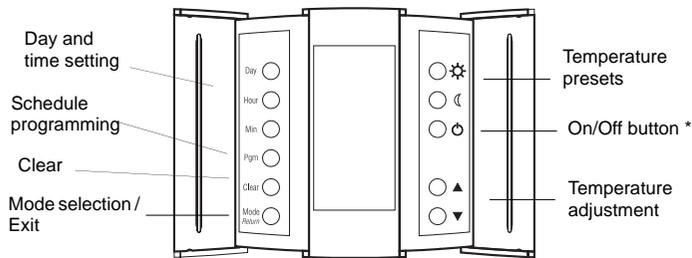


1 Description

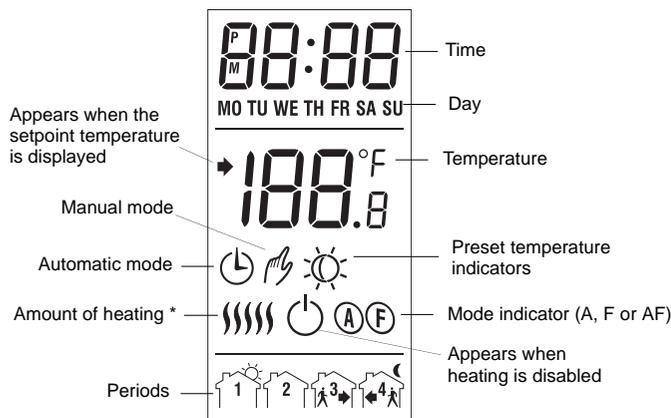
The U16c programmable thermostat provides the following temperature control modes:

- A mode:** ▶ controls and displays the ambient air temperature
- F mode:** ▶ controls and displays the floor temperature using an external temperature sensor (default mode)
- AF mode:** ▶ controls and displays the ambient air temperature
▶ maintains the floor temperature within desired limits using an external temperature sensor



* Use this button to disable heating (e.g. in the summer). The thermostat remains powered and continues to display the time and temperature.

Display

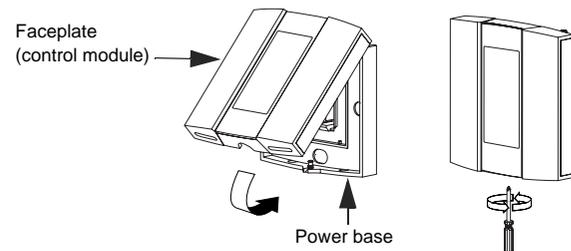


* The thermostat displays the amount of heating required to maintain the desired temperature. For example, **SS** is displayed when heating is at 40 percent.

Display	⌚	SS	SSS	SSSS	SSSSS
% of heating	1 to 24%	25 to 49%	50 to 74%	75 to 99%	100%

2 Faceplate Installation

- 1 Refer to the installation guide of the power base.
- 2 Insert the tabs at the top of the faceplate in the slots at the top of the power base.
- 3 Secure the faceplate using the captive screw underneath the base.



NOTE: Keep the thermostat's air vents clean and unobstructed at all times.

3 Power Up

Apply power to the thermostat at the main electrical panel. At power-up, the thermostat is in manual mode **⌚** and displays the actual (measured) temperature. The setpoint temperature is 28 °C (82 °F).

4 Error Messages

- LO** The actual temperature is below 0 °C (32 °F).
- HI** The actual temperature is above 70 °C (158 °F).
- Er** The thermostat built-in sensor is defective. Replace the thermostat.
- E1** The floor sensor circuit is opened. Check the sensor connections.
- E2** The floor sensor circuit is shorted. Replace the sensor.

5 Configuration

5.1 Control Mode Selection

- 1 Press and hold the **Clear** button for 3 seconds. The current control mode is displayed (**ctl**).
- 2 Press the **▲▼** to select between **A**, **AF** and **F**.

