

## Bimetal Thermometer

Type TBI

### Application.

Benney offers a full range of Bimetal Thermometers to suit a wide range of applications where local temperature indication is needed. To ensure the highest possible accuracy the thermometers use direct drive from a bimetal coil, rather than gears and linkages.

### Configuration.

All thermometers are made of stainless steel and other corrosion-resistant material, so they withstand rust, chemical attack and tough industrial use. Stem, plug and mounting nut are fused together and sealed to the head and bezel to stop condensate build up. Available in rear, bottom entry or adjustable neck.

### Process Connection.

Plain probe or  
1/2" NPT male.

### Materials.

Stem: All models 304 Stainless Steel.  
Head, Bezel, mounting bush: 300 series stainless steel.

### Dials.

Anodised aluminium. Black marks and numbers with satin matte finish background.

### Hermetic Seal.

All 3", 4" and 5" models are hermetically sealed per ASME B40.3.

### Operating Conditions.

The temperature of the head should not be allowed to exceed 90°C (65°C if silicone filled). Stems should not be exposed to continuous temperatures exceeding 50% over-range, or 425°C.

### Accuracy.

All models are guaranteed accurate to within +/-1% full scale.

### Instrument Response Time.

Readings stabilize within 40sec.

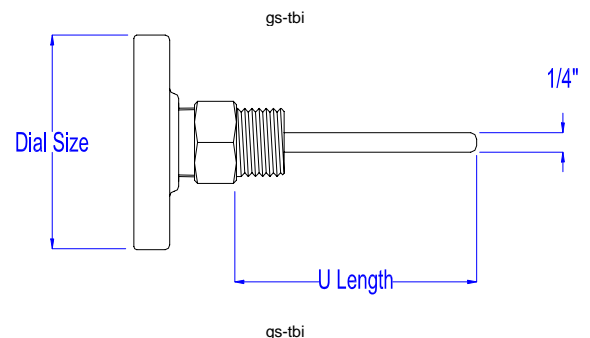
### Temperature Ranges & Divisions.

-70 / +70°C in 1°C	*0 / 50°C in 1/2°C	0 / +250°C in 2°C
-50 / +50°C in 1°C	0 / 100°C in 1°C	0 / +300°C in 2°C
-50 / +100°C in 2°C	-20 / +120°C in 2°C	0 / +400°C in 5°C
-40 / +70°C in 1°C	-10 / +110°C in 1°C	+50 / +400°C in 5°C
-40 / +160°C in 2°C	0 / +150°C in 1°C	+100 / +500°C in 5°C
-20 / +40°C in 1°C	0 / +200°C in 2°C	

\* Minimum 4" stem for these ranges.

### Probe Lengths.

2.5", 4", 6", 9", 12", 15", 18", 24", 30", 36", 48", 62" & 72"



### Silicon Fill.

Silicon fill is standard however dry case is available on request.

### Dial Size.

3", 4" and 5" in all models.

### External Reset.

All models are available with an external reset.

### Pointed Stems.

Optional on all models. Excellent for probing asphalt, compost, soil, frozen foods or other semi-solid materials.

### Immersion.

For correct temperature measurement, the stem of all models in all ranges must be immersed 2" in liquid, and 4" in gas except for 0 - 50°C which require 3 1/2" in liquid and 5" in gas.

### Thermowells.

Thermowells should be used whenever the stem would be exposed to pressure, corrosion, or shear forces. They are also required if the thermometer is to be used in a sanitary environment. Refer to the Thermowells specification sheet for more detail at [www.benney.com.au](http://www.benney.com.au)