



731

Installation Manual

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BZ33-201N

Manual

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Thermostat Application Guide

| Description | |
|---|-----|
| Gas or Oil Heat | Yes |
| Electric Furnace | Yes |
| Heat Pump (No Aux. or Emergency Heat) | Yes |
| Heat Pump (With Electric Aux.) | Yes |
| Heat Pump (With Gas Aux.) | No |
| Multi-Stage Systems | No |
| Heat Only Systems - Floor or Wall Furnace | Yes |
| Cool Only Systems | Yes |
| High and Low Fan Speed | Yes |
| Millivolt | No |
| Emergency Heat | No |
| Conventional Single Stage Furnace | Yes |
| Geothermal | Yes |

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Power Type

Battery Power

Hardwire (Common Wire)

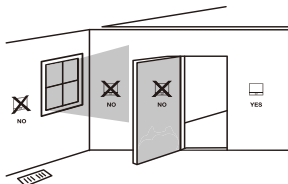
Hardwire (Common Wire) with
Battery Backup

A trained, experienced technician must install this product.

Carefully read these instructions. You could damage this product or cause a hazardous condition if you fail to follow these instructions.

Wall Locations

The thermostat should be installed approximately 4 to 5 feet above the floor. Select an area with average temperature and good air circulation.



Installation Tip

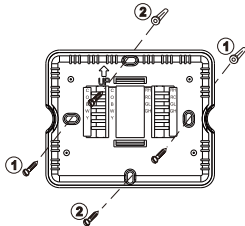
Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.

Do not install thermostat in locations:

- Close to hot or cold air ducts
- That are in direct sunlight
- With an outside wall behind the thermostat
- In areas that do not require conditioning
- Where there are dead spots or drafts (in corners or behind doors)
- Where there might be concealed chimneys or pipes

Subbase Installation

- ① Horizontal Mount
- ② Vertical Mount



For vertical mount put one screw on the top and one screw on the bottom.

For horizontal mount put one screw on the left and one screw on the right.



Installation Tip: Electrical Hazard

Failure to disconnect the power before beginning to install this product can cause electrical shock or equipment damage.



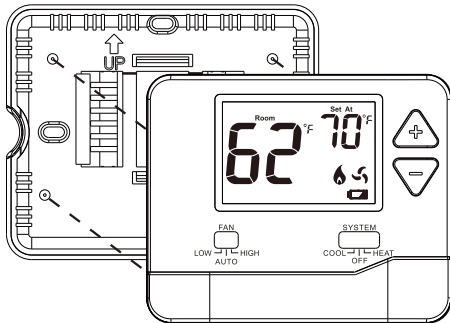
Mercury Notice

All of our products are mercury free. However, if the product you are replacing contains mercury, dispose of it properly. Your local waste management authority can give you instructions on recycling and proper disposal.

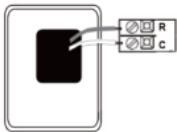
Installation Tips

Mount Thermostat

Align the 4 tabs on the subbase with corresponding slots on the back of the thermostat, then push gently until the thermostat snaps in place.



Battery Installation

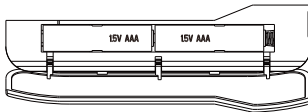


Insert 2 AAA Alkaline batteries (included). High quality alkaline batteries are recommended.

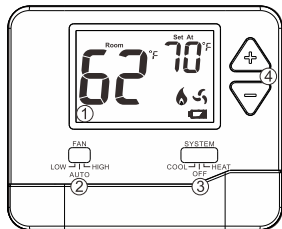
Battery installation is optional if thermostat is hardwired (R and C terminal connected to 24V power).

Important:

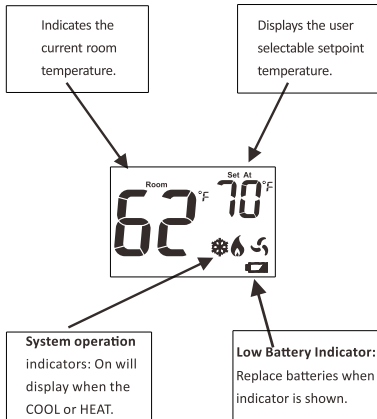
High quality alkaline batteries are recommended. Rechargeable batteries or low quality batteries do not guarantee a 1-year life span.



Getting to know your thermostat



- ① LCD
- ② Fan Switch
- ③ System Switch
- ④ Setpoint Buttons



Wiring

1. If you are replacing a thermostat, make note of the terminal connections on the thermostat that is being replaced. In some cases the wiring connections will not be color coded. For example, the red wire may not be connected to the **R** terminal.
2. Loosen the terminal block screws. Insert wires then retighten terminal block screws.



Installation Tip

Do not overtighten terminal block screws, as this can damage the terminal block. A damaged terminal block can keep the thermostat from fitting on the subbase correctly or cause system operation issues.

