

PALMER

Designed and Built in Asheville,
North Carolina - USA!

Model 60B • 60C Direct Drive Remote Reading 6" Dial Thermometer, Wall or Flush Mount

Palmer's experience in the thermometer field enables us to offer a line of filled system Dial Thermometers with uncompromising accuracy. Used in many different applications, including power plants, chemical processing plants, breweries, canneries and HVAC equipment, our Dial Thermometers are engineered to provide long service life with an extremely dependable thermal system.

Direct-Drive Double-Wound Bourdon Coil: With this construction, the pointer shaft operates directly from the center coil. This eliminates the conventional sector and pinion type movement and its multiplying mechanism which are subject to wear and tear and subsequent inaccuracies. This unique feature results in a temperature indicator that is extremely responsive to temperature changes and will maintain its accuracy for many years.

Stainless Steel Bezel Ring and Glass Cover: provides a weather-tight seal.

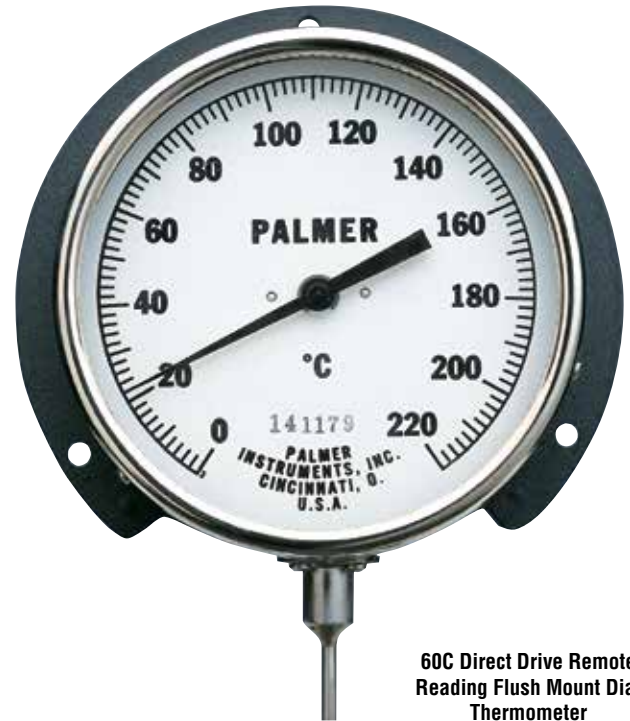
Easy to Read Dial: Every thermometer dial is constructed of heavy gauge aluminum with a low glare finish. High contrast black numerals, graduations, and pointer all contribute to minimize reading errors.

Liquid Actuated Systems: These temperature systems are filled with a non-toxic, odorless, organic, and non-flammable liquid up to 500°F. It is non-hazardous, environmentally friendly with no hydrogens, and proven to be an excellent substitute for Mercury.

Mercury Actuated Systems: For ranges over 500°F mercury is used in an all stainless steel, welded system with direct drive coil, responding to the slightest change sensed in the bulb. This provides the most accurate temperature reading possible.

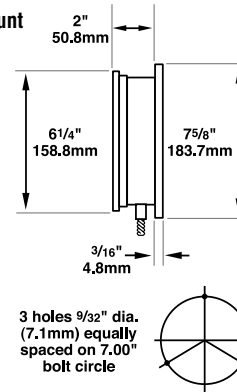
Calibration: Tapered-tip Pointer can be adjusted for calibration.

Fully Adjustable All Angle Case: Model 60B Wall Mount Dial Thermometers may be adjusted during installation and locked to provide the best reading angle.

