TH114

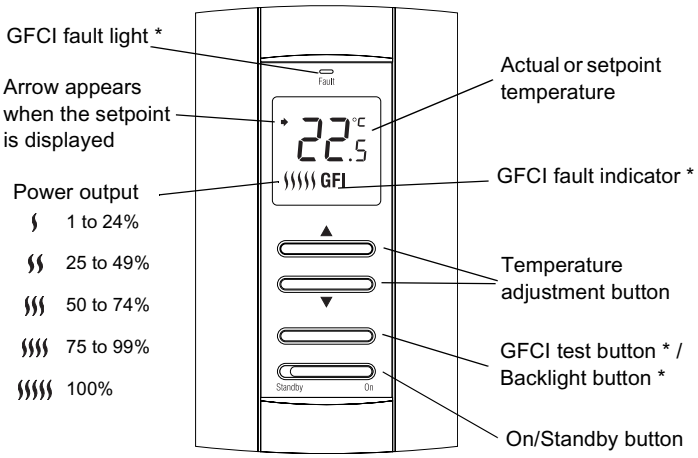
User's Guide

Non-programmable Thermostat

1. Description

Aube's TH114 Series non-programmable thermostats can be used to control ambient or floor temperature. The following models are available:

A model:	▸ controls and displays the ambient temperature
F model:	▸ controls and displays the floor temperature ▸ uses an external temperature sensor
AF model:	▸ controls and displays the ambient temperature ▸ maintains the floor temperature within desired limits ▸ uses an external temperature sensor

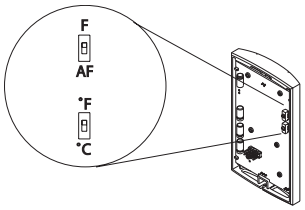


* available on certain models only

Each thermostat consists of a control module which must be mounted on a PB112 Series power base. For the selection and installation of the power base, refer to its installation instructions.

2. DIP Switch Configuration

The DIP switches are located at the back of the control module.



2.1 Temperature Display (S1)

To switch between °C and °F.

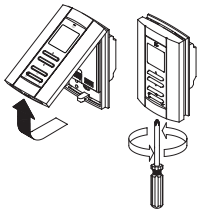
2.2 Model (S2)

***Note**: Available on certain models only*

F: To select the F model

AF: To select the A or AF model

3. Installation



❶ Refer to the installation instructions of the power base.

❷ Insert the tabs at the top of the control module in the slots at the top of the power base.

❸ Secure the control module using the captive screw underneath the base.

***Note**: Do not obstruct the thermostat's vents.*

4. Power-up

As soon as the thermostat is powered, it undergoes a series of tests before displaying the actual temperature.

5. Error Messages

The measured temperature is below 0°C (32°F). Heating is turned On.

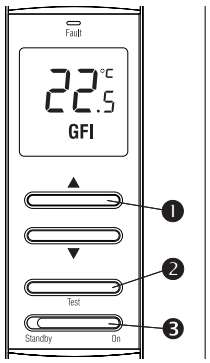
The measured temperature is above 50°C (122°F) (A or AF model) or 60°C (140°F) (F model).

The floor sensor is defective or not properly connected (F model only), or the thermostat is defective.

6. GFCI Test

***Note**: This procedure must be performed if the thermostat is mounted on a GFCI-equipped power base.*

Test the GFCI immediately after installing the control module, and once a month thereafter.



❶ Raise the temperature ▲ until the heating power indicator ≀≀≀≀ appears.

❷ Press the Test button.

❸ If the test is successful, you will hear a click caused by the GFCI relay tripping. The heating power indicator will disappear, GFI will appear and the Fault light will illuminate. Reset the thermostat by switching it to Standby and back to On.

❹ If the test has failed, cut power to the heating system from the main electrical panel and call customer service.

***Note**: If the Fault light is On during normal operation, cut power to heating system at the main electrical panel and have an electrician verify the installation.*

7. Operation

7.1 Backlight

When either of the ▲▼ buttons is pressed, the display is lit for 10 seconds. The setpoint appears for 5 seconds, then the actual temperature is displayed.

