



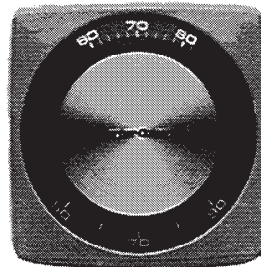
APPLICATION

The T12/TR12 & T13/TR13 Series Pneumatic Room Thermostats are 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.

Thermostat covers are available in various styles to meet particular requirements. Cover options include models with setpoint scale and thermometer, setpoint scale only, thermometer only, or blank. An external setpoint adjustment cover is available with all models and can be field installed on covers where required.

SPECIFICATIONS

- Action:** Proportional, See Table 1
- Setpoint Range:** 55° to 85°F(13° to 29°C)
- Throttling Range:** 2° to 12°F/12 psi adjustable, factory set 3°F
- Construction:**
 - Components,** Die cast aluminum, stainless steel and Lexan
 - Diaphragms,** Fabric-reinforced neoprene
 - Air Filter,** Internal
- Supply Air Pressure:** Clean, dry, oil free air required (ref. EN-123).
 - Nominal,** 20 psig(138 kPa)
 - Maximum,** 30 psig(207 kPa)
- Connections:** Spring-reinforced 3/16" plastic tubing
- Air Consumption:** 0.017 scfm
- Calibration Point:** 9 psig branch line pressure when ambient temperature equals setpoint
- Setpoint Adjustment,** Serrated thumbwheel
- Mounting:** Upright position on wall
- Dimensions:** See Figure 1



Full Dial Shown
Covers Must Be Ordered Separately

ACCESSORIES

- 6-371 Mounting ring (use with mounting heads)
- 10-26 Mounting head, 1 tube copper
- 10-53 Metal thermostat guard
- 10-57 Mortar joint fitting, 2 tube copper
- 10-58 Mounting ring (use with N5-52)
- 10-59 Internal stop kit
- 10-62 Clear plastic cover thermostat guard
- 10-63 Insulating backplate, for plastic guards
- 10-64 Tubing assembly with eyelets and fittings
- 10-66 Mortar joint fitting, 2 "FR" tubes
- 10-67 Mounting ring, vinyl adhesive
- 10-72 Concealed adjustment cover, for metal covers
- 10-73 Drywall mounting fitting (snap-in)
- 10-76 Opaque plastic guard
- 10-77 Adaptor plate
- 10-78 Insulating backplate
- 10-81 Concealed adjustment cover, for plastic cover
- MCS-GA Gauge tap adaptor
- N2-4 Calibration tool
- N5-49 Adaptor (for use with N5-53)
- N5-52 Bracket, drywall mount
- N5-53 Bracket, stud mount rough-in
- N5-95 Wall thermostat, conversion kit
- N100-0010 0.017 scfm restrictor tee, plastic
- N100-2501 In-line 0.017 scfm restrictor, plastic

Table 1. Specifications

Model Number	Action	Comments
T12-301	Direct	-
T13-301	Reverse	-
T12-3011*	Direct	-
T13-3011*	Reverse	-
TR12-3011*	Direct	See Table 2
TR13-3011*	Reverse	See Table 2

* Includes factory installed limit stops.

Table 2. TR12-3011, TR13-3011 Includes

Part Number	Description
T1X-3011	Thermostat
10-11	Tubing Assembly
10-58	Mounting Ring
10-77	Adaptor Plate
N4-109	1/4" x 3/16" Reducer
CTR-11*	Universal Cover Kit

* See CT/CTR General Instructions, F-23927, for cover installation.

Table 3. Covers (Must be Ordered Separately for T12 & T13 Series Only)

Material		Dial Adjustment Marking				Thermometer			
Plastic (Beige)	Metal (Satin Chrome)	°F	°C	C-W	None	°F	°C	None	Internal
CT-11	CT-21	X				X			
CT-11-400	CT-21-400	X						X	
CT-11-403	CT-21-403				X	X			
CT-11-404	CT-21-404				X			X	
CT-11-407	CT-21-407				X				X
CT-11-420	CT-21-420			X		X			
CT-11-421	CT-21-421			X				X	
-	CT-21-116		X				X		
-	CT-21-410		X					X	
-	CT-21-413				X		X		

All covers are supplied with concealed adjustment cover.

The concealed adjustment cover is factory installed on the -403,-404, 407 & 413 models.

PRE-INSTALLATION

Inspection

Visually inspect the carton for damage. If damaged, notify the appropriate carrier immediately. Visually inspect the device for obvious damage due to shipping. Return damaged parts.

Required Installation Items

- Piping diagrams
- Tools (not provided)
 - Appropriate screwdriver(s) for mounting screws
- Mounting screws, two(2) #5-40, provided
- Appropriate accessories

4. A thermostat 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 by radiant heat from the sun, water pipes, air ducts, etc.
5. Installation on outside walls should be avoided. If such a location is necessary, the thermostat should be mounted on an insulated backplate (accessory item).
6. Thermostats should be mounted AFTER WALL SURFACES HAVE BEEN FINISHED.
7. Do not exceed ratings of the device.

INSTALLATION

CAUTION

1. Installer must be a qualified, experienced technician.
2. Make all connections in accordance with the piping diagram.
3. Do not locate the device in areas subjected to excessive vibration or corrosive atmospheres.

Clean, Dry Oil Free Air Supplies for Pneumatic Systems

CAUTION

A refrigerated air dryer, particulate filter and a coalescing filter will provide clean, dry, oil free air required (reference EN-123).

Compressor oil must be non-paraffin mineral base or naphtha base. **Synthetic or paraffin base oils will destroy pneumatic controls and void the warranty.**