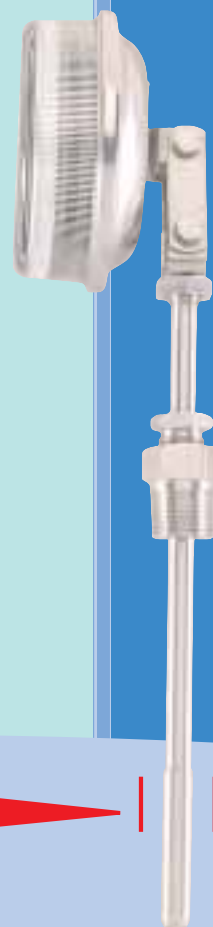


**PALMER**  
INSTRUMENTS, INC.

# RIGID AND REMOTE READING DIAL THERMOMETERS



**PALMER Wahl**  
INSTRUMENTATION GROUP



Model 35A Direct Drive Dial Thermometer



Model 60B Wall Mount Remote Dial Thermometer



Dial Thermometer with Maximum Minimum Indicators

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## RIGID DIAL THERMOMETERS

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### Custom Thermometers for your Applications

Contact Palmer for custom-made  
 Thermometers to your specifications.



Calibration Services Available

# Introduction to Palmer Dial Thermometers

## When Precision is a Matter of Degree...Industry Depends on Palmer Instruments

**Since 1872** Palmer has been recognized for quality products which bring economical solutions to industry's temperature measurement problems. Our experience in the thermometer field enables Palmer to offer industry an extensive line of temperature indicators. Palmer's Rigid and Remote Dial Thermometers are used in many different applications, including Power plants and Piping, Chemical Processing plants, Breweries, Canneries, Heating and Cooling Equipment.

All of Palmer's products have been engineered to provide the long service life and ease of adjustment you've come to expect. Our filled system expertise has been incorporated into an extremely dependable thermal system. Our unique Direct-Drive Double-Wound Bourdon Coil is connected directly to the pointer shaft, providing uncompromising accuracy.

Palmer's fine network of Manufacturers' Representatives, Distributors, and experienced Customer Service Department are ready to assist you with your application. Solutions to your measurement needs will come more promptly when you rely upon Palmer to supply them.



### PALMER DIAL THERMOMETER FEATURES

**Direct-Drive Double-Wound Bourdon Coil** — With this type of 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.

**Heavy Molded Glass Cover** — This unique cover maximizes the amount of light on the dial face enabling the user to read the dial face with ease in dimly lit areas. This cover, combined with a bezel ring and heavy, heat-resistant gasket, provides a weather-tight seal that prevents crystal fogging.

**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. This liquid has proven to be an excellent substitute for Mercury. Liquid fill is available with most of Palmer's 3-1/2", 5" and 6" dial thermometers.

**Mercury Actuated Systems** — Mercury remains the most accurate and reliable means to measure temperature. For ranges over 500°F we place mercury into an all stainless steel, atomic-hydrogen welded system with direct drive coil, responding to the slightest change sensed by the mercury in the bulb. This provides the most accurate temperature reading possible.

**Calibration** — All Palmer Dial Thermometers are equipped with external calibration. The external reset calibration screw

on the back of the case is readily accessible and simple to use. This feature permits setting for zero calibration error at any desired temperature within the range of the thermometer.

**Interchangeability** — All Model 1035 and 1050 Dial Thermometers have 1/4" diameter stem and 1/2" NPT fitting, are interchangeable with a bimetal thermometer type thermowell with a .260" diameter bore. All Model 35A/AL and 50A/AL Dial Thermometers have a .625" stem diameter with tapered sensing bulb interchangeable with a mercury-in-glass industrial thermometer type thermowell. A fast response is insured by the metal-to-metal contact of the tapered mercury filled bulb chamber and the internally tapered well.

**Fully Adjustable All Angle Case & Rotatable Dial Face** — Palmer 3-1/2" and 5" Rigid Stem and Wall Mounted Remote Dials may be adjusted during installation and locked to provide the best reading angle.

**Accuracy** — Guaranteed to be accurate within one scale division. Calibration is traceable to the National Institute of Standards and Technology.



Calibration Services Available

(800) 421-2853 • FAX (828) 658-0728 • [www.palmerwahl.com](http://www.palmerwahl.com)

**PALMER Wahl**  
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## Model 35A • 35AL • 50A • 50AL

### 3-1/2" & 5" Direct Drive Rigid Dials with 1-1/4"-18 Swivel Nut Fitting and Tapered Bulb



Model 50A Direct Drive Rigid Dial  
Thermometer

**Direct-Drive Double-Wound Bourdon Coil** — With this type of 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.

**Heavy Molded Glass Cover** — This unique cover maximizes the amount of light on the dial face enabling the user to read the dial face with ease in dimly lit areas. This cover, combined with a bezel ring and heavy, heat-resistant gasket, provides a weather-tight seal that prevents crystal fogging.

**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. This liquid has proven to be an excellent substitute for Mercury.

**Mercury Actuated Systems** — For ranges over 500°F we place mercury into an all stainless steel, atomic-hydrogen welded system with direct drive coil, responding to the slightest change sensed by the mercury in the bulb. This provides the most accurate temperature reading possible.

**Calibration** — All Palmer Dial Thermometers are equipped for external calibration. The reset calibration screw on the back of the case is readily accessible and simple to use. This feature permits setting for zero calibration error at any desired temperature within the range of the thermometer.

**Interchangeability** — All Model 35 and 50 Dial Thermometers have a .625" stem diameter with tapered sensing bulb interchangeable with a mercury-in-glass industrial thermometer type thermowell. A fast response is insured by the metal-to-metal contact of the tapered mercury filled bulb chamber and the internally tapered well.

**Fully Adjustable All Angle Case with Rotatable Dial Face** — Palmer 3-1/2" and 5" Rigid Stem Dials may be adjusted during installation and locked to provide the best reading angle.

**Accuracy** — Guaranteed to be accurate within one scale division. Calibration is traceable to the National Institute of Standards and Technology.

#### SPECIFICATIONS

**Form:** Fully Adjustable All Angle Case with Rotatable Dial Face or optional Fixed Back Connected.

**Case:** Polished Type 302 Stainless Steel Case. 3-1/2" Dial (88.9mm) Model 35A, 35AL, or 5" Dial (127mm) Model 50A, 50AL.

**Fill:** Liquid Actuated: 35AL, 50AL. Mercury Actuated: 35A, 50A.

**Dial Face:** Black Graduations and Numerals on White Glare-Free Background. Linear Scale with High-Visibility Tapered-Tip Black Pointer.

**Lens:** Heavy Molded Glass cover, Thick Gasket sealed. Waterproof. Plexiglass optional.

**Fitting:** 1-1/4" UNEF -18 Swivel Nut. Nickel Plated Brass. Optional Fittings available.

**Stem:** Type 303 Stainless Steel.

**Stem Length:** Standard Lengths from 3-1/2" (88.9 mm) to 72" (1828mm). See "Stem Length" Table on Page 5. Measure stem length below Swivel Nut Fitting.

**Bulb:** .625" (15.9mm) diameter, tapered Bulb chamber to .437" (11.1mm).

**System:** Case Compensated System with Double Wound Direct Drive Bourdon Coil.

**Calibration:** External Reset Calibration Screw on back of case.

**Accuracy:** ± One Scale Division.



# Model 35A • 35AL • 50A • 50AL

## Dial Thermometers Rigid Dial

### How To ORDER

#### 1. Select Dial Size and Fill Code:

Dial Size and Fill		Code
3 1/2" Dial	Mercury Actuated	35A
	Liquid Actuated	35AL
5" Dial	Mercury Actuated	50A
	Liquid Actuated	50AL

**Dual Sensing Option**  
see pages 14-15 for  
details about our  
Dual Sensing Dial Thermometers.

#### 2. Specify Option Code after Code above: (if applicable)

Options	Code
Back Connected Thermometer	AR
Electrical Contact*	EC
MAX-MIN Indices*	MM

\* Not available together, see pg 16 for full description.