When the backlight button is pressed, the display is lit for 5 seconds. **NOTE**: *If the thermostat is mounted on a GFCI-equipped power base, this button is used for the GFCI test.*

7.2 Displaying and Setting the Temperature

The thermostat normally displays the actual temperature. To view the setpoint, press once on one of the ▲▼ buttons. The setpoint is displayed for 5 seconds. During the setpoint display, press one of the ▲▼ buttons to change it. To scroll the setpoint faster, press and hold the button.

7.3 Setting the Floor Temperature Limits (AF model only)

The thermostat generally turns heating On or Off to control the ambient temperature. However, if the floor temperature drops below the set minimum floor temperature 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 desired limits.

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:

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

Note: Your modifications are also saved if no button is pressed for 60 seconds.

6. Switch the thermostat to Standby and back to On to reset the GFCI and return to the normal display.

8. Technical Specifications

Power supply: Refer to the power base installation instructions.

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

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

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

Setpoint resolution: ± 0.5°C (1.0°F)

Display resolution: ± 0.5°C (1.0°F)

Duty cycle: Refer to the power base installation instructions.

Storage: -20°C to 50°C (-4°F - 120°F)

9. Warranty

AUBE TECHNOLOGIES INC. ONE (1) YEAR LIMITED WARRANTY

This product is guaranteed against workmanship defects for a one year period following the initial date of purchase. During this period, AUBE Technologies Inc. will repair or replace, at our option and without charge, any defective product which has been used under normal conditions.

The warranty does not cover delivery costs and does not apply to products poorly installed or randomly damaged following installation. This warranty cancels and replaces any other manufacturer's express or implied warranty as well as any other company commitment.

AUBE Technologies Inc. cannot be held liable for related or random damages following the installation of this product. The defective product as well as the purchase invoice must be returned to the place of purchase or mailed, prepaid and insured, to the following address.

10. Service

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Saint-Jean-sur-Richelieu, Quebec
J2X 5K8
Canada

T: (450) 358-4600
1-800-831-AUBE (2823)
F: (450) 358-4650
service@aubetech.com

For more information on our products, visit us at:
www.aubetech.com

PB112-024T

Installation Instructions

24 V low voltage power base

1 Introduction

The PB112-024T power base is designed to power a TH11x series control module. This low voltage power base can be used to drive a line voltage load using a relay or connect directly to equipment using a 24 V signal.

The PB112-024T is compatible with most relays, but it has been optimized for use with an Aube relay. Aube offers solid state relays (SSR) such as the RT850 and RT850T (with built-in 24 V transformer), and electromechanical relays such as the RC840 and RC840T (with built-in 24 V transformer).

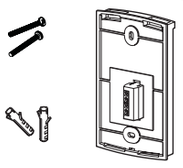
For greater flexibility, the PB112-024T power base also includes selectable heating cycles (15-second and 15-minute).

2 Installation Guidelines

Cut power to the heating system at the main power panel to avoid electrical shock. Installation should be carried out by an electrician.

- For a new installation, choose a location about 1.5 m (5 ft) above the floor.
- The thermostat must be installed facing the heating system and on an inside wall.
- Avoid locations where there are air drafts (top of staircase, air outlet), dead air spots (behind a door), direct sunlight or concealed chimneys or stove pipes.

3 Material



1. One (1) PB112-024T low voltage power base
2. Two (2) anchors
3. Two (2) mounting screws

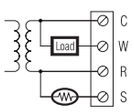
4 Installation Steps

1. Connect the base. See typical wiring diagrams.

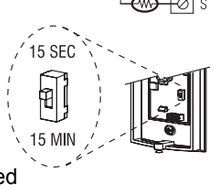
   Electric heating (figures 1, 2 and 3)
   - Connect the base to the relay. Use a relay with a built-in 24 V transformer or a relay and a 24 V external transformer.
   - Connect the relay to the load (see relay's instructions).

   Hot water heating (figure 4)
   - Connect the base to the 24 V valve of the hot water heating system.

