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INSTRUCTIONS “OVN” Series



WARNING



When using electrical appliances, basic precautions should always be taken to reduce the risk of fire, electrical shock and injury, including the following.

Read carefully these instructions before installation, operation of the heater. Failure to adhere to the instructions could result in fire, electric shock, serious personal injury, and death or property damage. Review frequently for continuing safe operation and advise future users, if necessary.

IMPORTANT INSTRUCTIONS

- 1- Read all instructions before installing or using this heater.
- 2- Do not paint the heater and do not alter the heater.
- 3- Do not install the heater on a wall covered with vinyl.
- 4- Do not use outdoors.
- 5- This heater may become hot when in use. To avoid burns, do not touch hot surfaces of the heater with bare skin. Keep all combustible materials at least 3 ft. (0.9 m) from the front of the heater and away from the side and top: furniture, pillows, bedding, paper, clothing, bath towel, bath robe, drapes, etc.
- 6- Heater should not be blocked in any way whatsoever. Do not use as a towel dryer.
- 7- Install heater in position as shown in the installation figures of these instructions.
- 8- Allow 4 in. (102 mm) minimum clearance below heater.
- 9- Allow 1 in. (25 mm) minimum clearance between sides of heater and any adjacent walls.
- 10- Allow 48 in. (1219 mm) minimum in front of heater.
- 11- We recommend to keep a distance of 39 1/2 in. (1004 mm) minimum from a bathtub in accordance with local and national codes.
- 12- Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
- 13- Use intended holes in enclosure to secure heater in place as specified in these instructions.
- 14- To avoid electric shock disconnect all power to heater at the main service panel before installation, wiring or servicing and replace front cover of heater before putting the power back.
- 15- Use copper supply wires only.
- 16- All wiring must be done in accordance with the national and local electrical codes and the heater must be grounded.
- 17- An incorrectly installed heater may be permanently damaged and present a risk of fire or electric shock. Required minimal clearances must be observed along with these instructions. Heater must be secure to the building's framing.
- 18- Do not install heater in vapor or shower bathrooms nor in places where it will be exposed to a high level of humidity or vapor for a long period.
- 19- Make sure applied voltage is suitable for rating of heater.
- 20- Do not insert or allow foreign objects to enter any ventilation opening as this may cause electric shock, short circuit, fire or damage to heater.
- 21- Do not block air inlet or outlet in any way whatsoever.
- 22- Use heater only as described in the OPERATING INSTRUCTIONS section of these instructions. Any other use not recommended by the manufacturer may cause fire, electric shock or injury to persons.
- 23- Refer to the OPERATING INSTRUCTIONS section of these instructions for troubleshooting tips on this heater.
- 24- AMERICAN VERSION ONLY: This heater includes a visual alarm (red light) to warn that parts of the heater are getting excessively hot. If the light turns on, immediately turn the heater off and inspect for any objects on or adjacent to the heater that may cause high temperatures. If nothing seems to obstruct air inlet, have heater inspected by a qualified person. DO NOT OPERATE THE HEATER WITH THE ALARM LIGHT IS ON. Refer to the OPERATING INSTRUCTIONS for the information about the hi-limit manual reset.
- 25- A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable liquids are used or stored.
- 26- Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
- 27- The thermostat should not be considered as an infallible system where maintaining a temperature is considered critical. Examples: Hazardous material storage, computer room, etc. In these particular cases, it is imperative to add a monitoring system to avoid the consequences of a failure of the thermostat.

SAVE THESE INSTRUCTIONS

MAINTENANCE INSTRUCTIONS

- Once every quarter, remove the front panel and use a vacuum cleaner to remove the dust accumulation inside the heater.
- Cleaning should be done while the heater is disconnected from the supply circuit.
- A qualified technician should perform any other servicing.

WARRANTY

OUELLET CANADA INC. warrants the electric heating element of the “OVN” Series for five (5) year period; and its component parts against defects in material and workmanship for a two (2) year period following the date of purchase, under normal use and service, when proof of purchase of such is provided to the manufacturer. The obligation of Ouellet Canada Inc., under the terms of this warranty, will be to supply a new unit and this releases the manufacturer from paying the installation costs or other secondary charges linked to replacing the unit or the component part(s).

INSTALLATION INSTRUCTIONS

SURFACE WALL MOUNTING STEPS without removing the front cover

CAUTION:

High temperature, risk of fire, keep electrical cords, drapery, furnishings, and other combustibles at least 36 in. (915 mm) from the front of the heater and away from the sides and top.

