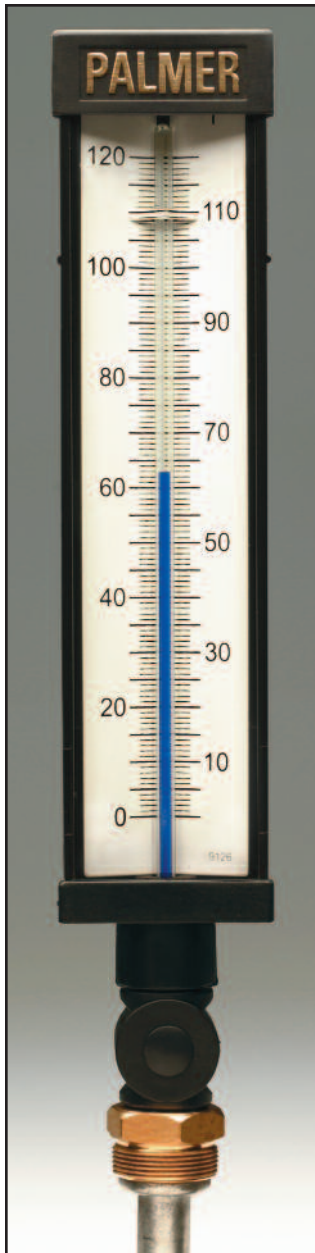


Model 9AL • 9FL • 9ALSB • 9FLSB Economy Industrial Thermometers



“SKY BLUE” Fill (SB) Environmentally Safe Models are filled with a mercury-free Blue Liquid. SB Models are available in 9" Cases, with either 3-1/2" or 6" Stem Lengths, Ranges up to 300°F. Mercury filled models are still available.

All Angle Adjustment: (pictured at right) Just two screws permit cases to be rotated 180° and stems to be positioned in 10° increments. Users can “infinitely” adjust Economy Line Industrial Thermometers to virtually any viewing angle required.

Easy Readability: Standard Lens front glass tube is “Red Reading” Mercury-Filled or Sky Blue Fill. Compact, yet visible 9" (229mm) Plastic or Aluminum, or 12" (305mm) Aluminum (only) cases, fitted with a “V” shaped white aluminum scale graduated with bold black lines and numerals.

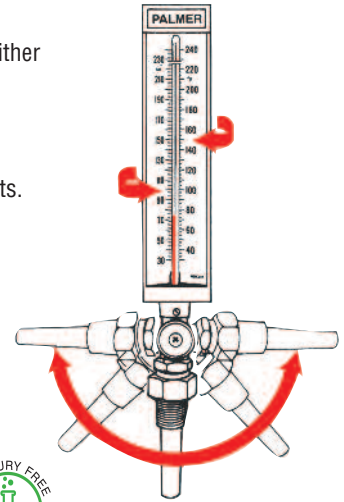
Accuracy: Economy Line Industrial Thermometers are calibrated against standards traceable to the National Institute of Standards and Technology (NIST) and are guaranteed accurate to ±1 scale division.

Construction: User selection of either tough, black-finished molded high temperature Plastic Case (9FL Models) or extruded, black-finished Aluminum Case (9AL or 12AL Models). Glass crystal, machined Brass Swivel Nut, and cast aluminum stem and seat are standard on all 3-1/2" stems.

Connection Assembly: Tapered Bulb Chamber allows maximum metal-to-metal contact with matching tapered thermowell for fast response and increased accuracy. Brass Swivel Nut is industry standard 1-1/4"-18 UNEF thread.

Range and Stem Length Selection: Full selection of Fahrenheit or Dual F & C Range scales available from -40 to 400°F (-40 to 204°C). Stock stem lengths are 3.5"(89 mm), 6"(152 mm), 8"(203 mm), 9"(229 mm) and 12"(305 mm).

Air Duct Construction: Air Duct Models feature a super-sensitive bare bulb protected by a 3/4" diameter perforated aluminum bulb guard. This design allows exposure to circulating air while still protecting the glass tube from any impact.



Environmentally Safe, Sky Blue Fill,
Industrial Thermometer



9AL, 9FL Standard Range Codes			
°F Code	°F Div	Dual, °F & °C Code	°F/°C Div
-40/110F	2°	-40/110F&C	2°F/2°C
0/120F	1°	0/120F&C	1°F/0.5°C
0/160F	2°	0/160F&C	2°F/0.5°C
20/180F	2°	20/180F&C	2°F/1°C
30/240F	2°	30/240F&C	2°F/1°C
30/300F	2°	30/300F&C	2°F/1°C
50/400F*	5°	50/400F&C*	5°F/2°C
100/550F	NA	100/550F&C	NA

* AL only, and not available in “Sky Blue” Fill

9AL, 9FL Base Model Numbers									
		Aluminum Case (AL)				Plastic Case (FL)			
		Mercury Fill		Sky Blue Fill (SB)		Mercury Fill		Sky Blue Fill (SB)	
Case Size		9" Scale*							
Bulb Type		Tapered	Air Duct (AD)	Tapered	Air Duct (AD)	Tapered	Air Duct (AD)	Tapered	Air Duct (AD)
Stem Length	3.5" (89mm)	9AL3.5	NA	9ALSB3.5	NA	9FL3.5	NA	9FLSB3.5	NA
	6" (152mm)	9AL6	9ALAD6	9ALSB6	9ALADSB6	9FL6	9FLAD6	9FLSB6	9FLADSB6
	8" (203mm)	9AL8	NA	9ALSB8	NA	9FL8	NA	9FLSB8	NA
	9" (229mm)	9AL9	NA	9ALSB9	NA	9FL9	NA	9FLSB9	NA
	12" (305mm)	9AL12	9ALAD12	9ALSB12	9ALADSB12	9FL12	9FLAD12	9FLSB12	9FLADSB12

* Optional 12" Case available, Aluminum only.

