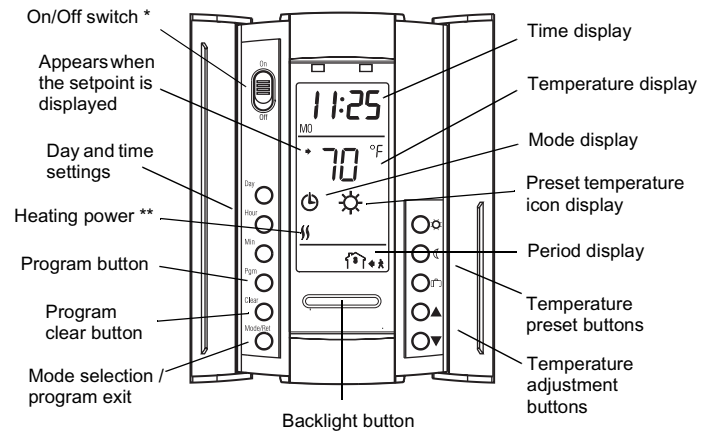


Operating Instructions
Programmable Thermostat

1. Description

Honeywell's TL8230A programmable thermostat can be used to operate an electric heater to control the room temperature.

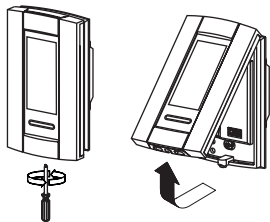


- * Place the switch on OFF to disable heating. This will not affect the clock and program settings.
- ** The thermostat displays the percentage of heater duty cycle required to maintain the desired temperature. For example, if the heater is activated 40 percent of the time, is displayed.

Display					
% of duty cycle	1 to 24%	25 to 49%	50 to 74%	75 to 99%	100%

2. Control Module Removal/Installation

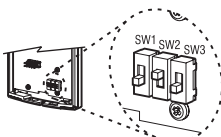
- To remove the control module from its power base, loosen the captive screw underneath the thermostat and pull the two halves apart as shown.
- To install the control module onto its power base, reverse the above procedure.



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

3. Configuration Switches

You can modify some functionalities of the thermostat via the small selector switches on the back of the control module.



Default (factory) settings are denoted in gray:

#	Functionality	UP	DN
SW1	Temperature format ^a	°F	°C
SW2	Early Start ^b	Disable	Enable
SW3	Time format	12-hour	24-hour

- a. If you change the temperature display format, the preset buttons (☀, ☾ and 🗑) will return to their default settings.
- b. Early Start functions 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 optimal start time daily based on the previous day's performance.

4. Power-up

When the thermostat is powered, it initially performs a series of tests before displaying the actual temperature.

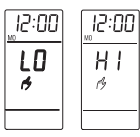


When power is applied initially, the LCD displays: 0:00, MO (Monday), and temperature.

- 1 Press the Hour and Min buttons to set the time.
- 2 Press the Day button to set the day.

5. Error Messages

LO: The measured temperature is below 32°F (0°C). Heating is activated.



HI: The measured temperature is above 122°F (50°C).

6. Backlight

When the backlight button is pressed, the display illuminates for 5 seconds. When either of the buttons is pressed, the display illuminates for 10 seconds during which the setpoint appears for 5 seconds. The actual temperature is then displayed.

7. Temperature Setting

Setpoint

The thermostat generally displays the actual temperature. To view the setpoint, press one of the buttons once or press the backlight button. The setpoint will appear for the next 5 seconds.

To change the setpoint, press one of the buttons until the desired temperature is displayed. To scroll faster, hold the button.

Preset buttons

The thermostat has 3 temperature preset buttons:

- ▶ Comfort preset button ☀
- ▶ Economy preset button ☾
- ▶ Vacation preset button 🗑

To use a preset temperature, press the appropriate button. The corresponding symbol ☀, ☾ or 🗑 will be displayed.

The following table shows the intended use and the default setting of each of the preset buttons.

Symbol	Intended use	Default setting	New
☀	Comfort (when at home)	70°F (21°C)	
☾	Economy (when asleep or away from home)	62°F (16.5°C)	
🗑	Vacation (during prolonged absence)	50°F (10°C)	

To store a preset temperature:

- 1 Set the desired temperature using the buttons.
- 2 Press and hold the appropriate preset button until the corresponding symbol is displayed.

- Press Mode/Ret to exit.

8. Operating Modes

The thermostat has 3 operating modes.

Manual - Maintains the temperature at a fixed setpoint.

- Press Mode/Ret until is displayed.
- Set the temperature using the , , or button.

Automatic - Maintains the temperature according to the energy-saving schedule.

Press Mode/Ret until is displayed. The current period setting is also displayed.

Temporary Bypass: If you press the , , or button when the thermostat is in automatic mode, the current period is bypassed. The new setpoint will be maintained until the beginning of the next period.

Vacation - Maintains the temperature at the Vacation temperature.

Press to place the thermostat in Vacation mode.

9. 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 week-end.

Period	Description	Temperature setting
	Wake-up	
	Away from home	
	Return home	
	Sleep	

The Comfort () temperature is used in periods 1 and 3 and the Economy () temperature is used in periods 2 and 4. The thermostat switches between the two setpoints at the programmed start time.

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 preprogrammed with the following schedule.

Period	Setpoint	MO	TU	WE	TH	FR	SA	SU
		6:00	6:00	6:00	6:00	6:00	6:00	6:00
		8:00	8:00	8:00	8:00	8:00	--:--	--:--
		6:00	6:00	6:00	6:00	6:00	--:--	--:--
		10:00	10:00	10:00	10:00	10:00	10:00	10:00

To modify the schedule:

- Press Pgm to access the programming mode.
- Press Day to select the day to program (hold for 3 seconds to select the entire week).
- Press Pgm to select the period.
- Press Hour and Min to set the start time, or press Clear if you want to skip this particular period (--:-- is displayed).
- Repeat steps 2 to 4 for each remaining period.
- Press Mode/Ret to exit the programming mode.

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

Use the following grid to record the new schedule.

Period	Setpoint	MO	TU	WE	TH	FR	SA	SU

10. Technical Specifications

Power supply: Refer to the power base installation instructions.

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

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

Preset temperatures:

- ▶ **Comfort:** 70°F (21°C)
- ▶ **Economy:** 64°F (18°C)
- ▶ **Vacation:** 50°F (10°C)

Display resolution: 1°F (0.5°C)

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

Heating cycle length: 15 minutes

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

11. Warranty

Honeywell warrants this product, excluding battery, to be free from defects in the workmanship or materials, under normal use and service, for a period of five (5) years 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
- 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.

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 FIVE-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.

12. Customer Assistance

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