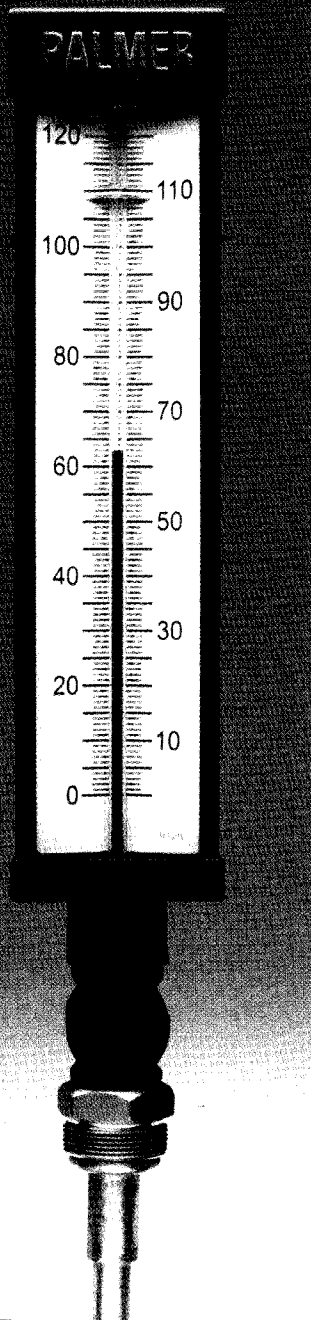


# Industrial Thermometers

## Type 9AL • 9FL • 9ALSB • 9FLSB



Environmentally Safe, Sky Blue Fill Industrial Thermometer

• **Flex Angle Adjustment:** 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 (red spirit-fill or Sky Blue fill option). Compact, yet visible 9" (229mm) or 12" (305mm) cases are 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.

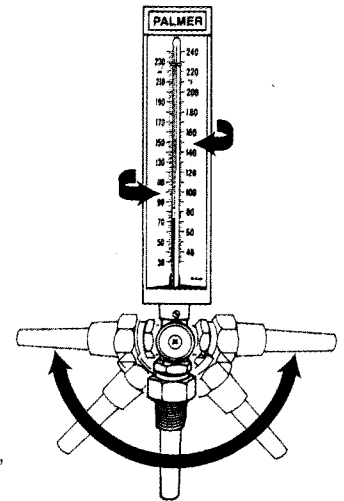
• **Construction:** User selection of either tough, black-finished molded high temperature case material (9FL Models) or extruded, black-finished aluminum case (9AL or 12AL Models). Glass crystal, machined brass swivel nut, and cast aluminum stem and seat are standard on all 3.5" stems. Brass stem and seat on all other stem lengths.

• **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 NEF thread.

• **Range and Stem Length Selection:** Full selection of Fahrenheit or dual, Fahrenheit/Celsius range scales available from -40°F (-40°C) to 550°F (290°C). Stock stem lengths are 3.5" (89mm), 6" (152mm), 8" (203mm), 9" (229mm), and 12" (305mm).

• **Air Duct Construction:** Air Duct Option Models (9FLAD and 9ALAD) feature a super-sensitive bare bulb protected by a 3/4" diameter perforated brass bulb guard. This design allows exposure to circulating air while still protecting the glass tube from impact during shipping, installation, or use. See detail illustration, page 3.

• **NEW Environmentally Safe Models:** "Sky Blue" models are filled with a non-toxic, mercury-free liquid. SB models are available in 9" cases only, 3-1/2" and 6" stem lengths up to 300°F.



### AVAILABLE TEMPERATURE RANGES

Fahrenheit Ranges	Div	Dual, F & C Ranges	Div
-40 to 110°F	2°F	-40 to 10°F / 40 to 43°C	2°F/2°C
0 to 120°F*	1°F	0 to 120°F / -17 to 49°C	1°F/0.5°C
0 to 160°F	2°F	0 to 160°F / -17 to 49°C	1°F/0.5°C
20 to 180°F	2°F	20 to 180°F / -6 to 82°C	2°F/1°C
30 to 240°F*	2°F	30 to 240°F / 0 to 114°C	2°F/1°C
30 to 300°F	2°F	30 to 300°F / -1 to 149°C	2°F/1°C
AL only 50 to 400°F	5°F	50 to 400°F / 10 to 204°C	5°F/2°C
AL only 100 to 550°F	5°F	100 to 550°F / 40 to 290°C	5°F/2°C

\* available in environmentally safe "Sky Blue" Fill

### BASE MODEL NUMBERS

Case Size	ALUMINUM CASE				PLASTIC CASE		SKY BLUE FILL PLASTIC CASE	SKY BLUE FILL ALUMINUM CASE
	9" Scale	12" Scale	9" Scale	12" Scale	9" Scale	9" Scale	9" Scale	9" Scale
Bulb Type	Tapered	Tapered	Air Duct	Air Duct	Tapered	Air Duct	Tapered	Tapered
Stem Length:								
3.5" (89mm)	9AL3.5	12AL3.5	N/A	N/A	9FL3.5	N/A	9FLSB3.5	9ALSB3.5
6" (152mm)	9AL6	12AL6	9ALAD6	12ALAD6	9FL6	9FLAD6	9FLSB6	9ALSB6
8" (203mm)	9AL8	12AL8	N/A	N/A	9FL8	N/A	N/A	N/A
9" (229mm)	9AL9	12AL9	N/A	N/A	9FL9	N/A	N/A	N/A
12" (305mm)	9AL12	12AL12	9ALAD12	12ALAD12	9FL12	9FLAD12	N/A	N/A

