

# THERMOSTATS & CONTROLLERS

## MULTISTAGE SEVEN-DAY PROGRAMMABLE THERMOSTAT

**KT7351**



### DESCRIPTION

The **Kele KT7351** is a single or multistage seven-day programmable thermostat (°F or °C) for use with AHU control for both heating and cooling applications. It is designed for low voltage power and switching to control within 1°F (1.8°C) using Proportional plus Integral (PI) algorithms, and it includes adjustable delays to prevent equipment short cycling. The **KT7351** has both system and fan switching with an internal sensor or remote sensor capabilities. It also has a number of energy-saving programs such as a seven-day clock with two occupied and unoccupied periods per day, optimal start, single-button continuous unoccupied, and adjustable occupied override. The cover has an easy-to-read digital display for temperature, time, system status, and fan status and 16 dedicated buttons for day-to-day control necessities. The temperature display can be disabled or offset to enhance occupant perceptions. Other control features are listed below.



**KT7351**



### FEATURES

- **PID control**
- **Outputs up to three heat and three cool and HP**
- **Seven-day programming clock**
- **365-day holiday scheduling**
- **Two occupied and unoccupied periods per day**
- **Optimal start**
- **Continuous unoccupied button**
- **Occupied override button (1-8 hours adjustable)**
- **Economizer interface contact**
- **Display in °F or °C**
- **Remote sensor inputs**
- **Keypad multi-level lockout**
- **Digital display with temperature and humidity**
- **Temperature display offset**
- **Setpoint range stops**
- **Adjustable staging on/off times**
- **Fan control for electric or conventional heat**
- **System control**
- **Changeover manual or auto**
- **Relay switching (no mercury)**
- **CE and UL listed and meets Title 24 requirements**
- **No battery backup required**
- **Recovery ramp control**
- **Replaces all T7300 versions**

### SPECIFICATIONS

<b>Supply Voltage</b>	20-30 VAC, 50/60Hz	<b>Default Setpoint</b>	
<b>Supply VA</b>	5 VA	<b>Heating</b>	
<b>Clock Accuracy</b>	12 or 24 hour, one min/month	<b>Occ</b>	70°F (21°C)
<b>Display</b>	LCD 1"H x 3.55"W (2.54 x 8.89 cm), ±1°F or ±1°C	<b>Unocc</b>	55°F (13°C)
<b>Remote Input Sensors</b>		<b>Cooling</b>	
<b>Room Temperature</b>	20 k thermistor (Type 42)	<b>Occ</b>	75°F (24°C)
<b>Humidity</b>	0-10 VDC (D and M models)	<b>Unocc</b>	85°F (29°C)
<b>OSA</b>	3K platinum RTD	<b>Deadband</b>	2°F (1°C)
<b>Discharge Minimum</b>	20 k thermistor (Type 42)	<b>Fan Switch</b>	Keyboard, On/Auto
<b>Occ Sensor</b>	Dry contact in 30 VDC, 1 mA	<b>System Switch</b>	Keyboard, H/O/C/Auto
<b>Enclosure</b>	White plastic	<b>Power Interrupt</b>	No battery required, infinite program memory, 48-hour clock
<b>Keypad Lockout</b>	Three levels	<b>Mounting</b>	Subbase with terminals (included)
<b>Relays</b>	30 VAC max (N.O.)	<b>Operating Temperature</b>	30° to 110°F (-1° to 43°C)
<b>Running</b>	1.5A H/C	<b>Operating Humidity</b>	5 to 90% RH (non-condensing)
<b>Inrush</b>	7.5A	<b>Dimensions</b>	4.5"H x 6.75"W x 2.19"D (11.4 x 17.1 x 5.6 cm)
<b>Outputs</b>	See wiring and ordering information	<b>Weight</b>	1.2 lb (0.59 Kg)
<b>Occ/Unocc</b>	Internal clock schedule or via keyboard	<b>Approvals</b>	CE, UL 873, FCC, California Title 24
<b>Control Algorithm</b>	PID	<b>Warranty</b>	1 year
<b>Setpoint Range</b>			
<b>Heating</b>	40° to 90°F (4° to 31°C)		
<b>Cooling</b>	45° to 99°F (7° to 37°C)		

## MULTISTAGE SEVEN-DAY PROGRAMMABLE THERMOSTAT

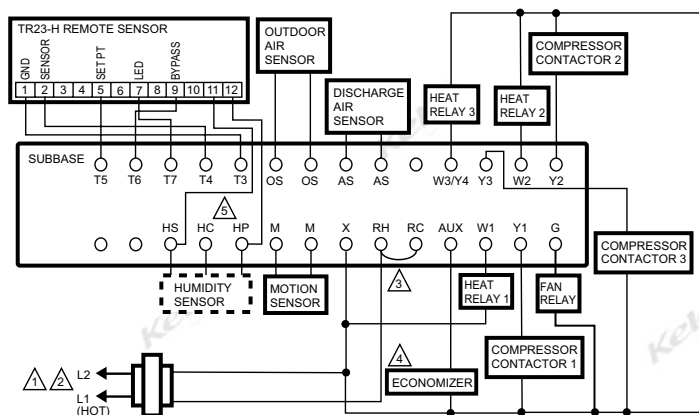
KT7351

## INSTALLATION

The thermostat comes with a subbase that mounts horizontally on a wall or a 2" x 4" (5.01 x 10.16 cm) outlet box with screws provided. No leveling is required.

## WIRING

T7351 COMMERCIAL PROGRAMMABLE THERMOSTAT



- 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.

Terminal	Typical Connection	Terminal	Typical Connection
AS, AS	Discharge air sensor	OS, OS	Outside air sensor (3K RTD)
AUX	(A) 2nd H or C, (B) 3rd H or C, or (B,D,M) Economizer	RC	Power connection cooling transformer
G	Fan relay coil	RH	Power connection heating transformer
HC	Remote humidity common	T3	Remote room sensor common
HP	Remote humidity power 24 VAC	T4	Remote room sensor thermistor (Type 42)
HS	Remote humidity signal 0-10 VDC	T5	Remote setpoint
M, M	Motion sensor input (DI)	T6	Remote push button
O/B	Heat pump changeover	Y1, Y2, Y3	Cooling stages 1, 2, 3

## ORDERING INFORMATION

**MODEL**  
KT7351F2127

**DESCRIPTION**

3H/3C conventional or 2H/2C heat pump seven-day or 365-day programmable thermostat with remote temperature and humidity sensor inputs, occupancy input, and integral humidity sensor

**T7351F2010**

**ST-D42**  
**ST-FZ42-12**  
**TR22**  
**TR23-N**  
**TR24**  
**TR21**  
**CI-24**

**RELATED PRODUCTS**

Discharge air duct 20k $\Omega$  thermistor sensor  
Averaging discharge air 20k $\Omega$  thermistor sensor  
Setpoint adjustment, network jack  
Setpoint adjustment, override button with LED, network jack, no Honeywell logo  
Override button with LED, network jack  
Wall mount remote indoor sensor: 20K ohm NTC (Type 42)  
Ceiling-mount occupancy sensor with SPDT isolated contact