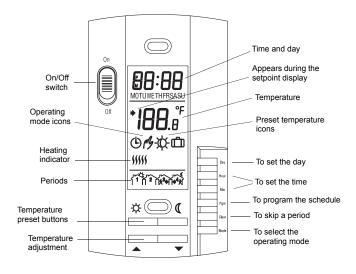
08161 TH110-DP-P TL8230



Description

This programmable thermostat can be connected to an electric heating system such as an electric baseboard, a radiant ceiling, a floor heating system, an electric convector, etc. It is not compatible with a central heating system.



* Set the switch to Off to cut power to the heater. This will not affect the time and temperature settings.

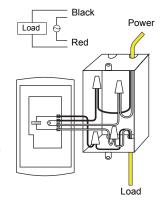


Connection

TURN OFF POWER TO THE HEATING SYSTEM AT THE MAIN POWER PANEL TO AVOID ELECTRICAL SHOCK.

- The installation must be carried out by an electrician.
- All cables and connections must conform to the local electrical code.
- Special CO/ALR solderless connectors must be used when connecting with aluminum conductors.
- Install the thermostat onto an electrical box.
- Install the thermostat about 5 feet high, on an inside wall facing the heater.
- Avoid locations where there are air drafts (such as the top of a staircase or an air outlet), dead air spots (such as behind a door), or direct sunlight.
- Do not install the thermostat on a wall that conceals chimney or stove pipes
- Connect the thermostat wires to the power and to the load using solderless connectors for copper wires.
- Push the excess wire back into the electrical box to prevent interference with the thermostat.
- Secure the thermostat using two 6-32 screws
- 4 Return power to heating system.

NOTE: Always keep the thermostat's vents clean and unobstructed.



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Configuration

The configuration switches are on the back of the thermostat. Default (factory) settings are inside the gray cells.

#	Configurations	UP	DN	
SW1	Not used			
SW2	Early Start ^a	Disable	Enable	
SW3	Time format	12-hour	24-hour	
SW4	Temperature format ^b	°F	°C	

- a. Early Start can be used in Automatic mode only. When this function is enabled, the thermostat calculates the optimal time to start heating in order to obtain the desired temperature by the set time. The thermostat re-assesses the start time daily based on the previous day's performance.



Power-up

Upon power-up, the thermostat is in manual mode ($^{\circ}$) and displays the actual temperature.

- Press the **Hour** and **Min** buttons to set the thermostat's clock.
- 2 Press the Day button to set the day.



Temperature Setting

Setpoint

The thermostat normally displays the actual temperature. To view the set-point, press the \blacktriangle or \blacktriangledown button briefly. The setpoint will appear for the next 5 seconds.

To change the setpoint, press the ▲ or ▼ button until the desired temperature is displayed. To scroll faster, hold the button.

Using a preset temperature

The thermostat has 3 preset temperatures:

- Comfort temperature
- ▶ Economy temperature 《

lcon	Intended use	Default setting	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Comfort (when at home)	70 °F (21 °C)	
(Economy (when asleep or away from home)	62 °F (16 °C)	
ů	Vacation (during prolonged absence)	50 °F (10 °C)	

- To use the Comfort or Economy temperature, press the or button respectively. The corresponding icon will be displayed.

Storing a preset temperature

To store the Comfort or Economy temperature:

Set the desired temperature using the \blacktriangle or \blacktriangledown button. Press and hold the appropriate button (\diamondsuit or \P) for approximately 3 seconds until the corresponding icon is displayed.

To store the Vacation temperature:

Set the desired temperature using the ▲ or ▼ button. Press and hold both ☼ and ℂ buttons simultaneously for approximately 3 seconds until the ம icon is displayed. Press the **Mode** button.



Operating Modes

 Automatic - The temperature is set according to the energy-saving schedule. To place the thermostat in this mode, press Mode until is dis- played. The icons of the current period and preset temperature are also dis-played.

Temporary Bypass: If you modify the setpoint (by pressing the \blacktriangle , \blacktriangledown , \diamondsuit or \P button) when the thermostat is in automatic mode, the new setpoint will be used until the end of the current period. When the next period starts, the temperature set for that period becomes the new setpoint

Manual - The energy-saving schedule is not used. The temperature must be set manually. To place the thermostat in this mode:

Press Mode until ₱ is displayed.

Set the temperature using the ▲, ▼, ☼ or € button.

□ Vacation - The thermostat is set to the Vacation temperature. Press both
 ☼ and ℂ buttons simultaneously to place the thermostat in Vacation mode.



Energy-saving Schedule

The schedule consists of 4 periods per day which represents a typical week day. You can program the thermostat to skip the periods that do not apply to your situation. For example, you can skip periods 2 and 3 for the weekend.

