Two-Pipe, Two Temperature Pneumatic Room Thermostats CTC–1640 Series

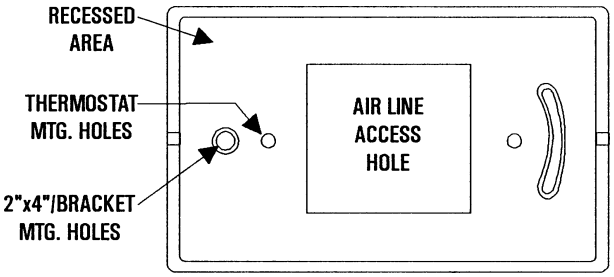
Installation Guide

Mounting

Mount the CTC-1640 Series thermostats away from excessive drafts and direct sunlight. Choose the location best suited for measuring the average room temperature. Units may be mounted horizontally or vertically to either a 2" x 4" electrical box or a hollow wall.

Electrical Box Mounting

1. Attach HMO-5024 or 5026 backplate to the box with the two 6-32 screws supplied.
2. Level the box using the slot in the backplate.
3. Fit the aluminum plate into the recess.
4. Pass the 3/32" ID tubing through access hole.
5. Make connections per “Connections”.
6. Mount thermostat to backplate with two 6-20 x 2" screws supplied with thermostat.



Hollow Wall Mounting - Thermostats may be directly mounted on walls up to 5/8" with the HMO-5023 kit.

1. Using the template, printed on the package, make a 2-11/16" x 1-1/2" cutout.
2. Loosely mount the bracket to the thermostat with two 6-32 x 2" screws supplied.
3. Make all connections per the “Connections” section.
4. Insert the bracket diagonally through the wall.
5. Center thermostat and tighten screws.

Scale Plate -All adjustments must be made with the scale plate removed. Complete adjustments before installing the scale plate.

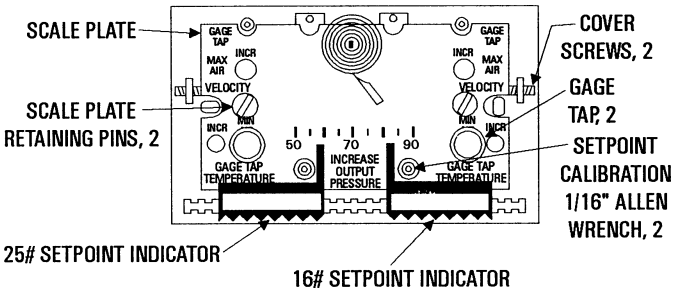
1. Remove all gauge tap rubber cap(s).
2. Slide plate under the setpoint indicator(s).
3 Insert retaining pins (two supplied), twisting to lock into place.
4. Replace gauge tap cap(s).

Mounting Continued

Setpoint Options - If setpoint indicators are not needed, simply snip off the indicator(s) with wire cutters. Limit or lock the range of the setpoint (s) by installing setpoint stops (HFO-0027) in the slider track.

Covers are available in 2 styles:

- **Window** versions include a symbol-coded label strip (HPO-1320) for setpoint indication. Apply the label in the recessed area underneath window.
- **Blank covers** require the removal of the setpoint thumb adjusters. Insert a small screwdriver in the slot between the thumb adjuster and the cam and pry apart. Discard adjuster.



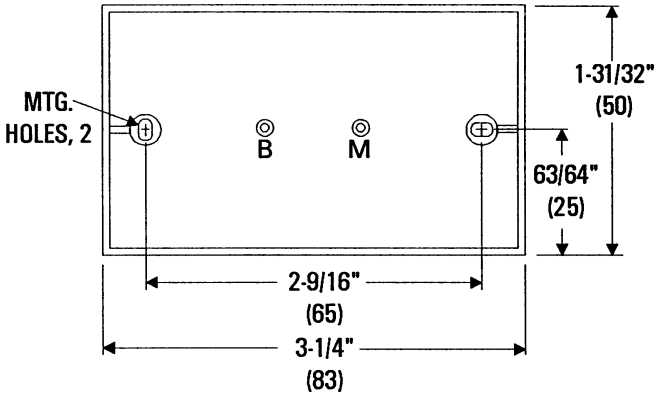
To install cover:

1. Check that the unit is mounted securely and all gauge tap cap(s) or accessories are installed.
2. Slide cover over base.
3. Using a 1/16" hex wrench, turn both cover mounting screws on the thermostat base CCW (outward) until cover is secured.

Connections

The CTC-1640 Series uses 3/32" I.D. Tygothane tubing (HFO-0028) for all connections.

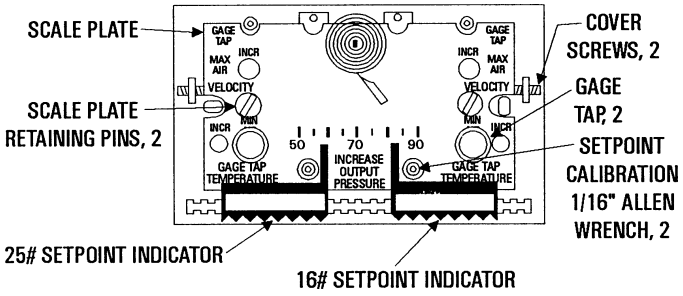
1. Connect Main Air to Port “M”
2. Connect Branch Air to Port “B”



Adjustments and Calibration

These thermostats are factory calibrated and do not require further calibration. Should it be necessary to change calibration:

1. Remove the cover and gauge tap rubber caps.
2. Install a gauge on the gauge tap using 3/32" ID tube.
3. Measure the ambient temperature with an accurate thermometer.
4. Move the setpoint slider to the measured ambient temperature.
5. Use a 1/16" hex wrench and turn the calibration adjustment until the test gauge indicates the desired pressure. (Clockwise rotation decreases the output pressure.)
6. Replace the gauge tap rubber cap after calibrating.
7. Place the setpoint slider to the desired temperature and replace cover.



Throttling Range

Throttling range is the temperature required to change the thermostat output pressure from 3–15 psig. All CTC-1600 series thermostats are factory set for a 3° F throttling range. The approximate throttling range setting is stamped on each lever in both °F and °C. If it is necessary to change this setting, reverify calibration after adjustment.

1. Remove scale plate.
2. Slide the black "TR" adjuster to appropriate value/location.

   NOTE: The hole in the "TR" adjuster fits a 1/16" hex wrench. Gently rotate the adjuster back and forth while sliding. *Do not turn excessively!*
3. Rotate back to a "square" position after adjustment.
4. Replace scale plate (see "Mounting").

Maintenance

No routine maintenance is required.

Care should be taken to keep the unit clean from dust during installation.

Each component is designed for dependable, long term reliability and performance.

KMC Controls
19476 Industrial Drive
New Paris, IN 46553
574.831.5250
www. kmccontrols.com

514-019-01