Max Torque = 6in-lbs.

Wiring

| Terminal | 1 Heat 1 Cool Conventional System | 1 Heat 1 Cool Heat Pump System | 2 Heat 1 Cool Heat Pump System |
|----------|---|--|--|
| R | Transformer power (cooling) | Transformer power (cooling) | Transformer power (cooling) |
| C | Transformer common | Transformer common | Transformer common |
| B | Energized in heating | Heat pump changeover valve energized in cooling | Heat pump changeover valve energized in heating |
| O | Energized in cooling | Heat pump changeover valve energized in cooling | Heat pump changeover valve energized in cooling |
| GL | Fan Relay, Low | Fan Relay, Low | Fan Relay, Low |
| GH | Fan Relay, High | Fan Relay, High | Fan Relay, High |
| W | First stage of heat | N/A | Second stage of heat |
| Y | First stage of cool | First stage of heat & cool | First stage of heat & cool |

Wiring

This thermostat is shipped from the factory to operate a conventional heating and cooling system. This thermostat will also operate a heat pump system. See the “heat pump” configuration step on page 10 of this manual to configure the thermostat for heat pump applications.

Wiring Tips



Caution: **Electrical Hazard**

Failure to disconnect the power before beginning to install this product can cause electrical shock or equipment damage.



Warning:

All components of the control system and the thermostat installation must conform to Class II circuits per the NEC Code.

C Terminal

The C (common wire) terminal does not have to be connected when the thermostat is powered by batteries.

Wire Specifications

Use shielded or non-shielded 18-22 gauge thermostat wire.



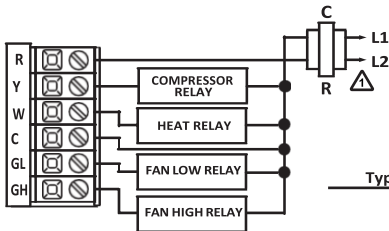
Note:

When connecting the thermostat to a PTAC, refer to the PTAC manufacturer instructions to enable remote thermostat operation.

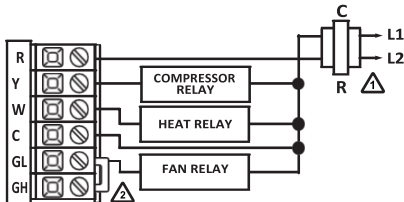
Wiring Diagrams

- 1 Power supply
- 2 Jumper (not supplied) to connect GL and GH terminals.
- 3 The Aux Heat Relay is energized as the second stage of heat.

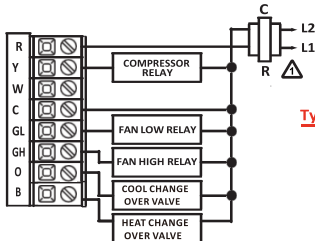
Typical 1H/1C System: 2 Speed Fan



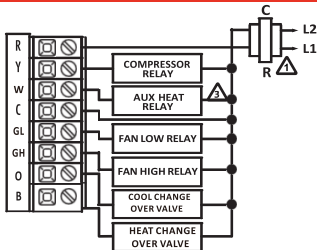
Typical 1H/1C System: 1 Speed Fan



Typical 1H/1C Heat Pump System: 2 Speed Fan



Typical 2H/1C Heat Pump System: 2 Speed Fan



Note:

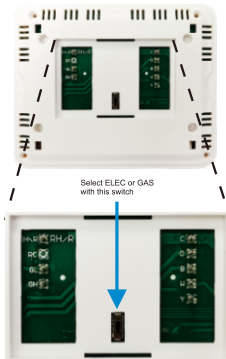
Most PTAC systems support two speed fan operation. In a single speed fan PTAC system or conventional single speed fan system, a jumper should be installed between GL and GH on the thermostat.

Technician Setup

Fan Operation Setup

Electric: The thermostat operation jumper pin should be put in the ELEC position. This setting allows the thermostat to operate the fan during a call for heat. Most PTAC systems will require ELEC Fan Operation Setup.

Gas: For systems that control the fan during a call for heat, put the jumper pin into the GAS position.





Technician Setup Menu

1. Set the thermostat system switch to OFF.
2. To enter Tech Setup Menu, press and hold "+" and "-" together for 3 seconds.
3. Use "+" and "-" to select desired setting for each option.
4. Tap "+" and "-" together to move next option.
5. To exit Tech Setup Menu, move system switch or wait for 15 seconds.