WARNING:

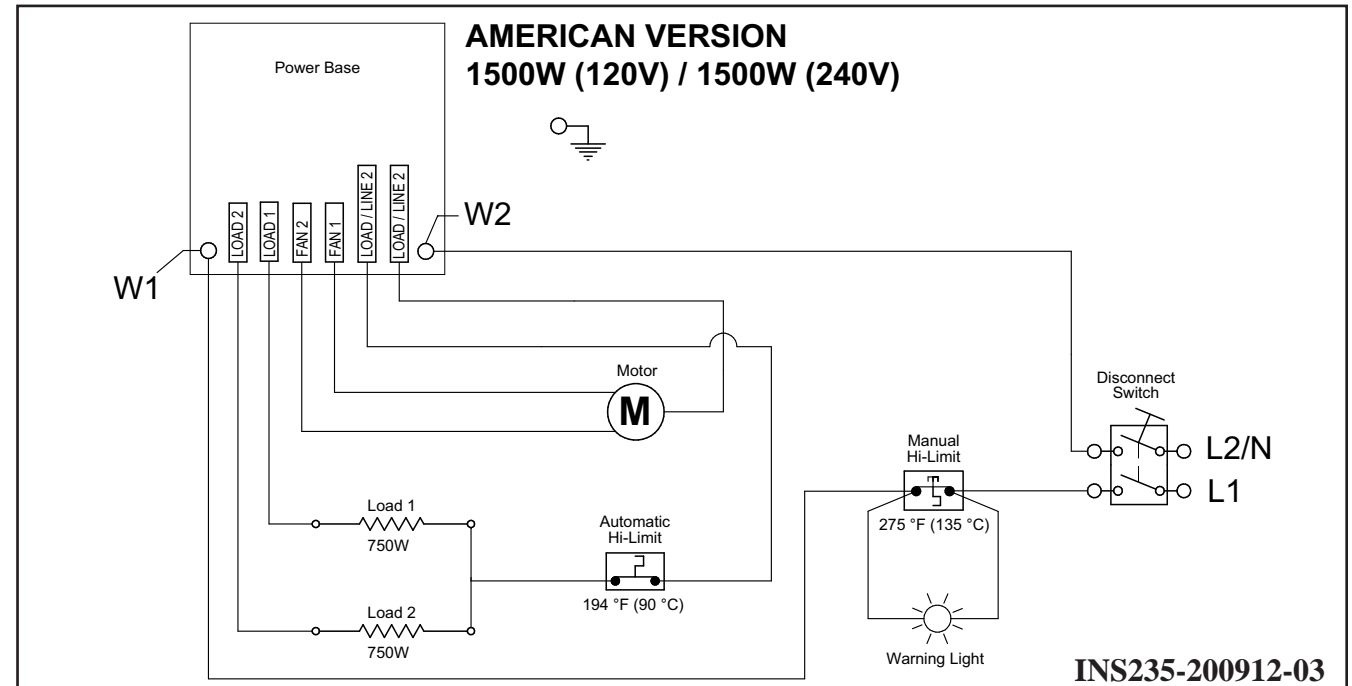
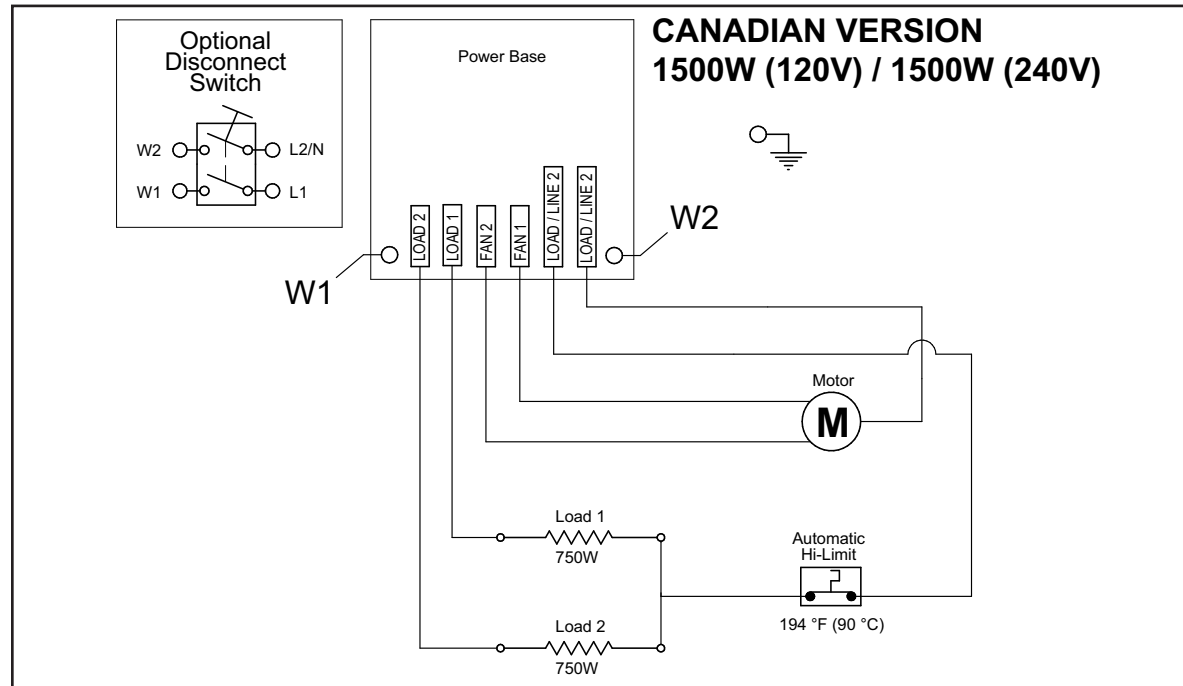
