

Replaceable Element Bimetal Thermometers

Type 3BE • 5BE • 3AE • 5AE

Bimetal Thermometers offers ability to replace Element, Case and Lens separately.



5" Dial, All Angle Model

Easy Dial Rotation: The replacement configuration provides for easy rotation of its dial face to a right-side up position. With the bezel and lens removed, a pointed object (such as a ballpoint pen tip) can be inserted in one of the two dial face holes. The dial can be easily rotated within the case to achieve the proper viewing angle.

Unique Palmer Design: Replaceable Element Bimetal Dial Thermometers make replacement operations more efficient and cost effective. Leave the case in place and remove and refit the factory-calibrated internal parts only. As easy as replacing batteries in a flashlight. No costly replacement of the case and no process shut down to remove the entire thermometer. Great for changing thermometer ranges or switching to Fahrenheit or Celsius scales with zero process down time.

Available in Two Styles and Two Dial Sizes: Popular Back Connected and versatile All Angle case styles in easy-reading 5" and space-saving 3" Dial sizes.

Ranges and Stem Lengths: Models for every application. Fahrenheit ranges from -100° up to 1000° and Celsius ranges from -50° up to 500° are available. Stem lengths up to 24" are standard with special stem lengths up to 60".

Rugged Design Features: All 304 stainless steel exterior parts with instrument glass lens (plexiglass option). Quick-lock, cam-action bezel ring with heavy duty, heat-resistant gasket seals out moisture to prevent lens icing or fogging and prevents bimetal coil freeze-up in extreme conditions. Built-in over range protection and adjustable pointer are standard.

Accuracy: Accuracy is within 1% of full scale.

Easy Reading: Dials are specially fabricated of low-glare finished metal using a deep drawn design for anti-parallax alignment of pointer to graduation marks. High-visibility numerals and graduations also help minimize reading errors.

Fast Response: Superior heat transfer characteristics, fast response, and consistent repeatability are achieved through the use of a low mass bimetal sensing element. Materials and design combine to convert the sensor's movement quickly and accurately into a dial reading.

Specifications

Form: All Angle Adjustable or Fixed Back Connected.

Case: Polished-Type 304 Stainless Steel Case and Bezel in 3" (76 mm) or 5" (127 mm) Size. Cases are Hermetically Sealed.

Stem: Polished-Type 304 Stainless Steel. All Welded.

Stem Length: Listed in Stem Length Table, Page 9. Custom Lengths Up to 60" (152 cm).

Fitting: 304 Stainless Steel. 7/8" Hex with 1/2" NPT threads.

Dial Face: Black Graduations and Numerals on White Background. Anti-parallax Dial Design with Linear Scale. High-Visibility Tapered-Tip Black Pointer.

Lens: Instrument Quality Glass Standard. Optional Plexiglass.

Recalibration: Micro-Adjustable Pointer.

Accuracy: 1% of Full Range.

Element: Bimetallic Coil Sensing Element Located in Stem Tip.

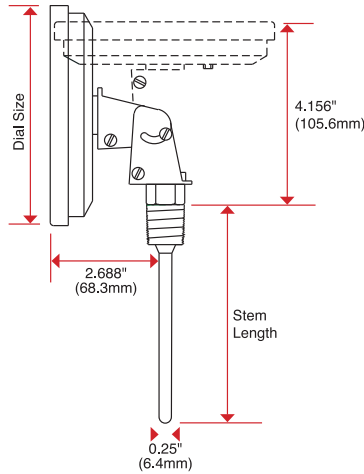
Over-Range: Protected Design Allows Temporary Swings of Up to 50% of Range without Permanent Damage to the Thermometer.

Warranty: One Year Limited Warranty.

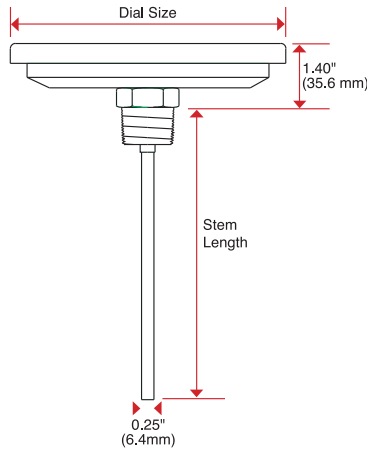


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All Angle Mount
Model 3AE: 3" Dial
Model 5AE: 5" Dial



Back Connected Mount
Model 3BE: 3" Dial
Model 5BE: 5" Dial



Disassembled replaceable element bimetal thermometer.

How To Order

1. Select Case Style and Dial Size Code from below.

Case Style and Dial Size		
	Back Connected Code	All Angle Code
3" Dial	3BE	3AE
5" Dial	5BE	5AE
3" Dial Element Only*	3BEO	3AEO
5" Dial Element Only*	5BEO	5AEO
3" Dial Case Only*	3BECO	3AECO
5" Dial Case Only*	5BECO	5AECO

*Please see "Order Notes and Information" below.

2. Select Stem Length Code from table below.

Stem Length								
Code	2.5	4	6	9	12	15	18	24
Length (in)	2.5	4	6	9	12	15	18	24
Length (mm)	63.5	102	152	229	305	381	457	610

Stem lengths up to 60" available on special request. Lengths over 30" have a 3/8" support tubing.

3. Select Temperature Range Code from the table below.

Temperature Range Codes					
°F Range	°Div	Code	°C Range	°Div	Code
-100 to 100	2°	-100/100F	-50 to 50	1°	-50/50C
-40 to 120	1°	-40/120F	-50 to 100	1°	-50/100C
0 to 200	2°	0/200F	-20 to 120	1°	-20/120C
0 to 250	2°	0/250F	0 to 50 ¹	0.5°	0/50C
25 to 125 ¹	1°	25/125F	0 to 100	1°	0/100C
50 to 300	2°	50/300F	0 to 150	1°	0/150C
50 to 400	5°	50/400F	0 to 200	2°	0/200C
50 to 500	5°	50/500F	0 to 300	5°	0/300C
150 to 750 ¹	5°	150/750F	100 to 400 ¹	5°	100/400C
200 to 1000 ^{1,2}	10°	200/1000F	100 to 500 ^{1,2}	5°	100/500C

¹ Minimum stem length for these ranges is 4" in All Angle, and 6" in Back Connected.

² Recommended for continuous service up to 800°F or 427°C. Can be used for intermittent service up to 1000°F or 500°C.

4. Select Option Code from the table below.

Options	
Code	Description
(PC)	Plexiglass Cover
(SPG)	Shatter Proof Safety Glass
(1/4NPT)	1/4" NPT Fixed Thread Fitting
(3/8NPT)	3/8" NPT Fixed Thread Fitting
(7/8SN)	7/8"- 22 Swivel Nut Fitting
(1/2NPS)	1/2" NPSM Union Swivel Nut
(3/8D)	3/8" Diameter Stem with Pointed Tip

Order Notes and Information

- On **Replaceable Element only** orders, all internal parts are included: bimetal element, shaft, and pointer/dial assembly. Assembly: The element is pre-calibrated and ready for installation.
- To order **Case only**, specify dial size, case form, and stem length. All exterior parts are included: case, stem assembly, fitting, lens, bezel ring, spacer ring, and sealing gasket.

Part Number Example: 5AE18-20/120C(GF)(78SN)

Register your product at www.palmerwahl.com/register

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