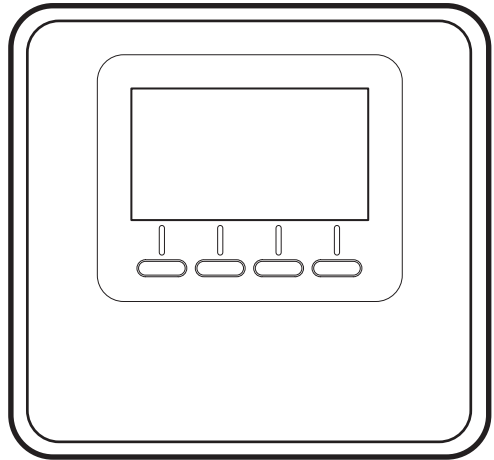


Modulating Room Sensor

Instruction Manual



SPECIAL ATTENTION BOXES

The following defined terms are used throughout this manual to bring attention to the presence of hazards of various risk levels or to important product information.

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in personal injury or death.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTICE

NOTICE is used to address practices not related to personal injury.

⚠ WARNING

This manual must only be used by a qualified installer / service technician. Read all instructions in this manual before installing. Perform steps in the given order. Failure to do so could result in substantial property damage, severe personal injury, or death.

California Proposition 65 Warning: This product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

NOTICE

The manufacturer reserves the right to make product changes or updates without notice and will not be held liable for typographical errors in literature.

NOTE TO CONSUMER: PLEASE KEEP ALL INSTRUCTIONS FOR FUTURE REFERENCE.

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For the Installer

This device must be installed by qualified and licensed personnel. The installer should be guided by the instructions furnished with the device, and by local codes and utility company requirements.

Installations Must Comply With:

Local, state, provincial, and national codes, laws, regulations, and ordinances.

The latest version of the *National Electrical Code, NFPA No. 70*.

Part 1 - General Safety Information

WARNING

Installer - Read all instructions in this manual before installing. Perform steps in the given order.
FAILURE TO ADHERE TO THE GUIDELINES ON THIS PAGE CAN RESULT IN SUBSTANTIAL PROPERTY DAMAGE, ELECTRICAL SHOCK, SEVERE PERSONAL INJURY, OR DEATH.

NOTE: Install all system components in such a manner that does not reduce the performance of any fire rated assembly.

Do not perform operations that involve removing the boiler from its installation location.

Take care when installing the device, especially if using stepladders.

Do not allow children or inexperienced people to operate the device or perform any cleaning or maintenance.

Do not climb onto chairs, stools, ladders, or unstable supports to install or clean the device.

Be sure to disconnect electrical power from the boiler and wait for associated equipment to cool before wiring the device.

CAUTION

Failure of the system due to freeze related damage IS NOT covered by product warranty.

Do not use this device for anything other than its intended purpose (as described in this manual). Doing so could result in property damage and WILL VOID product warranty.

High heat sources (sources generating heat 100°F / 37°C or greater, such as stove pipes, space heaters, etc.) may damage plastic components of the device. Such damages ARE NOT covered by warranty. Locate the device away from high heat sources. High heat sources may also affect temperature readings.

High heat sources and drafts may affect temperature readings.

Do not use insecticides, solvents, or aggressive detergents to clean the room sensor. Harsh cleaners can damage plastic or painted parts.

Do not use the device for any purpose other than normal domestic use. Damage to the device or other objects due to improper use or operation overload is not covered by product warranty.

The manufacturer cannot be held responsible for damages caused by improper installation or by failure to follow the instructions in this manual.

NOTICE

UNPACKING THE DEVICE - Any claims for damage or shortage in shipment must be filed immediately against the transportation company by the consignee.

COLD WEATHER HANDLING - If the device has been stored in a very cold location (BELOW 32°F) before installation, handle with care until the device comes to room temperature. Failure to do so could result in damage to the device.

NOTE: Reference the device model and serial numbers when inquiring about service or troubleshooting.