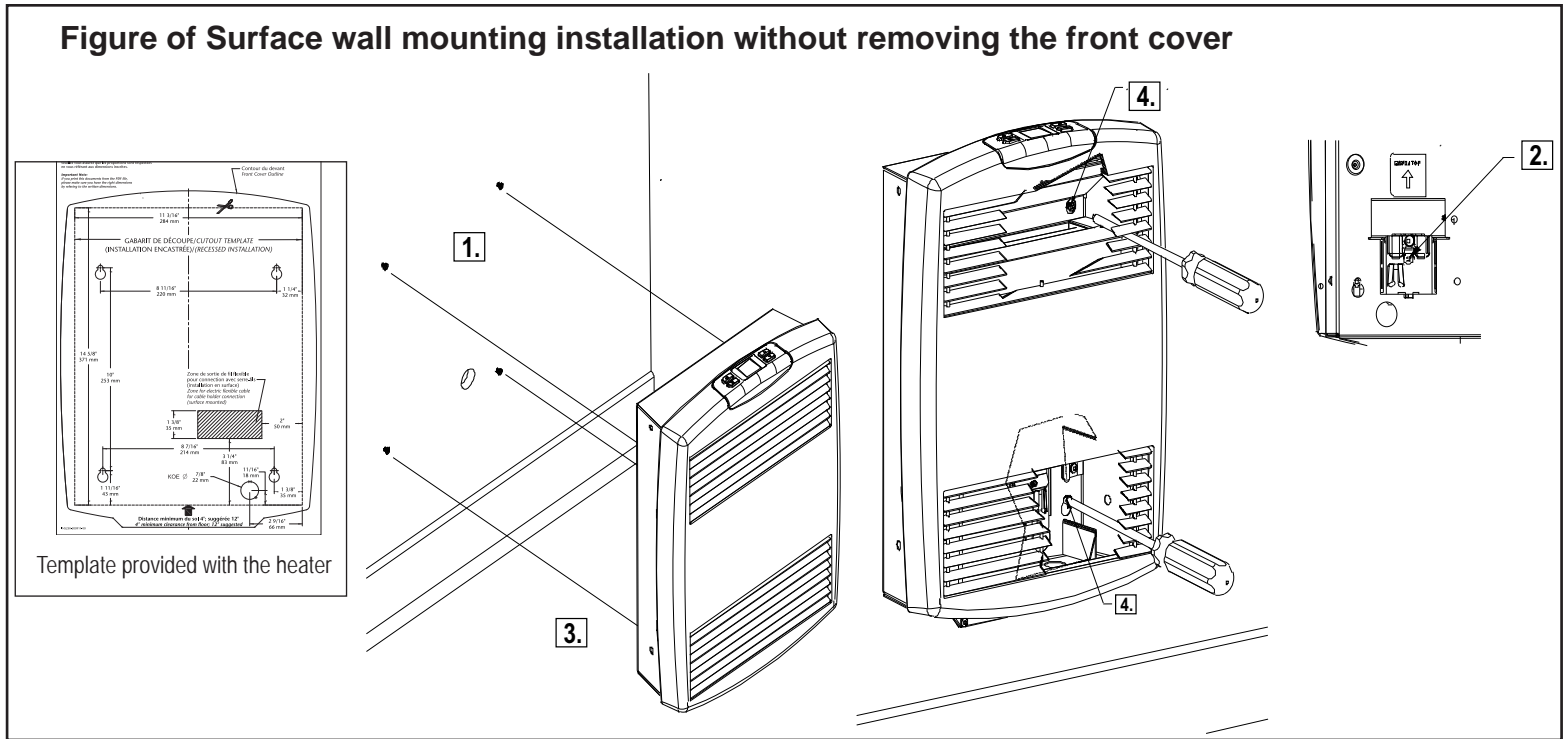
To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.