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# Type 9AL • 9FL • 9ALSB • 9FLSB

## Industrial Thermometers

### SPECIFICATIONS

<b>Form</b>	All angle adjustable
<b>Case</b>	Painted aluminum (9AL) or molded plastic (9FL)
<b>Case Size</b>	9" (220mm) Plastic case; 9" or 12" (305mm) aluminum case
<b>Stem Material</b>	Standard cast aluminum stem and seat
<b>Stem Length</b>	Listed in "Base Model" table, page 2
<b>Ranges</b>	Listed in "Range" table, page 2
<b>Bulb</b>	Choice of tapered bulb chamber or perforated air duct design
<b>Fitting</b>	1-1/4" - 18 NEF machined brass swivel nut
<b>Scale Face</b>	High visibility V-shaped painted white aluminum scale, black markings
<b>Glass Tube</b>	"Red Reading" mercury fill, Sky Blue fill, or red spirit fill
<b>Crystal</b>	Glass crystal standard
<b>Accuracy</b>	Accurate to $\pm 1$ scale division
<b>Calibration</b>	Calibrated to NIST traceable standards
<b>Warranty</b>	One year limited warranty

### ORDERING INFORMATION AND OPTIONS

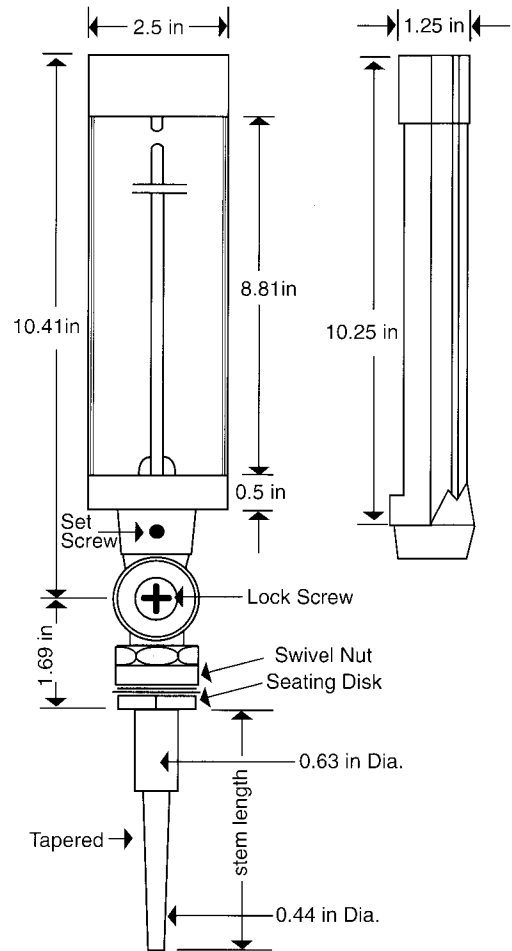
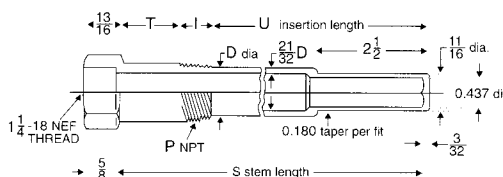
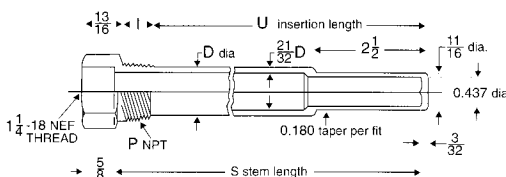
Options Description	How to Order
Brass stem and seat	Option code "B"
Stainless Steel stem/seat material	Option code "S"
Red Spirit Fill (300°F/150°C limit)	Option code "RS"
7" (178mm) Case	Substitute "7" in place of "9" or "12" in Base Model No. Table
Adjustable, Tilting Air Duct Flange	Order Part No. 58 as a separate item
Flanged Union Connection	Order Part No. 1140-9 or 1141-9, see p.6
Plastic Crystal	Option code "G"

Sample Model Number	Base Model No.	Temp. Range	Option Code
9FLAD6	9FLAD6	30/240F & C	B
Sample Description	9" case Plastic case Air duct Stem in 6" length	30/240°F & 0/114°C Dual Scale range	Brass Stem and Seat

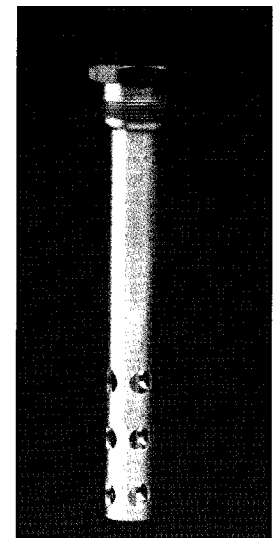
### ECONOMY THERMOWELLS

Well Material	REGULAR SERIES THERMOWELLS			LAGGING EXTENSION THERMOWELLS			
	Stem Igth. "S"	Insertion Igth. "U"	Model No.	Stem Igth. "S"	Insertion Igth. "U"	Lagging Ext. "T"	Model No.
Cast brass	3.5"	2.5"	1140-230-01A	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 and Union Connections, Please Request catalog No. 1100



Reference Dimensions for 9" Case Models



Air Duct Stem Model with bare bulb

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