BRITECH

Owner's Guide
Guide du propriétaire
Guía para el usuario

TH115-AF-GA-10

Programmable thermostat
Thermostat programmable
Termostato programable

Read and save these instructions.

Veuillez lire le mode d'emploi et le conserver en lieu sûr.

Estas instrucciones deben leerse y conservarse.

Table of contents

ENGLISH

Before you start

Read the entire document

CAUTION:

- Installation must be carried out by an electrician and must comply with national and local electrical codes.

- Use this thermostat only for resistive load.

- Do NOT install the thermostat in an area where it can be exposed to water or rain.

- To prevent severe shock or electrocution, always turn the power OFF at the service panel before working with wiring.

- Install the thermostat onto an electrical box.

- Use special CO/ALR solderless connectors if you connect the thermostat to aluminum wires.

- Keep the thermostat's top and bottom air vents (openings) clean and unobstructed at all times.

About your thermostat

The TH115 programmable thermostat has three temperature control modes:

A mode: ▶   controls the ambient air temperature

F mode: ▶   controls the floor temperature using an external temperature sensor
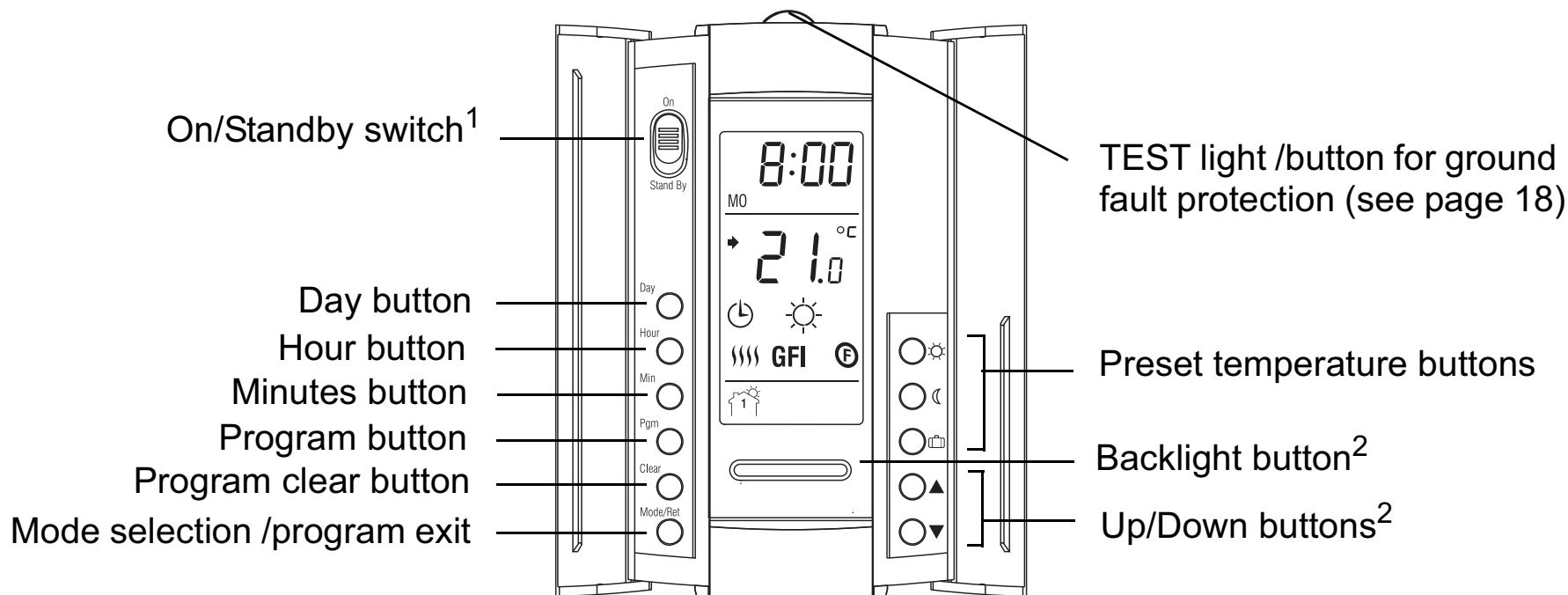
AF mode: ▶   controls the ambient air temperature
              ▶   maintains the floor temperature within desired limits using an external temperature sensor

See page 9 on how to change the temperature control mode setting.

