



# DIAL THERMOMETER



## Flush Mount Front Flange Case

Miljoco vapor dial thermometers are manufactured to the highest standards for a wide range of uses and may be fitted into almost any temperature reading application. These instruments are ideal for obtaining readings from remote locations. Being vapor actuated, they are not subject to any ambient temperature variations along the tube system and give excellent readings both above and below ambient. Vapor instruments have progressive graduations and are best read in the upper two-thirds of the range. Many ranges are available between -40°F and 450°F. Front flange thermometers are designed to be installed in a panel using three screws from the front.

## Remote Reading

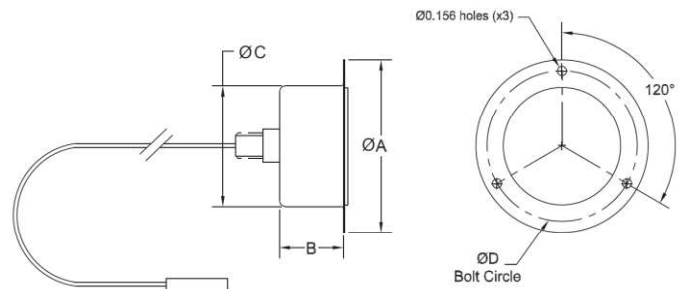


V2036

## General Specifications

- CASE:** 300 series stainless steel
- LENS:** Polycarbonate, press-in (2" only) or threaded
- DIAL:** Aluminum with white finish and black markings
- POINTER:** Black, adjustable.
- MOVEMENT:** Brass with precision gearing
- BOURDON TUBE:** Phosphor Bronze
- ACCURACY:** ±One scale division
- TUBE SYSTEM:**
  - CAPILLARY TUBING: 60" tinned-plated copper (std.)
  - CONNECTION: Plain
  - SENSING BULB: Nickel-plated copper bulb, Ø 7/16" Other tube systems and capillary lengths available - see Page 59
- AMBIENT TEMPERATURE:** -40 to 140°F (-40 to 60°C)

## Models & Dimensions (in.)



## To Order

Select a **Model Number**, then see **Page 59 & 60** for temperature range and tube system selections

## Options

- Tubing Strain Relief     Case Sealant
- Silicone Dampening     Weephole
- Over Range Protection     Lens O-Ring

Model	Dial Size	Case Mat'l	Outlet	Lens	A	B	C	D
V2036	2"	SS	Rear	Press-in	2.94	1.09	2.06	2.56
V2036P	2"	ABS	Rear	Press-in	2.94	1.09	2.06	2.56
V2037	2"	SS	Rear	Threaded	2.94	1.09	2.06	2.56
V2036L	2"	SS	Lower	Press-in	2.94	1.09	2.06	2.56
V2037L	2"	SS	Lower	Threaded	2.94	1.09	2.06	2.56
V2537	2½"	SS	Rear	Threaded	3.48	1.09	2.56	3.20
V2537L	2½"	SS	Lower	Threaded	3.48	1.09	2.56	3.20
V3537	3½"	SS	Rear	Threaded	4.30	1.09	3.50	4.00
V3537L	3½"	SS	Lower	Threaded	4.30	1.09	3.50	4.00

# DIAL THERMOMETER



## Flush Mount U Clamp Case

Miljoco vapor dial thermometers are manufactured to the highest standards for a wide range of uses and may be fitted into almost any temperature reading application. These instruments are ideal for obtaining readings from remote locations. Being vapor actuated, they are not subject to any ambient temperature variations along the tube system and give excellent readings both above and below ambient. Vapor instruments have progressive graduations and are best read in the upper two-thirds of the range. Many ranges are available between -40°F and 450°F. This series is designed for flush panel-mounting and is furnished with a u-clamp for this service.

## General Specifications

**CASE:** 300 series stainless steel or ABS plastic in gray.

Other colors available.