2. For a floor heating system installation, connect the floor sensor between the S and R terminals.



3. Set the switch to applicable position:
   - **15 SEC**: use only with SSR relay. Recommended for electric heating (baseboards, convectors, etc.).
   - **15 MIN**: use with SSR or electromechanical relay. Recommended for mechanical actuated system (water heating using a solenoid valve, etc.).



4. Push the excess wire into the wall and secure the base using the provided screws and wall anchors.
5. **Before** mounting the control module onto the base, configure the switches located on the control module (if any) and install the control module onto the base (**refer to the user guide**).
6. Once the thermostat is properly installed, return power to heating system.

Figure 1: Single unit

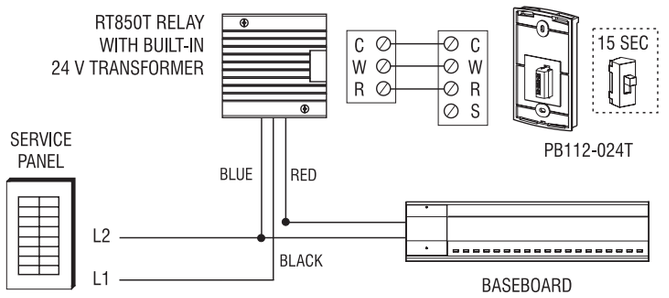


Figure 2: Multiple units

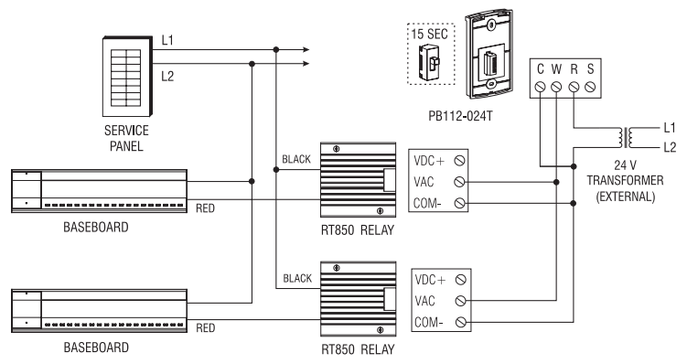
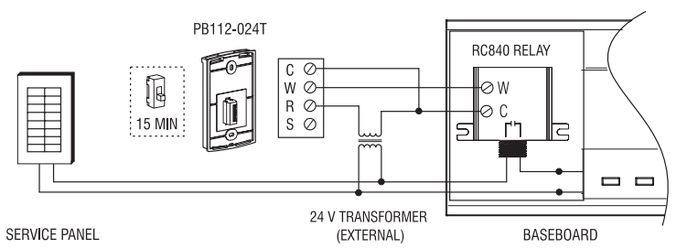
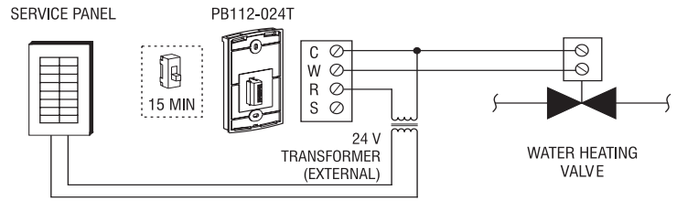


Figure 3: Single unit, relay inside baseboard



NOTE: The RC840T relay with built-in 24 V transformer is also available.

Figure 4: Connection to a water heating valve



Technical Specifications

Maximum load: 0.5 A / 24 VAC
Heating cycles: 15 seconds / 15 minutes (switch selectable)
Operating temperature: 32°F to 122°F (0°C to 50°C)
Storage: -4°F to 122°F (-20°C to 50°C)
Size (H • W • D): 124 x 70 x 23 mm (4.89 x 2.76 x 0.91 in)
Wire gauge: 14 to 22 AWG

If you have any questions concerning the installation of the PB112-024T low voltage base, call our technical support team at:

Phone: Montreal area: (450) 358-4600
Canada / U.S.: 1-800-831-AUBE (2823)
Fax: (450) 358-4650
Email: service@aubetech.com

Monday to Friday from 8:30 AM to 5:00 PM EST.

For more information on our products, visit us at:
www.aubetech.com

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