Model 9AL • 9FL • 9ALSB • 9FLSB

**Economy
Industrials**

Specifications

Case Length: 9" (220mm) Plastic or Aluminum Case, optional 12" (305mm) Aluminum.

Case Material: Painted Aluminum (AL) or Molded Plastic (FL).

Case Style: All Angle Adjustable.

Crystal: Glass Crystal Standard.

Scale: High visibility V-shaped painted white aluminum scale, black markings.

Glass Tube: Mercury Fill: Red Reading Lens glass, individually calibrated, thoroughly annealed and aged for permanent accuracy.

Sky Blue Fill: Magnified Lens; highly visible.

Fill: "Red-Reading" Mercury Fill, or Sky Blue Fill (SB Models)

Accuracy: Accurate to ± 1 scale division.
Fitting: 1-1/4"-18 UNEF machined Brass Swivel Nut.

Stem Material: Standard Cast Aluminum Stem and Seat.

Bulb: Choice of Tapered Bulb Chamber or perforated Air Duct design.

Calibration: Calibrated to NIST traceable standards.

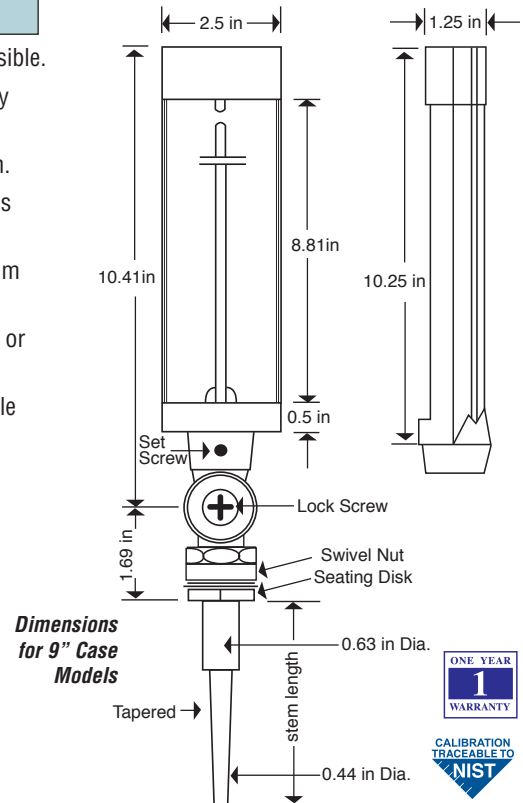
Ordering Information

9AL, 9FL Option Codes

Code	Option Description
12	12" (305 mm) Case Substitute "12" in place of "9" inch Scale in Base Model No. Table
(B)	Brass Stem and Seat
(PC)	Plastic Crystal
SB	Sky Blue Fill
(S)	Stainless Steel Stem/Seat material
58	Adjustable, Tilting Air Duct Flange Order Part No. "58" as a separate item
1140-9 or 1140-9	Flanged Union Connection Order Part No. 1140-9 or 1141-9

Standard three holes drilled in flange; 9/32" (7.1 mm) diameter equally spaced on 2-5/16" (57.7 mm) diameter bolt circle.

Specify either: Model 1140-9: 0.75" (19.1 mm) Flanged Union Connection, or Model 1141-9: 2.5" (63 mm) Extended Neck Flanged Union.



ONE YEAR
1
WARRANTY

CALIBRATION
TRACEABLE TO
NIST

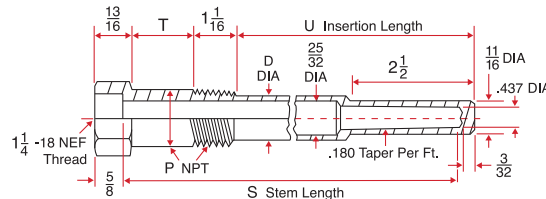
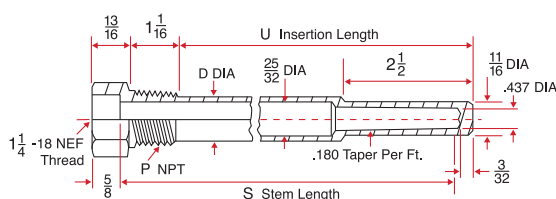
Part Number Example

Base Model No.	Stem Length	Temp. Range	Option Code
9FLAD	6	30/240F&C	(S)
9" Case, Plastic Case Air Duct Mercury Fill	6" Stem	30/240°F & 0/114°C Dual Scale Range	Stainless Steel Stem and Seat

Economy Thermowells for Industrial Thermometers

Well Material	Regular Series Thermowells			Lagging Extension Thermowells			
	Stem Length "S"	Insertion Length "U"	Model Number	Stem Length "S"	Insertion Length "U"	Lagging Extension "T"	Model Number
Cast Brass	3.5"	2.5"	1140-203-01A	3.5"	1.75"	1"	1141-203-01A
Cast Brass	6"	5"	1140-206-01A	6"	2.5"	2.5"	1141-206-01A
Mach. Brass	8"	7"	1140-208-01	8"	4"	3"	1141-208-01
Mach. Brass	9"	8"	1140-209-01	9"	5"	3"	1141-209-01
Mach. Brass	12"	11"	1140-212-01	12"	8"	3"	1141-212-01

For a full listing of Industrial Thermometer Thermowells & Union Connections, please request catalog No. PW1100.



Air Duct Stem Model with bare bulb

Register your product at www.palmerwahl.com/register

Specifications subject to change without notice

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