 cm)

Weights

T7350 models	1.25 lb (0.57 Kg)
W7350 model	1.25 lb (0.57 Kg)

Warranty 1 year

Note: For more specification data on the W7350 please see manufacturer's specification sheet. (www.kele.com)

T7350 THERMOSTAT FEATURES

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

[a] All models are down–selectable and can be configured to control fewer stages than the maximum allowed.
[b] One extra stage (of either heat or cool) can be configured using the auxiliary relay.
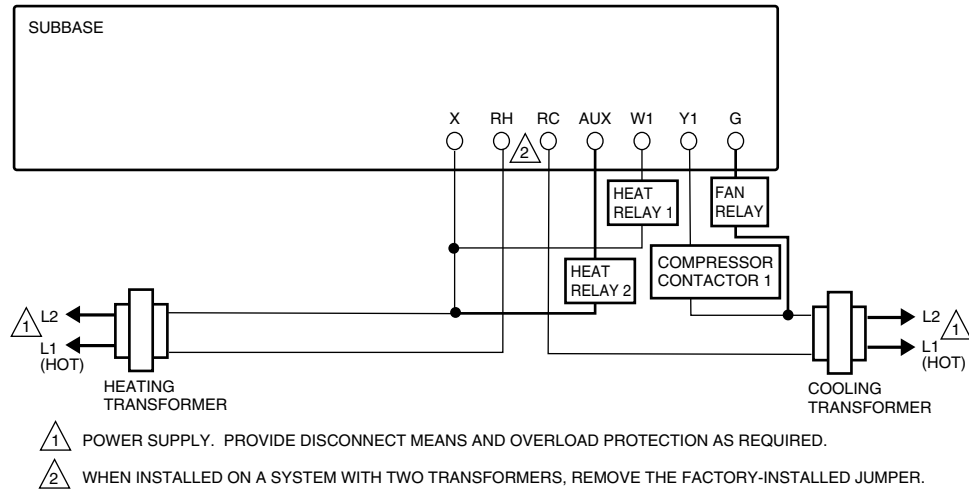[c] Heat pump applications for these models have a maximum of two heat stages and two cool stages.

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)

WIRING

SUBBASE

X   RH   RC   AUX   W1   Y1   G

HEAT
RELAY 1

FAN
RELAY

HEAT
RELAY 2

COMPRESSOR
CONTACTOR 1

△1 L2
L1
(HOT)

HEATING
TRANSFORMER

COOLING
TRANSFORMER

L2 △1
L1
(HOT)

△1 POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

△2 WHEN INSTALLED ON A SYSTEM WITH TWO TRANSFORMERS, REMOVE THE FACTORY-INSTALLED JUMPER.

Typical hookup of T7350A in two-stage heat and one-stage cool conventional system with two transformers

TR23 REMOTE SENSOR

GND | SENSOR | SET PT | LED | BYPASS
1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12

OUTDOOR
AIR
SENSOR

DISCHARGE
AIR
SENSOR

COMPRESSOR
CONTACTOR 2

HEAT
RELAY 2

SUBBASE

T5   T6   T7   T4   T3   OS   OS   AS   AS   W2   Y2

X   RH   RC   AUX   W1   Y1   G

HEAT
RELAY 1

FAN
RELAY

COMPRESSOR
CONTACTOR 1

△1 L2
L1
(HOT)

HEATING
TRANSFORMER

△3
ECONOMIZER

COOLING
TRANSFORMER

L2 △1
L1
(HOT)

△1 POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

△2 WHEN INSTALLED ON A SYSTEM WITH TWO TRANSFORMERS, REMOVE THE FACTORY-INSTALLED JUMPER.

△3 USE ECONOMIZER INSTRUCTIONS FOR INSTALLATION DIRECTIONS.

Typical hookup of T7350B in two-stage heat and two-stage cool conventional system with two transformers