#### 3. Select Stem Length Code:

Stem Lengths								
Code	3.5	6	8	9	12	15	18	24
Length (in)	3-1/2"	6"	8"	9"	12"	15"	18"	24"
Length (mm)	89	152	203	229	305	381	457	610
Code	30	36	42	48	54	60	66	72
Length (in)	30"	36"	42"	48"	54"	60"	66"	72"
Length (mm)	762	914	1067	1219	1372	1524	1676	1828

Longer Lengths available upon request

#### 4. Select Temperature Range Code:

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

Dual Scale Ranges: specify **F&C** Fahrenheit & Reamer 0° to 240° F&R  
0° to 150° F&R

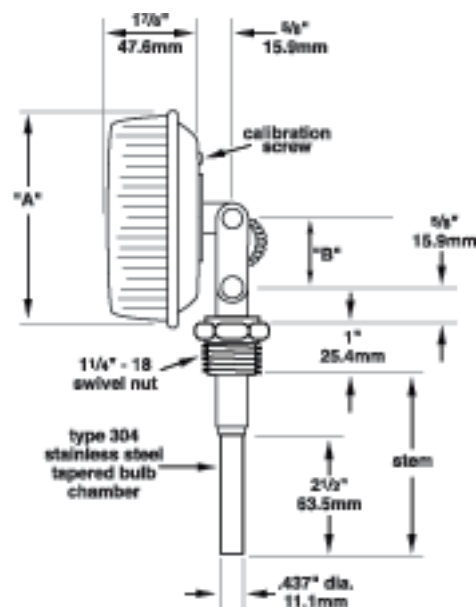
#### 5. Specify Additional Option Code at end of Part Number:

Additional Options	Code
Anti-Vibration Bearings	(AV)
Plexiglass Cover	(PC)
7/8"-22 Swivel Nut Fitting	(S)
316 SS Fitting	(SS)

#### 6. Select Thermowells from Palmer Thermowells and Fittings catalog PW1100, if applicable.



Model 50A - view of All Angle adjustment feature with 350° rotation ability of dial.



MODEL NO.	DIM "A" INCHES	DIM "A" Mm.	DIM "B" INCHES	DIM "B" Mm.
35-A	4 1/4"	111.1	1 1/4"	34.9
50-A	5 7/8"	149.2	2 1/4"	67.2

**Part Number Example: 50AL3.50/240F(PC)**

Calibration Services Available

(800) 421-2853 • FAX (828) 658-0728 • [www.palmerwahl.com](http://www.palmerwahl.com)

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## Model 1035 • 1050

### 3-1/2" & 5" Direct Drive Dial with 1/2" NPT and 1/4" Diameter Stem



Model 1050 Direct Drive Rigid Dial  
Thermometer

**Direct-Drive Double-Wound Bourdon Coil** — With this type of 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.

**Heavy Molded Glass Cover** — This unique cover maximizes the amount of light on the dial face enabling the user to read the dial face with ease in dimly lit areas. This cover, combined with a bezel ring and heavy, heat-resistant gasket, provides a weather-tight seal that prevents crystal fogging.

**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. This liquid has proven to be an excellent substitute for Mercury. Palmer Models 1035 and 1050 are a superior alternative to using bimetallic thermometers.

**Mercury Actuated Systems** — For ranges over 500°F we place mercury into an all stainless steel, atomic-hydrogen welded system with direct drive coil, responding to the slightest change sensed by the mercury in the bulb. This provides the most accurate temperature reading possible.

**Calibration** — All Palmer Dial Thermometers are equipped for external calibration. The reset calibration screw on the back of the case is readily accessible and simple to use. This feature permits setting for zero calibration error at any desired temperature within the range of the thermometer.

**Interchangeability** — All Model 1035 and 1050 Dial Thermometers have a 1/4" diameter stem with a 1/2" NPT Fitting, and are interchangeable with a bimetal thermometer type thermowell with a .260" diameter bore.

**Fully Adjustable All Angle Case with Rotatable Dial Face** — Palmer 3-1/2" and 5" Rigid Stem Dials may be adjusted during installation and locked to provide the best reading angle.

**Accuracy** — Guaranteed to be accurate within one scale division. Calibration is traceable to the National Institute of Standards and Technology.

#### SPECIFICATIONS

**Form:** Fully Adjustable All Angle Case with Rotatable Dial Face or optional Fixed Back Connected.

**Case:** Polished Type 302 Stainless Steel Case. 3-1/2" Dial (88.9mm) Model 1035, or 5" Dial (127mm) Model 1050.

**Fill:** Liquid Actuated, Mercury Actuated over 500°F.

**Dial Face:** Black Graduations and Numerals on White Glare-Free Background. Linear Scale with High-Visibility Tapered-Tip Black Pointer.

**Lens:** Heavy Molded Glass cover, Thick Gasket sealed. Waterproof. Plexiglass optional.

**Fitting:** 1/2" NPT Fixed Thread Fitting. Optional Fittings available.

**Stem:** Polished Type 304 Stainless Steel, .250" Diameter Stem.

**Stem Length:** *Stem bends without affecting accuracy.* Standard Lengths from 4" (102mm) to 72" (1828mm). See "Stem Length" Table on Page 7. Measure stem length below Swivel Nut Fitting.

**System:** Case Compensated System with Double Wound Direct Drive Bourdon Coil.

**Calibration:** External Reset Calibration Screw on back of case.

**Accuracy:** ± One Scale Division.



# Model 1035 • 1050

## Dial Thermometers Rigid Dial

### How To Order

#### 1. Select Dial Size Code:

Dial Size	Code
3 1/2" Dial	<b>1035</b>
5" Dial	<b>1050</b>

#### 2. Specify Option Code after Code above: (if applicable)

Options	Code
Back Connected Thermometer	<b>AR</b>
Electrical Contact*	<b>EC</b>
MAX-MIN Indices*	<b>MM</b>

\* Not available together, see pg 16 for full description.

#### 3. Select Stem Length Code:

Stem Lengths								
Code	4	6	8	9	12	15	18	24
Length (in)	4"	6"	8"	9"	12"	15"	18"	24"
Length (mm)	102	152	203	229	305	381	457	610
Code	30	36	42	48	54	60	66	72
Length (in)	30"	36"	42"	48"	54"	60"	66"	72"
Length (mm)	762	914	1067	1219	1372	1524	1676	1828

Longer lengths available upon request

#### 4. Select Temperature Range Code:

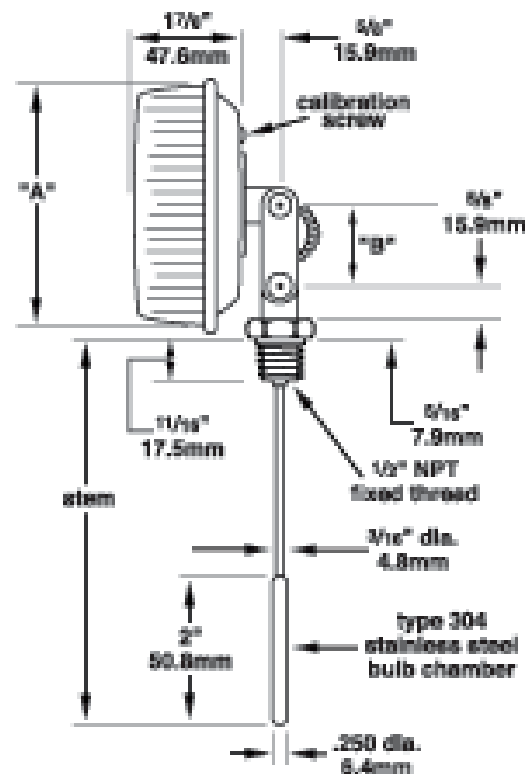
Temperature Ranges						
Fill	°F Range	°Div	Code	°C Range	°Div	Code
Liquid Actuated	-100 to 100°	2°	<b>-100/100F</b>	-60 to 40°	1°	<b>-60/40C</b>
	-30 to 130°	1°	<b>-30/130F</b>	-30 to 60°	1°	<b>-30/60C</b>
	30 to 180°	1°	<b>30/180F</b>			
Liquid or Mercury Actuated	0 to 150°	1°	<b>0/150F</b>	-10 to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