| Tech Setup Steps | | LCD Will Show | Adjustment Options | Default |
|------------------------------------|--|--------------------|--|---------|
| Room Temperature Calibration | This feature allows the installer to change the calibration of the room temperature display. For example, if the thermostat reads 70° and you would like it to read 72° then select +2. | Calibration 0°F | You can adjust the room temperature display to read up to 4° above or below the factory calibrated reading. | 0°F |
| F or C | Select for Fahrenheit temperature read out select C for Celsius read out. | OF | F for Fahrenheit C for Celsius | OF |
| Compressor Short Cycle Delay | The compressor short cycle delay protects the compressor from short cycling. This feature will not allow the compressor to be turned on for 5 minutes after it was last turned off. | ON Com Delay | Selecting ON will not allow the compressor to be turned on for 5 minutes after the last time the compressor was switched off. Select OFF to remove this delay. | ON |
| Heat Pump | When turned on the thermostat will operate a heat pump. Y will be the first stage of heat & cool, W will be the second stage of heat. | OF HU | OFF configures the thermostat for non heat pump systems. ON configures the thermostat for heat pump systems. | OFF |
| Heating Temperature Setpoint Limit | This feature allows you to set a maximum heat setpoint value. The setpoint temperature cannot be raised above this value. | 90°F HE | 44.0° - 90.0° F 7.0° - 32.0° C | 90°F |
| Cooling Temperature Setpoint Limit | This feature allows you to set a minimum cool setpoint valve. The setpoint temperature cannot be lowered below this value. | 44°F CL | 44.0° - 90.0° F 7.0° - 32.0° C | 44°F |

Swing Setting

1. Set the thermostat system switch to the desired position (COOL or HEAT).
2. Press and hold "+" and "-" together for 3 seconds.
3. Use "+" and "-" to adjust desired swing setting (The display reads in tenths of a degree.)
4. To exit, move system switch or wait for 1 seconds.

| Swing Settings | | LCD Will Show | |
|--------------------------------|---|---|--|
| Cooling Swing (SYSTEM COOL) | The swing setting, often called "cycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles. |  | The cooling swing setting is adjustable from 0.2° to 2°. For example: A swing setting of 0.5° will turn the cooling on at approximately 0.5° above the setpoint and turn the cooling off at approximately 0.5° below the setpoint. |
| Heating Swing (SYSTEM HEAT) | The swing setting, often called "cycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles. |  | The heating swing setting is adjustable from 0.2° to 2°. For example: A swing setting of 0.5° will turn the heating on at approximately 0.5° below the setpoint and turn the heating off at approximately 0.5° above the setpoint. |

Swing Setting

The second stage of Heat will turn on at 2x the swing setting. The second stage will turn off when 1x the swing is reached. For example, if the swing setting is 0.8° for heating and the thermostat is set at 70° F, the first stage will turn on at approximately 69.2° F. The second stage will turn on at 68.4°F and the first will turn off at 70.8° F.

Thermostat

| | |
|--|--|
| The display range of temperature ... | 32°F to 99°F (1°C to 40°C) |
| The control range of temperature.... | 44°F to 90°F (7°C to 32°C) |
| Load rating..... | 1 amp per terminal, 1.5 amp maximum all terminals combined |
| Swing (cycle rate or differential) | Heating is adjustable from 0.2° to 2.0° Cooling is adjustable from 0.2° to 2.0° |
| Power source | 18 to 30 VAC, NEC Class II, 50/60 Hz for hardwire Battery power from 2 AAA Alkaline batteries |
| Operating ambient | 32°F to +105°F (0°C to +41°C) |
| Operating humidity | 90% non-condensing maximum |
| Dimensions of thermostat | 120 x 98 x 28MM |

Warranty

WARRANTY

Breeze33 Products LLC (Breeze33) warrants to the ORIGINAL PURCHASER that its thermostats shall be free from defects in material and workmanship under normal use and service for a five (5) years. This warranty cannot be transferred - it is extended only to the original Purchaser or First User of the Product. By accepting and keeping this Product you agree to all of the warranty terms and limitations of liability described below.

Breeze33's obligations under the warranty set forth above shall be to replace any Breeze33 Thermostat which is defective.

WHAT IS NOT COVERED?

The warranty above does not cover and Breeze33 is not liable for, (i) installation, (ii) any labor charges or (iii) products which have been damaged as a result of any accident, misuse, abuse, neglect, improper installation or maintenance, the use of abrasive or organic solvent cleaners, modification, failure to use the register, grille, or diffuser in accordance with instructions provided by Breeze33.

HOW TO OBTAIN WARRANTY SERVICE

Contact our warranty department at 740-314-4404 to report the defect. Return failed product with proof of purchase, your name, and address within 30 days of failure to:

Breeze33 Products LLC 350
Courtney Road Sebring,
Ohio 44672 USA

LIMITATION OF LIABILITY

Breeze33's liability on any claim of any kind, including, without limitation, warranty, negligence and/or breach of contract, shall in no case exceed the purchase price paid by the Customer. IN NO EVENT SHALL BREEZE33 BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, DAMAGE TO PROPERTY) OR PUNITIVE DAMAGES, DAMAGES IN THE NATURE OF PENALTIES OR SIMILAR OR RELATED DAMAGES OF ANY KIND.

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