Supplied Parts
- One (1) power base
- Two (2) mounting screws
- Four (4) solderless connectors for copper wires
- One (1) floor sensor
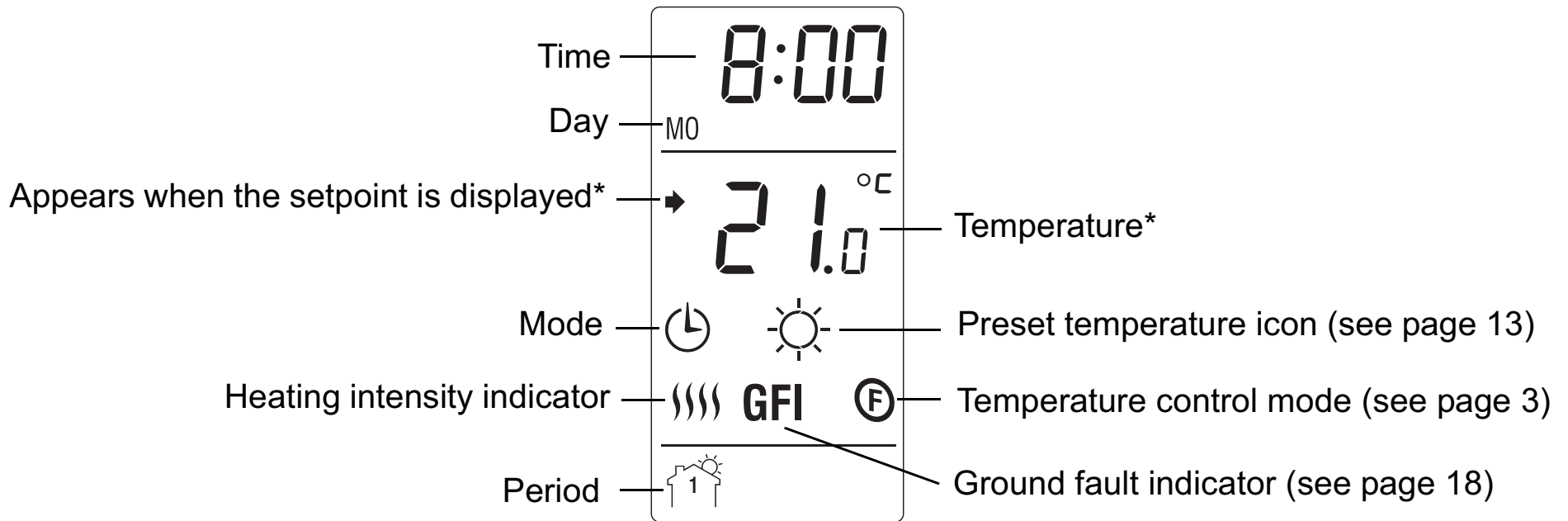- One (1) flat-tip screwdriver

Quick reference to controls

On/Standby switch[1]

TEST light /button for ground fault protection (see page 18)

Day button

Hour button

Minutes button

Program button

Program clear button

Mode selection /program exit

Preset temperature buttons

Backlight button[2]

Up/Down buttons[2]

[1] *Place on Standby to cut power to the heater (e.g., in the summer). This will not affect the time and temperature settings.*

[2] *When the backlight button or either of the ▲▼ (Up/Down) buttons is pressed, the display illuminates for 12 seconds.*

4

Quick reference to display

Time — 8:00

Day — MO

Appears when the setpoint is displayed* → 21.0 °C

Temperature*

Mode — ⏻ ☼ — Preset temperature icon (see page 13)