Dual Scale Ranges: specify **F&C** Fahrenheit & Reamer 0° to 240° F&R  
0° to 150° F&R

#### 5. Specify Additional Option Code at end of Part Number:

Additional Options	Code
Anti-Vibration Bearings	<b>(AV)</b>
Plexiglass Cover	<b>(PC)</b>
7/8"-22 Swivel Nut Fitting	<b>(S)</b>
316 SS Fitting	<b>(SS)</b>

#### 6. Select Thermowells from Palmer Thermowells and Fittings catalog PW1100, if applicable.



MODEL NO.	DIM "A" INCHES	DIM "A" Mm.	DIM "B" INCHES	DIM "B" Mm.
1035	4 1/4"	111.1	1 1/4"	34.9
1050	5 1/4"	140.2	2 1/4"	57.2

Part Number Example: 103560/500F&C(SS)

Calibration Services Available

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**PALMER Wahl**  
INSTRUMENTATION GROUP

## Dial Thermometers

### Rigid Dial Adjustable Union

## Model 935 • 950

### 3-1/2" and 5" Direct Drive Dial Thermometers with 1/2" NPT SS Adjustable Union



Model 950 Direct Drive Rigid Dial Thermometer  
with 1/2" NPT SS Adjustable Union

**NEW! 1/2" NPT Stainless Steel Adjustable Union** — designed to adjust for installation in multiple thermowell stem lengths.

**Direct-Drive Double-Wound Bourdon Coil** — With this type of 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.

**Heavy Molded Glass Cover** — This unique cover maximizes the amount of light on the dial face enabling the user to read the dial face with ease in dimly lit areas. This cover, combined with a bezel ring and heavy, heat-resistant gasket, provides a weather-tight seal that prevents crystal fogging.

**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. This liquid has proven to be an excellent substitute for Mercury.

**Mercury Actuated Systems** — For ranges over 500°F we place mercury into an all stainless steel, atomic-hydrogen welded system with direct drive coil, responding to the slightest change sensed by the mercury in the bulb. This provides the most accurate temperature reading possible.

**Calibration** — All Palmer Dial Thermometers are equipped for external calibration. The reset calibration screw on the back of the case is readily accessible and simple to use. This feature permits setting for zero calibration error at any desired temperature within the range of the thermometer.

**Fully Adjustable All Angle Case with Rotatable Dial Face** — Palmer 3-1/2" and 5" Rigid Stem Dials may be adjusted during installation and locked to provide the best reading angle.

**Accuracy** — Guaranteed to be accurate within one scale division. Calibration is traceable to the National Institute of Standards and Technology.

#### SPECIFICATIONS

**Form:** Fully Adjustable All Angle Case with Rotatable Dial Face or optional Fixed Back Connected.

**Case:** Polished Type 302 Stainless Steel Case. 3-1/2" Dial (88.9mm) Model 935, or 5" Dial (127mm) Model 950.

**Fill:** Liquid Actuated, Mercury Actuated over 500°F.

**Dial Face:** Black Graduations and Numerals on White Glare-Free Background. Linear Scale with High-Visibility Tapered-Tip Black Pointer.

**Lens:** Heavy Molded Glass cover, Thick Gasket sealed. Waterproof. Plexiglass optional.

**Fitting:** 1/2" NPT SS Adjustable Union. Optional Fittings available.

**Stem:** Polished Type 304 Stainless Steel, 3/8" Diameter Stem.

**Stem Length:** Standard Lengths from 6" (152 mm) to 72" (1828mm). See "Stem Length" Table on Page 9. Measure stem length below Swivel Nut Fitting.

**System:** Case Compensated System with Double Wound Direct Drive Bourdon Coil.

**Calibration:** External Reset Calibration Screw on back of case.

**Accuracy:** ± One Scale Division.





# Model 935 • 950

## Dial Thermometers Rigid Dial Adjustable Union

### How To ORDER

#### 1. Select Dial Size Code:

Dial Size	Code
3 1/2" Dial	935
5" Dial	950

#### 2. Specify Option Code after Code above: (if applicable)

Options	Code
Back Connected Thermometer	AR
Electrical Contact*	EC
MAX-MIN Indices*	MM

\* Not available together, see pg 16 for full description.

#### 3. Select Stem Length Code:

Stem Lengths								
Code	6	8	9	12	15	18	24	30
Length (in)	6"	8"	9"	12"	15"	18"	24"	30"
Length (mm)	152	203	229	305	381	457	610	762
Code	36	42	48	54	60	66	72	
Length (in)	36"	42"	48"	54"	60"	66"	72"	
Length (mm)	914	1067	1219	1372	1524	1676	1828	

#### 4. Select Temperature Range Code:

Temperature Ranges						
Fill	°F Range	°Div	Code	°C Range	°Div	Code
Liquid Actuated	-100 to 100°	2°	-100/100F	-60 to 40°	1°	-60/40C
	-30 to 130°	1°	-30/130F	-30 to 60°	1°	-30/60C
	0 to 150°	1°	0/150F	-10 to 80°	1°	-10/80C
	0 to 240°	2°	0/240F	-10 to 120°	1°	-10/120C
	0 to 300°	2°	0/300F	-10 to 150°	1°	-10/150C
	0 to 400°	5°	0/400F	0 to 220°	2°	0/220C
	0 to 500°	5°	0/500F	0 to 280°	2°	0/280C
Mercury Actuated	0 to 600°	5°	0/600F	0 to 320°	2°	0/320C
	0 to 750°	5°	0/750F	0 to 400°	2°	0/400C
	200 to 750°	5°	200/750F	100 to 400°	2°	100/400C
	200 to 950°	5°	200/950F	100 to 500°	5°	100/500C
Dual Scale Ranges: specify <b>F&amp;C</b> Fahrenheit & Reamer 0° to 240° F&R 0° to 150° F&R						

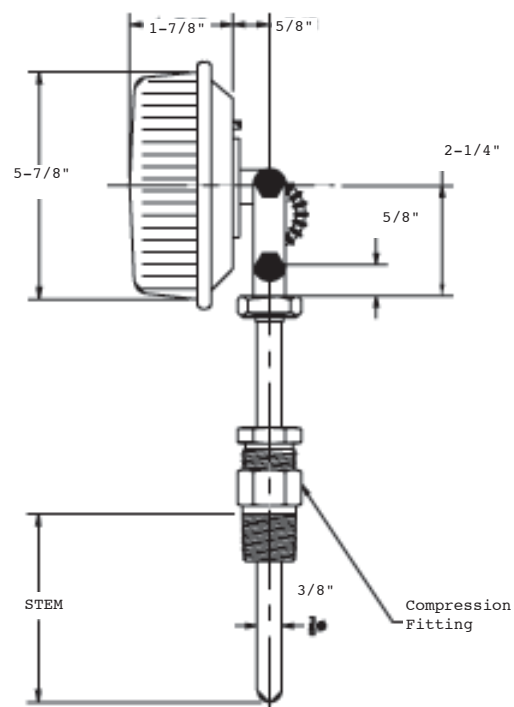
#### 5. Specify Additional Option Code at end of Part Number:

Option Codes	Code
Anti-Vibration Bearings	(AV)
Plexiglass Cover	(PC)
7/8"-22 Swivel Nut Fitting	(S)
316 SS Fitting	(SS)

#### 6. Select Thermowells from Palmer Thermowells and Fittings catalog PW1100, if applicable.



Model 950 1/2" NPT SS Adjustable Union



## Dial Thermometers Remote Reading

# Model 35B • 35C • 50B • 50C Palmer 3-1/2" & 5" Wall & Flush Mount Thermometers



Model 50C Flush Mount Remote Reading Dial Thermometer.

