

VAPOR ACTUATED THERMOMETER

REOTEMP's Vapor Actuated Thermometers can be fitted into a large variety of temperature indicating applications. Manufactured to the highest standards, these instruments are ideal for remote reading. Vapor actuated thermometers, are not subject to indicator error due to ambient temperature variations along the capillary tube system, and will give excellent readings provided the measured temperature is above or below ambient temperature.

Note: Vapor instruments have progressive non-linear graduations, and are best read in the upper 2/3 of the dial range. Many ranges are available between -40°F and +350°F, and care should be exercised to select a range that will locate the operating temperatures within the upper 2/3 of the dial range.



Note: Thermowells should be used whenever the stem or bulb would be exposed to pressure, corrosion, velocity, abrasion or shear forces. Thermowells also make it possible to remove the thermometer without losing pressure or the contents of the process.



Custom Logo



Made in the USA

FEATURES / BENEFITS

- Accuracy ± 1 Scale Division (Upper 2/3 Scale)
- Ideal for Remote Reading, such as Panel Installation
- Capillary Lengths of 1 to 100 Feet
- Stainless Steel Sealed Construction
- Variety of Flanged or U-Clamp Mounting Options
- Brass and 316SS Thermowells for Vapor-Actuated Bulbs Available.

SPECIFICATIONS

Accuracy	± 1 Scale Division (Upper 2/3 Scale)
Dial Size	2", 2 1/2", 3 1/2", 4 1/2"
Ranges	Over twenty °F and °F/°C ranges available, from -40°F to 350°F. For higher temperature ranges, please call REOTEMP to inquire about gas-actuated vapor thermometers.
Case Material	All-Stainless Steel, except: VA45FL (Aluminum) and VA45TB (Phenolic)
Bulbs	Stainless Steel or Copper. Bulb O.D. 7/16" (threaded), 3/8" (plain). Bulb lengths vary from 2 1/2" to 9 1/4" depending on capillary length.
Pointer	Standard Adjustable
Lens	Polycarbonate or Glass
Process Connection	Plain Bulb, 1/2" NPT Union, 1/2" NPT sliding union on 12" bendable extension, or thermowell.
Bourdon Tube	Phosphor Bronze
Movement	Brass with Precision Gearing
Dial Material	Aluminum with white finish and black markings. Other colors available upon request.
Capillary	Copper, copper with bronze braid armor, stainless steel, stainless steel with stainless steel armor. Available lengths from 1-100ft.
Applications	Control panels, chemical processing, pipelines, food processing, OEM applications, ovens, solar heating, refrigeration, etc.

VAPOR ACTUATED THERMOMETER

HOW TO ORDER: Choose options to build a part number. For example: **V20FRF23D05L2**

V

20FR

23

D

CASE STYLE						TEMPERATURE RANGE	CAPILLARY & BULB MATERIAL															
 Front Flanged (Panel Mount)	Part #	Dial Size	Case Material	Lens Material	Connection Location	Fahrenheit Ranges 20 = -40°F to 60°F 30 = -40°F to 100°F 32 = -20°F to 120°F 72 = 0°F to 180°F 49 = 0°F to 150°F 80 = 20°F to 220°F 50 = 40°F to 240°F 56 = 0°F to 250°F 60 = 30°F to 300°F 68 = 100°F to 350°F	<table border="1"> <thead> <tr> <th>Code</th> <th>Capillary & Bulb</th> <th>Capillary Protection</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Tin Plated Copper</td> <td>None</td> </tr> <tr> <td>C</td> <td>Copper</td> <td>Bronze Braid</td> </tr> <tr> <td>D</td> <td>316SS</td> <td>None</td> </tr> <tr> <td>E</td> <td>316SS</td> <td>SS Armor</td> </tr> </tbody> </table>	Code	Capillary & Bulb	Capillary Protection	A	Tin Plated Copper	None	C	Copper	Bronze Braid	D	316SS	None	E	316SS	SS Armor
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	A	Tin Plated Copper	None																			
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	D	316SS	None																			
E	316SS	SS Armor																				
20FR	2"	SS	Polycarbonate**	Rear																		
25FR	2.5"	SS	Polycarbonate**	Rear																		
35FR	3.5"	SS	Polycarbonate**	Rear																		
45FR	4.5"	SS	Polycarbonate**	Rear																		
 U-Clamp	20UR	2"	SS	Polycarbonate**	Rear	Dual Scale Ranges 21 = -40°F to 60°F & -40°C to 15°C 31 = -40°F to 110°F & -40°C to 40°C 33 = -20°F to 120°F & -30°C to 50°C 73 = 0°F to 180°F & -20°C to 80°C 79 = 0°F to 150°F & -15°C to 65°C 81 = 20°F to 220°F & 0°C to 105°C 51 = 40°F to 240°F & 0°C to 115°C 57 = 0°F to 250°F & -20°C to 120°C 61 = 30°F to 300°F & 0°C to 150°C 66 = 100°F to 350°F & 40°C to 175°C																
	25UR	2.5"	SS	Polycarbonate**	Rear																	
	35UR	3.5"	SS	Polycarbonate**	Rear																	
 Rear Flanged (Surface Mount) RR RB	20RR	2"	SS	Polycarbonate**	Rear																	
	35RR	3.5"	SS	Polycarbonate**	Rear																	
	35RB	3.5"	SS	Polycarbonate**	Bottom																	
	45RR	4.5"	SS	Polycarbonate**	Rear																	
	45RB	4.5"	SS	Polycarbonate**	Bottom																	
	45TB	4.5"	Phenolic	Glass	Bottom																	
 Other Styles SB DA	35SB	3.5"	SS	Polycarbonate**	Adjustable Bracket Mount																	
	45SB	4.5"	SS	Polycarbonate**	Adjustable Bracket Mount																	
	35DA	3.5"	SS	Polycarbonate**	Direct Adjustable Mount with 3.4" Bulb & 1/2" NPT																	
	45DA	4.5"	SS	Polycarbonate**	Direct Adjustable Mount with 3.4" Bulb & 1/2" NPT																	