Part 2 - Technical Features

Technical Data - Modulating Room Sensor (Cabled Version)	
Power Supply	BridgeNet BUS 8 to 24V max / Limited Power Source Complies
Electrical Uptake	6 mA
Operating Temperature	32 to 104°F
Storage Temperature	14 to 158°F
Dimensions	3.6" x 3.4" x 0.9"
Bus Wire Length and Cross-Sectional Area NOTE: Use a shielded or twisted pair cable to avoid interference issues.	Max 164' - Min 20 AWG
Insulation Class	III
Protection Rating	IP30 (when installed as specified)
Temperature Sensor	+/-1%

Table 1 - Technical Data

Room Sensor:

1. Display
2. Keys

Display:

- A. Detected Room Temperature
- B. WiFi Device Connected on Bus
- C. Heating Mode Indication
- D. Fault
- E. Cooling / Anti-Freeze Mode in Controlled Zone
- F. Heat Request
- G. Timer-Based Modification of Room Temperature Set-Point in the Schedule Programming (when enabled)
- H. Manual Mode Active
- I. Programmed Mode Active (as scheduled on the room sensor control)
- L. Controlled Zone Off
- M. Battery Low Charge
- N. Mode Key ("MODE")
- O. Confirm Key (OK)
- P. Increase Temperature Setting Key (+)
- Q. Decrease Temperature Setting Key (-)

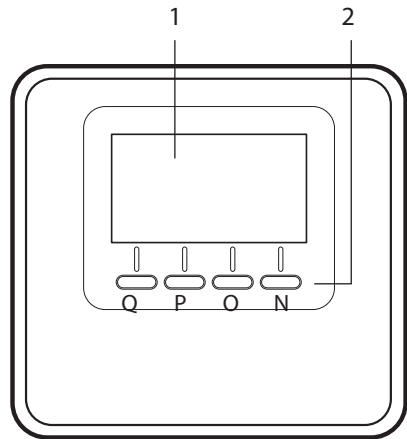


Figure 1 - Room Sensor Details

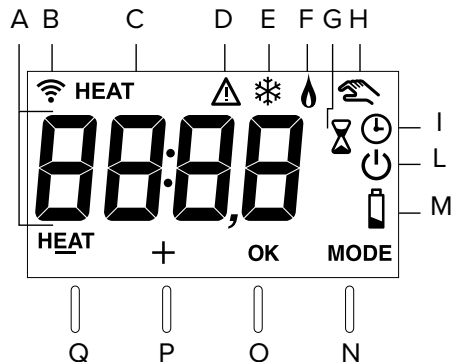


Figure 2 - Display Details

Part 3 - Manual Operation

Manual operation heats the zone in which the room sensor is installed, and maintains the manual temperature setting throughout the day (time scheduling is disabled).

Press the "MODE" button (Figure 3) until the display shows "👉".

Modifying the Room Temperature

In manual mode, the set-point temperature (default value 68°F) can be modified. Press the temperature adjustment keys "+" and "-" to set the room temperature (Figure 4). Press "OK" to confirm.

The set value will flash on the display for a few seconds, after which the display will once again show the detected room temperature.

Disabling Heating

You can disable heating in the zone in which the room sensor is installed. Press the "MODE" button until the display shows: "🔌". See Figure 5.

When heating is off, the anti-freeze function is enabled.

Anti-Freeze Function

When the anti-freeze function is enabled the display shows: "❄️".

In this mode, central heating will only activate if the room temperature falls below 41°F to protect the pipes against freezing.

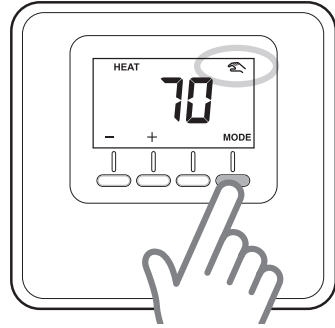


Figure 3 - Press "MODE" Button to Set Manual Operation

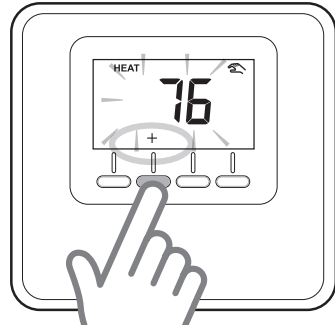


Figure 4 - Press + and - to Change Set-Point Temperature

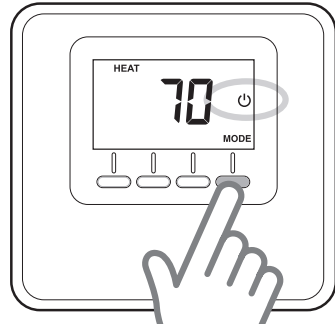


Figure 5 - Press the "MODE" Button to Disable Heating

Part 4 - Programmed Operation

Programmed operation is controlled by the heating schedule set on the boiler control.