**U-CLAMP:** CRS zinc plated

**LENS:** Polycarbonate, press-in or threaded

**DIAL:** Aluminum with white finish and black markings

**POINTER:** Black, adjustable.

**MOVEMENT:** Brass with precision gearing

**BOURDON TUBE:** Phosphor Bronze

**ACCURACY:** ±One scale division

**TUBE SYSTEM:**

CAPILLARY TUBING: 60" fine-plated copper (std.)

CONNECTION: Plain

SENSING BULB: Nickel-plated copper bulb, Ø 7/16"

Other tube systems and capillary lengths available –see Page 59

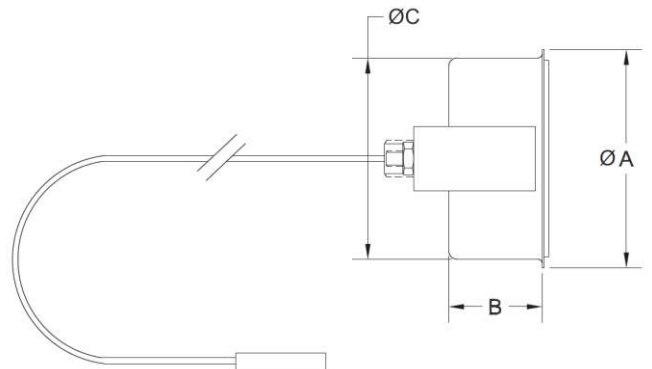
**AMBIENT TEMPERATURE:** -40 to 140°F (-40 to 60°C)

## Remote Reading



V2066

## Models & Dimensions (in.)



\*Maximum panel thickness 0.736".

## To Order

Select a **Model Number**, then see **Page 59 & 60** for temperature range and tube system selections

## Options

- Tubing Strain Relief
- Case Sealant
- Silicone Dampening
- Weephole
- Over Range Protection
- Lens O-Ring

Model	Dial Size	Case Mat'l	Outlet	Lens	A	B	C
V2066	2"	SS	Rear	Press-in	2.24	1.09	2.06
V2046	2"	ABS	Rear	Press-in	2.24	1.09	2.06
V2067	2"	SS	Rear	Threaded	2.24	1.09	2.06
V2066L	2"	SS	Lower	Press-in	2.24	1.09	2.06
V2046L	2"	SS	Lower	Press-in	2.24	1.09	2.06
V2067L	2"	SS	Lower	Threaded	2.24	1.09	2.06
V2567	2½"	SS	Rear	Threaded	2.86	1.09	2.56
V2567L	2½"	SS	Lower	Threaded	2.86	1.09	2.56
V3567	3½"	SS	Rear	Threaded	3.94	1.09	3.50
V3567L	3½"	SS	Lower	Threaded	3.94	1.09	3.50

# DIAL THERMOMETER



## To Order

**V XXXXX**

Model Number

**5 4**

Range  
Code

**6 - 6 0**

Tube System Code  
Capillary Length in Inches  
(Omit if direct mount)


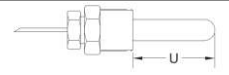
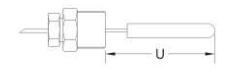
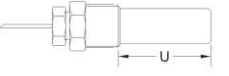
Specify Model Number from preceding pages, followed by Range and Tube System from the tables below, followed by capillary length in inches.