Need Higher Temperature Ranges? Call REOTEMP customer service to inquire about gas-actuated vapor thermometers.

*Glass Lens Available, specify "Glass Lens"

**Polycarbonate Lens Available, specify "Polycarbonate Lens"

For other case styles connection locations, specify model and range only. Example: **V45DA-80**

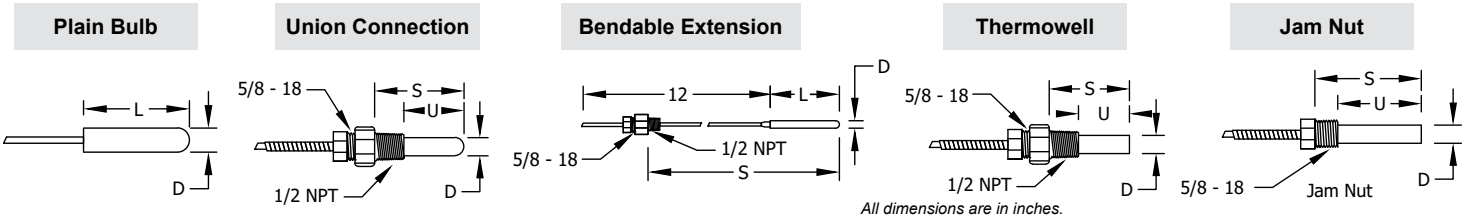
05

L2

CAPILLARY LENGTH IN FEET	PROCESS CONNECTION																																	
??? = Capillary Length in Ft. (Standard Length is 5 ft.) Capillary available in lengths 1-100 ft. Note: Capillary Lengths over 5 feet affect bulb length see table on page 151.	Code	Connection	Material																															
	J1	None (Plain Bulb)	N/A																															
	J2	Jam Nut Only	Brass (For Brass Well)																															
	J3	Jam Nut Only	Nickel Plated Brass																															
	K2	1/2" NPT Union	Brass																															
	L2	1/2" NPT Union	316SS																															
	M2	1/2" Sliding Union on Bendable Extension	316SS (With 316SS Capillary ONLY)																															
	???	Thermowell .447 Bore	See Chart to Right																															
				<table border="1"> <thead> <tr> <th>Thermowells with .447 Bore for Vapor-actuated Bulbs (Except M2)</th> <th>1/2" NPT Brass</th> <th>3/4" NPT Brass</th> <th>1/2" NPT 316SS</th> <th>3/4" NPT 316SS</th> </tr> </thead> <tbody> <tr> <td>(Bulb #1) 1-10 ft. Capillary</td> <td>12B</td> <td>13B</td> <td>12S</td> <td>13S</td> </tr> <tr> <td>(Bulb #2) 11-25 ft. Capillary</td> <td>22B</td> <td>23B</td> <td>22S</td> <td>23S</td> </tr> <tr> <td>(Bulb #3) 26-50 ft. Capillary</td> <td>32B</td> <td>33B</td> <td>32S</td> <td>33S</td> </tr> <tr> <td>(Bulb #4) 51-75 ft. Capillary</td> <td>42B</td> <td>43B</td> <td>42S</td> <td>43S</td> </tr> <tr> <td>(Bulb #5) 76-100 ft. Capillary</td> <td>52B</td> <td>53B</td> <td>52S</td> <td>53S</td> </tr> </tbody> </table>	Thermowells with .447 Bore for Vapor-actuated Bulbs (Except M2)	1/2" NPT Brass	3/4" NPT Brass	1/2" NPT 316SS	3/4" NPT 316SS	(Bulb #1) 1-10 ft. Capillary	12B	13B	12S	13S	(Bulb #2) 11-25 ft. Capillary	22B	23B	22S	23S	(Bulb #3) 26-50 ft. Capillary	32B	33B	32S	33S	(Bulb #4) 51-75 ft. Capillary	42B	43B	42S	43S	(Bulb #5) 76-100 ft. Capillary	52B	53B	52S	53S
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THERMOMETERS

