M39044

aube technologies

Owner's Guide

TH114-AF-GA / TH114-AF-GB

Non-programmable thermostat
Thermostat non programmable
Termostato no programable

ENGLISH

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Before you start

Read the entire document

CAUTION:

- Installation must be carried out by a certified electrician and must comply with national and local electrical codes.
- Use this thermostat for resistive loads only.
- 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 TH114 non-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) thermostat
- Two (2) mounting screws
- Four (4) solderless connectors for copper wires
- One (1) floor sensor
- One (1) flat-tip screwdriver

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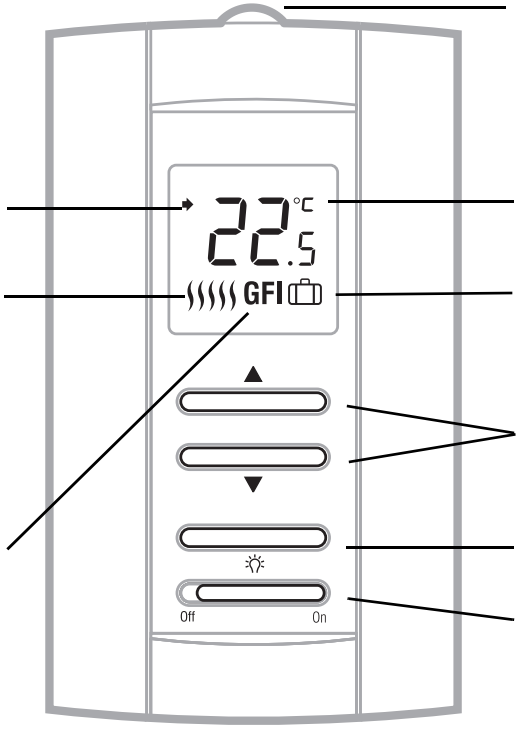
Controls and display

Appears when the set temperature is displayed

Heating indicator. The number of flames indicates the heating intensity. The image disappears when heating stops.

GFI appears when the ground fault protection is triggered (see page 12)



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TEST light/button for ground fault protection (see page 12)

Temperature (see page 5)

Unoccupied Mode indicator (see page 11)

Temperature adjustment button

Backlight button (see page 5)

On/Off switch (see page 5)

Temperature Display and Setting

The thermostat usually displays the room temperature. To view the set (desired) temperature, press either of the ▲▼ buttons once. The set temperature is displayed for 5 seconds.

To set a new temperature, press one of the ▲▼ buttons repeatedly until the desired temperature is displayed. To scroll faster, press and hold the button.

Backlight

The display illuminates for 5 seconds when the backlight button is pressed.

When either of the ▲▼ buttons is pressed, the display illuminates for 10 seconds. The set-point temperature appears for the first 5 seconds, then the current temperature is displayed.

On/Off Switch

You can set the thermostat to OFF to cut power to the heating system when it is not in use (e.g. in summer). The thermostat screen becomes blank but the settings are saved.

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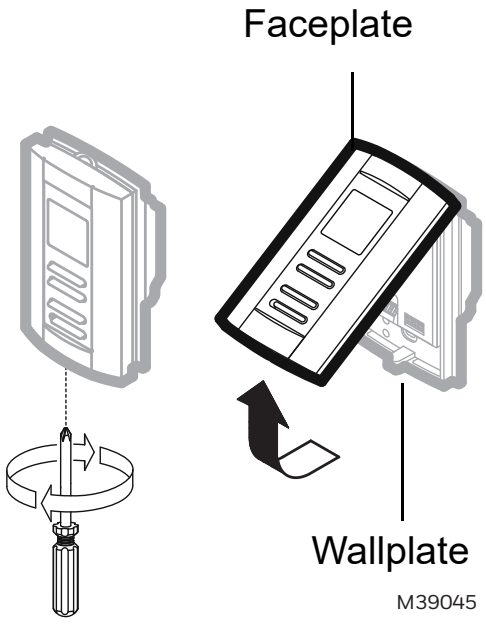
Installing the thermostat

1. Turn the heating system off at the main electrical panel.
2. Loosen the bottom screw and remove the thermostat faceplate from its wallplate. (The screw cannot be completely removed.)
3. Connect the thermostat to the load and to the power supply (see page 7).
4. If the thermostat will be used in F or AF mode (see page 9), connect the floor sensor (see page 8).
5. If you wish to connect a remote control device, see page 8.
6. Install the wallplate to the electrical box using the provided screws.
7. Set the configuration switches on the back of the faceplate (see page 9).
8. Install the faceplate back on the wall plate and tighten the screw. If there is a sticker on the screen, peel it off.
9. Apply power to the heating system at the main electrical panel.
10. Test the ground fault protection (see page 12).