## Standard Ranges

Range Code	Range	°F Scale		°C Scale		Range Code	Range	°F Scale		°C Scale	
		Fig.	Div.	Fig.	Div.			Fig.	Div.	Fig.	Div.
22	-40 to 20°C	-	-	10	1	72	0 to 180°F	20	2	-	-
20	-40 to 65°F	-	-	10	2	73	0 to 180°F/C	20	2	20	2
21	-40 to 65°F/C	10	2	10	1	80	20 to 220°F	10	2	-	-
16	20 to 80°F	10	1	-	-	81	20 to 220°F/C	10	2	10	2
25	20 to 80°F/C	10	1	5	1	50	30 to 240°F	20	2	-	-
19	0 to 100°F	10	2	-	-	51	30 to 240°F/C	20	2	10	2
29	0 to 100°F/C	10	2	10	2	53	0 to 250°F	20	2	-	-
28	0 to 100°C	-	-	10	2	54	0 to 250°F/C	20	2	10	2
30	-40 to 110°F	20	2	-	-	56	50 to 250°F	20	2	-	-
31	-40 to 110°F/C	20	2	10	2	57	50 to 250°F/C	10	2	10	2
32	-20 to 120°F	20	2	-	-	60	30 to 300°F	10	1	-	-
33	-20 to 120°F/C	20	2	10	2	61	30 to 300°F/C	10	1	10	2
46	20 to 130°F	10	2	-	-	64	100 to 350°F	20	5	-	-
48	20 to 130°F/C	10	2	10	1	66	100 to 350°F/C	20	5	20	5
67	-40 to 150°F	10	2	-	-	70	200 to 450°F	20	2	-	-
49	0 to 150°F	20	2	-	-	71	200 to 450°F/C	20	2	20	2

Many ranges are NSF listed for use in the food service industry. Special ranges, colors, logos, and custom artwork is also available at nominal charge. Vapor thermometers have progressive graduations and are best read in the upper two-thirds of the scale. Care should be used to select a range that will locate the working temperature in this area. Other ranges are also available, consult factory.

## Tube Systems

Type	Code	Capillary Tubing Material	Connection or Well Material	Sensing Bulb Materials
 Plain Connection*	02	Tin Plated Copper	-	Nickel Plated Copper
	03	PVC Coated Copper	-	Nickel Plated Copper
	04	Bronze Braided Copper	-	Nickel Plated Copper
	05	Smooth 316SS	-	316SS
	08	Armored 316SS	-	316SS
 1/2" NPT Union Connection*	12	Tin Plated Copper	Brass	Nickel Plated Copper
	13	PVC Coated Copper	Brass	Nickel Plated Copper
	14	Bronze Braided Copper	Brass	Nickel Plated Copper
	15	Smooth 316SS	316SS	316SS
	18	Armored 316SS	316SS	316SS
 1/2" NPT Union Conn. with Extension*	32	Tin Plated Copper	Brass	Nickel Plated Copper
	33	PVC Coated Copper	Brass	Nickel Plated Copper
	34	Bronze Braided Copper	Brass	Nickel Plated Copper
	35	Smooth 316SS	316SS	316SS
	38	Armored 316SS	316SS	316SS
 1/2" NPT Thermowell*	22	Tin Plated Copper	Brass	Nickel Plated Copper
	23	PVC Coated Copper	Brass	Nickel Plated Copper
	24	Bronze Braided Copper	Brass	Nickel Plated Copper
	25	Smooth 316SS	316SS	316SS
	28	Armored 316SS	316SS	316SS

\*See table on page \_\_ for Sensing Bulb Dimensions

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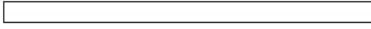




## Bulbs, Tubing, and Optional Features

### Sensing Bulb Dimensions

Range	Tube System Length	Bulb Diameter	Bulb Length	Notes
-40 to 65°F, -40 to 65°F/C	All	0.250"	2.0"	For systems over 1200", consult factory. Bulb lengths of 4.5" & 6" may be available on shorter systems, consult factory.
All Others	Up to 120"	0.438"	2.5"	
	121" to 600"	0.438"	4.5"	
	601" to 1200"	0.438"	6.0"	

### Capillary Tubing

The following connecting tubing types are used on vapor actuated dial thermometers in conjunction with the tube systems listed on the previous page:

