

T-8000 Proportional and Two-Position Remote Element Controllers

The T-8000 Remote Element Thermostat is designed for applications which require the sensing element to be located where extreme conditions do not permit controller mounting, or where operational adjustments to the controller would be inconvenient. This high volume (output) instrument is ideally suited for installations that require the controller to be mounted on a local control panel.

The thermostat can be made to function as a direct or reverse acting instrument by changing position of the patented sliding control port. Repositioning the control port will also change sensitivity on proportional models and differential on two-position models.

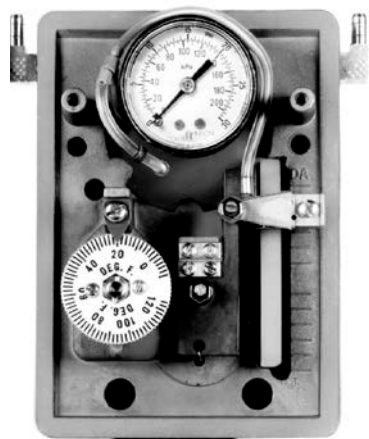
Operation

As the temperature at the measuring element increases or decreases, the liquid in the element expands or contracts at a linear rate. This will cause the system of flexure levers to open or close the control port. For a direct acting instrument, the sliding control port should be

positioned above the mid-point on the slider rail. For a reverse acting instrument, the slider control port should be positioned below the mid-point on the slider rail. The rail is marked DA (Direct Acting) at the top and RA (Reverse Acting) at the bottom. Moving the slider upward from the mid-point on the rail increases sensitivity and decreases differential for direct acting applications. Moving the slider downward from the mid-point on the rail increases the



**T-8000 Remote Element Controller
(Element Not Shown)**



T-8000 with Cover Removed

Models

Action	Element Type	Capillary Length (Non-Compensated)	Net Weight	Code No.
Proportional	Bulb	4 ft	3.1 lbs	T-8000-1
		15 ft	3.3 lbs	T-8000-3
	Averaging	8 ft	3.3 lbs	T-8000-4
		15 ft	3.5 lbs	T-8000-6
Two-Position	Bulb	15 ft	3.3 lbs	T-8000-70

Specifications

Action	DIR or REV (Furnished DIR, Field Reversible)
Supply Pressure	20 PSIG (140 kPa) Nominal; 25 PSIG (175 kPa) Max.
Output Pressure	0 to 20 PSIG (0 to 140 kPa)
Air Consumption	45 SCIM (12 mL/s)
Output Flow Capacity	1500 SCIM (410 mL/s)
Sensitivity (Proportional Models)	Factory Set @ 1 PSI/F° (12 kPa/C°); Adjustable From 0.2 to 3.0 PSI/F° (2.5 to 38 kPa/C°)
Differential (Two-Position Model)	Factory Set @ 4F° (2C°) Adjustable From 2.5 to 50F° (1 to 28C°)
Dial Range	Side 1: -10 to 124F; Side 2: 110 to 244F. Factory Set at 70F. 2F° Graduations
Instrument Ambient Temperature Limits	-20 to 150F (-29 to 65°C)
Element Operating Limits	-30 to 300F (-34 to 149°C)
Air Connections	Barbed Fittings for 1/4 in. O.D. Poly tubing
Materials	Body Die Cast Aluminum, Iridite Finish
	Cover Die Cast Zinc, Sprayed Beige Finish
	Element & Capillary Copper

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

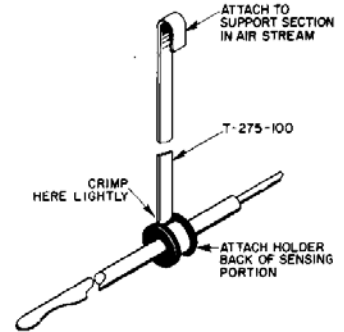
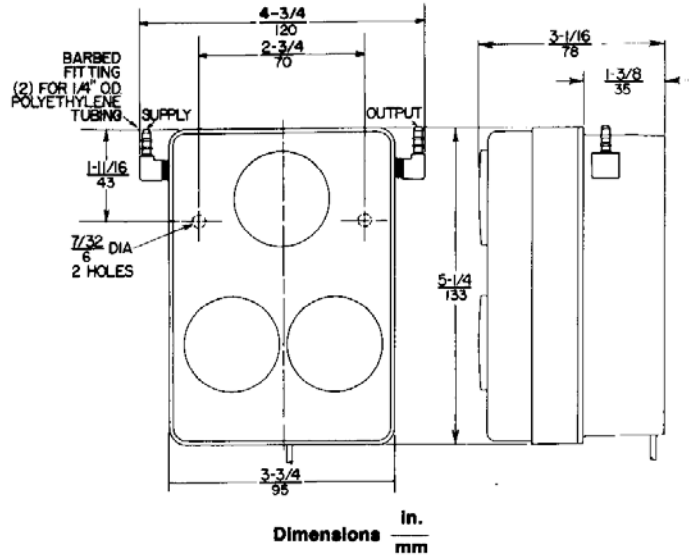
sensitivity and decreases differential for reverse acting applications.

Mounting

The T-8000 is designed for surface mounting with barbed fittings provided for air connections. Position of the measuring element will not affect operation of the instrument. Avoid kinking the capillary when mounting.