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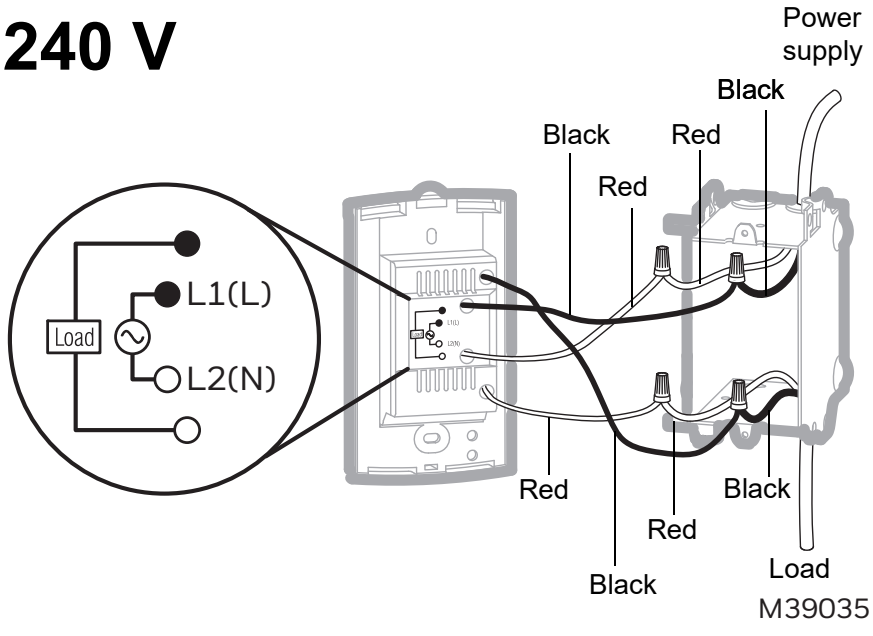
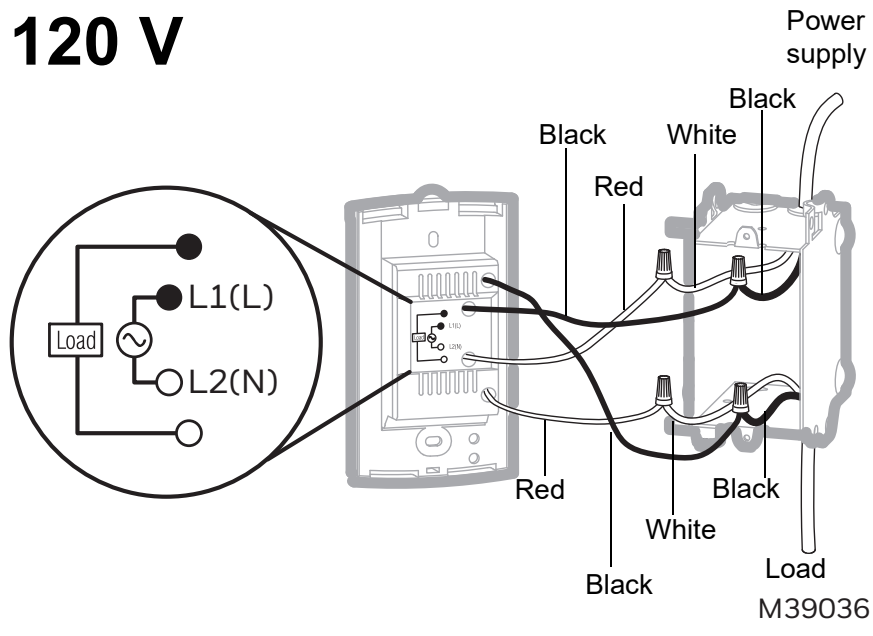
Wiring diagrams

