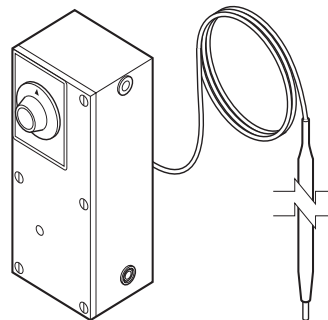


## Unitary Bulb Thermostats

For proportional temperature control of pneumatic valves and actuators to maintain discharge temperature of reheat systems and sampling chamber or return air temperature of terminal units and as a proportional low limit thermostat.



Features:

- Proportional, two-pipe nozzle and flapper design.
- One-pipe model available for use as low-limit controller.
- Adjustable throttling range.
- Straight, coiled or averaging liquid-filled sensing elements.
- Rugged design.
- Direct Acting or DA/RA models available.

Model Chart						
Model No.	Description and Action <sup>a</sup> psi (kPa)	Max. Safe Bulb Temp. °F (°C)	Bulb Style Dimensions in. (mm)	Control Dial Range °F (°C)	Throttling Range	Supply Air Pressure psig (kPa)
TK-2001	Heating D.A. <sup>b</sup>	140 (60)	Straight 1/4 x 11-1/2 (6.35 x 287)	Dial Marked "Cooler- Warmer" 60 to 90 (15 to 32)	Adjustable 2 to 10°F (1 to 6°C)/ 10 psi (69 kPa) Factory Set 4°F (2°C)/ 10 psi (69 kPa)	15 (103) Minimum 20 (138) Nominal
TK-3001			Coiled 1 x 5 (25 x 127)			
TK-4001			Averaging 1/8 x 48 (3 x 1.2 m)			
TK-2201	Heating-Cooling 20 (138) D.A. 15 (103) R.A.	140 (60)	Straight 7/32 x 14 (6 x 356)	Dial Marked "Cooler- Warmer" 30 to 90 (-1 to 32)	Adjustable 5 to 25°F (3 to 14°C)/ 10 psi (69 kPa) Factory Set 10°F (6°C)/ 10 psi (69 kPa)	15 (103) R.A. <sup>a</sup> Cooling 20 (138) D.A. <sup>a</sup> Heating
TK-3201			Coiled 1 x 5 (25 x 127)			
TK-2012	Heating D.A. <sup>b</sup>	230 (110)	Straight 3/16 x 11-1/4 (5 x 286)	Dial Marked "Cooler- Warmer" 30 to 90 (-1 to 32)	Adjustable 5 to 25°F (3 to 14°C)/ 10 psi (69 kPa) Factory Set 10°F (6°C)/ 10 psi (69 kPa)	15 (103) Minimum 20 (138) Nominal
TK-4012			Averaging 3/32 x 54 (2 x 1.4 m)			
TK-4212	Heating-Cooling 20 (138) D.A. 15 (103) R.A.	Averaging 3/32 x 54 (2 x 1.4 m)	15 (103) R.A. <sup>a</sup> Cooling 20 (138) D.A. <sup>a</sup> Heating			
TK-4212-201	Heating-Cooling Low Limit <sup>c</sup> 20 (138) D.A. Full Output 15 (103)	Averaging 3/32 x 54 (2 x 1.4 m)				15 (103) Full Output 20 (138) D.A. <sup>a</sup> Heating

<sup>a</sup> Direct Acting (D.A.) — Increase output pressure on temperature rise.  
Reverse Acting (R.A.) — Decrease output pressure on temperature rise.

<sup>b</sup> Field changeable to reverse acting.

<sup>c</sup> At 20 psi (138 kPa) unit can bleed down a branch line from a controlling thermostat.  
At 15 psi (103 kPa) unit is inoperative, i.e., passes controlling thermostat signal.

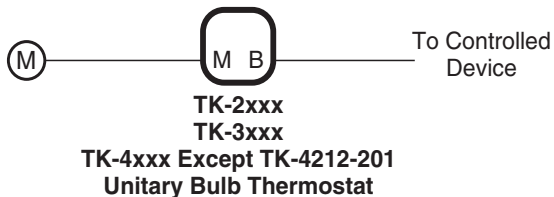
## Specifications

<b>Thermostat</b>	Proportional type using balanced lever system.
<b>Sensing element</b>	Liquid-filled copper with 3 ft. (914 mm) capillary.
<b>Control dial range</b>	Refer to Model Chart.
<b>Throttling range</b>	Refer to Model Chart.
<b>Output air signal</b>	1 psig (6.9 kPa) to supply air pressure -1.0 psig (-6.9 kPa).
<b>Action</b>	Refer to Model Chart.
<b>Ambient limits</b>	
<b>Shipping</b>	-40 to 140°F (-40 to 60°C). 0 to 98% R.H., non-condensing.
<b>Case operating</b>	40 to 140°F (4 to 60°C). 10 to 98% R.H., non-condensing.
<b>Bulb</b>	Refer to Model Chart.
<b>Supply air pressure</b>	
<b>Nominal</b>	Refer to Model Chart.
<b>Minimum</b>	Refer to Model Chart.
<b>Maximum</b>	30 psig (207 kPa).
<b>Air connections</b>	Post with barb for 1/4 in. O.D. plastic tubing.
<b>Air consumption for sizing air compressor</b>	27.6 scim (8 mL/s) at 15 psig (103 kPa), 41.5 scim (11 mL/s) at 20 psig (138 kPa).
<b>Air capacity for sizing air mains</b>	40 scim (11.1 mL/s) at 15 psig (103 kPa), 56 scim (15.7 mL/s) at 20 psig (138 kPa).
<b>Mounting</b>	Directly by means of top mounting holes or with a right angle mounting bracket included with thermostat.
<b>Case dimensions</b>	4-5/8 H x 2-1/8 W x 1-5/8 D in. (117 x 54 x 41 mm).

## Accessories

Model No.	Description
AT-11-600	Aspirating kit.
AT-208	Duct mounting kit.
TOOL-095-1	Pneumatic calibration tool kit.

## Typical Applications



**Figure 1 Typical Application.**