- Use the template provided with the heater.
 - Allow 4 in. (102 mm) minimum below heater. Recommended installation height is 12 in. (305 mm) below the heater for a better temperature regulation.
 - Locate positioning of the supply wire and make a 1 in. (25 mm) diameter hole.
 - Firmly install the 4 screws supplied to the wall. **DO NOT OVERTIGHT** SINCE YOU WILL NEED TO SLIDE THE HEATER AT STEP 3.
- For an installation with "Loomex" flexible wire, use the single-screw wire holder by unscrewing the screw, make the connections and screw back the wire holder. Do not let more than 12 in. (305 mm) of loose wire between the heater and the wall.
- Wire the heater according to national and local codes and as per the wiring diagram below.
- Align the oversized part of the holes with the screws already on the wall, then slide the heater downward. Make sure that the 4 screws are well supported at the top of the keyhole (small part).
- Once the heater in place, finish tightening the 4 screws with a 5 in. (127 mm) minimum rod screwdriver through the grilles of the heater as shown. **DO NOT USE A DRILL WITH A SQUARE BIT AT THIS STEP BECAUSE YOU COULD DAMAGE THE GRILLES.**
- Test the heater by pressing the "Hour-glass" button to activate the boost heating mode.

For an installation with "BX" cable, follow step 4. b) of the RECESSED WALL MOUNTING STEPS or SURFACE WALL MOUNTING STEPS by removing the front cover.

It is possible that a slight heating smell emerges from the grilles, which is totally normal and will stop after a few minutes of operation.