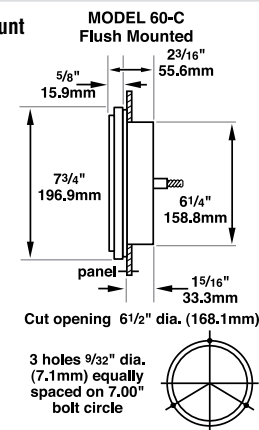


60C Direct Drive Remote Reading Flush Mount Dial Thermometer

60B Wall Mount



60C Flush Mount



MODEL 60B AND 60C SERIES SPECIFICATIONS

| | |
|--------------------|--|
| Form: | 60B - Wall Mount furnished with Chrome Plated Brass Slip Ring, black enamel finish and Black back flange. 60C - Flush Mount furnished with cast aluminum bezel held in place with 2 screws. Black enamel finish. |
| Case: | Aluminum Case. 6" Dial (152 mm) |
| Fill: | Liquid Actuated: < 500°F Mercury Actuated: > 500°F |
| Dial Face: | Black Graduations and Numerals on White Background. Linear Scale with High-Visibility Tapered-Tip Black Pointer. |
| Bezel/Lens: | Stainless Steel Bezel Ring and Plexiglass Cover, Gasket Sealed |
| Capillary: | 1/4" Diameter Stainless Steel Flexible Armor, 5 feet, Standard. 3/16" Diameter Stainless Steel Bendable Stiff Armor, 5 feet, Optional. Capillary Lengths longer than 5 ft. specify desired length in terms of feet. Mercury Actuated available up to 50 feet. Liquid Actuated limited to 15 feet. |
| Bulb: | Liquid Actuated Dials use 81 Series Bulbs. Mercury Actuated Dials use 51 Series Bulbs. |
| System: | Case Compensated System with Double Wound Direct Drive Bourdon Coil. Liquid Actuated Dials use 1-B Systems. Mercury Actuated Dials use 5-B Systems. |
| Accuracy: | ± One Scale Division. |

Specifications subject to change without notice.

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2020

Palmer Wahl Instruments, Inc. • Toll Free: 800-421-2853 • Phone: 828-658-3131 • www.palmerwahl.com



60B • 60C Series Ordering Guide

MODEL 60 SERIES - DIRECT DRIVE REMOTE READING DIAL

Step 1 - Select: Dial

| Code | Dial |
|------------|--|
| 60B | 6" Direct Drive Remote Reading Dial, Wall Mount |
| 60C | 6" Direct Drive Remote Reading Dial, Flush Mount |

Step 2 - Select: Capillary Length

| Code | Capillary Length. Insert number of desired feet up to 15 ft max for Liquid Filled, 50 ft max for Mercury. |
|-----------|---|
| 5 | 5 Feet (1524 mm) (Std) |
| 6 | 6 Feet (1828 mm) |
| 7 | 7 Feet (2133 mm) |
| 8 | 8 Feet (2438 mm) |
| 9 | 9 Feet (2743 mm) |
| 10 | 10 Feet (3048 mm) |
| 11 | 11 Feet (3352 mm) |
| 12 | 12 Feet (3657 mm) |
| 13 | 13 Feet (3962 mm) |
| 14 | 14 Feet (4267 mm) |
| 15 | 15 Feet (4572 mm) |
| XX | For capillary over 15 Feet, Mercury only, Length Code in increments of feet, example: 20 feet = Code 20. |

Step 3 - Select: Armor or Capillary Type

| Code | Armor or Capillary Type |
|----------|--|
| F | 1/4" Diameter Stainless Steel Flexible Armor, 5 feet, Standard |
| B | 3/16" Diameter Stainless Steel Bendable Stiff Armor, 5 feet |

Step 4 - Select: Temperature Range

| Code | °F Range | ° Div | Code | °C Range | ° Div | Fill |
|------------------|---------------|-------|-----------------|--------------|-------|------------------|
| -100/100F | -100° to 100° | 2° | -60/40C | -60° to 40° | 1° | Liquid Actuated |
| -30/130F | -30° to 130° | 1° | -30/60C | -30° to 60° | 1° | |
| 30/180F | 30° to 180° | 1° | NA | NA | | |
| 0/150F | 0° to 150° | 1° | -10/80C | -10° to 80° | 1° | |
| 0/240F | 0° to 240° | 2° | -10/120C | -10° to 120° | 1° | |
| 0/300F | 0° to 300° | 2° | -10/150C | -10° to 150° | 1° | |
| 0/400F | 0° to 400° | 5° | 0/220C | 0° to 220° | 2° | |
| 0/500F | 0° to 500° | 5° | 0/280C | 0° to 280° | 2° | Mercury Actuated |
| 0/600F | 0° to 600° | 5° | 0/320C | 0° to 320° | 2° | |
| 0/750F | 0° to 750° | 5° | 0/400C | 0° to 400° | 2° | |
| 200/750F | 200° to 750° | 5° | 100/400C | 100° to 400° | 2° | |
| 200/950F | 200° to 950° | 5° | 100/500C | 100° to 500° | 5° | |
| 200/1200F | 200° to 1200° | 10° | NA | NA | | |

Mercury Bulbs are available below 500°F if products containing mercury can be shipped to your state. Contact us for details.

