

THERMOSTATS & CONTROLLERS

FOCUSPRO™ RESIDENTIAL AND LIGHT COMMERCIAL THERMOSTATS TH5000, TH6000, TB7000 SERIES



DESCRIPTION

The **Honeywell TH5000 Series** is a single- or multi-stage digital thermostat made for typical residential heating and cooling systems with either conventional heat or heat pump. The **TH6000 Series** is a five-day-plus-two programmable thermostat. It is available in single- or multi-stage models for typical residential H/C systems with either conventional heat or heat pump. The **TB7220** is a seven-day programmable thermostat made for light commercial applications. The **TB7220** is a multi-stage thermostat, for conventional heat or heat pump application with additional algorithms to accommodate larger spaces and larger equipment in commercial applications. Algorithms include configurable recovery ramp and pre-occupancy purge cycle. It also has remote sensor capability.

FEATURES

- **Programmable and Non-Programmable Models**
- **Large digital backlit display**
- **Auto or manual heat-cool operation**
- **Relay switch type**
- **°F or °C selectable**
- **Five-year warranty**

Honeywell



TH5110D1022
Non-Programmable



TH5220D1029
Non-Programmable



TH6220D1028
Programmable



TB7220U1012
Commercial Programmable

SPECIFICATIONS

Supply Voltage	20 to 30 VAC, 50/60 Hz	Clock	±1 minute/month, 10-year battery TH6000, TB7220 only
Battery	Optional, 2-AA	DST Auto Adjust	Yes, TB7220 only
Accuracy	±1°F (±0.5°C)	Compressor Cycle	Adjustable cycles per hour and minimum off time
System Compatibility	Conventional and heat pump	Purge Duration	Adjustable, TB7220 only
Display	LCD 2.98 to 5.09 sq in, model dependent (°F or °C)	Heat Pump Lockout	Adjustable, TB7220 only
Display Offset	±3°F (±3°C), TB7220 only	Remote Sensors	Two, indoor and outdoor, TB7220 only
Controls	4 to 6 soft keys, model dependent	Wiring	18 to 22 AWG, no shield required
Keypad Lockout	Configurable, TB7220 only	Night Setback Program Times	TB7220 7-day, 2 or 4 periods/day
Sensor Type	Thermistor	TH6220	5+2- or 5+1+1-day, 4 periods/day
Switch Type	Y1,Y2,W,E: 1A relay W2,G,O/B,L,A: 0.5A relay	Color	White
Stages & Control	See terminal designation table	Operating Temperature	32° to 120°F (0° to 49°C)
Memory	10 years, then AA batteries required	TB7220	0° to 120°F (-18° to 49°C)
System Switch	Selectable, Heat/Off/Cool/Auto, plus emergency heat on TH5220 and TH6220	Operating Humidity	0 to 90% RH (non-condensing)
Fan Switch	Auto/On	Dimensions	TH5110 3.42"H x 4.5"W x 1.3"D (8.7 x 11.4 x 3.3 cm)
Setpoint Range		TH6000, TH5220	3.56"H x 5.81"W x 1.5"D (9.0 x 14.7 x 3.8 cm)
Heating	40° to 90°F (4.5° to 32°C)	TB7220	3.75"H x 6.0"W x 1.4"D (9.5 x 15.2 x 3.6 cm)
Cooling	50° to 99°F (10° to 37°C)	Weight	0.75 lb (0.34 Kg)
Setpoint Limits	Full setpoint span (TH5220, TH6220, TB7220 only)	Warranty	5 years, all except TB7220 (2 years)
Control Type	Proportional plus integral (PI) TB7220 tuned for larger spaces/ equipment		
Deadband	3°F (1.7°C) fixed (all except TB7220) Adjustable 2° to 9°F (1.1° to 5°C), TB7220 only		
Remote Sensor	10K thermistor, TB7220 only		