**Liquid Actuated Systems** — These temperature systems are filled with a non-toxic, odorless, organic, and non-flammable liquid up to 500°F. This liquid has proven to be an excellent substitute for Mercury.

**Mercury Actuated Systems** — For ranges over 500°F we place mercury into an all stainless steel, atomic-hydrogen welded system with direct drive coil, responding to the slightest change sensed by the mercury in the bulb. This provides the most accurate temperature reading possible.

**Calibration** — All Palmer Dial Thermometers are equipped for external calibration. The reset calibration screw on the back of the case is readily accessible and simple to use. This feature permits setting for zero calibration error at any desired temperature within the range of the thermometer.

**Fully Adjustable All Angle Case with Rotatable Dial Face** — Palmer 3-1/2" and 5" Remote Reading Dials may be adjusted during installation and locked to provide the best reading angle.

**Accuracy** — Guaranteed to be accurate within one scale division. Calibration is traceable to the National Institute of Standards and Technology.

**Direct-Drive Double-Wound Bourdon Coil** — With this type of 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.

**Heavy Molded Glass Cover** — This unique cover maximizes the amount of light on the dial face enabling the user to read the dial face with ease in dimly lit areas. This cover, combined with a bezel ring and heavy, heat-resistant gasket, provides a weather-tight seal that prevents crystal fogging.

**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.



Model 50B Wall Mount Remote Reading Dial Thermometer shown above.



Rear View at right shows adjustable linkage dial face rotation capabilities, and reset calibration screw.

## SPECIFICATIONS

**Form:** Fully Adjustable All Angle Case with Rotatable Dial Face or optional Fixed Back Connected.

**Case:** Type 302 Stainless Steel Case. 3-1/2" Dial (88.9mm) Model 35B, 35C, or 5" Dial (127mm) Model 50B, 50C.

**Wall Mounted Models:** 35B/50B Furnished complete with 3" diameter flange for wall mounting with linkage for positioning case.

**Flush Mounted Models:** 35C/50C Complete with steel bezel and three mounting studs, nuts, and washer. Black finish. Chrome optional.

**Fill:** Liquid Actuated, Mercury over 500°F.

**Dial Face:** Black Graduations and Numerals on White Glare-Free Background. Linear Scale with High-Visibility Tapered-Tip Black Pointer.

**Lens:** Heavy Molded Glass cover, Thick Gasket sealed. Waterproof. Plexiglass optional.

**Capillary:** 5 ft. 1/2" Stainless Steel Capillary protected by a 1/4" diameter Flexible Armor. Optional Capillary materials available. Specify desired Capillary length. Mercury Actuated available up to 250 feet. Liquid Actuated limited to 15 feet.

**Bulb:** Liquid Actuated Dials use 81 Series (pg 19). Mercury Actuated Dials use either 51 Series, or 71 Series, (pgs 17 and 18).

**System:** Liquid Actuated Dials use 1-B Systems (pg 19). Mercury Actuated Dials use either 5-B or 5-A Systems, (pgs 17 and 18).

**Calibration:** External Reset Calibration Screw on back of case.

**Accuracy:** ± One Scale Division.



## Model 35B • 35C • 50B • 50C

### How To Order

#### 1. Select Dial Size and Case Style:

Dial Size and Case Style		Code
3 1/2" Dial	Wall Mount	<b>35B</b>
	Flush Mount	<b>35C</b>
5" Dial	Wall Mount	<b>50B</b>
	Flush Mount	<b>50C</b>

#### 2. Specify Option Code after Code above: (if applicable)

Options	Code
Back Connected Thermometer	<b>AR</b>
Electrical Contact*	<b>EC</b>
MAX-MIN Indices*	<b>MM</b>

\* Not available together, see pg 16 for full description.

#### 3. Select Capillary Length\* and Armor Code:

Capillary and Armors	Code
5 feet, 1/4" Diameter SS Flexible Armor	<b>F</b>
5 feet, 3/16" Diameter SS Bendable Stiff Armor	<b>B</b>
5 feet, 1/8" Diameter Self Compensated Capillary	<b>SC</b>
5 feet, SS Flexible Armor over Self Compensated Capillary	<b>SCF</b>
5 feet, Polyvinyl Covered SS Armor	<b>P</b>

\* For capillary lengths over 5 ft, see limitations on pgs 17 - 19.

#### 4. Select Temperature Range Code:

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

Dual Scale Ranges: specify **F&C** Fahrenheit & Reamer 0° to 240° F&R  
0° to 150° F&R

#### 5. Select Bulb:

Bulbs
<b>51 Series</b> , Specify Length, pg 17
<b>71 Series</b> , Specify Length, pg 18
<b>81 Series</b> , Specify Length, pg 19

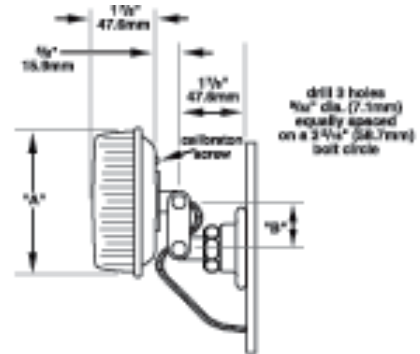
\* If selecting XX-11 Bulbs, indicate 1/2", 3/4" or 1" Adjustable Union if desired.

#### 6. Specify Additional Option Code at end of Part Number:

Additional Options	Code
Anti-Vibration Bearings	<b>(AV)</b>
Plexiglass Cover	<b>(PC)</b>
316 SS Fitting	<b>(SS)</b>

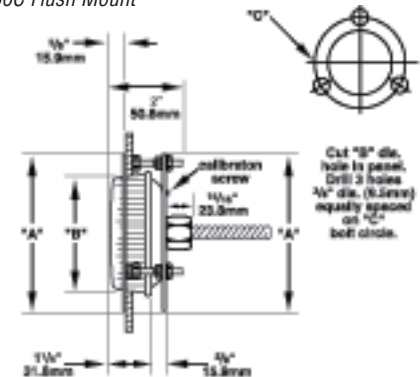
#### 7. Select Thermowells from Palmer Thermowells and Fittings catalog PW1100, if applicable.

Model 50B Wall Mount



MODEL NO.	DIM "A" INCHES	DIM "A" Mm.	DIM "B" INCHES	DIM "B" Mm.
35-B	4 1/2	111.1	1 1/2	38.1
50-B	5 7/8	149.2	2 1/4	57.2

Model 50C Flush Mount



MODEL NO.	DIM "A" INCHES	DIM "A" Mm.	DIM "B" INCHES	DIM "B" Mm.	DIM "C" INCHES	DIM "C" Mm.
35-C	5 1/2	139.7	4 1/4	111.1	5	127.0
50-C	7	177.8	5 3/4	143.2	6 1/2	165.1

**Part Number Example:**  
**35B5SC-30/60C81-5**

## Dial Thermometers Remote Reading

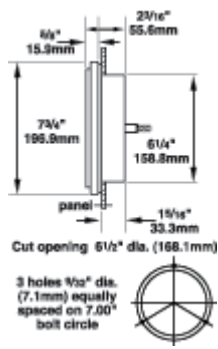
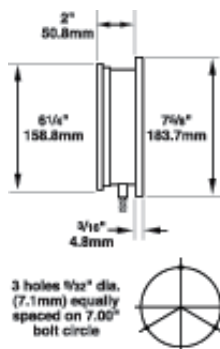
# Model 60B • 60C

## 6" Wall or Flush Mount Thermometers



Model 60B Wall Mount

Model 60C Flush Mount



### SPECIFICATIONS

**Form:** Fully Adjustable All Angle Case with Rotatable Dial Face.

**Case:** Aluminum case. 6" Dial (152mm).

**Wall Mounted Models: 60B** Chrome Plated Brass Slip Ring, Black Enamel finish, Black Back Flange.

**Flush Mounted Models: 60C** Cast Aluminum bezel held in place with 2 screws, Black Enamel finish.

**Fill:** Liquid Actuated, Mercury Actuated over 500°F.

**Dial Face:** Black Graduations and Numerals on White Glare-Free Background. Linear Scale with High-Visibility Tapered-Tip Black Pointer.