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

240 V



120 V



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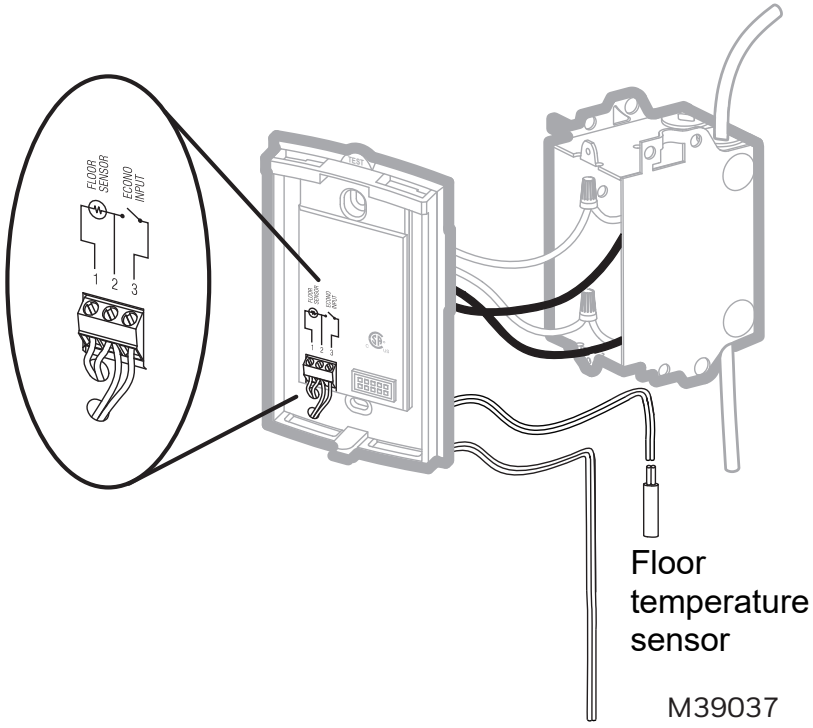
Connecting the floor temperature sensor / remote control system

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

- The sensor wires must not come in contact with the electrical wires and must be routed 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 damage might not be noticeable during testing but can become apparent several days later.

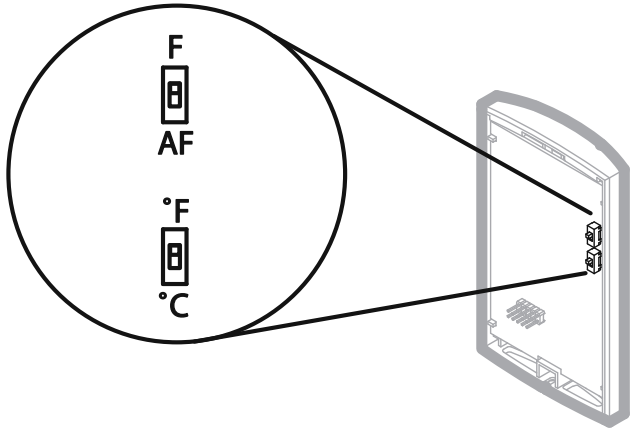
❷ If you wish to connect a remote control device (see page 11), insert the wires (use 18- to 22-gauge flexible wires) through one of the two openings on the wallplate and connect them to terminals 2 and 3 (no polarity).



Setting the configuration switches

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

#	Configurations	Up	Down
S1	Displayed temperature unit	°F	°C
S2	Temperature control mode *	F	AF



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* See page 3 for definition of each mode.

- To select the F Mode, connect the floor temperature sensor (see page 8) and place the switch in the F position.
- To select the AF Mode, proceed as follows: Connect the floor temperature sensor (see page 8). Place the switch in the F position. If the thermostat displays **Er**, the sensor is improperly connected or damaged. If the thermostat displays a temperature reading, place the switch in the AF position.
- To select the A Mode, place the switch in the AF position but do NOT connect the floor temperature sensor.

Floor temperature limits (AF mode only)

The minimum and maximum floor temperature limits are available only if the temperature control mode is **AF** (see page 9).

If the floor temperature drops below the minimum limit or rises above the maximum limit, the thermostat will turn heating On or Off respectively, regardless of the ambient temperature, to maintain the floor temperature within the set limits.