Period	Description	Associated preset temperature
ſĨ [†]	Wake-up	≎
12 A+	Away from home	(
(°) + ±	Return home	❖
邻	Sleep	(

The Comfort (\diamondsuit) temperature is used in periods 1 and 3 and the Economy (\emptyset) temperature is used in periods 2 and 4. For example, when the period changes from 1 to 2, the setpoint automatically changes from Comfort setting (\diamondsuit) to Economy setting (\diamondsuit) .

You can have a different program for each day of the week; i.e., each period can start at different time for each day of the week. The thermostat has been programmed with the following schedule.

Period	Setting	МО	TU	WE	TH	FR	SA	SU
鬥	\	6:00 AM						
		8:00	8:00	8:00	8:00	8:00		
(2) ±+	(AM	AM	AM	AM	AM	:	:
{*}+±	ø	6:00 PM	6:00 PM	6:00 PM	6:00 PM	6:00 PM	:	:
্রি	(10:00 PM						

To modify the schedule:

- Press Pgm to access the programming mode. Period 1 is selected.
- Press Day to select the day to program (hold for 3 seconds to select the entire week).
- Press **Hour** and **Min** to set the start time of the selected period, or press **Clear** if you want to skip the period (--:-- is displayed).
- Press Pgm to select another period, or press Day to select another day. Then repeat step 3.
- Press Mode to exit the programming mode.

NOTE: If no button is pressed for 60 seconds, the thermostat will automatically exit the programming mode.



Troubleshooting

Problems	Solutions		
The thermostat's screen is blank.	The thermostat's switch is set to Off.		
LO is displayed.	The measured temperature is below the display range. Heating is activated.		
HI is displayed.	The measured temperature is above the display range.		
The wrong time is displayed.	The thermostat was without power for more than 2 hours.		
The measured temperature is wrong.	The thermostat is located in a spot exposed to an air draft.		
The heater is always On.	Check the thermostat wiring.		
The thermostat indicates that heating is On but the heater is not On.	Check the thermostat wiring.		
The temperature does not change according to the energy-saving schedule	Check that the thermostat is in Automatic mode. Check also the energy-saving schedule and clock settings.		

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Technical Specifications

Power: 208/240 Vac, 60 Hz

Maximum load: 16 A maximum (resistive only)

3328 watts @ 208 Vac 3840 watts @ 240 Vac

Display range: 32 °F to 140 °F (0 °C to 60 °C)

Display resolution: 0.1 °F (0.1 °C)

Setpoint range: 40 °F to 86 °F (5 °C to 30 °C)

Setpoint interval: 1 °F (1 °C)

Storage: -4 °F to 120 °F (-20 °C to 50 °C)

Certifications: CSA/UL

Data backup: In the event of a power outage, most settings are saved. Only the time must be re-adjusted if the power outage lasts more than 2 hours. The thermostat will sature to the mode that was eating prior to the power outage.

stat will return to the mode that was active prior to the power outage.



Warranty

Honeywell warrants this product, excluding battery, to be free from defects in the work-manship or materials, under normal use and service, for a period of one (1) year from the date of purchase by the consumer. If at any time during the warranty period the product is determined to be defective or malfunctions, Honeywell shall repair or replace it (at Honeywell's option).

If the product is defective,

- return it, with a bill of sale or other dated proof of purchase, to the place from which
 you purchased it, or
- (ii) call Honeywell Customer Care at 1-800-468-1502. Customer Care will make the determination whether the product should be returned to the following address: Honeywell Return Goods, Dock 4 MN10-3860, 1885 Douglas Dr N, Golden Valley, MN 55422, or whether a replacement product can be sent to you.

This warranty does not cover removal or reinstallation costs. This warranty shall not apply if it is shown by Honeywell that the defect or malfunction was caused by damage which occurred while the product was in the possession of a consumer.

Honeywell's sole responsibility shall be to repair or replace the product within the terms stated above. HONEYWELL SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY, FROM ANY BREACH OF ANY WARRANTY, EXPRESS OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation may not apply to you.

limitation may not apply to you. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY HONEYWELL MAKES ON THIS PRODUCT. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IS HEREBY LIMITED TO THE ONE-YEAR DURATION OF THIS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

If you have any questions concerning this warranty, please write Honeywell Customer Relations, 1985 Douglas Dr, Golden Valley, MN 55422 or call 1-800-468-1502. In Canada, write Retail Products ON15-02H, Honeywell Limited/Honeywell Limitée, 35 Dynamic Drive, Scarborough, Ontario M1V4Z9.



Customer Assistance

If you have any questions about the operation of your thermostat, please go to http://yourhome.honeywell.com, or call Honeywell Customer Care toll-free at 1-800-468-1502.



As an ENERGY STAR [®] partner, Honeywell has determined that this product meets the ENERGY STAR quidelines for energy efficiency.