NOTE: If you have chosen the **A** or **F** mode, go to step 7. If you have chosen the **AF** mode, the thermostat will control the ambient temperature while keeping the floor temperature within desired limits. If the floor temperature is too low or too high, the thermostat will turn heating on or off to maintain the floor temperature within the limits regardless of the ambient temperature. The minimum and maximum floor temperature limits are factory-set at 5 °C (41 °F) and 28 °C (82 °F) respectively. To modify the limits, continue with the next step:

- 3 Press the **Clear** button briefly. The minimum limit is displayed (**FL:LO**).
- 4 Press the **▲▼** button to set the minimum limit.

- 5 Press the **Clear** button briefly. The maximum limit is displayed (**FL:HI**).
- 6 Press the **▲▼** buttons to set the maximum limit.
- 7 Press the **Mode/Return** button to exit and save the changes.

NOTE: If no button is pressed for 60 seconds, the thermostat will save the changes and return to normal display.

5.2 Other Configurations

This procedure allows you to choose the following configurations:

Parameters	Default settings
• Temperature format	°C
• Time format	24H
• Early Start setting (see the note below)	On

- 1 Press and hold the **Pgm** button for 3 seconds. The current temperature unit is displayed (**unit**).
- 2 Press the **▲▼** to toggle between °C and °F.
- 3 Press the **Pgm** button briefly. The current time format is displayed (**Hr**).
- 4 Press the **▲▼** to toggle between **24H** and **12H**.
- 5 Press the **Pgm** button briefly. The current Early Start setting is displayed (**ES**).
- 6 Press the **▲▼** to toggle between **OFF** and **On**.
- 7 Press the **Mode/Return** button to exit and save the changes.

NOTE: Early Start can be used in Automatic mode only. When this function is set to On, 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 results.

6 Clock and Day Setting

- 1 Press the **Hour** button to set the hour.
- 2 Set the **Min** button to set the minutes.
- 3 Set the **Day** button to set the day.
- 4 Press **Mode/Return** to exit and save the changes.

Daylight Savings (DLS) Time

When the **DLS** function is set to **US**, the thermostat switches to Daylight Savings Time on the second Sunday of March and to normal time on the first Sunday of November.

When the **DLS** function is set to **Eu**, the thermostat switches to Daylight Savings Time on the last Sunday of March and to normal time on the last Sunday of October.

NOTE: The **DLS** function is **OFF** (default setting) when the clock loses its setting.

- 1 Press the **Day** button (3 seconds) until **DLS** appears on the screen.
- 2 Press the **▲▼** to toggle between **US**, **Eu** and **OFF**.
- 3 Press the **Day** button briefly. The year setting is displayed.
- 4 Press the **▲▼** to set the current year.
- 5 Press the **Day** button briefly. The month setting is displayed.
- 6 Press the **▲▼** to set the current month.
- 7 Press the **Day** button briefly. The date setting is displayed.
- 8 Press the **▲▼** to set the current date.
- 9 Press **Mode/Return** to exit and save the changes.

7 Temperature Adjustment

7.1 Setpoint Temperature

The thermostat normally displays the actual (measured) temperature. To view the setpoint, press one of the **▲▼** buttons once. 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, press and hold the button.

Backlight

The screen is lit for 12 seconds when any button is pressed.

7.2 Preset Temperatures

The thermostat has 2 preset temperatures:

- ▶ Comfort temperature ☀
- ▶ Economy temperature ☾

To use a preset temperature, press the corresponding button. The corresponding icon will be displayed.

The following table shows the intended use and the default value of each of the preset temperatures.

Icon	Intended use	A/AF modes	F mode
☀	Comfort (when at home)	21 °C (70 °F)	28 °C (82 °F)
☾	Economy (when asleep or away from home)	16.5 °C (62 °F)	20 °C (68 °F)

To store a preset temperature:

- 1 Set the desired temperature using the **▲▼** buttons.
- 2 Press and hold the corresponding temperature preset button until the corresponding icon is displayed.