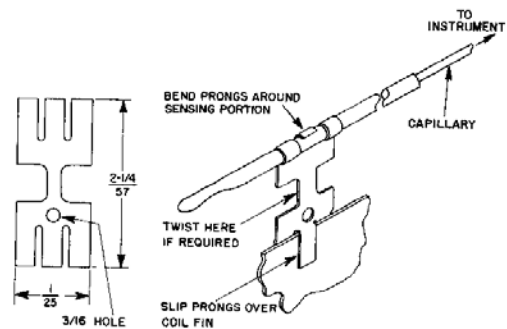
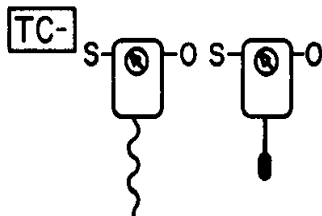
Accessories (Order Separately)

T-275-100	Bulb Holder
T-275-101	Averaging Element Holder
T-800-1603	Single Flange for Bulb Element
T-800-1604	Double Flange for Bulb Element
T-800-1605	Brass Well; 6-1/2 in.
T-800-1606	Stainless Steel Well; 6-1/2 in.
T-800-1610	Bulb Element Adapter Nut; 1/2 in. NPT
SHL10A-603	Bulb Element Weather Shield

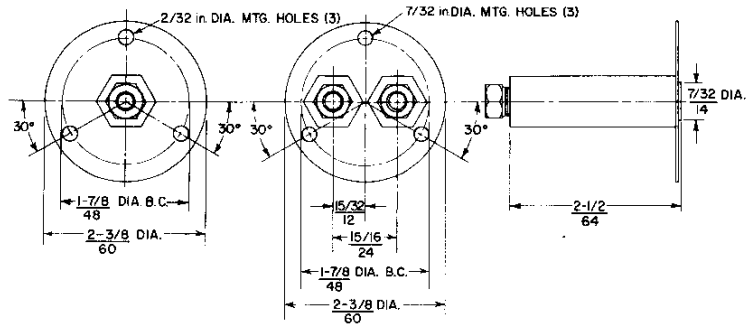


**T-275-100
Bulb Element Holder**

Application and Drawing Identification



T-275-101: Averaging Element Holder



T-800-1603
Single Flange for
Bulb Element

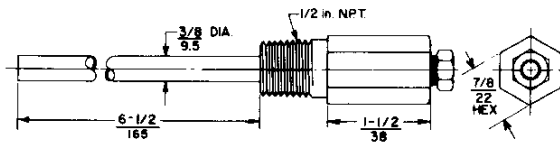
T-800-1604
Double Flange for
Bulb Element



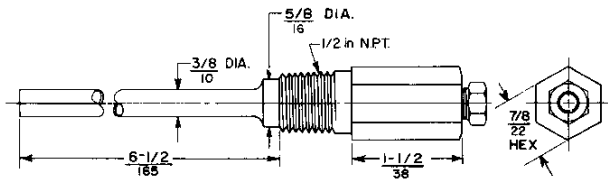
Bulb Element



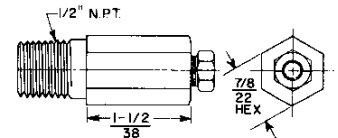
Averaging Element



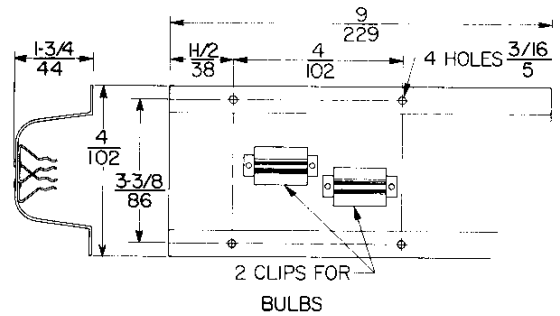
T-800-1605
Brass Well



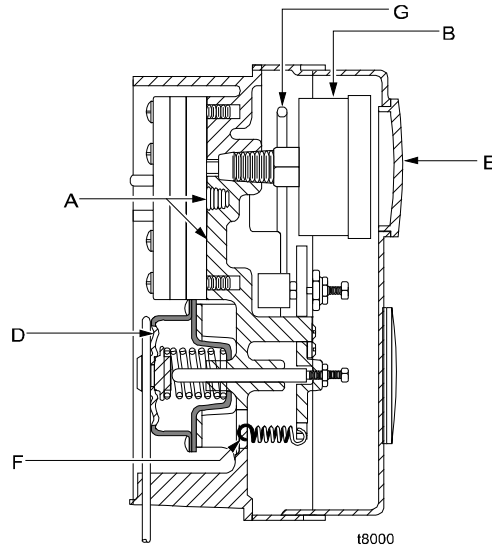
T-800-1606
Stainless Steel Well



**T-800-1610 Bulb Element Adapter
Nut; 1/2 in. NPT**



SHL10A-603 Bulb Weather Shield



Repair Parts

Item	Description	Code No.
B	Output Gage, 0 to 30 PSIG, 1-1/2 in.	G-2010-5

Type	Capillary		Element		
	Length	Type	Material		
D Non-Compensated (Copper)	4'	Bulb	Copper	T-800-1003	
		Bulb	Copper	T-800-1010	
	15'	8 Ft. Avg.	Copper	T-800-1011	
		Bulb	S.S.	T-800-1012	
Compensated (Stainless Steel)	15'				

G	1/8 in. O.D. Polyurethane Tubing (Order in Multiples of 50 Ft)	F-1000-355
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Building Efficiency
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