

Dial Thermometers

Rigid Dial

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

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
Liquid or Mercury Actuated	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
	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 & Reaumur 0° to 240° F&R; 0° to 150° F&R

5. Specify Additional Option Code at end of Part Number

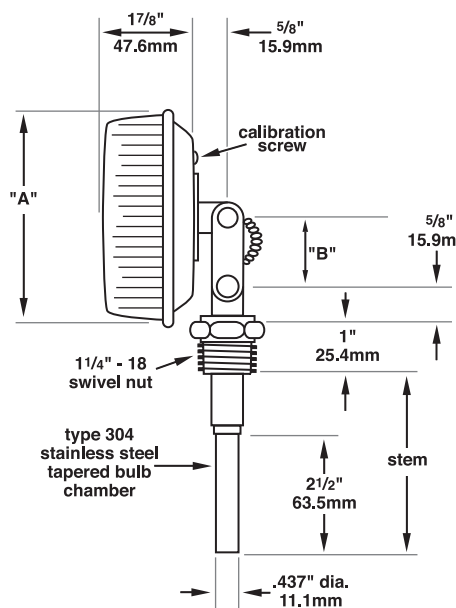
Additional Options	Code
Anti-Vibration Bearings	(AV)
Plexiglass Cover	(PC)
7/8"-22 Swivel Nut Fitting	(S)
316 SS Fitting	(SS)

6. Select Thermowells from Palmer Thermowells and Fittings catalog PW1100 (if applicable)

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



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 3/8	111.1	1 3/8	34.9
50-A	5 7/8	149.2	2 1/4	57.2

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