Heating intensity indicator — ⑊⑊⑊ GFI Ⓕ — Temperature control mode (see page 3)

Period — ⌂1 — Ground fault indicator (see page 18)

* The thermostat normally displays the actual (measured) temperature. To view the setpoint, press either 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.
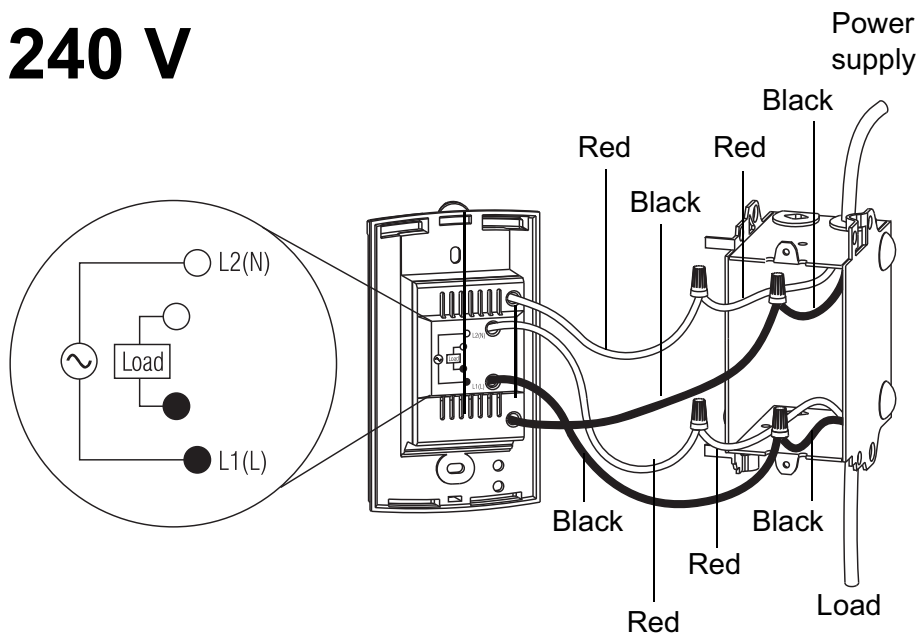
ENGLISH

Installing the thermostat

❶ Turn off power to the heating system at the service panel.

❷ Loosen the captive screw and remove the thermostat faceplate from the wallplate. (The screw remains captive and cannot be completely removed.)

❸ Connect the thermostat to the power supply and to the load (see page 7).

❹ Connect the floor sensor (see page 8).

❺ If you wish to connect a remote control device, see page 8.

❻ Install the wallplate to the electrical box using the provided screws.

❼ Set the configuration switches on the back of the faceplate (see page 9).

❽ Install the faceplate on the wall plate and tighten the captive screw.

❾ Apply power to the heating system.
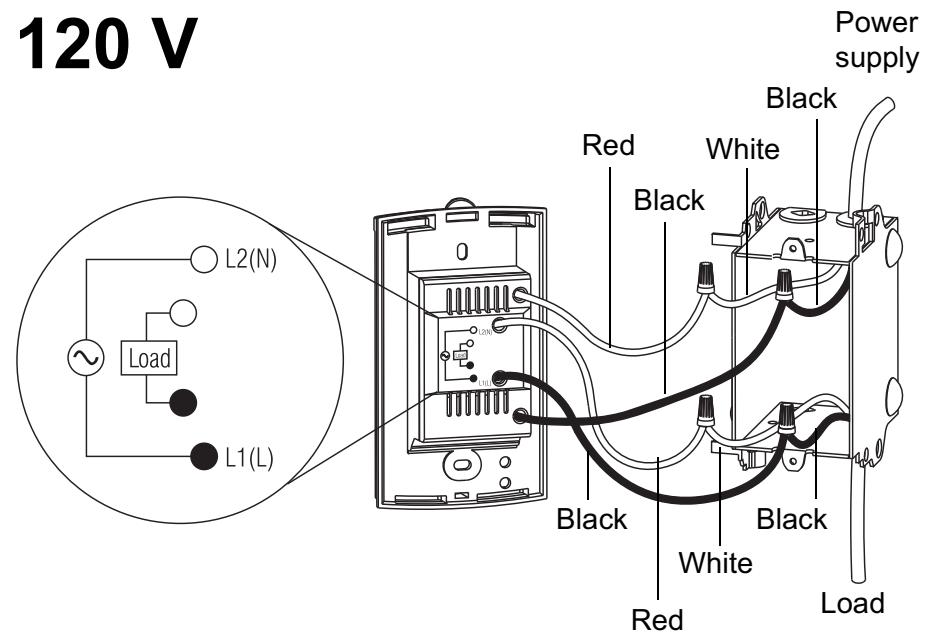
❿ Test the ground fault protection (see page 19).

