2220-053

Schneider Electric

Room Temperature Transmitter Installation Instructions

APPLICATION

The 2220-053 Room Temperature Transmitter senses room temperature and transmits a proportional pneumatic signal to a calibrated receiver gauge and/or a receiver controller. It is designed to transmit a 3-15 psig(20.6-103.4 kPa) signal over a 50-90 °F(90-162 °C) span, and is factory calibrated.

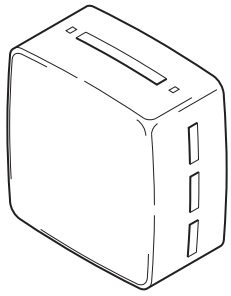
This unit is a “one-pipe” force balanced transmitter which must utilize an external restrictor in the supply line. It incorporates a highly sensitive bimetal thermostatic element and a ball valve with pneumatic feedback. This ensures accuracy and stability over the entire operating range.

Accessories

Part Number	Replaces Model	Description
Accessories		
20-660	6-441	Cover screw
20-707	10-53	Metal thermostat guard
20-715	10-62	Clear thermostat guard
21-876	10-76	Opaque thermostat guard
21-928		Gray plastic cover, blank dial
21-933		Gray plastic cover, °F/°C dial
Calibration		
20-881	N2-4	Calibration wrench
22-138	MCS-GA	Branch tap gauge adaptor
900-002		Thermostat calibration kit
Installation		
10-82-SS		Outlet box mounting plate, stainless steel
20-850	10-82	Outlet box mounting plate, black
20-642		Mounting ring
21-473		Snap-in drywall mounting
22-021		Universal drywall mounting kit
22-022	N5-95	Competitor replacement mounting kit
22-024		Standard mounting kit

SPECIFICATIONS

Action: Direct, proportional.
Range: 50° to 90°F (90-162 °C).
Output Pressure: 3 to 15 psig (20.6 to 103.4 kPa).
Main Air Pressure: 20 psig (138 kPa) operating, 30 psig (206.8 kPa) maximum.
Air Consumption: 30 scim (8.2 mL/s).
Air Connection: Nipple for 3/16" OD spring-reinforced tubing.
Calibration Point: Factory calibrated to 9 psig (62 kPa) at midrange.
Maximum Ambient Temperature: 140 °F 60 °C).



Model Chart

Part Number	Replaces Model	Description
2220-053	T53-101	Includes 1/4" by 3/16" barbed couplings, 20-693 tubing, standard mounting plate and screws.

GENERAL INSTRUCTIONS

1. Transmitter should be mounted where it will be affected only by the average room temperature. Free circulation of air must exist at the selected location. Avoid locations that are affected by drafts, or radiant heat from the sun, water pipes, air-ducts, etc.
2. Location on outside walls should be avoided. However, should this location be necessary, *ALWAYS MOUNT TRANSMITTER ON A 20-716 INSULATING BACKPLATE, AND HOLE IN WALL BEHIND TRANSMITTER SHOULD BE SEALED IF THERE IS DANGER OF DRAFTS FROM INSIDE THE WALL.*
3. Transmitter should be mounted *AFTER WALL SURFACE HAS BEEN FINISHED.*
4. Receiver gauge must be 3-15 psig (20.6-103.4 kPa) range and graduated 50°-90°F (10-32 °C) to match transmitter output.

Caution: This device should be installed by a qualified service technician with due regard for safety, as improper installation could result in a hazardous condition.

Installation

- 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)