Press the "MODE" button (Figure 6) until the display shows "🕒".

Timed Adjustment Room Temperature

In programmed mode, the set-point temperature can be temporarily modified. Press the temperature adjustment keys "+" and "-" to set the room temperature (Figure 7). Press "OK" to confirm the temporary setting.

The display will now show "🕒" and the time for which the changed setting applies will flash (3h default). See Figure 8.

Press "+" and "-" to set the duration of the modification, which can vary between 0 hours (minimum) and 24 hours (maximum). Press "OK" to confirm the modified setting.

The display will now show the detected room temperature again.

When the temporary setting times out the display will again show the set-point temperature set within the boiler control.

To cancel the modified setting, press "MODE" and select manual mode.

Press the "MODE" button until the display shows "🕒" to return to programmed operation.

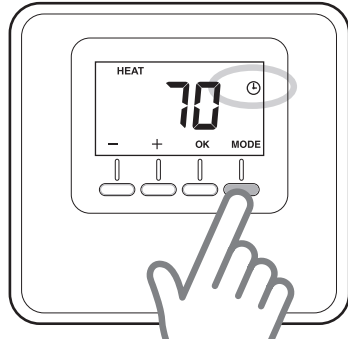


Figure 6 - Press "MODE" Button to Set Programmed Operation

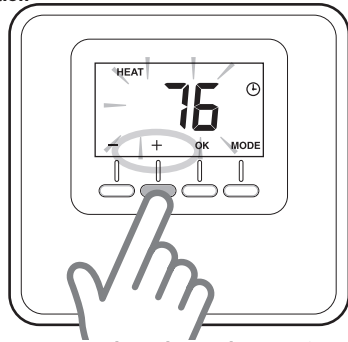


Figure 7 - Press + and - to Change the Set-Point Temperature

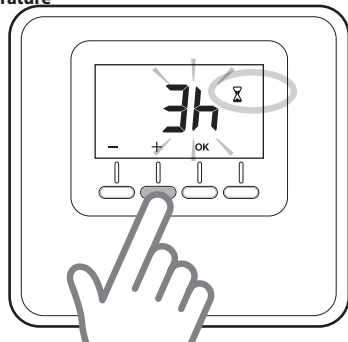


Figure 8 - Press + and - to Change the Hours

Part 5 - Installation

Positioning

The device detects the room temperature, therefore several factors should be taken into account when choosing an installation site. Position the device far from heat sources (radiators, sunlight, fireplaces, etc.) and from drafts, doorways, and windows which could affect the temperature readings. It should be installed approximately 4.9 feet above floor level.

⚠ WARNING

Installation should be performed by a qualified technician. Before making any connections, shut off electrical power to the boiler at its external two-position switch. The power supply of the device must be connected to a circuit breaker.

Wall Installation

- If necessary, install the mounting plate to the electrical box included in the kit (Figure 9).
- Detach the room sensor's base by pressing down the tab at the bottom (Figure 10).
- Fix the base to the wall at the chosen position, using the plugs and screws supplied with the kit (Figure 11).

Electrical Connection to the Boiler

USE A SHIELDED OR TWISTED PAIR CABLE TO AVOID INTERFERENCE PROBLEMS.

- Route the wires through the slot and connect them to terminals B and T.
- Once the wires have been connected, restore the room sensor by first inserting the top and then rotating it downwards while pressing it gently in towards the wall.
- Connect the room sensor wire to the BUS terminal on the boiler terminal board (Figure 12).
- Power up the boiler.