Faceplate

Wallplate

6
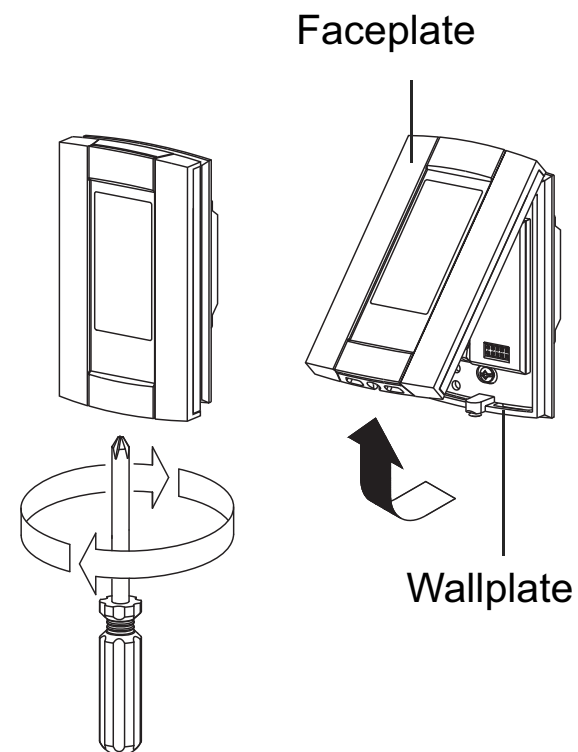
Wiring diagram

NOTE: Connect the wires using the provided solderless connectors for copper wires:

240 V

Power supply

Black

Red   Red

Black

L2(N)

Load

L1(L)

Black   Black

Red

Red   Load

120 V

Power supply

Black

Red   White

Black

L2(N)

Load

L1(L)

Black   Black

White

Red   Load

ENGLISH

Floor sensor / remote control connections

❶ Insert the floor sensor cable through one of the two openings on the wallplate and connect the sensor wires to terminals 1 and 2 (no polarity).

- The sensor cable must pass outside the electrical box and follow the wall down to the floor.
- Position the sensor cable such that it does not come in contact with the floor heating wires. The sensor must be centered between two floor heating wires for best temperature control.
- Do NOT staple the sensor head (the plastic end) to the floor. Doing so might damage the sensor. Any damages might not be noticeable during testing but can become apparent several days later.

❷ If you wish to connect a remote control device, insert the wires (use 18- to 22-gauge flexible wires) through one of the two openings on the wallplate and connect them to terminals 2 and 3 (no polarity). Connecting a remote device enables you to place the thermostat on vacation mode from a remote location. See page 17.