Figure of Surface wall mounting installation without removing the front cover



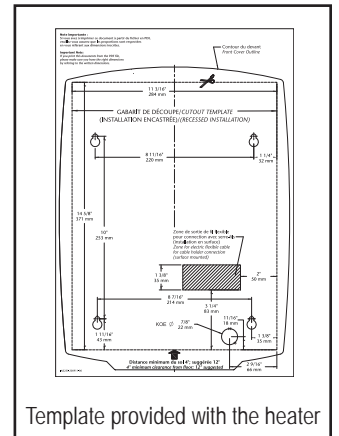
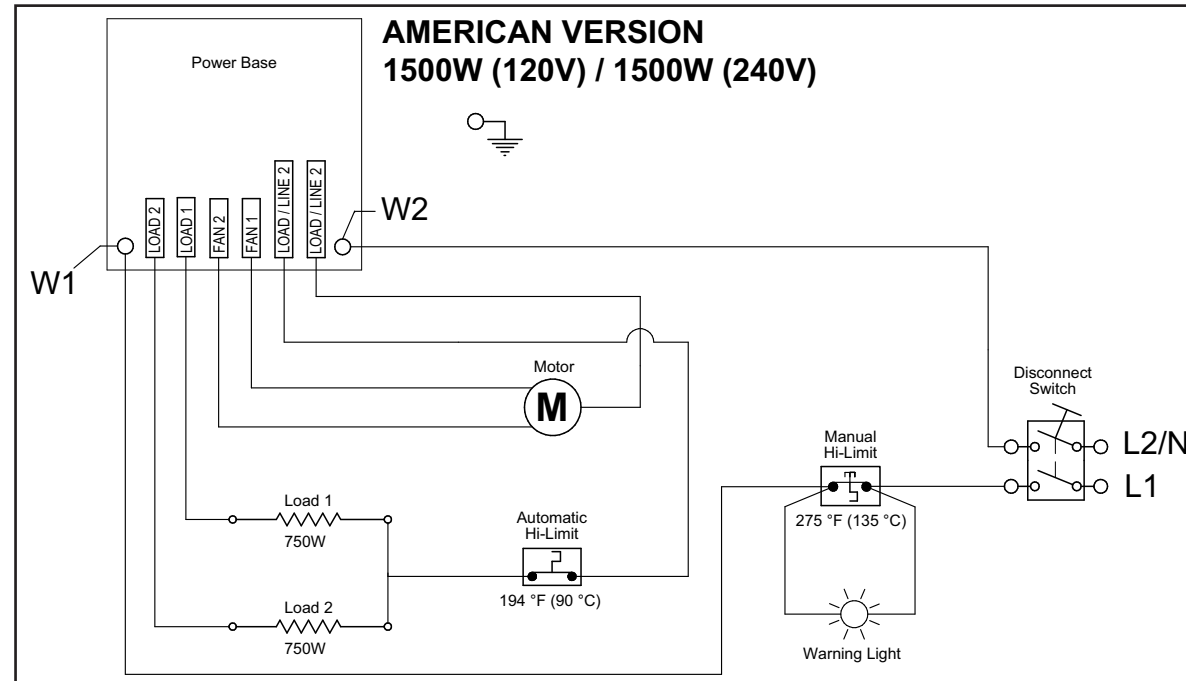
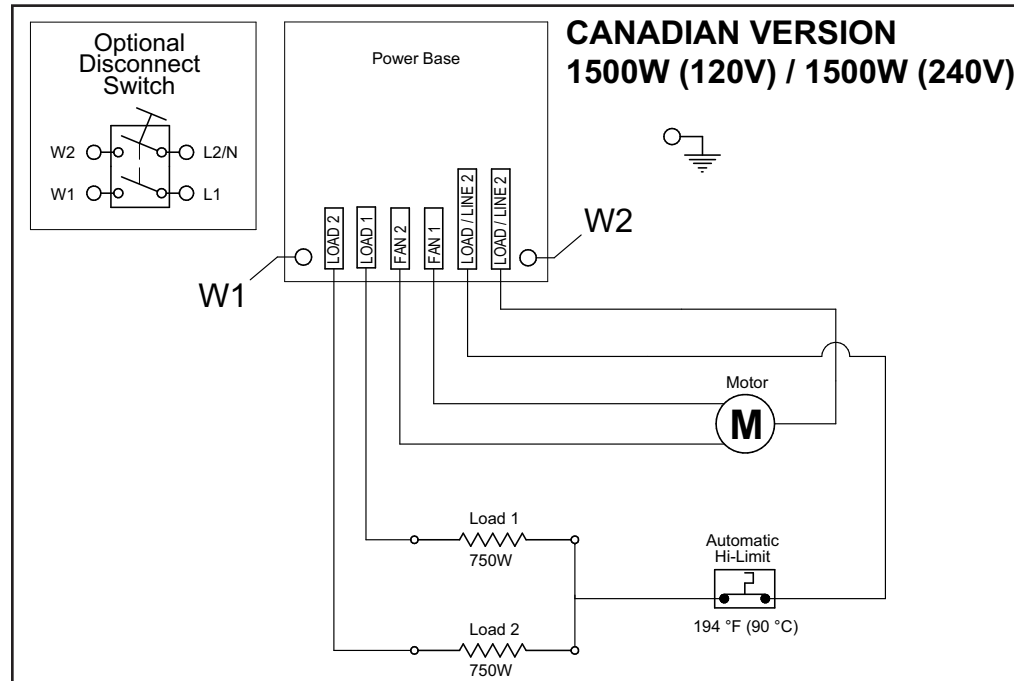
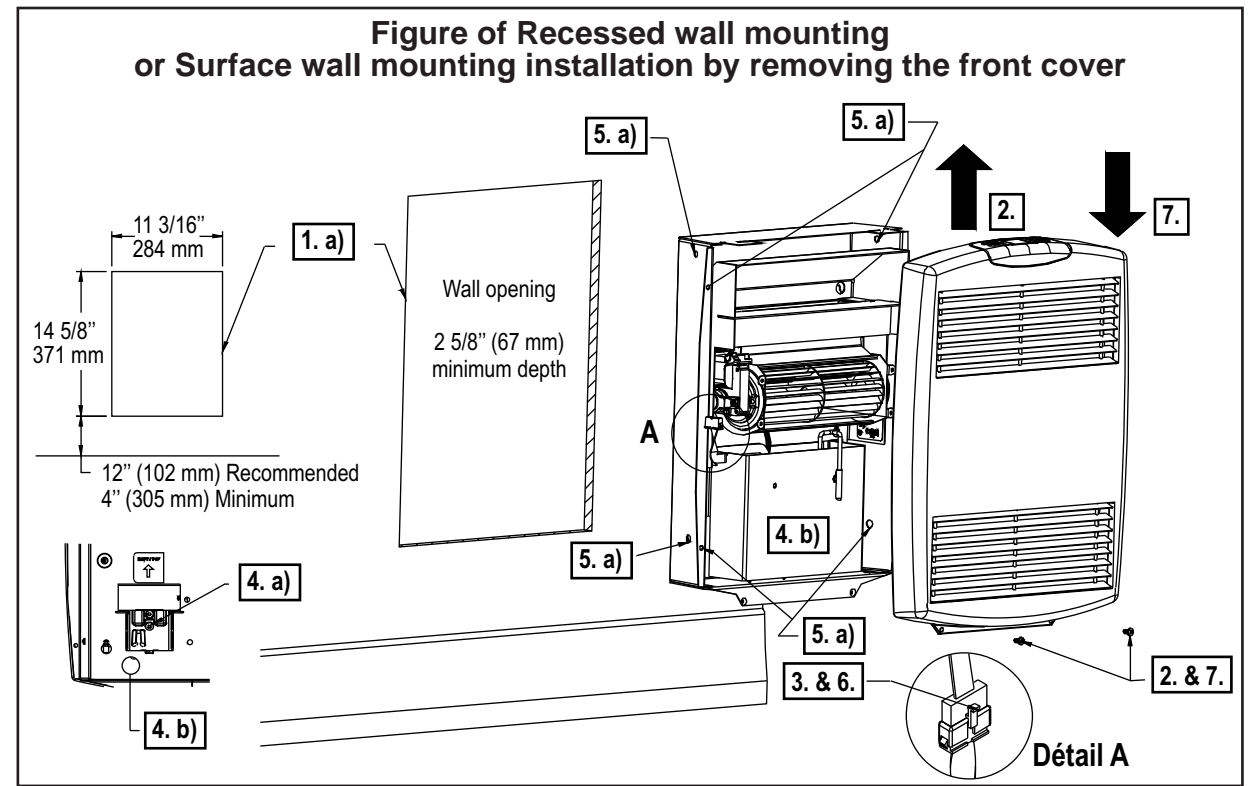
INSTALLATION INSTRUCTIONS

