Bimetal Thermometer
Model TI.31, Stainless Steel & Wetted Parts

Applications

- Suitable for medium which does not corrode 304 stainless steel

Special features

- Industrial design
- Lower (bottom) connection with external reset
- Stainless steel case and wetted parts

Standard version

Size
3” (76.2 mm) Type TI.31

Accuracy
± 1.0% full scale value (ASME B40.3)

Ranges
-100°F to 1000°F (and equivalent Celsius)

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

Over Range
Temporary over or under range tolerance of 50% of scale up to 500°F (260°C). For ranges above 500°F, maximum over range is 800°F; continuous. 1000°F intermittent.

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

Case
Material: 304 stainless steel
Hermetically sealed per ASME B40.3 standard
Ingress protection IP 65
External reset slotted hex head on back of case

Dial
White aluminum, dished, with black markings

Pointer
Black aluminum

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

Window Gasket
Neoprene
Silicone (-100°F and over 550°F)

Dampening
Inert gel to minimize pointer oscillation

Window
Flat instrument glass

Weight
11 oz. (3” dial)
Add 1 oz for every 2” of stem length

Movement
Viscous inert gel to enhance pointer operation
Optional Extras
- Thermowells
- Silicone fill
- Dampered Movement
- Special scales and dial markings
- Acrylic and safety glass windows
- Calibration certification traceable to NIST

STANDARD RANGES

<table>
<thead>
<tr>
<th>Fahrenheit</th>
<th>Dual Scale F &amp; C</th>
<th>Celsius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Scale</td>
<td>F Outer, C Inner</td>
<td>Single Scale</td>
</tr>
<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>50/550 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>

¹Minimum length 4" for Types 31, 34, 51, 52, 54
²Not recommended for continuous service over 800°F (425°C)

Dimensions

Standard versions

<table>
<thead>
<tr>
<th>WIKA Type</th>
<th>DIAL SIZE</th>
<th>A</th>
<th>B</th>
<th>S (Stem Length)</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>3&quot; (76.2 mm)</td>
<td>3-1/4&quot; (82.6 mm)</td>
<td>1-7/8&quot; (47.6 mm)</td>
<td>As Specified</td>
</tr>
</tbody>
</table>

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.