



T18/TR18 & T19/TR19 Series

Two-Pipe Pneumatic Room Thermostats General Instructions

APPLICATION

The T18/TR18 & T19/TR19 Series Pneumatic Room Thermostats are designed for proportional control of pneumatic devices and actuators in environmental control systems. These two pipe thermostats incorporate a highly sensitive bimetal element and a pilot operated relay with pneumatic feedback for 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

Setpoint Range: 55° to 85°F

Throttling Range: 2° to 12°F/12 psi adjustable, factory set 3°F

Construction:

Components, Die cast aluminum, stainless steel and nylon

Diaphragms, Fabric-reinforced neoprene

Air Filter, Internal

Supply Air Pressure: Clean, dry, oil free air required (ref. EN-123).

Minimum, 8 psig

Nominal, 20 psig

Maximum, 30 psig

Connections: Fittings for spring-reinforced 3/16" plastic tubing (order separately)

Air Consumption: 0.009 scfm

Calibration Point: 9 psig branch line pressure when ambient temperature equals setpoint

Setpoint Adjustment, Serrated thumbwheel, external or concealed

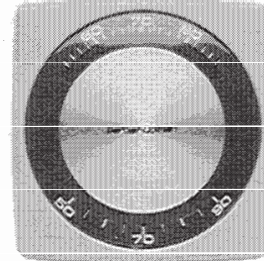
Mounting: Upright position on wall

Dimensions: See Figure 1

Table 1. Specifications

Model Number	Action	Comments
T18-301	Direct	-
T19-301	Reverse	-
T18-3011*	Direct	-
T19-3011*	Reverse	-
TR18-3011*	Direct	See Table 2
TR19-3011*	Reverse	See Table 2
TR18-3091*	Direct	See Table 3
TR19-3091*	Reverse	See Table 3

* These models have factory installed dial stops.



Full Dial Shown
Covers Must Be Ordered Separately

ACCESSORIES

6-371	Mounting ring (use with mounting heads)
10-07	Mounting head, 2 tube, copper
10-15	Aspirating box, 2 pipe
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

Table 2. TR1X-3011 Includes

Part Number	Description
T1X-3011	Thermostat
10-11	Tube Assembly
10-58	Mounting Ring
10-77	Adaptor Plate
N4-109	(2) 1/4" x 3/16" Reducer
CTR-11*	Universal Cover Kit

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

Table 3. TR1X-3091 Includes

Part Number	Description
T1X-3011	Thermostat
CT-21*	Cover
RC-3-185	Cover Insert
N5-95**	Thermostat Conversion Kit

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

** See N5-95 General Instructions, F-23932, for the use of conversion kit.

Table 4. Covers (Must be Ordered Separately For T18 & T19 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.**