Dual Scale Ranges: specify F&C
Fahrenheit and Réaumur: 0° to 240°F&R; 0° to 150°F&R

| Dial | Capillary Length | Armor Type | Temperature Range |
|--|------------------|------------|-------------------|
| 60 | | | |
| Insert Codes in boxes above to build part number | | | |



We build to order:
if your process requires
an option not shown here
please call
Customer Service.

60B • 60C Series Ordering Guide

All systems conform to ASME, ISA, SAMA or other codes designed as 5B or 1B systems.

See pages 4 and 5 for dimensional drawings of Remote Bulbs.

| Step 5 - Select: Bulb Type | | | |
|------------------------------|--|---|--|
| Code | Mercury Actuated, 51 Series - 5B Bulbs | Bulb Length | Connection |
| 51-5 | Plain Stainless Steel Bulb | 6" Std. Multiples of 6" up to 10 ft. | |
| 51-11 | Plain Stainless Steel Bulb | 6" Std. | Optional Adjustable Union |
| 51-12 | Plain Stainless Steel Bulb | 6" Std. | 1-1/4"-18 Swivel Nut |
| 51-13 | Tapered Bulb Chamber | 3.5", 6", 8", 12" Std. Multiples of 6" up to 10 ft. | 1-1/4"-18 Swivel Nut |
| 51-29 | Plain Air Temperature Bulb | 12" Std. | |
| 51-30 | Air Temperature Bulb | 12" Std. | 1-1/4"-18 Swivel Nut |
| Step 6 - Select: Bulb Length | | | |
| Code | Bulb Length | | Connection |
| 81-4 | Plain Stainless Steel Bulb | | 4", 6", 9", 12", 18", 24", 36" |
| 81-5 | Plain Stainless Steel Bulb | | 6" Std. Multiples of 6" up to 10 ft. |
| 81-11 | Plain Stainless Steel Bulb | | Specify |
| 81-12 | Plain Stainless Steel Bulb | | Specify |
| 81-13 | Tapered Bulb Chamber | | 3.5", 6", 8", 12" Std. Multiples of 6" up to 3 ft. |

| Step 6 - Select: Bulb Length | |
|------------------------------|---|
| Code | Bulb Length |
| (3.5") | 3.5 inches (88.9 mm) (51-13 and 81-13 only) |
| (4") | 4 inches (101.6 mm) (81-4 only) |
| (6") | 6 inches (152.4 mm) |
| (8") | 8 inches (203.2 mm) |
| (9") | 9 inches (228.6 mm) |
| (12") | 12 inches (304.8 mm) |
| (18") | 18 inches (457.2 mm) |
| (24") | 24 inches (609.6 mm) |

If Bulb lengths over 24" are required please call Customer Service.

| Step 7 - Select: Options | |
|--------------------------|--------------------------------------|
| Code | Options |
| (F&R) | Dual Range Scale |
| (PC) | Plexiglass Cover |
| (SS) | 316 Stainless Steel Fitting and Stem |

| Step 8 - Select: Optional Adjustable Union on 51-13 and 81-13 Bulbs | |
|---|---------------------------|
| Code | Adjustable Union |
| 1/2" NPT | 1/2" NPT Adjustable Union |
| 3/4" NPT | 3/4" NPT Adjustable Union |
| 1" NPT | 1" NPT Adjustable Union |

Model Number Example:
60C12B0/220C81-13(6")(PC): 6 inch Dial, Flush Mount, 12 foot Capillary Length, 3/16" Dia. SS Bendable Stiff Armor Type, 0° to 220°C Liquid Actuated Temperature Range, 81-13 Liquid Actuated Bulb, 6 inch Bulb Length, Plexiglass Cover.

| Bulb Type | Bulb Length | Options | Adjustable Union |
|--|-------------|---------|------------------|
| | | | |
| Insert Codes in boxes above to build part number | | | |

Final Part Number:

| Dial | Capillary Length | Armor Type | Temperature Range | Bulb Type | Bulb Length | Options | Adjustable Union |
|--|------------------|------------|-------------------|-----------|-------------|---------|------------------|
| 60 | | | | | | | |
| Insert Codes in boxes above to build Final Part Number | | | | | | | |

Specifications subject to change without notice.