RECESSED WALL MOUNTING STEPS or SURFACE WALL MOUNTING STEPS by removing the front cover

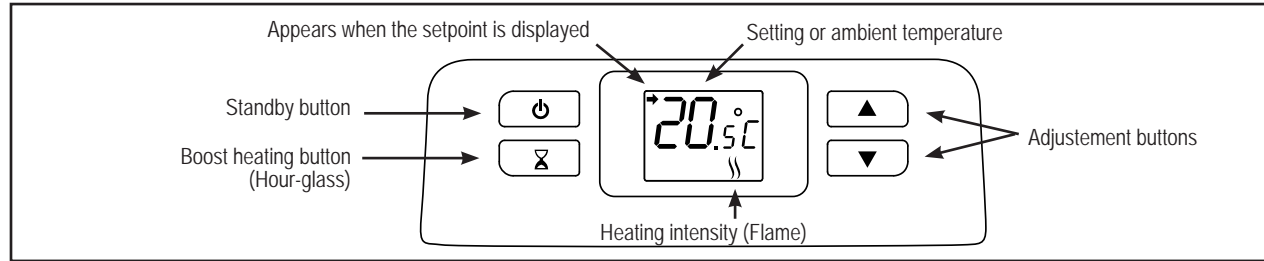
CAUTION:
High temperature, risk of fire, keep electrical cords, drapery, furnishings, and other combustibles at least 36 in. (915 mm) from the front of the heater and away from the sides and top.

WARNING:
To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.