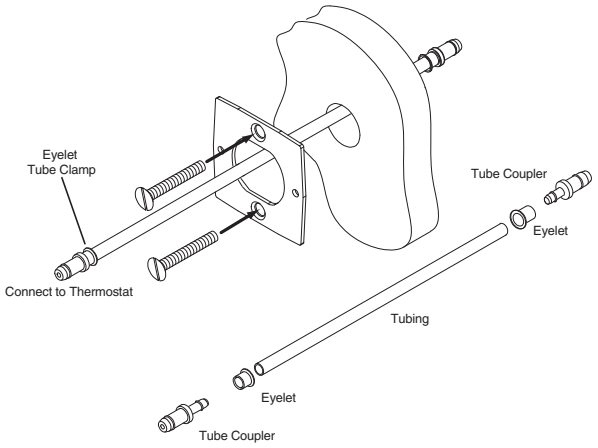


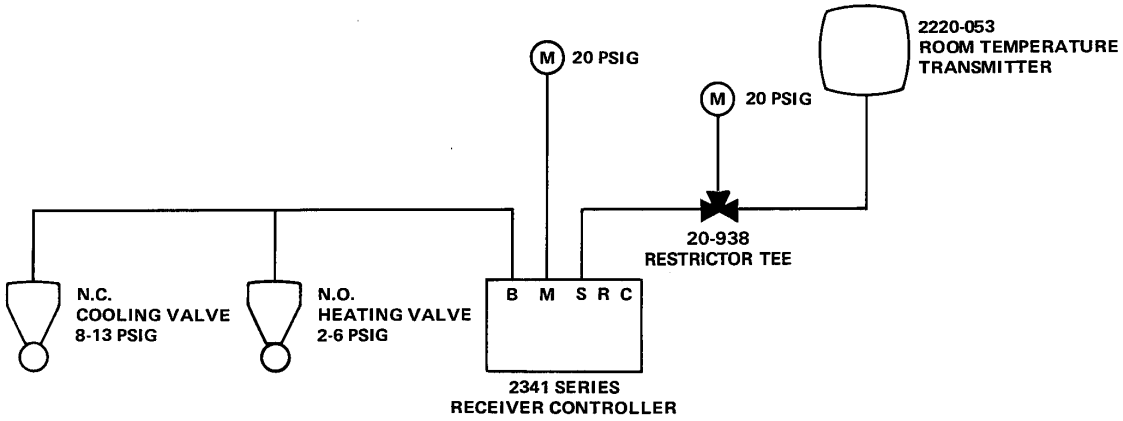
Figure-1

1. Assemble the eyelets and two tube couplers to tubing.
2. Connect the assembly by inserting the tube coupler into existing tubing in the wall (Figure-1).
3. Pull tubing through center hole in mounting plate and screw mounting plate to wall with flat head screws. Cut tubing. The tubing is connected into the port on the thermostat (Figure-1).
4. Affix thermostat to mounting ring with round head screws, taking care not to kink the tubing.

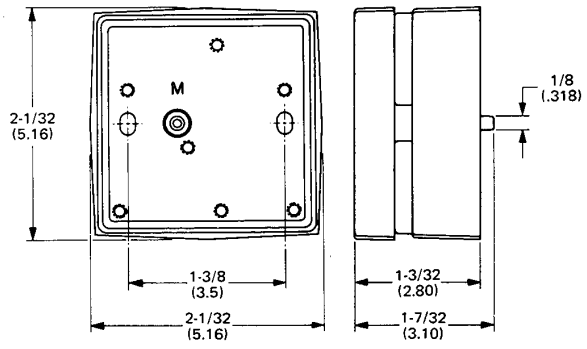
CALIBRATION

The 2220-053 is factory calibrated to provide a 3 to 15 psig (20.6-103.4 kPa) signal over the range of 50 to 90°F (10-32 °C). Additional field calibration should not be required. If minor field calibration is required, turning the calibration screw (1) clockwise increases the branch pressure; counterclockwise rotation decreases the pressure.

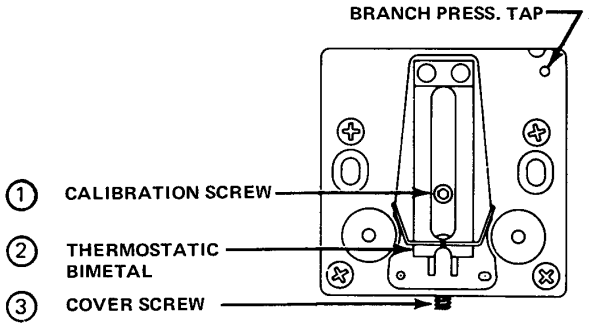
TYPICAL APPLICATION



MOUNTING DIMENSIONS



Dimensions in inches (cm).



2220-053 WITH COVER REMOVED

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