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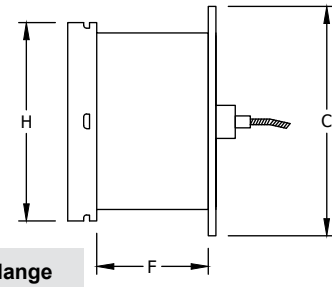
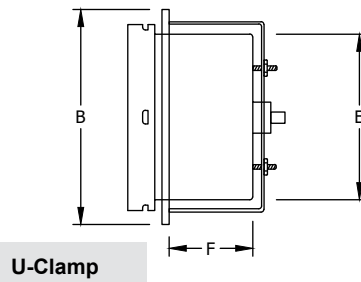
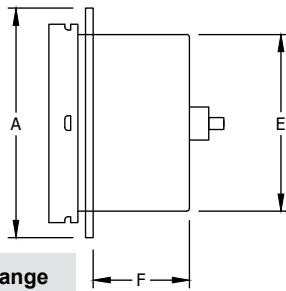
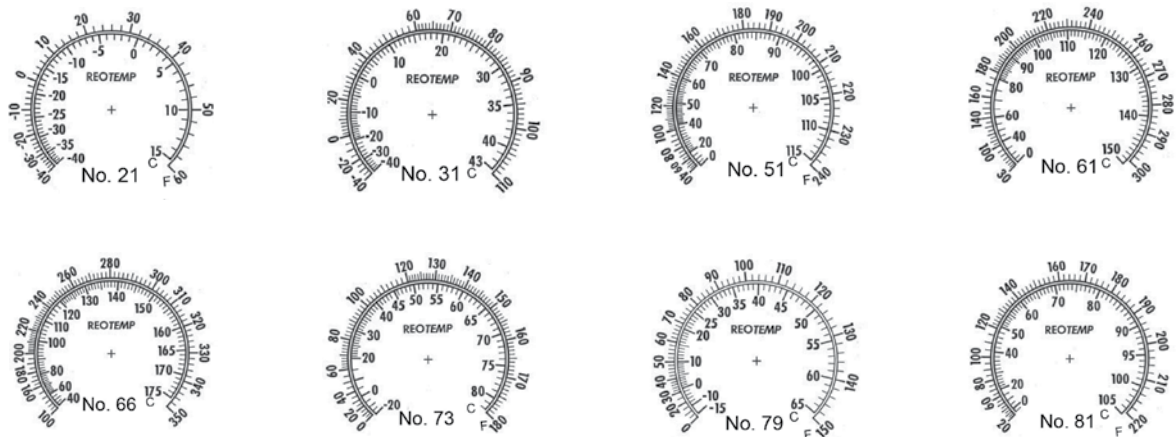
STANDARD BULB DIMENSIONS

Capillary Length	Plain Bulb		Union Connection			Bendable Extension (Fits .385 Bore)			Thermowell		
	L	D	U	S	D	L	S	D	U	S	D
(Bulb #1) 1-10 ft. Capillary	2 1/2" (1-5 ft.); 3 7/16" (6-10 ft.)	3/8"	1 13/16"	2 3/8"	7/16"	2 1/2" (1-5 ft.); 3 7/16" (6-10 ft.)	3-13"; 4-14"	3/8"	1 15/16"	2 1/2"	9/16"
(Bulb #2) 11-25 ft. Capillary	3 7/16"	3/8"	1 1/2"	3 1/4"	7/16"	3 7/16"	4-14"	3/8"	2 5/8"	3 3/8"	9/16"
(Bulb #3) 26-50 ft. Capillary	4 7/8"	3/8"	4 1/2"	5 1/4"	7/16"	4 7/8"	5-15"	3/8"	4 5/8"	5 3/8"	9/16"
(Bulb #4) 51-75 ft. Capillary	7 7/8"	3/8"	6 1/2"	7 1/4"	7/16"	7 7/8"	8-18"	3/8"	6 5/8"	7 3/8"	9/16"
(Bulb #5) 76-100 ft. Capillary	10 7/8"	3/8"	8 1/2"	9 1/4"	7/16"	10 7/8"	11-21"	3/8"	8 5/8"	9 3/8"	9/16"

All dimensions are in inches.

Dial Faces

Typical dial are faces shown here. A complete list is shown on page 21. Operating temperatures should be in upper 2/3 of selected range. For temperatures above or below those shown, ask for information on REOTEMP Gas Actuated Thermometers.



CASE AND MOUNTING DIMENSIONS

Dial	A	B	C	D	E	F	G	H	J
2"	2.94"	2.25"	2.94"	1.25" R	2.05"	0.98"	1.28" R	2.3"	0.14"
2 1/2"	3.69"	2.81"	-	1.66" R	2.56"	1"	-	-	0.17"
3 1/2"	4.75"	3.97"	4.75"	2.16" R	3.59"	1.41" RF 0.75" UC, FR	2.16" R	3.69"	0.16"
4 1/2"	5.88" FR 6.31" FL	-	5.88" RR, RB 5.83" TB	2.69" R -	4.59"	1.41" RF 0.75" UC, FF 2.56" TB 1.63" FL	2.69" R	4.69"	0.22"

All dimensions are in inches.