- Use the template provided with the heater.
 - Recess wall mounting**
 - Provide a minimum opening of 2 5/8 in. (67 mm) deep. HOLE MUST BE CUT PRECISELY.
 - Allow 4 in. (102 mm) minimum below heater. Recommended installation height is 12 in. (305 mm) below the heater for a better temperature regulation.
 - Surface wall mounting**
 - If you have decided to remove the front cover for a surface wall mounting installation, follow step 1 of the SURFACE WALL MOUNTING STEPS without removing the front cover.
- Remove the front cover by unscrewing the 2 screws at the bottom and by sliding the front cover upwards.
- Disconnect the electronic thermostat from the casing by pressing the central tab of the black plastic connector. Put the front cover on a clean surface.
- For an installation with "Loomex" flexible wire, use the single-screw wire holder by unscrewing the screw, make the connections and screw back the wire holder. Do not let more than 12 in. (305 mm) of loose wire between the heater and the wall.
 - For "BX" cable, use the appropriate knock-out (back or bottom of the heater) with a connector (not supplied). Remove the protection plate (4 screws), make the connections and put the protection plate back (4 screws).
- Wire the heater according to national and local codes and as per the wiring diagram below.
- Recessed wall mounting**
 - Install the casing in the wall opening using the recessed mounting holes on the side or the front of the casing. Do not try to force the casing in the opening.
 - Surface wall mounting**
 - If you have decided to remove the front cover for a surface wall mounting installation, follow step 3 and 4 of the SURFACE WALL MOUNTING STEPS without removing the front cover.
- Reconnect the electronic thermostat to the casing by clipping both parts of the black plastic connector together. Replace the flat cable in the wire clips.
- Put the front cover back by sliding it downwards. The 2 tabs of the front cover fit into the 2 slots of the casing. Screw back the 2 bottom screws.
- Test the heater by pressing the "Hour-glass" button to activate the boost heating mode. It is possible that a slight heating smell emerges from the grilles, which is totally normal and will stop after a few minutes of operation.



OPERATING INSTRUCTIONS



The heater must be properly installed before it is used.

Temperature Display and Setting

The thermostat normally displays the ambient measured temperature.

The screen is backlit at maximum intensity for 15 seconds when any button is pressed.

To view the setpoint temperature, press once on either adjustment button. The setpoint temperature will appear for 5 seconds. A small arrow appears on the top left corner of the screen.

To change the setpoint temperature, press the appropriate adjustment button. Setpoint range: 50 °F to 86 °F (10 °C to 30 °C).

The thermostat using proportional regulation determines the heating intensity necessary for the electric heating heater to precisely maintain the ambient temperature according to the setpoint. The number of flames indicates the percentage of heat calculated by the electronic thermostat, such as 25%, 50%, 75% and 100%.

To change the temperature display format from °C to °F or vice versa, press the 2 "Adjustment" buttons simultaneously for 2 seconds.

Boost Heating (Hour-glass)

For boost heating mode, use the "Hour-glass" button. Press once to activate this mode and to see the remaining time flashing ("min" is now displayed in the bottom right corner). Display will stop flashing after 5 seconds. While the remaining time flashes, press again the "Hour-glass" button to set the minutes to 5, 10, 15, 20, 25 or 30. If display does not flash any more, press again the "Hour-glass" button to turn off the boost

heating mode. Whenever needed in the boost heating mode, use the "Adjustment" button to increase or decrease, by increments of 1 minute, the remaining time. When in the boost heating mode ambient temperature is not displayed.

Display Backlit

By default, the screen is backlit at mid-intensity at any time and at maximum intensity for 15 seconds when you press any button.

To deactivate the mid-intensity backlit, press the "Standby" and the bottom adjustment buttons simultaneously for 2 seconds.

The letters "bL" appear on the screen. Press one or the other adjustment buttons until "Off" appears on the screen.

The thermostat will automatically save any changes and return to normal display if you do not press any buttons for 5 seconds.

Keypad Lock

This feature eliminates unwanted temperature adjustments and the use of different modes of the thermostat.

Before activating this function, make sure you have set the temperature setpoint to the desired temperature. Press the "Standby" and the up buttons simultaneously for 2 seconds.

A pad lock icon appears on the screen to confirm that your settings are now locked. Repeat this step to deactivate this function.

Standby

The standby mode enables thermostat shut down at end of heating season. Take note that when this mode is activated, the heater does not heat, no matter the room temperature or the setpoint. **WARNING!** The standby mode does not cut the current to the heater.

For any maintenance, cut power to the heating system at the main electrical panel to avoid any risk of electrical shock.

To put the thermostat in standby mode, press the "Standby" button for 2 seconds. The standby icon appears on the screen to confirm that the device is in standby.

To return to the heating mode, press the "Standby" button. The thermostat will then return to normal display.

Power Outage

During a power outage only the setpoint temperature is saved in memory. The screen then returns to normal display and any other functions go back to their default settings. Note that it can take between 0 and 10 seconds before heating begins.