Floor temperature sensor

Remote control device

8
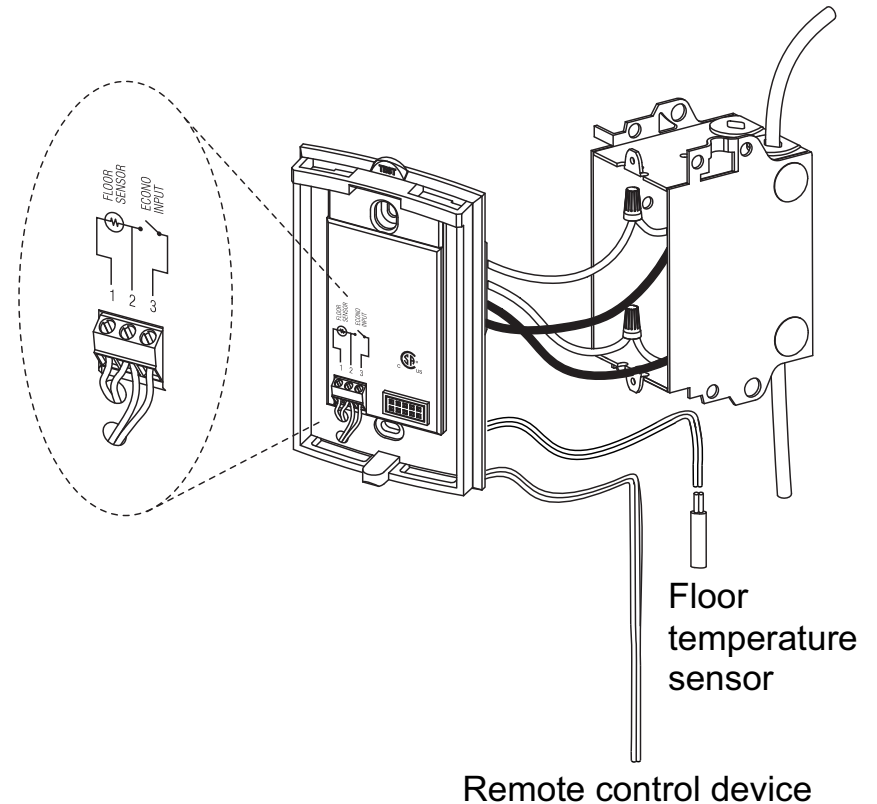
Configuration switches

Configuration switches are on the back of the faceplate. Factory settings are shown inside gray cells.

#	Configurations	Up	Down
1	Display format	°F / 12 h	°C / 24 h
2	Early Start[1]	Enable	Disable
3	Temperature control mode[2]	F	AF
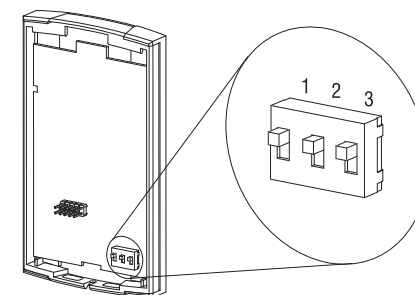
1. Early Start can be used in Automatic mode only. When this function is enabled, the thermostat calculates the optimal time to start heating in order to obtain the desired temperature by the set time. The thermostat re-assesses the start time daily based on the previous day's results.

2. See temperature control mode display on page 3. To select the F Mode, place the switch in the F position. To select the AF Mode, place the switch in the AF position and ensure that the remote temperature sensor is connected to the thermostat. To select the A Mode, place the switch in the AF position and ensure that the remote temperature sensor is **NOT** connected to the thermostat.

ENGLISH

Clock and day

To set the clock and the day:

❶   Press the **Hour** button to set the hour.

❷   Press the **Min** button to set the minutes.

❸   Press the **Day** button to set the day.

❹   Press the **Mode/Ret** button to exit.

Daylight Savings Time

When Daylight Savings Time function is enabled (On), the thermostat automatically switches to Daylight Savings Time on the second Sunday of March and to normal time on the first Sunday of November.

NOTE: The function is disabled (default setting) when the clock loses its setting.

To change the Daylight Savings Time setting or to set the date:

❶ Press the **Day** button (3 seconds) until **DLS** appears on the screen.

❷ Press either of the ▲▼ buttons to toggle between On (enabled) and Off (disabled).

❸ Press the **Day** button briefly. The year setting is displayed.

