

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

Datasheet TI.51

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



Thermometer TI.51

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

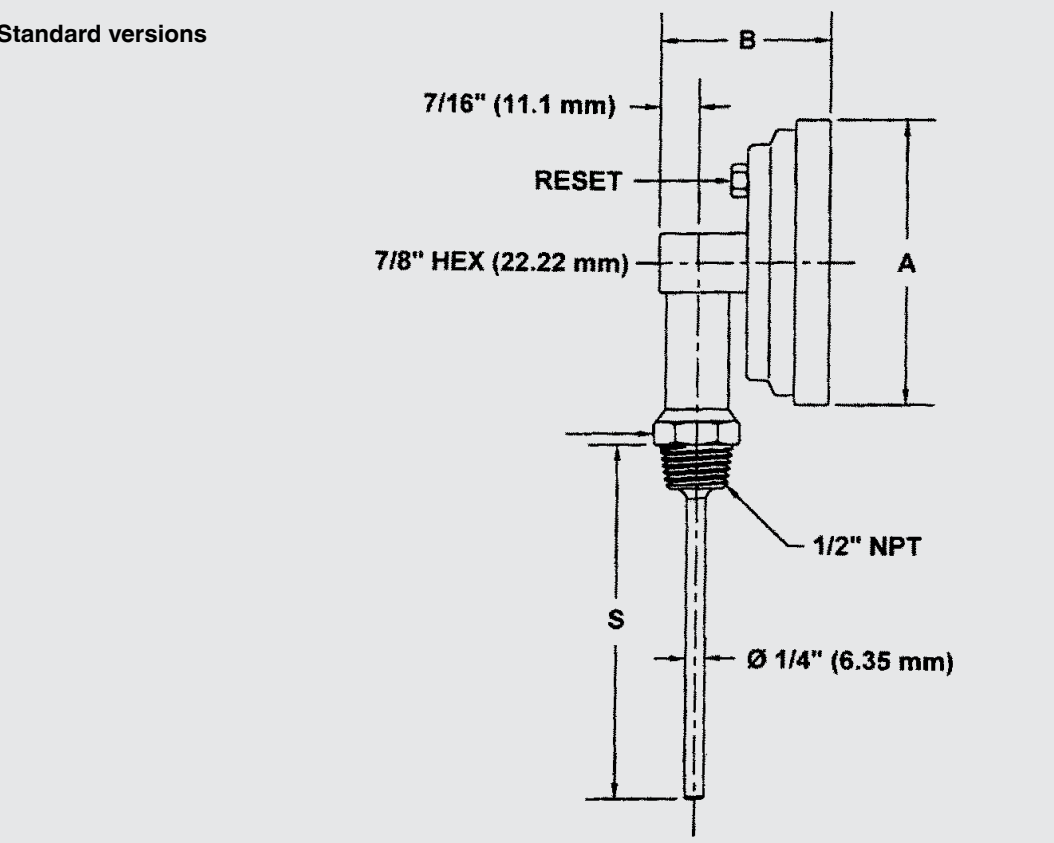
- Thermowells
- Silicone fill
- Dampened Movement
- Special scales and dial markings
- Acrylic and safety glass windows
- Calibration certification traceable to NIST

STANDARD RANGES		
Fahrenheit Single Scale	Dual Scale F & C F Outer, C Inner	Celsius Single Scale
-100/150 F	-100/150 F & -70/70 C	-50/50 C
-40/120 F	40/120 F & -40/50 C	-20/120 C
0/140 F	0/140 F & -20/60 C	0/50 C ¹
0/200 F	0/200 F & -15/90 C	0/100 C
0/250 F	0/250 F & -20/120 C	0/150 C
20/240 F	20/240 F & -5/115 C	0/200 C
25/125 F ¹	25/125 F & -5/50 C ¹	0/250 C
50/300 F	50/300 F & 10/150 C	0/300 C
50/400 F	50/400 F & 10/200 C	0/450 C ²
50/550 F	50/500 F & 10/260 C	100/550 C ²
150/750 F	150/750 F & 65/400 C	
200/1000 F ²	200/1000 F & 100/540 C ²	

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

Dimensions

Standard versions



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.



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