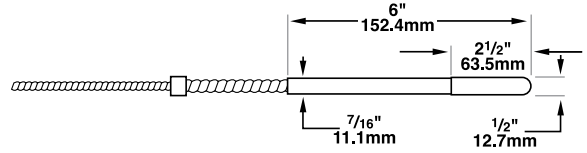
51 Series Remote Bulbs - Mercury Actuated

5B Mercury Filled Case Compensated Thermal System.

For ranges over 500°F mercury is used in an all stainless steel, welded system with direct drive coil, responding to the slightest change sensed in the bulb. This provides the most accurate temperature reading possible. Limitations include Remote Capillary lengths up to 50 feet, provided the ambient temperature changes along the capillary will not exceed $\pm 15^\circ\text{F}$. Rigid Mount Thermometers have Stainless Steel stems limited to 10 feet.

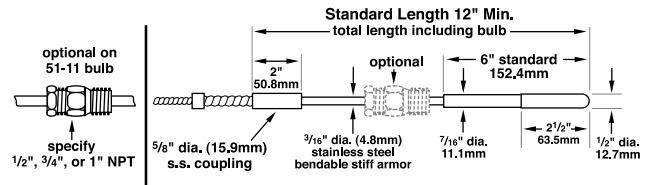
Models 51-5:

Plain Stainless Steel Bulb
Standard Lengths: 6" Std, multiples of 6" up to 10 feet (120 in.)



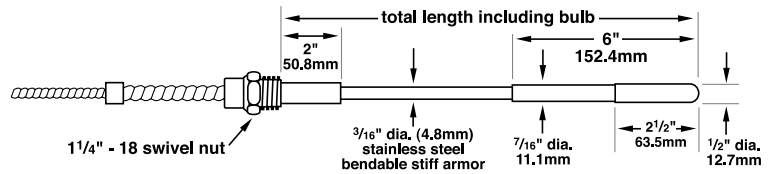
Models 51-11:

Plain Stainless Steel Bulb
Standard Length: 6"
Connection: Optional Adjustable Union



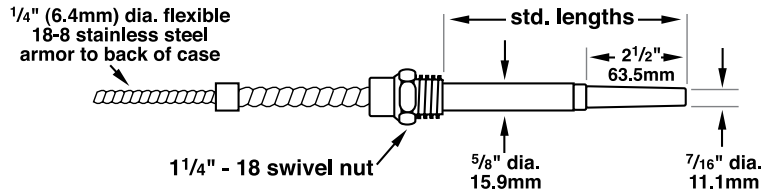
Models 51-12:

Plain Stainless Steel Bulb
Standard Length: 6"
Connection: 1-1/4"-18 Swivel Nut



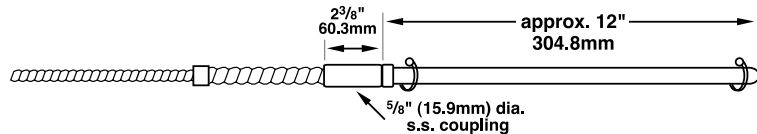
Models 51-13:

Tapered Bulb Chamber
Standard Lengths: 3.5", 6", 8", 12" Std, multiples of 6" up to 10 feet (120 in.)
Connection: 1-1/4"-18 Swivel Nut



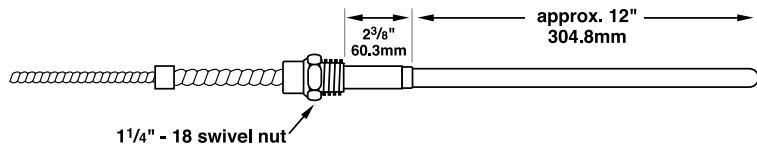
Models 51-29:

Plain Air Temperature Bulb with removable rings for suspending in air stream.
Standard Length: 12"



Models 51-30:

Air Temperature Bulb.
Standard Length: 12"
Connection: 1-1/4"-18 Swivel Nut



All systems conform to ASME, ISA, SAMA or other codes designed as 5B or 1B systems.