**Lens:** Plexiglass Standard.

**Capillary:** Stainless Steel Capillary protected by a 1/4" diameter Flexible Stainless Steel Armor. Specify Capillary length as required.

**Bulb:** Liquid Actuated Dials use 81 Series (pg 19). Mercury Actuated Dials use either 51 Series, or 71 Series, (pgs 17 and 18).

**System:** Liquid Actuated Dials use 1-B Systems (pg 19). Mercury Actuated Dials use either 5-B or 5-A Systems, (pgs 17 and 18).

**Calibration:** External Reset Calibration Screw on back of case.

**Accuracy:** ± One Scale Division.



### How To ORDER

#### 1. Select Dial Size and Case Style.

Dial Size and Case Style		Code
3 1/2" Dial	Wall Mount	60B
	Flush Mount	60C

#### 2. Specify Option Code after Code above: (if applicable)

Options	Code
Back Connected Thermometer	AR
Electrical Contact*	EC
MAX-MIN Indices*	MM

\* Not available together, see pg 16 for description.

#### 3. Select Capillary Length\* and Armor Code:

Capillary and Armor Codes	Code
5 feet, 1/4" Diameter SS Flexible Armor	F
5 feet, 3/16" Diameter SS Bendable Stiff Armor	B
5 feet, 1/8" Diameter Self Compensated Capillary	SC
5 feet, SS Flexible Armor over Self Compensated Capillary	SCF
5 feet Polyvinyl Covered SS Armor	P

\* For capillary lengths over 5 ft, see limitations on pgs 17 - 19.

#### 4. Select Temperature Range Code:

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

Dual Scale Ranges: specify **F&C** Fahrenheit & Reamer 0° to 240° F&R  
0° to 150° F&R

#### 5. Select Bulb:

Bulbs
51 Series, Specify Length, pg 17
71 Series, Specify Length, pg 18
81 Series, Specify Length, pg 19

\* If selecting XX-11 Bulbs indicate 1/2", 3/4" or 1" Adjustable Union if desired.

#### 6. Specify Additional Option Code at end of Part Number:

Additional Options	Code
Anti-Vibration Bearings	(AV)
316 SS Fitting	(SS)

#### 7. Select Thermowells, if applicable.

Calibration Services Available

# Model 35H • 50H

## Storage Tank Thermometers

The versatility of this instrument with its leak-proof construction and smooth bendable stiff armor makes it easy to install in jacketed tanks, agitated vessels and storage tanks where a rigid stem thermometer could not be used.

### SPECIFICATIONS

**Form:** Fully Adjustable All Angle Case with Rotatable Dial Face.

**Case:** Type 302 Stainless Steel Case, 3-1/2" Dial (88.9mm) Model 35-H or 5" Dial (127mm) Model 50-H, Storage Tank.

**Fill:** Mercury Actuated (Capillary lengths up to 250 ft) or Liquid Actuated (limited to Capillary lengths to 15 ft and Temperature Range of 500°F).

**Dial Face:** Black Graduations and Numerals on White Glare-Free Background. Linear Scale with High-Visibility Tapered-Tip Black Pointer.

**Lens:** Heavy Molded Glass cover, Thick Gasket sealed. Waterproof. Plexiglass optional.

**Fitting:** 1-1/4" UNEF -18 Swivel Nut. Nickel Plated Brass. Optional Fittings available.

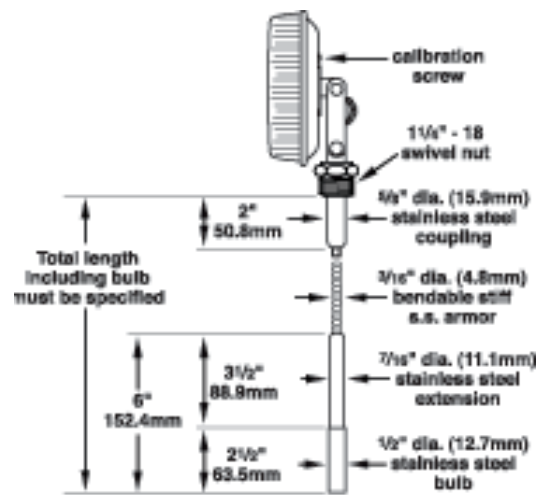
**Union:** Optional 3/4" or 1" NPT Brass Union available. (Model 1140-7 or 1140-8 respectively) See catalog PW1100, Thermowells and Fittings.

**Capillary:** 5 ft. of 3/16" diameter bendable stainless steel armor and bulb. Lengths longer than 5 ft. are optional.

**Bulb:** 1/2" diameter Stainless Steel Bulb.

**Calibration:** External Reset Calibration Screw on back of case.

**Accuracy:** ± One Scale Division.



MODEL NO.	DIM "A" INCHES	DIM "A" Mm.	DIM "B" INCHES	DIM "B" Mm.
35-H	4 3/4"	111.1	1 1/4"	34.9
50-H	5 7/8"	149.2	2 1/4"	57.2

### How To Order

#### 1. Select Dial Size Code:

Dial Size	Code
3 1/2" Dial	<b>35H</b>
5" Dial	<b>50H</b>

#### 2. Specify Capillary Length\* and Armor Code:

Capillary and Armor	Code
5 feet 3/16" Diameter SS Bendable Stiff Armor	<b>B</b>

\* For capillary lengths over 5 ft, see limitations on pgs 17 - 19.

#### 3. Select Temperature Range Code:

Temperature Ranges						
Fill	°F Range	°Div	Code	°C Range	°Div	Code
Mercury Actuated	-30 to 130°	1°	<b>-30/130F</b>	-30 to 60°	1°	<b>-30/60C</b>
	0 to 150°	1°	<b>0/150F</b>	-10 to 80°	1°	<b>-10/80C</b>
	0 to 240°	2°	<b>0/240F</b>	-10 to 120°	1°	<b>-10/120C</b>
	0 to 300°	2°	<b>0/300F</b>	-10 to 150°	1°	<b>-10/150C</b>
	0 to 400°	5°	<b>0/400F</b>	0 to 220°	2°	<b>0/220C</b>
	0 to 500°	5°	<b>0/500F</b>	0 to 280°	2°	<b>0/280C</b>
	0 to 600°	5°	<b>0/600F</b>	0 to 320°	2°	<b>0/320C</b>
	0 to 750°	5°	<b>0/750F</b>	0 to 400°	2°	<b>0/400C</b>
	200 to 750°	5°	<b>200/750F</b>	100 to 400°	2°	<b>100/400C</b>
	200 to 950°	5°	<b>200/950F</b>	100 to 500°	5°	<b>100/500C</b>
	200 to 1200°	10°	<b>200/1200F</b>			

Dual Scale Ranges: specify **F&C** Fahrenheit & Reamer 0° to 240° F&R  
Liquid Actuated Available up to 500°F 0° to 150° F&R

#### 4. Specify Length and Bulb:

Bulb	Code
6" Bulb (Standard)	<b>51 - 5</b>

Optional Lengths available.

Mercury Actuated bulb lengths to 250 ft

Liquid Actuated bulb lengths to 15 ft, and 500°F only.

