

POWERS™ Controls D Room Thermostat Direct Acting

Product Description

POWERS Controls D Room Thermostat is a gradual-acting, pneumatic instrument recommended for room temperature control in heating and air conditioning applications.

To properly install a D Room Thermostat, you should purchase a Calibration Kit (Part Number 832-177) or Calibration Tool Kit (Part Number 832-178). This kit contains equipment required to install and calibrate the thermostat.

Product Numbers

Product Numbers	Description
832-0120	Concealed adjustment with thermometer
832-0490	Concealed adjustment without thermometer
832-0500	Exposed key adjustment with thermometer
832-1260	Exposed knob adjustment with thermometer

Required Tools

- 832-177 Calibration Kit
- Cover Screw and Calibration Wrench (included in Calibration Kit)
- D Adjustment Key (included in Calibration Kit)
- Small, flat-blade screwdriver
- Dial thermometer (included in Calibration Kit)
- Pressure gauge assembly (see Figure 2)
- Needle nose pliers

Expected Installation Time

30 minutes

Installation

NOTE: Do not install near windows, on an external wall, or near sources of heat (copy machines, for example).

1. Remove the two vandal-proof, chrome screws from the thermostat cover using the Cover Screw and Calibration Wrench. See Figure 1.

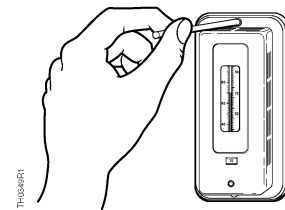


Figure 1. Removing the Thermostat Cover.

2. Remove the two #6 × 1/4-inch long, round head, slotted screws using a flat-blade screwdriver.
3. Pull the pneumatic tubes through the upper, open section of the thermostat base.
4. Mount the base to the wall in two places using the screws provided.
5. Terminate the pneumatic tubes to the terminal head barbs (as you face the wall, left is supply and right is return). Use the needle nose pliers to adjust the tube retainers to secure the plastic hose over the barbs.
6. Replace the thermostat on the wall plate and secure with the two #6 × 1/4-inch long, round head, slotted screws.
7. Adjust the setpoint.
8. Replace the cover and use the Cover Screw and Calibration Wrench to secure the two cover screws.

The installation is now complete.

Calibration (if required)

1. Remove the two vandal-proof, chrome screws from the thermostat cover using the Cover Screw and Calibration Wrench. See Figure 1.

2. Verify that the room temperature is between 70°F and 80°F (21°C and 27°C).
3. Construct pressure gauge assembly as shown in Figure 2.

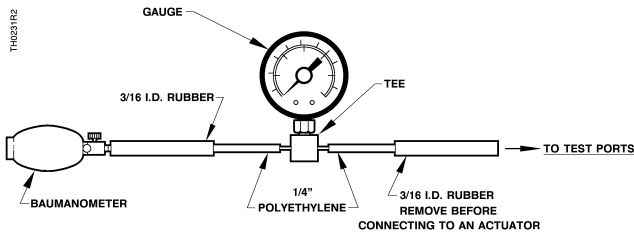


Figure 2. Pressure Gauge Assembly.

4. Loosen test screw (see Figure 3) using a screwdriver, 1/2 turn counterclockwise.

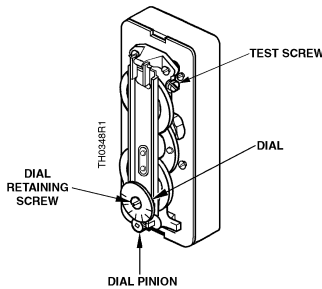


Figure 3. Test Screw Location.

5. Attach the 3/16-inch ID rubber hose on the pressure gauge assembly over the test screw body.
6. Stand away from thermostat for about five minutes to prevent body heat temperature influence. If control pressure does not read 7 psi to 8 psi (48 kPa to 55 kPa), turn adjustment screw with the D Adjustment Key as follows:
 - If less than 7 psi to 8 psi (48 kPa to 55 kPa), turn the adjustment screw clockwise.
 - If greater than 7 psi to 8 psi (48 kPa to 55 kPa), turn the adjustment screw counterclockwise.

If there is no change in pressure, the thermostat is not functioning and should be replaced with

Part Number 832-040 D Thermostat replacement unit.

If the dial reading and room temperature do not agree, loosen dial retaining screw with a screwdriver. (See Figure 3.)

1. Tilt and rotate until dial reading agrees with room temperature. Do not turn dial pinion.
2. Retighten dial retaining screw.
3. Remove the D Adjustment Key and pressure gauge assembly, and let pressure stabilize.
4. Verify that the control pressure remains between 7 to 8 psi.
5. Stand away from thermostat for about five minutes. If control pressure does not read 7 to 8 psi (48 to 55 kPa), turn adjustment screw with key (Part Number 856-055) until this pressure is obtained.
6. If the dial reading and room temperature do not agree, loosen dial retaining screw. (See Figure 3.)
7. Tilt and rotate until dial reading agrees with room temperature. Do not turn dial pinion. Retighten dial retaining screw.
8. Replace the thermostat cover and tighten the two vandal-proof, chrome screws.

The instrument is now in calibration and can be set to the desired room temperature.

Service Kits

Product Number	Description
832-040	D thermostat chassis without cover and base
832-164	Exhaust Supply Valve Repair Kit
832-034	Base Kit for mounting D thermostat with exposed tubing
856-036	Replacement cover for 832-0120
856-046*	Replacement cover for 832-0490
856-044	Replacement cover for 832-1260 or 832-0500

* Two 856-014 screws are required with this cover.

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