❹ Press either of the ▲▼ buttons to set the current year.

❺ Press the **Day** button briefly. The month setting is displayed.

❻ Press either of the ▲▼ buttons to set the current month.

❼ Press the **Day** button briefly. The date setting is displayed.

❽ Press either of the ▲▼ buttons to set the current date.

❾ Press the **Mode/Ret** button to exit.

ENGLISH

Floor temperature limits (AF mode only)

NOTE: *To avoid damaging your floor, follow your floor supplier's recommendations regarding floor temperature limits.*

The minimum and maximum floor temperature limits are 5.0°C (41°F) and 28.0°C (82°F) by default. To modify these limits, proceed as follows:

❶   Switch the thermostat to Standby.

❷   Press and hold the ☼ button.

❸   Switch the thermostat back to On.

❹   Release the ☼ button when the minimum temperature limit (*FL:LO*) appears.

❺   Set the minimum temperature limit using the ▲▼ buttons.

❻   Press the ☼ button to display the maximum temperature limit (*FL:HI*).

❼   Set the maximum temperature limit using the ▲▼ buttons.

❽   Press **Mode/Ret** to exit.

12
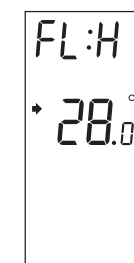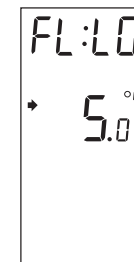
Preset temperatures

The thermostat has 3 preset temperatures. The following table shows the intended use and the default setting of each of the preset temperatures.

Preset temperature	Intended use	Displayed icon	A/AF modes	F mode
Comfort	When at home	☼	21.0°C (70°F)	28.0°C (82°F)
Economy	When asleep or away from home	☾	17.0°C (63°F)	20.0°C (68°F)
Vacation	During prolonged absence	🛄	10.0°C (50°F)	10.0°C (50°F)

To use a preset temperature, briefly press the appropriate button (☼, ☾ or 🛄). The preset temperature becomes the current setpoint and its icon will appear on the screen.

To modify a preset temperature:

❶ Set the desired temperature using the ▲▼ buttons.

❷ Press and hold the appropriate preset temperature button until its icon appears on the screen.

ENGLISH

Default schedule (Energy-Star settings)

The schedule consists of 4 periods per day, which represents a typical work day. The Comfort (☼) preset temperature is automatically used in Periods 1 and 3 and the Economy (☾) preset temperature in Periods 2 and 4. 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.

NOTE: *If you wish to use only 2 periods, set periods "1 and 4" or periods "2 and 3". The "Early Start" function (see page 9) will not work if you set periods "1 and 2" or periods "3 and 4".*

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	Description	Preset temperature	MO	TU	WE	TH	FR	SA	SU
1	Wake	Comfort ☼	6:00	6:00	6:00	6:00	6:00	6:00	6:00
2	Leave	Economy ☾	8:30	8:30	8:30	8:30	8:30	--:--	--:--
3	Return	Comfort ☼	17:00	17:00	17:00	17:00	17:00	--:--	--:--
4	Sleep	Economy ☾	23:00	23:00	23:00	23:00	23:00	23:00	23:00

Modifying the schedule

❶ Press **Pgm** to access the programming mode. Period 1 is selected.

❷ Press **Day** to select the day to program (hold for 3 seconds to select the entire week).

❸ 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).

❹ Press **Pgm** to select another period, or press **Day** to select another day. Then repeat step 3.

❺ Press **Mode/Ret** to exit the programming mode.

NOTE: The thermostat will also automatically exit the programming mode if no button is pressed for 60 seconds.

ENGLISH

ENGLISH

Running the schedule (automatic mode)

In automatic mode, the thermostat follows the programmed schedule (see page 14). To place the thermostat in this mode, press **Mode/Ret** until ⏻ is displayed.