#### 5. Specify Additional Option Code at end of Part Number:

Additional Options	Code
Anti-Vibration Bearings	<b>(AV)</b>
Plexiglass Cover	<b>(PC)</b>
316 SS Fitting	<b>(SS)</b>

#### 6. Select Union from Palmer Thermowells and Fittings catalog PW1100, if applicable.

**Part Number Example:**  
**35H5B0/300F51-5**

Calibration Services Available

(800) 421-2853 • FAX (828) 658-0728 • www.palmerwahl.com

**PALMER Wahl**  
INSTRUMENTATION GROUP



**Dial Thermometers**  
**Dual Sensing Option**  
**RTD or Thermocouple**

## Dual Sensing Dial Thermometers

### 3-1/2" and 5" Dial Thermometer with optional RTD or Thermocouple



Model 50AL Dual Sensing Dial Thermometer with Wahl TM500 Thermocouple Meter

See **Wahl Heat Prober®** catalog PW1220 for details about all our RTD and Thermocouple Meters

**Compatible with New Technology** — Easily integrated into a computerized monitoring or control system while retaining the traditional dial analog instrument as a fail-safe backup.

**Interchangeability with Existing Thermowells** — Upgrade to electronic sensing without mechanical changes in the process fittings and configuration, saving material and labor costs as well as system downtime.

**Continuous Accuracy Confirmation** — Independent mechanical and electronic output from a single installation provides ongoing accuracy confirmation as well as a manual fail-safe system.

**Critical Temperature Maintenance** — Maintain zero error readings at any critical temperature point by utilizing the mechanical unit's reset gear. Set the unit (either by factory or in the field) to zero error at the desired temperature. Factory setting includes a sentry seal so any tampering with calibration is evident.

**Easy-to-Read Dial** — Black numerals and graduations on a white, low-glare dial surface are easily read, resulting in fewer reading errors.

**Versatile** — A Data Logger can easily be incorporated to provide the instrument with a recording function.

**Configured for Your Application** — Palmer Dual Sensing Dial Thermometers are available with Wahl Instruments line of Heat-Prober Thermocouple and RTD Meters, as output and calibration devices. Consult the factory or your Palmer Representative to develop the right Dual-Sensing Dial Thermometer for your specific industry and application.

#### SPECIFICATIONS

**Add Dual Sensing Option to 35A, 35AL or 50A, 50AL Dial Thermometers** (see pages 4-5 for additional specifications).

**Form:** Fully Adjustable All Angle Case with Rotatable Dial Face or optional Fixed Back Connected.

**Case:** Polished Type 302 Stainless Steel Case. 3-1/2" Dial (88.9mm) Model 35A, 35AL, or 5" Dial (127mm) Model 50A, 50AL.

**Fill:** Liquid Actuated: 35AL, 50AL. Mercury Actuated: 35A, 50A.

**Dial Face:** Black Graduations and Numerals on White Glare-Free Background. Linear Scale with High-Visibility Tapered-Tip Black Pointer.

**Lens:** Heavy Molded Glass cover, Thick Gasket sealed. Waterproof. Plexiglass optional.

**Fitting:** 1-1/4" UNEF -18 Swivel Nut, Nickel plated Brass. Optional Fittings available.

**Stem:** Type 303 Stainless Steel.

**Stem Length:** Standard Lengths from 3-1/2" (88.9 mm) to 72" (1828mm). See "Stem Length" Table on Page 15. Measure stem length below Swivel Nut Fitting.

**Bulb:** .625" (15.9mm) diameter stem, Tapered Bulb Chamber to .437" (11.1mm).

**System:** Case Compensated System with Double Wound Direct Drive Bourdon Coil.

**Sensor:** Type J or K Thermocouple or Pt100 2, 3 or 4 wire Thin Film RTD. Other Sensors available on request.

**Connection:** RTD Meter Connection, Thermocouple Mini Connector, or Terminal Block with 1/2" Conduit Connector for RTD or Thermocouple.

**Calibration:** External Reset Calibration Screw on back of case.

**Accuracy:** Filled System  $\pm$  One Scale Division. For Accuracy of Thermocouple or RTD see Wahl Heat Prober® Catalog.



Calibration Services Available

# Dual Sensing Dial Thermometers

## 3-1/2" and 5" Dial Thermometer with optional RTD or Thermocouple

### How To ORDER

#### 1. Select Dial Size and Fill Code:

Dial Size and Fill		Code
3 1/2" Dial	Mercury Actuated	35A
	Liquid Actuated	35AL
5" Dial	Mercury Actuated	50A
	Liquid Actuated	50AL

#### 2. Specify Option Code after Code above: (if applicable)

Options	Code
Back Connected Thermometer	AR
Electrical Contact*	EC
MAX-MIN Indices*	MM

\* Not available together, see pg 16 for full description.

#### 3. Select Stem Length Code:

Stem Lengths								
Code	3.5	6	8	9	12	15	18	24
Length (in)	3-1/2"	6"	8"	9"	12"	15"	18"	24"
Length (mm)	89	152	203	229	305	381	457	610
Code	30	36	42	48	54	60	66	72
Length (in)	30"	36"	42"	48"	54"	60"	66"	72"
Length (mm)	762	914	1067	1219	1372	1524	1676	1828

Longer Lengths available upon request

#### 4. Select Temperature Range Code:

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

Dual Scale Ranges: specify **F&C**      Fahrenheit & Reamer    0° to 240° F&R  
0° to 150° F&R

**Part Number Example: 35A0/150FRT2M**



Mini Connector with Thermocouple



Terminal Block & 1/2" Conduit Connector

#### 5. Select Sensor Code:

Sensors	Code
Type J Thermocouple	J
Type K Thermocouple	K
Pt100-2 wire Thin Film RTD	RT2
Pt100-3 wire Thin Film RTD	RT3
Pt100-4 wire Thin Film RTD	RT4
Other Sensors available upon request	

#### 6. Select Electrical Connection Code:

Electrical Connection	Code
RTD Meter Connection to Wahl 392 Meter only	M
Thermocouple Mini Connector 2-pin, Color Coded for T/C type	MC
Terminal Block & 1/2" Conduit Connector for RTD or Thermocouple	T
Other Connections available upon request	

#### 7. Specify Additional Option Code at end of Part Number:

Additional Options	Code
Anti-Vibration Bearings	(AV)
Plexiglass Cover	(PC)
7/8"-22 Swivel Nut Fitting	(S)
316 SS Fitting	(SS)

#### 8. Select Thermowells from Palmer Thermowells and Fittings catalog PW1100, if applicable.

## Dial Thermometers Special Options



### Maximum Minimum

*Make any Palmer Dial Thermometer into a Maximum/Minimum indicator by adding this option.*

**Maximum and Minimum Indicators** — Red knob and pointer indicates **Maximum**. Green knob and pointer indicates **Minimum**. The two pointers can be easily reset as often as necessary. Simply rotate the red knob to the left until the maximum indicator makes contact with the pointer. Then rotate the green knob to the right until the minimum indicator also makes contact with the pointer. The instrument is then ready to use.

#### To order MAX-MIN RIGID or REMOTE THERMOMETERS

1. Specify Model Number for the Dial Thermometer of your choice.
2. Specify **MM** for Maximum-Minimum indicators after Model Number.
3. Follow Ordering Instructions indicated for the dial thermometer selected.

### Air or Soil Temperature

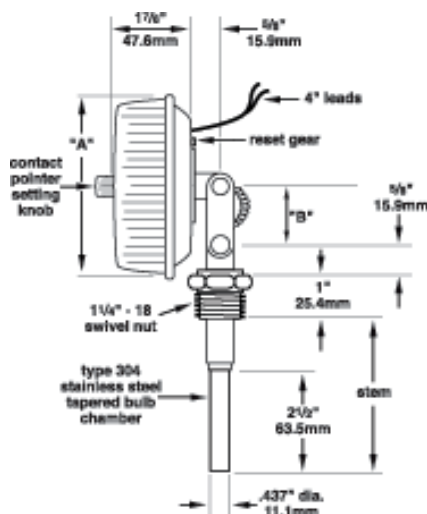


#### To order AIR or SOIL TEMPERATURE THERMOMETERS

(for General Specifications, see 35B or 50B, pgs 6-7)

1. Specify: **35B** (3-1/2" Dial) or **50B** (5" Dial).
2. Specify Length and Capillary Type: 1/4" Diameter Flexible Stainless Steel Armor, 5 ft Std. (Self Compensated Capillary recommended for lengths over 50 ft or where wide fluctuations in ambient temperature exist.)
3. Specify Range Code **-40/120F** (-40 to 120°F 1° Divisions).
4. Bulb: **Soil Temperature Bulb**: Type 304 Stainless Steel 12" long, 3/8" Diameter.