Offset of Ambient Temperature

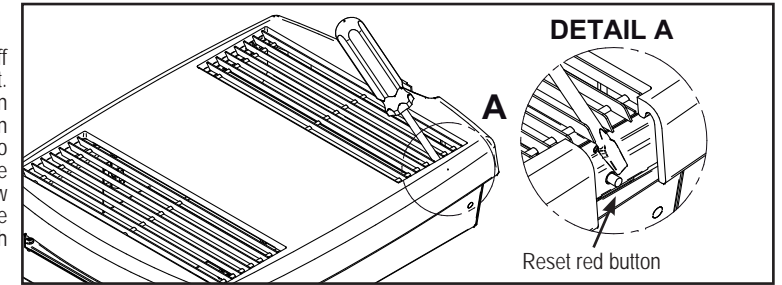
The heater thermostat has been calibrated in laboratory in order to be precise at ±0.5 °C. Somehow, depending of the conditions in which it is installed, the ambient temperature could be different from the one displayed on the heater thermostat. If you want the thermostat to display the ambient temperature shown on your thermometer, you must use the "Offset of Ambient Temperature" function.

Steps to follow (you must have a thermometer):

- 1- Put the heater in standby mode. (See Standby).
- 2- Press the "Hour-glass" button for 2 seconds until "Off" appears on the screen and then "0.0".
- 3- To calculate the correction factor (could be a negative value):
 $TT = \text{Ambient temperature according to the thermometer}$
 $TA = \text{Temperature shown on the heater thermostat}$
 Celsius: $\frac{TT - TA}{2}$ or Fahrenheit: $\frac{TT - TA}{4}$
- 4- Use the adjustment buttons to enter the correction factor by increments of 0.5
- 5- Press the "Hour-glass" button in order to quit the "Offset of Ambient Temperature" function.
- 6- Press the "Standby" button to get back to normal display. The correction factor is now taken in to account by the thermostat. The ambient temperature displayed on the thermostat should now be the same as the one displayed on your thermometer.

Hi-Limit with Manual Reset (AMERICAN VERSION ONLY)

This heater includes a manual reset limiting control to turn off power when parts of the heater are getting excessively hot. When it operates, a visual alarm (red light) is illuminating. In that situation, immediately disconnect all power at the main service panel and inspect for any objects on or adjacent to the heater that may cause high temperatures. Wait until the heater comes back at room temperature. Use a flat screw driver through the upper (grille – louver), on its right side and press the manual reset red button of the hi-limit with manual reset. (Detail A).



TROUBLESHOOTING

PROBLEMS	TIPS
If the heater stops working in normal mode, without error code. The display no longer works.	1- Check the circuit breaker of your house. 2- AMERICAN VERSION ONLY: If the red light is illuminating, refer to the OPERATING INSTRUCTIONS for the information about the hi-limit manual reset.
If the heater stops working in normal mode, without error code. The display still works.	It is possible that the ambient temperature exceeds the temperature setpoint. When the ambient temperature falls below the setpoint temperature, the heater will heat again.
The display shows LO	The ambient temperature is equal or below 0 °C (32 °F). The code LO will disappear when the ambient temperature is above 0 °C (32 °F). The ambient measured temperature will be displayed again.
The display shows HI	The ambient temperature is above 37 °C (98.5 °F). The code HI will disappear if the ambient temperature falls below 37 °C (98.5 °F). The ambient measured temperature will be displayed again.
The display shows E1	The ambient temperature is below -15 °C (5 °F) or the sensor is cut or not connected to the power card. If the ambient temperature is below -15 °C (5 °F), you can press the «Hour-glass» button to bring the ambient temperature to 0 °C (32 °F), and come back to standard heating mode. If the sensor wire is damaged, the thermostat will also shown E1 error and the sensor has to be changed.
The display shows E2	The ambient temperature may be above 50 °C (122 °F). The heater may be partially blocked and influences the temperature sensor. It is also possible that the sensor is shorted. If so, the sensor must be replaced because it is probably damaged.
The display shows E3	It is likely that something partially obstructs the air outlet and/or the air inlet of the heater. This causes overheating at the thermostat and a protection is engaged. The heater can not work, even in boost heating mode, if the error code is still shown. Let the air inlet and outlet free. The thermostat will return to normal mode once the temperature has dropped.
The heater cycle in normal mode without error code.	The heater is probably completely obstructed, and the thermal protection of the heater turns off the heat, but not the fan. Let the air inlet and outlet free and the heater should no longer cycle. If the heater cycles again, it is possible that the element or even the fan are dirty. Clean with an air stream after closing the circuit breaker in your electrical panel.
The heater operates normally but the display is dark gray and does nothing.	The display is defective.
The thermostat does not seem precise at first.	An electronic thermostat will seek accuracy from the accumulated historical in a given location. After one day, the thermostat has adjusted its core curriculum to fit its new environment and should reach its level of precision. (See Offset of Ambient Temperature).