8 Modes of Operation

The thermostat has 2 modes of operation: automatic mode and manual mode.

8.1 Automatic Mode ☺

Use automatic mode if you want the thermostat to follow the programmed schedule. The schedule has 4 time periods and uses the 2 preset temperatures. The thermostat switches to Comfort temperature in periods 1 and 3 and to Economy temperature in periods 2 and 4. The following table shows the intended use of each time period.



Periods	Temperature setting	Typical use
☀	Comfort ☀	Wake-up
☾	Economy ☾	At work
☀	Comfort ☀	At home
☾	Economy ☾	Sleep

To use the automatic mode, press the **Mode** button to display ☺ on the screen. The current period number will also appear.

Preprogrammed schedule

The thermostat has been programmed with the following schedule.

Period	Temperature setting	Period start time						
		MO	TU	WE	TH	FR	SA	SU
	Comfort 	6:00 am	6:00 am	6:00 am	6:00 am	6:00 am	6:00 am	6:00 am
	Economy 	8:30 am	8:30 am	8:30 am	8:30 am	8:30 am	--:--	--:--
	Comfort 	4:00 pm	4:00 pm	4:00 pm	4:00 pm	4:00 pm	--:--	--:--
	Economy 	11:00 pm	11:00 pm	11:00 pm	11:00 pm	11:00 pm	11:00 pm	11:00 pm

Temporary bypass

You can override the temperature of the current period by pressing the , ,  or  buttons. The new setpoint will be used until the beginning of the next period. The clock icon  flashes during the bypass.

To cancel the bypass, press the **Mode** button.

Customizing the schedule

- Press **Pgm**. Period 1 of Monday is displayed.
- If you wish to select another day, press **Day** repeatedly until the desired day is displayed.
NOTE: To select all 7 days, hold the **Day** button for 3 seconds. This function is helpful if you want the same program every day. If you select all 7 days, the start time of the displayed period is the same for all 7 days. For example, if period 1 is displayed when you select all 7 days, period 1 will have the same start time for all 7 days. If all 7 days are displayed when you select the next period, the start time of that period will be the same for all 7 days.
- If you wish to select another period, press **Pgm** repeatedly until the desired period is displayed.
- Press **Hour** and **Min** to set the period start time.
NOTE: If you want the thermostat to skip a period such as periods 2 and 3 in the preprogrammed schedule, press **Clear**. The thermostat will instead show --:-- to indicate that the period will be skipped.
- To program another period, go back to step 2.
- Press **Mode/Return** to exit.

NOTE: If no button is pressed for 60 seconds, the thermostat will save the changes and return to normal display.

8.2 Manual Mode

In manual mode, the programmed schedule is not used. Use this mode if you wish to set the temperature manually or keep the same temperature all the time.

To use the manual mode:

- Press the **Mode** button to display .
- Set the temperature using the   buttons or select one of the preset temperatures by pressing the  or  button.



9 Technical Specifications

Power supply: Refer to the power base's installation guide

Ambient temperature setpoint range (A/AF models): 5 °C to 30 °C (40 °F to 86 °F)

Floor temperature setpoint range (F model): 5 °C to 40 °C (40 °F to 104 °F)

Floor temperature limit range (AF model): 5 °C to 40 °C (40 °F to 104 °F)

Temperature display range: 0 °C to 70 °C (32 °F to 158 °F)

Temperature display resolution: 0.5 °C (1 °F)

Operating temperature: 0 °C to 50 °C (32 °F to 120 °F)

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

Heating cycle length: 15 minutes

Software: Class A

Automatic action: Type 1B and 1Y

Protection index: IP21

Power outage: All programs and temperature settings are saved during a power outage. The clock must be reprogrammed if the power outage lasts more than 4 hours. When power returns, the thermostat returns to the mode of operation preceding the outage.

Size (H/W/D): 83 x 79 x 13 mm (3.3" x 3.1" x 0.5")



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