***NOTE**: The desired ambient temperature might not be attainable if the maximum floor temperature is set too low.*

The minimum and maximum floor temperature limits are factory-set at 10 °C (50 °F) and 28 °C (82 °F) respectively. To modify the limits, proceed as follows:

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

1. Switch the thermostat to Off.
2. While pressing either ▲▼ button, switch the thermostat back to On to access the floor temperature limit settings.
3. Press the Backlight button briefly to switch between minimum and maximum floor temperature settings.
4. Press the ▲▼ buttons to set the desired limit.
5. Press the Backlight button for 3 seconds to save your modifications. After the data are saved, the thermostat displays the current temperature or "– –".

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***NOTE**: Your modifications are automatically saved if no button is pressed for 60 seconds.*

Unoccupied Mode

The Unoccupied Mode can be activated if you have connected the thermostat to a remote control device equipped with a dry contact (see page 8). When the contact closes, the Unoccupied Mode is activated and 💼 appears on the screen. In this mode, the thermostat lowers its setpoint by 3.5 °C (7 °F) and all temperature adjustments are blocked except for temporary bypass.

Temporary Bypass

You can temporarily bypass the Unoccupied Mode by pressing the backlight button. During the bypass, 💼 flashes. The bypass is automatically cancelled after 2 hours or if the backlight button is pressed again.

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 Off and back to On. The TEST light will turn off.

End of Life

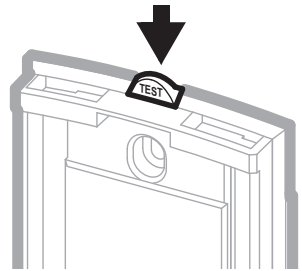
If the TEST light is flashing permanently the device must be replaced.

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 set temperature above the actual temperature to start heating. Wait for the heating indicator to appear on the screen.

TEST button/light



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❷ Press the TEST button.

- If the TEST light does NOT turn 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 turns on, continue the test.

❸ Switch the thermostat to **Off** then back to **On**.

- If the TEST light turns 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 heating system to off then back to on at the main electrical panel.

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.

Error Messages

LO	The measured temperature is below the display range. Heating is activated.
HI	The measured temperature is above the display range. Heating is deactivated.
Er	Verify the thermostat and sensor connections. Heating is deactivated.

Technical Specifications

Model	Supply	Max. load (resistive only)		Ground Fault Protection (GFCI)	Wiring
		Current	Power		
TH114-AF-GA	120 VAC, 60 Hz	15 A	1800 W	5 mA	4 wires, double pole
	240 VAC, 60 Hz		3600 W		
TH114-AF-GB	120 VAC, 60 Hz		1800 W	15 mA	
	240 VAC, 60 Hz		3600 W		

Setpoint range **- F mode**: 5 °C to 40 °C (40 °F to 104 °F)
- A/AF mode: 5 °C to 30 °C (40 °F to 86 °F)

Floor limit range **- AF mode**: 5 °C to 40 °C (40 °F - 104 °F)

Display range **- F mode**: 0 °C to 60 °C (32 °F to 140 °F)
- AF mode: 0 °C to 50 °C (32 °F to 122 °F)

Resolution: 0.5 °C (1 °F)

Heating cycle length: 15 minutes

Data protection: All settings are saved during a power failure.

Warranty

Resideo warrants this product to be free from defects in workmanship or materials, under normal use and service, for a period of three (3) years from the date of first purchase by the original purchaser. If at any time during the warranty period the product is determined to be defective due to workmanship or materials, Resideo shall repair or replace it (at Resideo's option).

If the product is defective,
(i) return it, with a bill of sale or other dated proof of purchase, to the place from which you purchased it; or
(ii) call Resideo Customer Care at 1-800-468-1502. Customer Care will make the determination whether the product should be returned to the following address: Resideo Return Goods, 1985 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 Resideo that the defect was caused by damage which occurred while the product was in the possession of a consumer.

Resideo's sole responsibility shall be to repair or replace the product within the terms stated above. RESIDEO 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.

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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 Resideo Customer Care, 1985 Douglas Dr, Golden Valley, MN 55422 or call 1-800-468-1502.