NEW!
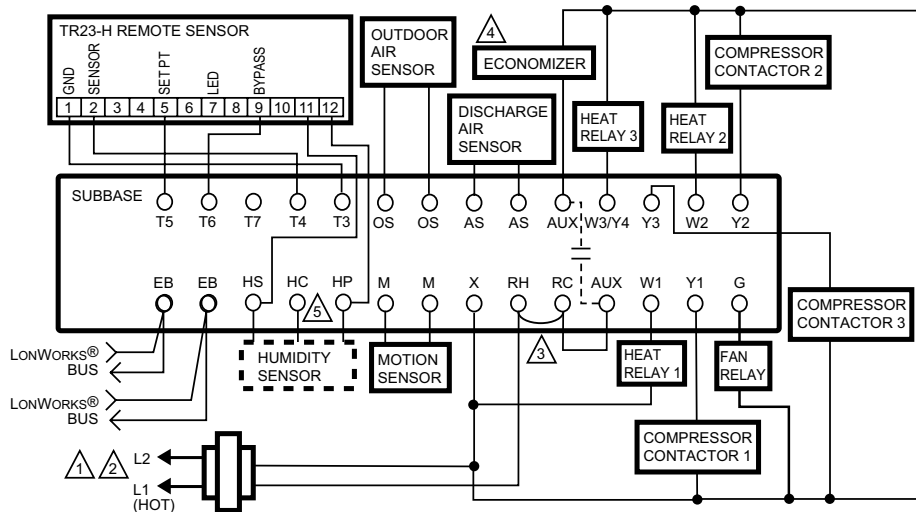
WIRING
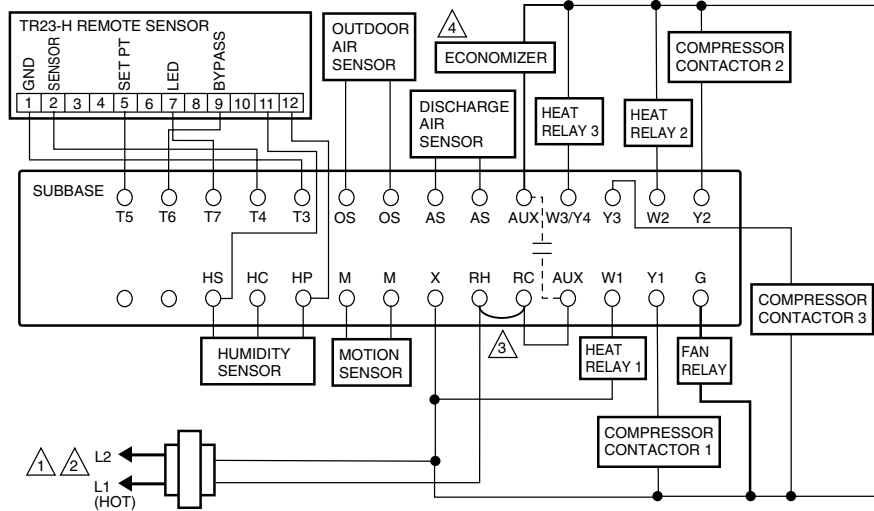
1. POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

2. ENSURE TRANSFORMER IS SIZED TO HANDLE THE LOAD.

3. HEAT/COOL SYSTEMS WITH ONE TRANSFORMER REQUIRE THE FACTORY-INSTALLED JUMPER.

4. USE ECONOMIZER INSTRUCTIONS FOR INSTALLATION DIRECTIONS.

5. NO NEED TO WIRE HC TERMINAL BECAUSE THE T3 TERMINAL IS INTERNALLY TIED TO HC, WHICH IS ALSO TIED TO TERMINAL 1 COMMON AT THE SENSOR.

Typical hookup of T7350D in three-stage heat and three-stage cool conventional system with one transformer.

1. POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

2. ENSURE TRANSFORMER IS SIZED TO HANDLE THE LOAD.

3. HEAT/COOL SYSTEMS WITH ONE TRANSFORMER REQUIRE THE FACTORY-INSTALLED JUMPER.

4. USE ECONOMIZER INSTRUCTIONS FOR INSTALLATION DIRECTIONS.

5. WHEN USING THE TR23-H FOR HUMIDITY SENSING THERE IS NO NEED TO WIRE HC TERMINAL BECAUSE THE T3 TERMINAL IS INTERNALLY TIED TO HC, WHICH IS ALSO TIED TO TERMINAL 1 COMMON AT THE SENSOR

Typical hookup of T7350H1009 in three-stage heat and three-stage cool conventional system with one transformer
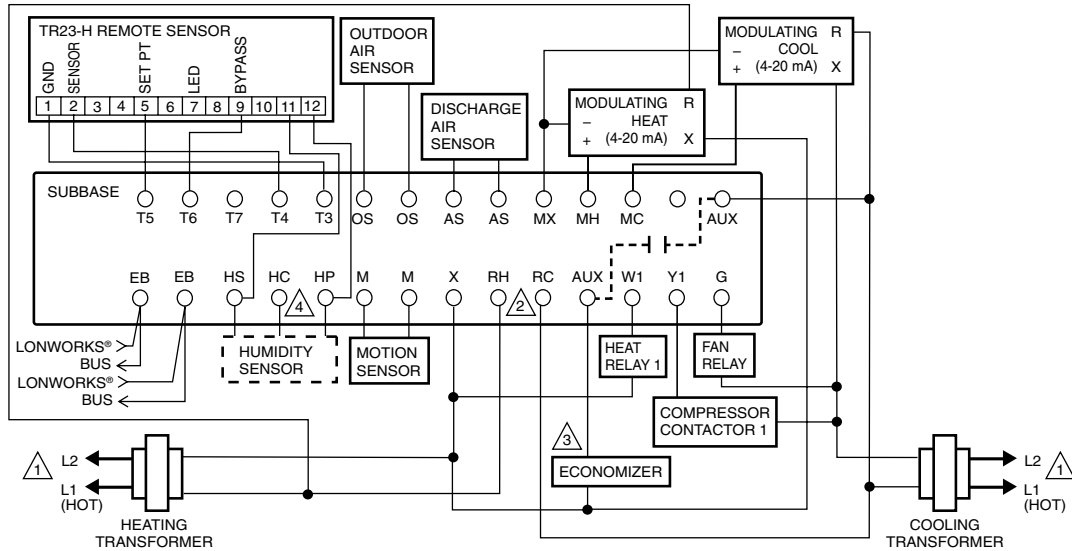
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WIRING

1. POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

2. WHEN INSTALLED ON A SYSTEM WITH TWO TRANSFORMERS, REMOVE THE FACTORY-INSTALLED JUMPER.

3. USE ECONOMIZER INSTRUCTIONS FOR INSTALLATION DIRECTIONS.

4. WHEN USING THE TR23-H FOR HUMIDITY SENSING THERE IS NO NEED TO WIRE HC TERMINAL BECAUSE THE T3 TERMINAL IS INTERNALLY TIED TO HC, WHICH IS ALSO TIED TO TERMINAL 1 COMMON AT THE SENSOR.

Typical hookup of T7350H1017 for system with two independent heat stages (one modulating), two independent cool stages (one modulating), and two transformers.
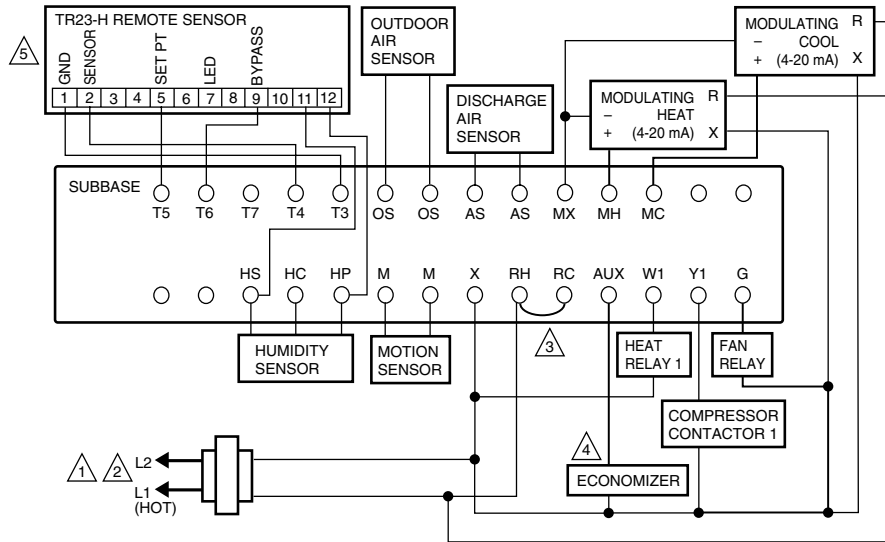
1. POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

2. ENSURE TRANSFORMER IS SIZED TO HANDLE THE LOAD.

3. HEAT/COOL SYSTEMS WITH ONE TRANSFORMER REQUIRE THE FACTORY-INSTALLED JUMPER.

4. USE ECONOMIZER INSTRUCTIONS FOR INSTALLATION DIRECTIONS.

5. WHEN USING THE TR23-H FOR HUMIDITY SENSING THERE IS NO NEED TO WIRE HC TERMINAL BECAUSE THE T3 TERMINAL IS INTERNALLY TIED TO HC, WHICH IS ALSO TIED TO TERMINAL 1 COMMON AT THE SENSOR.

Typical hookup of T7350M for system with two independent heat stages (one modulating), two independent cool stages (one modulating), and one transformer.

THERMOSTATS & CONTROLLERS

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ORDERING INFORMATION

MODEL	DESCRIPTION
T7350A1004	Single stage heat pump compatible
T7350M1008	Modulating with 2 stage heat and 2 stage cool
T7350B1002	Multi-stage heat pump compatible
T7350D1008	Multi-stage heat pump compatible with occupancy and humidity feature
T7350H1009	Multi-stage heat pump compatible with occupancy and humidity feature communicating LonWorks®
T7350H1017	Modulating with 2 stage heat and 2 stage cool with occupancy and humidity feature communicating LonWorks®
W7350A1000	Webstat controller for T7350H series thermostats

ACCESSORIES

MODEL	DESCRIPTION
50014064-001	Infra-red thermostat module for T7350 Series
C7041B2005	Duct temperature sensor, 6 inch
C7041B2013	Duct temperature sensor, 12 inch
C7041C2003	Duct temperature sensor, 18 inch
C7041J2007	Duct temperature averaging sensor, 12 foot
C7089R2013	Wireless outdoor sensor

THERMOSTATS & CONTROLLERS

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