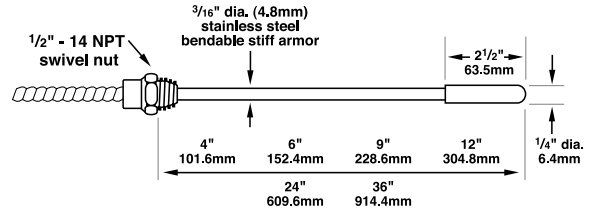
81 Series Remote Bulbs - Liquid Actuated

1B Liquid Filled Case Compensated Thermal System.

These temperature systems are filled with a non-toxic, odorless, organic, and non-flammable liquid up to 500°F. It is non-hazardous, environmentally friendly with no hydrogens, and proven to be an excellent substitute for Mercury. Limitations include Remote Capillary lengths up to 15 feet. Rigid Mount Thermometers are limited to 48" stem lengths.

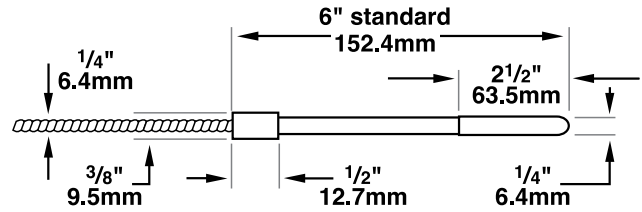
Models 81-4:

Plain Stainless Steel Bulb for .260" bore wells.
 Standard Lengths: 4", 6", 9", 12", 18", 24", 36" inches.
 Connection: 1/2"-14 Swivel Nut Connection



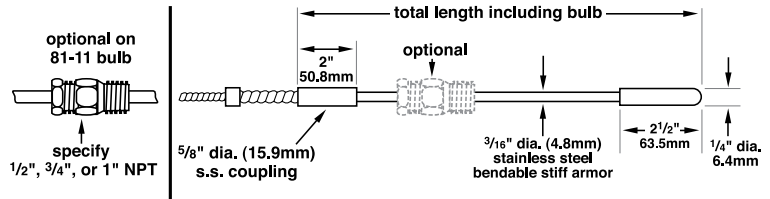
Models 81-5:

Plain Stainless Steel Bulb
 Standard Lengths: 6" Std, multiples of 6" up to 10 feet (120 in.)



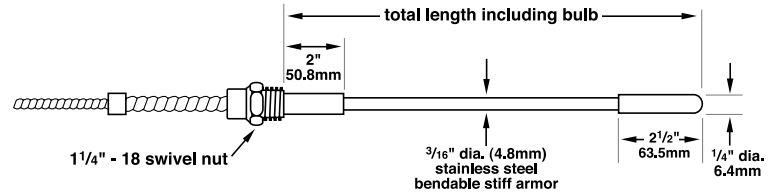
Models 81-11:

Plain Stainless Steel Bulb
 Specify Length
 Connection: Optional Adjustable Union



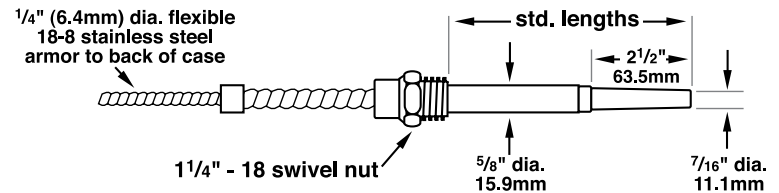
Models 81-12:

Plain Stainless Steel Bulb
 Specify Length
 Connection: 1-1/4"-18 Swivel Nut



Models 81-13:

Tapered Bulb Chamber
 Standard Lengths: 3.5", 6", 8", 12" Std. Multiples of 6" up to 3 ft.
 Connection: 1-1/4"-18 Swivel Nut



All systems conform to ASME, ISA, SAMA or other codes designed as 5B or 1B systems.