**Air Temperature Bulb**: Select by catalog number from 51 Series, or 71 Series. (pgs 18-19).



MODEL NO.	DIM "A" INCHES	Mm.	DIM "B" INCHES	Mm.
35-AEC	4 1/2"	111.1	1 1/2"	34.9
50-AEC	5 7/8"	149.2	2 1/4"	57.2

### Electric Contact

**Electric Contact** — The Palmer Contact Dial Thermometer can control up to 25 watts or 1/4 ampere. If higher current is involved, relays must be used. The dials can operate either rising or falling temperature. 4" leads from back of case.

**General Specifications** — The Electric Contact can be supplied with any model Rigid or Remote Reading Dial Thermometer. Please refer to the specifications of the model of your choice.

#### To Order Electric Contact:

1. Specify Model Number for the Dial Thermometer of your choice.
2. Specify **EC** for Electric Contact after Model Number.
3. Follow Ordering Instructions indicated for the dial thermometer selected.
4. Indicate if the Electrical Contact to be on the **Rise** or **Fall** as separate line item.



# 51 Series Remote Bulbs

## 5B Mercury Actuated Case Compensated Thermal System

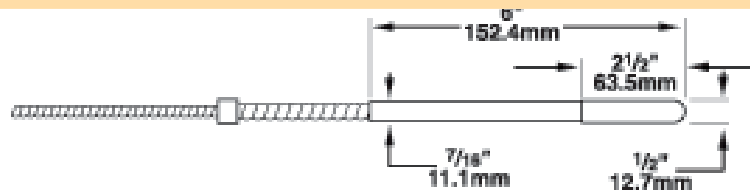
- Case Compensated Only.
- For Remote Reading Dial Thermometers.
- Capillary has Flexible Armor.

All Systems conform to ASME, ISA, SAMA or other codes designed as 5A, 5B, 1B Systems

Limitations include Remote Capillary lengths up to 50 ft. provided ambient temperature changes along the capillary will not exceed  $\pm 15^{\circ}\text{F}$ . Longer capillary lengths will require 5A systems. Direct Mount Thermometers have Stainless Steel stems limited to 10 ft. Consult Palmer Customer Service for further limitations.

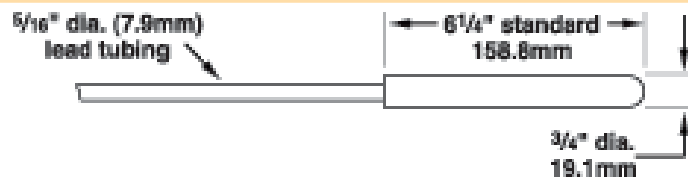
### No. 51-5

Plain bulb of stainless steel. Standard lengths: 6" and multiples of 6" up to 10 ft.



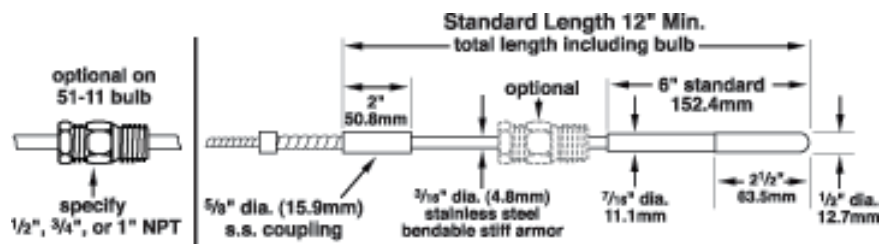
### No. 51-10

6" plain bulb of stainless steel, with covered lead. Maximum temperature not to exceed  $550^{\circ}\text{F}$ .



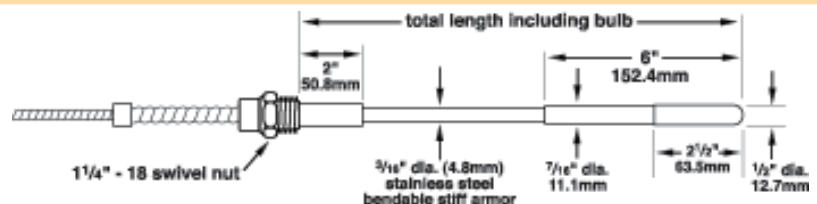
### No. 51-11

Bendable stiff armor between plain bulb and flexible armor. (Send sketch of application). Available with adjustable union connection at additional cost.



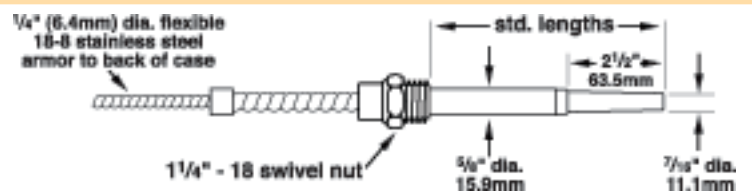
### No. 51-12

Bendable stiff armor between plain bulb and swivel nut. For use with union or union flange. See catalog PW1100 for fittings.



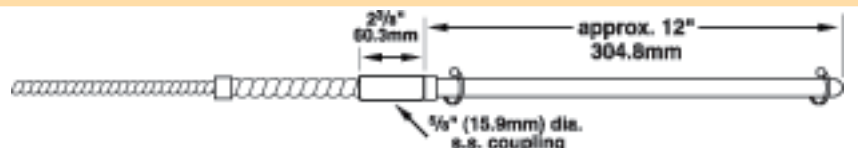
### No. 51-13

Tapered bulb chamber for well or union connection. Standard lengths: 3-1/2", 6", 8", 12" and multiples of 6" up to 10 ft. See catalog PW1100 series 1140 for wells or fittings.



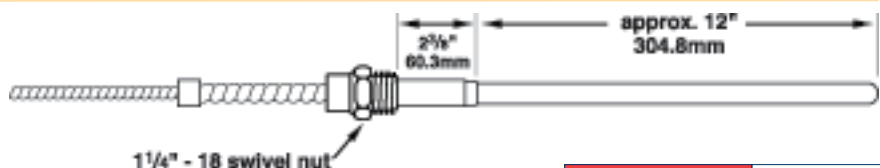
### No. 51-29

Plain air temperature bulb with removable rings for suspending in airstream.



### No. 51-30

Air temperature bulb for union connection and flanged union. See catalog PW1100 for fittings.



Calibration Services Available

# Dial Thermometers

## Remote Bulbs

### Thermal Systems

All Systems conform to  
ASME, ISA, SAMA or other  
codes designed as  
5A, 5B, 1B Systems

## 71 Series Remote Bulbs

### 5A Mercury Actuated Case and Self Compensated Thermal System

- Systems are Compensated by a Case Compensator and a 1/8" Diameter Stainless Steel Self-Compensating Capillary.
- For Remote Reading Dial Thermometers.
- Capillary has Flexible Armor.

Limitations include capillary lengths of 250 ft. Consult Palmer Customer Service for further limitations.

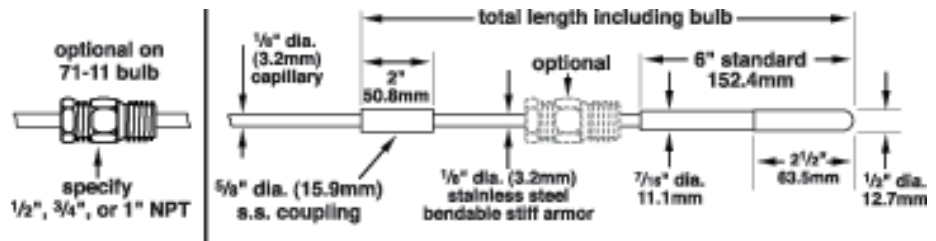
#### No. 71-5

Plain bulb of stainless steel. Standard lengths: 6" and multiples of 6" up to 10 ft.



