

Pneumatic One-Pipe Room Thermostats

Application

The 2211 Series Pneumatic Room Thermostat is designed for proportional control of pneumatic devices and actuators in environmental control systems. These one-pipe thermostats are force-balanced and utilize an external restrictor in the supply line. Their design incorporates a highly sensitive bimetal thermostatic element and a ball valve for pneumatic feedback, which ensures accuracy and stability over the entire operating range.

These thermostats have a serrated thumb wheel for setpoint adjustment.

Specifications

Action: Proportional.

Setpoint Range: 55 to 85 °F (13 to 29 °C).

Throttling Range: 2 to 12 °F, adjustable.

Supply Air Pressure: 20 psig.

Maximum Air Pressure: 30 psig.

Main Air Consumption: 29 scim.

Calibration Point: 9 psig branch line pressure when ambient equals setpoint (factory-set).

Setpoint Adjustment: Serrated thumbwheel.

Construction:

Mechanical Components, Die cast aluminum, stainless steel, and glass-filled nylon.

Diaphragm, Fabric-reinforced Neoprene.

Air Lines, Connect to thermostat nipples with spring-reinforced plastic tubes.

Branch Connections, Equipped with internal filters.

Environment

Humidity: 5 to 95% relative humidity, non-condensing.

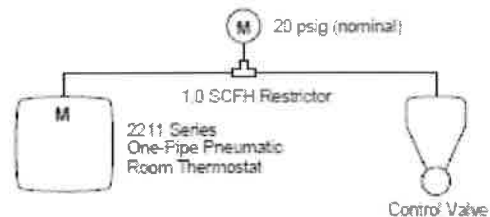
Ordering Data

Table-1 Model Chart — Thermostats.

Part Number	Replaces Model	Action	Description
2211-012-CS&S	2211-012 T12-301	Direct	Includes (1) 1/4" x 3/16" barbed couplings, tubing, wall plate, mounting plate, and mounting screws.
2211-013-CS&S	2211-013 T13-301	Reverse	



Piping Diagram



Installation Requirements

- Tools (not provided):
- Appropriate screwdriver for mounting the thermostat
- 20-881 Thermostat calibration and cover screw wrench (or 1/16" and 1/4" hex wrenches)

Location

Caution:

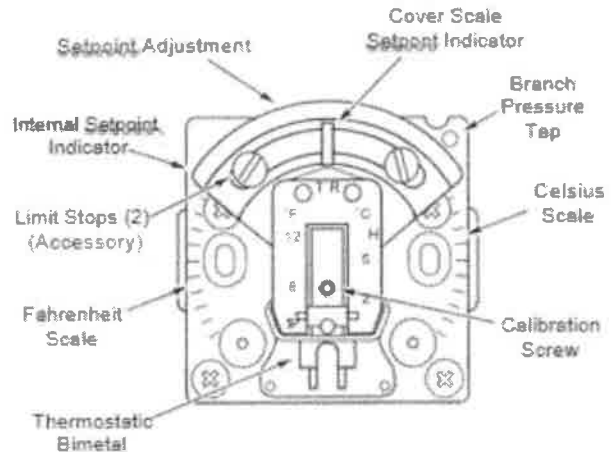
- Do not locate the thermostat near sources of heat or cold, such as lamps, motors, sunlight, or concealed ducts or pipes. Doing so will affect the accuracy of the thermostat.
- Avoid installing the thermostat on outside walls. If such a location is necessary, mount the thermostat on an insulated back plate (accessory item).
- Mount thermostats *only after the wall surfaces have been finished.*

Locate the thermostat where it will be exposed to an unrestricted circulation of air, which represents the average temperature of the controlled space.

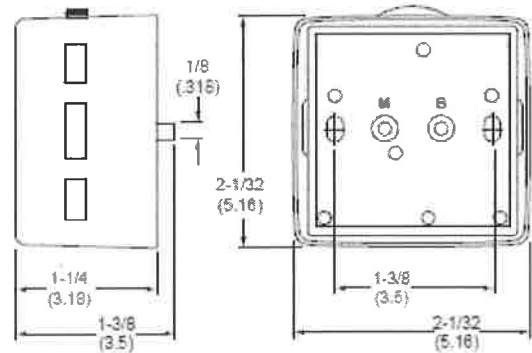
Calibration

Calibration and Throttling Range Setting The 2211 series thermostats are factory calibrated and are shipped with the throttling range set at 3 °F. They should not require calibration upon installation. However, if it is necessary, change the calibration or throttling range setting as follows:

1. Remove the thermostat cover, using a 20-881-CS&S thermostat wrench (1/4" hex wrench), and install a 22-138-CS&S branch tap gauge adaptor into the branch pressure tap hole. Note, a damaged gauge adapter can damage the tap sealing ring.
2. Measure the ambient temperature with an accurate thermometer. This temperature *must be within the range of the thermostat*.
3. Move the setpoint adjustment to the measured ambient temperature, using the internal setpoint indicator.
4. Taking care not to breathe on, or place the hand near the bimetal, use a 20-881 thermostat wrench (1/16" hex wrench) to turn the calibration screw until the branch line pressure indicates 9 psig. Clockwise rotation increases the branch line pressure. Counterclockwise rotation lowers the branch line pressure.
5. Reinstall the thermostat cover and set the thermostat to the desired setpoint.



Dimensional Data



Dimensions are in inches (mm).

These products are proudly manufactured by Crandall Stats and Sensors, Inc. in Machesney Park, Illinois, USA.