Bimetal Thermometer, Process Grade - All Stainless Steel Construction
Type TI.51, 5” Dial Size - Bottom Connected

Applications
- General process instrumentation in the chemical, petrochemical, oil and gas, energy and water/wastewater industries
- Temperature measurement in harsh and aggressive environments
- With liquid dampening suitable for applications with high vibrations

Product features
- Process design
- Lower (bottom) connection with external reset
- All stainless steel construction
- Hermetically sealed per ASME B40.3
- Accurate to 1% of full scale value
- Available with silicone case filling for vibration

Specifications
Size
5” (127 mm) Type TI.51

Accuracy
+ 1.0% full scale value per ASME B40.3 Grade A

Ranges
From -100°F (70°C) to 1000°F (540°C)
From -50°C to 550°C (as single scale)
See table on page 2

Working Range
Steady: full scale value
Short time: 110% of full scale value

Over/Under Range Protection
≤ +500°F (+260°C): Temporary up to 50% of full scale
> +500°F (+260°C): Continuous to 800°F (+427°C)
Intermittant up to 1000°F (+538°C)

Connection
Material: 304 stainless steel
Lower mount (LM), 1/2” NPT

Stem
Material: 304 stainless steel
Diameter: 1/4” (6.35 mm)
Length: 2½” to 72” (63.5 mm to 1,828.8 mm)

Measuring Element
Bi-metal helix

Dial
White aluminum, dished, with black markings

Case
Material: 304 stainless steel
Hermetically sealed per ASME B40.3 standard
Weather protection NEMA 4X (IP 66)
External reset slotted hex head on back of case

Pointer
Black aluminum

Standard Scales
Single: Fahrenheit or Celsius
Dual: Fahrenheit (outer) and Celsius (inner)

Window Gasket
Neoprene
Silicone for ranges -100°F (-70°C) and ranges > +550°F (+260°C)

Window
Flat instrument glass

Weight
24 oz. (680 g) - 5” dial (127 mm)
Add 1 oz, (28 g) for every 2” (50 mm) of stem length

Dampening
Inert gel to minimize pointer oscillation

Warranty
7-Year Warranty
Optional Extras

- Thermowells
- Silicone fill
- Damped Movement
- Special scales and dial markings
- Acrylic and safety glass windows
- Calibration certification traceable to NIST

### Standard Ranges

<table>
<thead>
<tr>
<th>Fahrenheit Single Scale</th>
<th>Dual Scale F &amp; C</th>
<th>Celsius Single Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>-100/150 F</td>
<td>-100/150 F &amp; -70/70 C</td>
<td>-50/50 C</td>
</tr>
<tr>
<td>-40/120 F</td>
<td>40/120 F &amp; -40/50 C</td>
<td>-20/120 C</td>
</tr>
<tr>
<td>0/140 F</td>
<td>0/140 F &amp; -20/60 C</td>
<td>0/50 C¹</td>
</tr>
<tr>
<td>0/200 F</td>
<td>0/200 F &amp; -15/90 C</td>
<td>0/100 C</td>
</tr>
<tr>
<td>0/250 F</td>
<td>0/250 F &amp; -20/120 C</td>
<td>0/150 C</td>
</tr>
<tr>
<td>20/240 F</td>
<td>20/240 F &amp; -5/115 C</td>
<td>0/200 C</td>
</tr>
<tr>
<td>25/125 F¹</td>
<td>25/125 F &amp; -5/50 C¹</td>
<td>0/250 C</td>
</tr>
<tr>
<td>50/300 F</td>
<td>50/300 F &amp; 10/150 C</td>
<td>0/300 C</td>
</tr>
<tr>
<td>50/400 F</td>
<td>50/400 F &amp; 10/200 C</td>
<td>0/450 C²</td>
</tr>
<tr>
<td>50/550 F</td>
<td>50/500 F &amp; 10/260 C</td>
<td>100/550 C²</td>
</tr>
<tr>
<td>150/750 F</td>
<td>150/750 F &amp; 65/400 C</td>
<td></td>
</tr>
<tr>
<td>200/1000 F²</td>
<td>200/1000 F &amp; 100/540 C²</td>
<td></td>
</tr>
</tbody>
</table>

¹ Minimum stem length 4” for Type 51
² Not recommended for continuous service over 800°F (425°C)

### Dimensions

**Standard versions**

![Diagram of thermometer dimensions]

**Stem Length**

- 2½” (63.5 mm)
- 4” (101.6 mm)
- 6” (152.4 mm)
- 9” (228.6 mm)
- 12” (304.8 mm)
- 15” (381.0 mm)
- 18” (457.2 mm)
- 24” (609.6 mm)

Note: Thermowells for temperature instruments are recommended for all process systems where pressure, velocity, or viscous, abrasive and corrosive materials are present individually or in combination. A properly selected thermowell protects the temperature instrument from possible damage resulting from these process variables. Furthermore, a thermowell permits removal of the temperature instrument for replacement, repair or testing without effecting the process media or the system.

**Ordering information**

State computer part number (if available) / type number / size / range / connection size and locations / options required. WIKA reserves the right to make changes without prior notice.