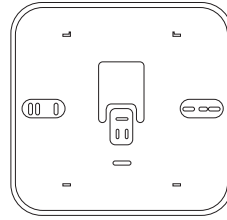


Figure 9 - Device Mounting Plate

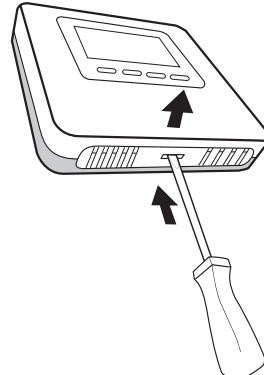


Figure 10 - Detach the Room Sensor Base

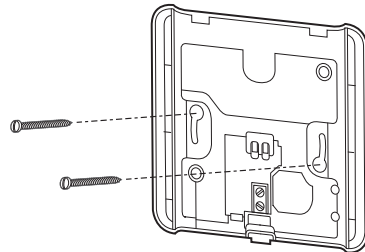


Figure 11 - Install the Room Sensor Base

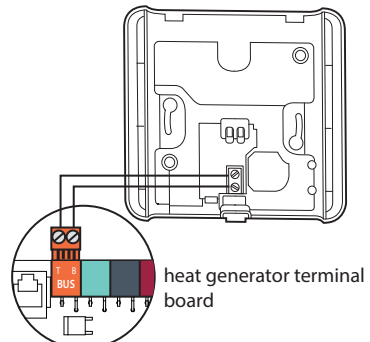


Figure 12 - Wire the Room Sensor to the BUS Terminal

Associating the Zone

- Ensure the room sensor is powered and properly wired
- Press and hold the "+" key on the room sensor for five (5) seconds (Figure 13).
- Again, press and hold the "+" key on the room sensor for five (5) seconds.

The display will show the parameter "nr02" (Figure 14).

- Press "OK" to enter the zone association menu. The display will show the first available zone.
- Press "+" and "-" to select the zone you wish to associate (Figure 15).
- Press "OK" to confirm.
- Press "MODE" to return to the main screen.

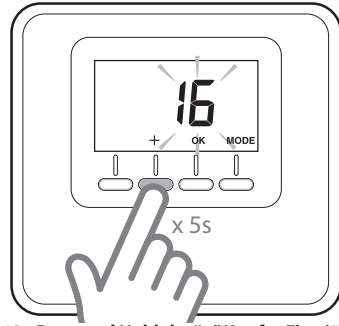


Figure 13 - Press and Hold the "+" Key for Five (5) Seconds

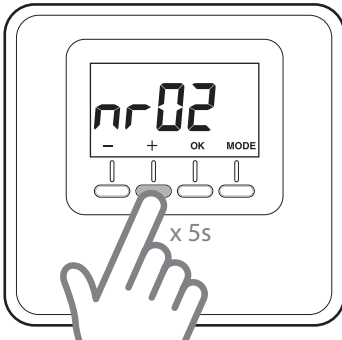


Figure 14 - Again, Press and Hold the "+" Key for Five (5) Seconds

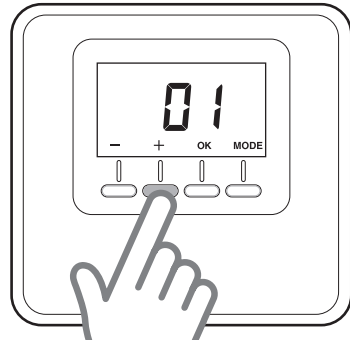


Figure 15 - Press the "+" and "-" Key for Select the Zone

Part 6 - Technical Adjustments

Cabled and Wireless Versions

- Hold "+" down for five (5) seconds. The display will alternate between the software version and modification index.
- Press "OK" to enter the settings menu.
- Press "+" and "-" to scroll through the parameters.
- Press "OK" button to select a parameter.

Parameter	Description	Default
CF01	Room temperature correction (range: +/- 9°F)	0°F
CF09	Change from Fahrenheit to Celsius (range: 0 = °F, 1 = °C)	0 = °F
CF11	0: Display OFF after ten (10) seconds; 1: Display always on	1
CF12	0: Backlight Off; 1: Backlight Off after five (5) seconds of inactivity	1

Table 2 - Table of Parameters

Error	Cause	Solution
Err - Ebus	Zone association error: the zone associated with the device is already assigned.	Check the installed room sensors. Associate a different zone.
--- Err	The room sensor is damaged.	Replace the room sensor.

Table 3 - Table of Errors

