

### DESCRIPTION

The Badger Meter® Model THT Temperature Sensor provides accurate remote temperature sensing for use with Badger Meter Series 340 BN/MB Btu Transmitter, 3050 Series Monitor and other building automation applications.

The THT includes unique mounting hardware incorporating an isolation valve allowing the temperature probe to be "hot tapped", or installed in a working pipeline without shutting down or draining the line. This hot tap capability allows temperature sensors to be retrofit to existing pipelines at a fraction of the cost of thermowell installations. For Btu measurement or submetering applications, THT temperature sensors should always be installed in pairs to match their reaction time to temperature change.

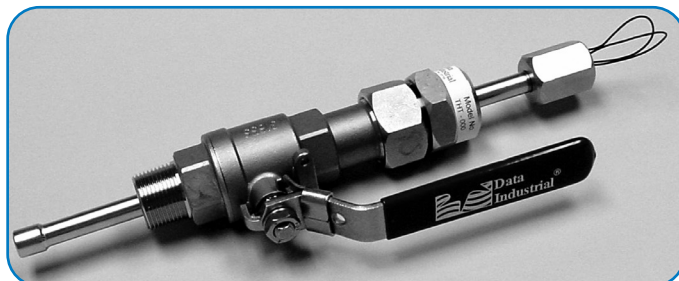
The THT sensor features a precision 10 K $\Omega$  thermistor element encapsulated with a temperature conductive compound within a 316 stainless steel probe. These two-wire devices have a thermal accuracy of  $\pm 0.36^{\circ}\text{F}$  ( $0.2^{\circ}\text{C}$ ).

### SPECIFICATIONS

<b>Sensing Element</b>	2-wire thermistor (thermal resistor)
<b>Accuracy</b>	$\pm 0.36^{\circ}\text{F}$ ( $0.2^{\circ}\text{C}$ ) from $32\ldots 158^{\circ}\text{F}$ ( $0\ldots 70^{\circ}\text{C}$ )
<b>Temperature Range</b>	$0\ldots 250^{\circ}\text{F}$ ( $-17\ldots 121^{\circ}\text{C}$ )
<b>Stability</b>	$0.024^{\circ}\text{F}$ ( $0.13^{\circ}\text{C}$ ) over 5 years
<b>Head Dissipation</b>	2 mW/ $^{\circ}\text{C}$ typical before plotting
<b>Wetted Materials</b>	316 stainless steel, Viton® O-rings
<b>Service Connection Size</b>	1 in. NPT
<b>Pressure Rating</b>	1000 psi (69 bar)
<b>Insertion Force Required</b>	Approximately 20% of line pressure
<b>Mounting</b>	1 in. tap, tapping saddle or weldment
<b>Electrical Connection</b>	6 in. 24 AWG flying leads with 1/2" conduit thread

### ORDERING INFORMATION

Model Number	Description
8THT-000	1 in. stainless steel hot tap temperature sensor, complete
8XTHT-000	Replacement thermistor probe
8A1027	Brass tapping nipple; adapts thread to NPT for tapping machine; reuseable



Model THT Sensor



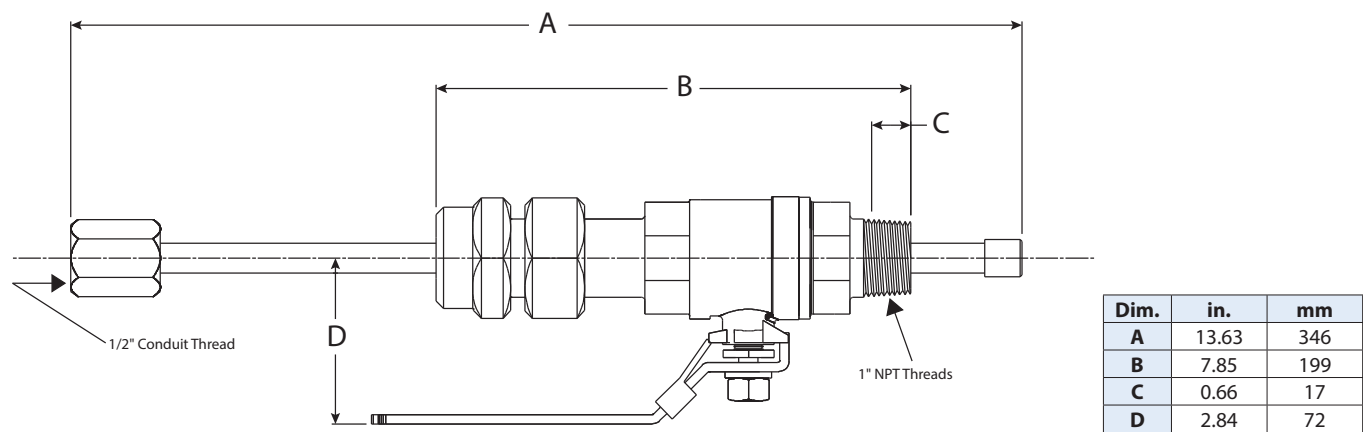
Temperature Probe Removed from Valve

### Temperature vs Resistance (10 K $\Omega$ Thermistors)

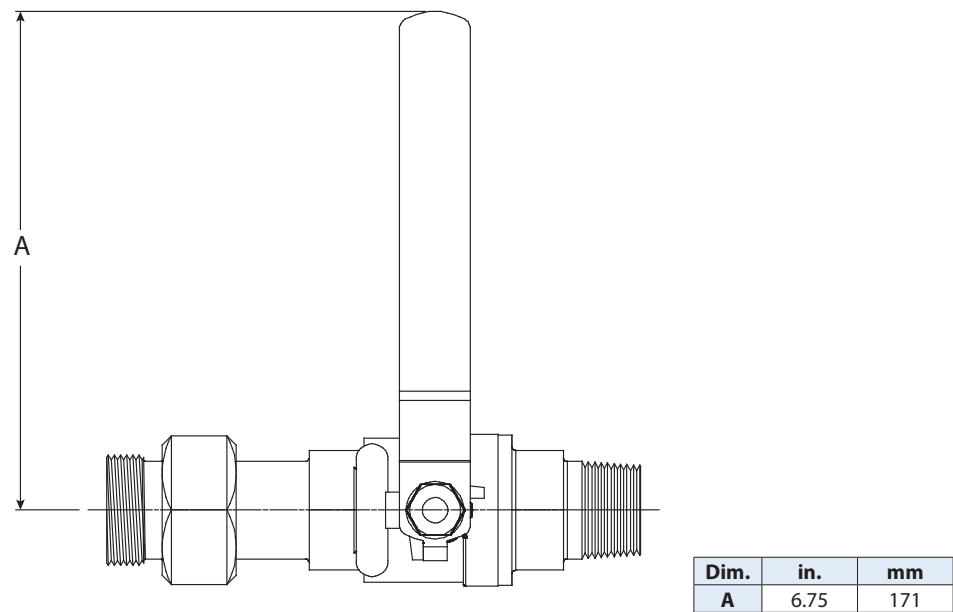
Temperature		Resistance Ohms
$^{\circ}\text{F}$	$^{\circ}\text{C}$	
32	0	32,654
50	10	19,903
68	20	12,493
77	25	10,000
86	30	8056
104	40	5325
122	50	3602
140	60	2488
158	70	1753
176	80	1257
194	90	917
212	100	679

DIMENSIONS

Model THT Sensor Dimensions



Model THT Ball Valve Dimensions



Control. Manage. Optimize.