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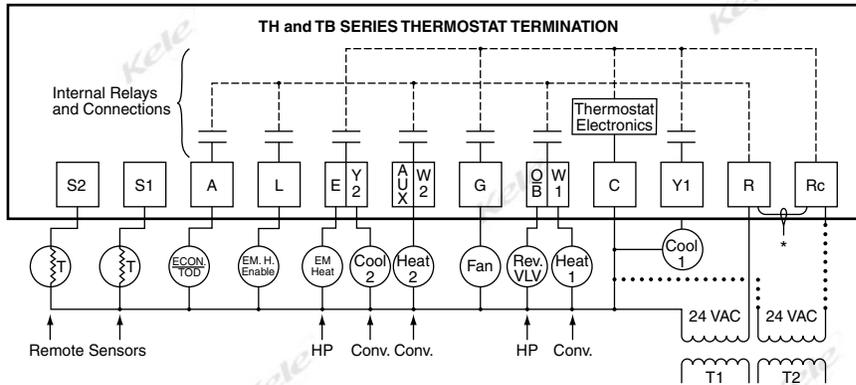
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WIRING

TABLE 1. TERMINAL DESIGNATIONS BY THERMOSTAT MODEL

RESIDENTIAL THERMOSTATS		RESIDENTIAL PROGRAMMABLE THERMOSTATS		COMMERCIAL	Terminal**	Thermostat Function**
TH5110 1H/1C	TH5220 2H/2C	TH6110 1H/1C, programmable	TH6220 2H/2C, programmable	TB7220 3H/2C, programmable		
●	●	●	●	●	Rc	24 VAC power for cooling, for a split heating-cooling system
●	●	●	●	●	R	24 VAC power for heating (typically jumpered with Rc for common-powered systems)
●	●	●	●	●	Y1	Cooling 1st stage
●	●	●	●	●	C	24 VAC common (must come from cooling transformer)
●	●	●	●	●	W1	Heating 1st stage
○	○	○	○	○	O/B	Changeover valve (replaces W1 for heat pump)
●	●	●	●	●	G	Fan relay
	●		●	●	W2	Heating 2nd stage (TH5220, TH6220, TB7220)
	○		○		Aux	2nd stage heat for heat pump application (TH5220, TH6220, replaces W2 for HP)
	●		●	●	Y2	Cooling 2nd stage (TH5220, TH6220, TB7220)
	○		○		E	Emergency heat relay (TH5220, TH6220, replaces Y2 for HP)
	●		●		L	Emergency heat enabled annunciate (TH5220, TH6220)
				●	A	Economizer or time-of-day output powered by the R terminal (TB7220)
				●	S1	Remote sensor 1 set for room or OSA (TB7220)
				●	S2	Remote sensor 2 set for room or OSA (TB7220)

○ = Heat pump application only
● = Conventional heating application



* Factory Jumper (remove if heating transformer is used).
 ... Wiring if Separate Heating Transformer is Needed.
 --- Internal Thermostat Connections
 Conv. Conventional Heating
 HP Heat Pump Heating
 ECON/TOD Economizer Enable or Time of Day Output

ORDERING INFORMATION

MODEL	DESCRIPTION
TH5110D1022	Digital thermostat 1H/1C (HP), system (H/O/C/A), fan auto/on
TH5220D1029	Digital thermostat 2H/2C (HP), system (H/O/C/A/Em), fan auto/on
TH6110D1021	Programmable (5-2 day) thermostat 1H/1C (HP), system (H/O/C/A), fan auto/on
TH6220D1028	Programmable (5-2 day) thermostat 2H/2C (2H/1C HP), system (H/O/C/A/Em), fan auto/on
TB7220U1012	Programmable (7-day) thermostat 3H/2C (HP), system (H/O/C/A), fan auto/on

MODEL	RELATED PRODUCTS
32003796-001	Cover goof plate, 6"H x 8.3"W (TH7220)
50002883-001	Cover goof plate, 6"H x 8.3"W (TH6000 Series, TH5000 Series)
C7089U1006	Outdoor Thermistor sensor with mounting clip, 10K ohm @ 77°F NTC (TB7220), Non-Standard Curve
C7189U1005	Remote indoor thermistor sensor, 10K ohm @ 77°F NTC (TB7220), Non-Standard Curve