Temporary override of schedule

If you modify the setpoint temperature (by pressing the ▲▼, ☼ or ☾ button) when the thermostat is in Automatic Mode, the new temperature will be used until the beginning of the next period. ⏻ flashes during the temporary override. You can cancel the temporary override by pressing **Mode/Ret**.

Permanent override of schedule (manual mode)

In manual mode, the thermostat does not follow the programmed schedule. To place the thermostat in this mode, press **Mode/Ret** to display ☝ on the screen. Set the temperature using the ▲▼, ☼ or ☾ button.

When you go on vacation (vacation mode)

In this mode, the thermostat uses the vacation preset temperature (see page 13). To place the thermostat in vacation mode, press the 🧳 button to display 🧳 on the screen.

ENGLISH

ENGLISH

Ground fault protection (GFCI)

This ground fault protection thermostat is different from conventional thermostats. In the event of a ground fault, the ground fault protection mechanism on the thermostat will trip and quickly stop the flow of electricity to prevent serious injury.

Definition of a ground fault

Instead of following its normal safe path, electricity passes through a person's body to reach the ground. For example, a defective floor heating mat can cause a ground fault.

A ground fault protection thermostat **does not protect** against circuit overloads, short circuits, or electrical shocks. For example, you can still receive an electrical shock if you touch bare wires while standing on a non-conducting surface such as a wood floor.

Ground fault protection reset

When the ground fault protection mechanism trips, the TEST light is On (red). To reset the ground fault protection, switch the thermostat to Standby and back to On. The TEST light will go off.

ENGLISH

TH115-AF-GA-10

Ground fault protection (con'd)

Testing the ground fault protection

To ensure the ground fault protection is always in working order, test it once the thermostat is installed and on a monthly basis thereafter.

❶ Increase the setpoint temperature above the measured temperature in order to activate the heating system.

TEST button/light

❷ Press the TEST button.
- If the TEST light does NOT come on, **the test has failed**. Cut power to the heating system at the main electrical panel, have an electrician verify the installation and, if necessary, replace the thermostat.
- If the TEST light comes on, continue the test.

❸ Switch the thermostat to Standby then back to On.
- If the TEST light goes off, **the test has passed**. Set the thermostat back to the desired temperature. The test is now completed.
- If the TEST light remains on, **the test has failed**. Continue with the rest of the procedure.

❹ Switch the circuit breaker (at the service panel) of the heating system to off then back to on.

❺ Repeat the test. If the test fails again, cut power to the heating system at the main electrical panel, have an electrician verify the installation and, if necessary, replace the thermostat.

ENGLISH
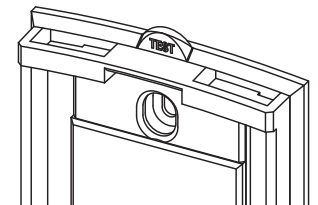
Error Messages

LO The measured temperature is below the thermostat's display range. Heating is activated.

HI The measured temperature is above the thermostat's display range. Heating is deactivated.

Er Verify the thermostat connection and sensor connection.

Technical Specifications

Supply	Maximum Load (resistive only)		Wiring
	Current	Power	
120 VAC, 60Hz	15 A	1800 W	4 wires, double pole
240 VAC, 60Hz	15 A	3600 W	4 wires, double pole

Display range: 0°C to 70.0°C (32°F to 158°F)

Ambient setpoint range (A/AF modes): 5.0°C to 30.0°C (40°F - 86°F)

Floor setpoint range (F mode): 5.0°C to 40.0°C (40°F - 104°F)

Floor limit range (AF mode): 5.0°C to 40.0°C (40°F - 104°F)

Resolution: 0.5°C (1°F)

GFCI: 5 mA

Heating cycle length: 15 minutes

Data protection: In the event of a power failure, most settings are saved. Only the time and Daylight Saving Time must be set if the power failure lasts more than 6 hours. The thermostat will return to the mode that was active prior to the power failure.

Certification: c CSA us

ENGLISH

Customer Assistance

Warranty

BRITECH