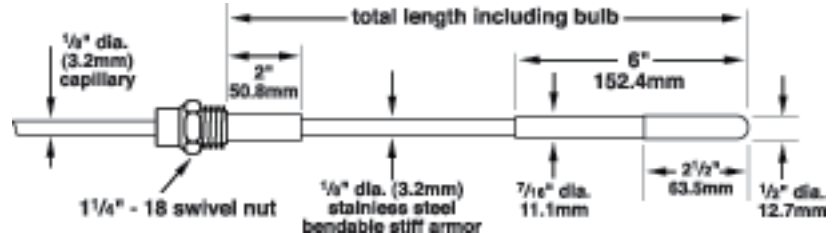
#### No. 71-11

Bendable stiff armor between plain bulb and self-compensating capillary. (Send sketch of application). Available with adjustable union connection at additional cost.



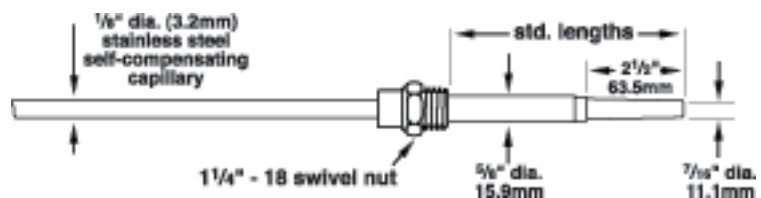
#### No. 71-12

Bendable stiff armor between plain bulb and swivel nut. For use with union or union flange. See catalog PW1100 for fittings.



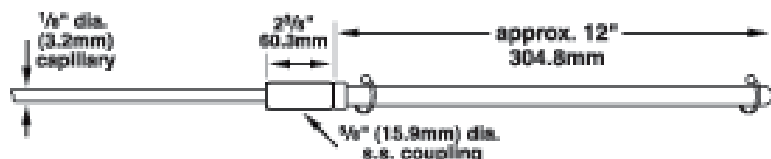
#### No. 71-13

Tapered bulb chamber for well or union connection. Standard lengths: 3-1/2", 6", 8", 12" and multiples of 6" up to 10 ft. See catalog PW1100 for wells or fittings.



#### No. 71-29

Plain air temperature bulb with removable rings for suspending in airstream.



#### No. 71-30

Air temperature bulb for union connection and flanged union. See catalog PW1100 for fittings.





# 81 Series Remote Bulbs

## 1B Liquid Filled Case Compensated Thermal System

- Case Compensation Only.
- For Remote Reading Dial Thermometers.
- Capillary has Flexible Armor.
- Maximum Temperature 500°F.

All Systems conform to ASME, ISA, SAMA or other codes designed as 5A, 5B, 1B Systems

Limitations include Remote Capillary lengths up to 15 ft. Rigid Mount Thermometers are limited to 48" stem lengths. Range limit of 500°F. Consult Palmer Customer Service for further limitations.

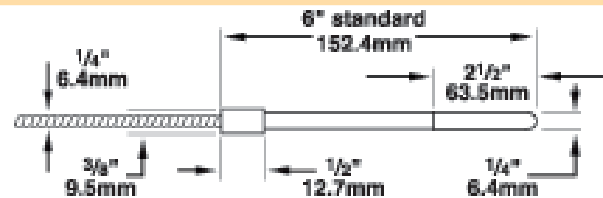
### No. 81-4

Bulb for .260" bore wells. Standard lengths: 4", 6", 9", 12", 18", 24", 36". Thermowells required in most applications. See catalog PW1100 for wells.



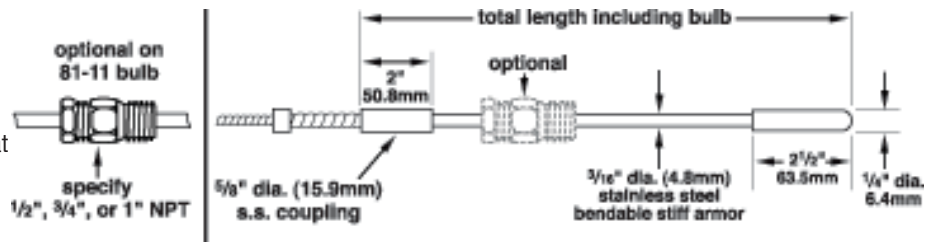
### No. 81-5

Plain bulb of stainless steel. Standard lengths: 6" and multiples of 6" up to 10 ft.



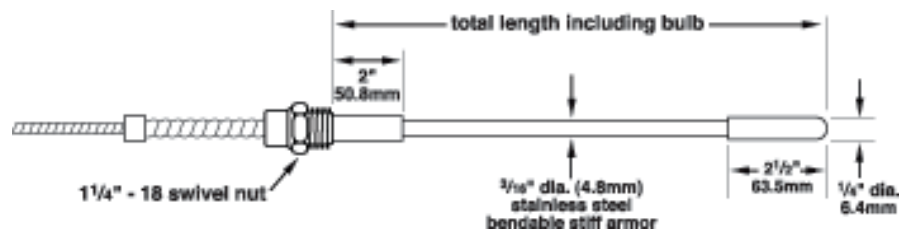
### No. 81-11

Bendable stiff armor between plain bulb and flexible armor. (Send sketch of application). Available with adjustable union connection at additional cost.



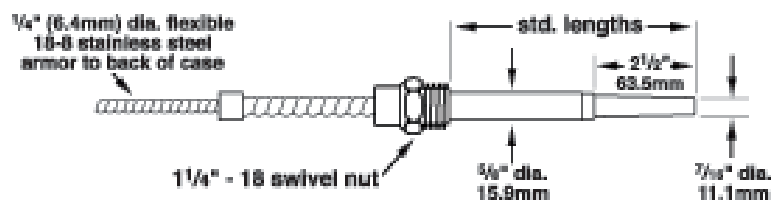
### No. 81-12

Bendable stiff armor between plain bulb and swivel nut. For use with union or union flange. See catalog PW1100 for fittings.



### No. 81-13

1 1/4" swivel nut with tapered bulb chamber for well or union connection. Standard lengths 3 1/2", 6", 8", 12" and multiples of 6" up to 36". See catalog PW1100 for wells or fittings.





**The World's Finest Manufacturers of  
Temperature, Pressure, and Humidity Instrumentation**



- Industrial Glass Thermometers
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- Pressure Gauges and Accessories
- Temperature and Pressure Recorders
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- Process Thermometers
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- Heat Prober® Meter/Probe Thermometer Systems
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- Digi-Stem® Digital Industrial Thermometers
- Temperature Transmitters and Switches
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- Heat Spy Monitor® Fixed Infrared Sensors
- In situ RTD and Thermocouple Probes and Connection Systems
- Thermistor Probes and Connection Systems
- Specialty Probes for OEM applications
- Probe extension Cables and Connectors



- Portable Electronic Temperature and Process Calibrators
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- Hand-Held RTD, Dual Thermocouple, and Combination Thermocouple and RTD Meters
- Hand-Held Pressure and Differential Pressure Meters, Temperature, Humidity, and Dew Point Meters
- Hand-Held Combination Thermocouple and RTD Meter
- Electronic Weather Stations

### Warranty

Manufacturer warrants all products listed in this catalog to be free from defects in material or workmanship under normal use and service. The Manufacturer agrees to repair or replace any product which upon examination is revealed to have been defective due to faulty workmanship or material if returned to our factory, transportation charges prepaid, within the product specific warranty period stated in the catalog by the manufacturer. This warranty is in lieu of all other warranties, expressed or implied and of all obligations or liabilities on its part for damages including but not limited to consequential damages, following the use or misuse of instruments sold by the Manufacturer. No agent is authorized to assume for Manufacturer any liability except as set forth above.

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