Type	Capillary Tubing Material
 Copper	Smooth Ø 0.062 tin plated copper capillary. This small diameter tubing can be easily formed without kinking or breaking. It is the material of choice in the food service industry and meets the requirements of NSF.
 PVC Covered	Smooth Ø 0.150 PVC covered Ø 0.062 copper capillary. This rugged, dielectric material is the ideal choice when the application requires bundling with other tubing, cable, or wiring. It meets the requirements of NSF and is the material of choice for commercial dishwashing and warewashing equipment.
 Bronze Braided	Bronze braided Ø 0.150 armor over Ø 0.062 copper capillary. This material is extremely durable, yet flexible, making it an excellent choice for applications where the capillary tubing will be exposed to extreme conditions. It can be ordered with nickel plating for use in food zones applications.
 316 Stainless Steel	Smooth Ø 0.062 type 316 stainless steel capillary. This small diameter tubing is flexible and provides chemical and corrosion resistance. It is an excellent choice for industrial processing or other applications where the capillary will be exposed to caustic or corrosive materials.
 316SS with 316SS Armor	Type 316 stainless steel Ø 0.250 interlocking armor over Ø 0.062 type 316 stainless steel capillary. This material is extremely rugged but has limited flexibility. It offers maximum protection against caustic or corrosive materials and is ideal for applications where the tubing will be exposed to rough handling.

### Optional Features

Code	Feature	Description
HS	Strain Relief at Case	Plastic boot installed at the case end of the capillary tubing to provide additional protection.
TS	Strain Relief at Bulb	Stainless steel round wire at the bulb end of the capillary tubing to provide additional protection.
SD	Silicone Dampening	Silicone grease applied to the movement mechanism to reduce wear in applications in which the instrument will be exposed to vibration.
WP	Lens O-Ring	O-ring seal installed on the lens (threaded type only) to help prevent moisture from entering the case from the front.
RTV	Case Sealant	RTV sealant applied around the rear connection opening to help prevent moisture from entering the rear of the case. Also prevents cold air from refrigeration equipment from entering the case and causing the lens to fog or frost.
WH	Weep Hole	Drain hole to allow drainage of the case in situations where moisture may collect in the bottom of the case. Useful in outdoor applications.
OR	Over Range Protection	The instrument should only be used within the range indicated on the dial. However, below-ambient ranges (e.g., -40 to 65°F) will be exposed to over ranging during shipment and storage. These instruments are furnished standard with over range protection. Additionally, many cross-ambient and above-ambient ranges can be provided with optional over range protection. <b>consult factory when requesting this feature.</b>

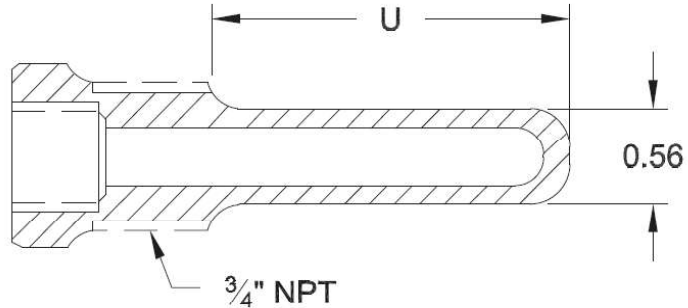
Specify the optional feature code when ordering

# DIAL THERMOMETER

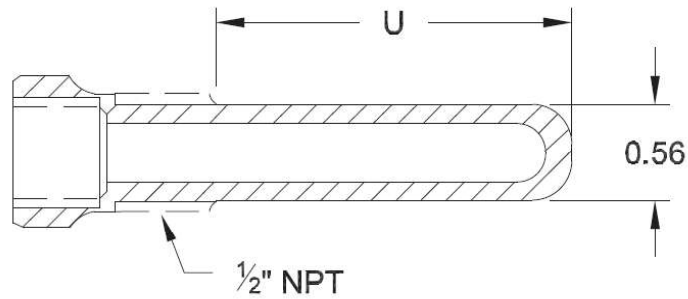


## Thermowells

DW \_ \_ \_ - 75



DW \_ \_ \_



These thermowells are designed for use with Miljoco vapor-actuated dial thermometers. They are intended to separate the thermometer from the process or media being measured, which allows for removal of the thermometer and protects of the thermometer stem from corrosive media. They are readily available in brass or 316 stainless steel construction to suit a wide range of applications. Other materials are available on request - consult factory.

### Models & Dimensions (in.)

Process Conn. "A"	Immersion Length "U"	Material	
		Brass	316SS
1/2" NPT	2.25"	DW25B	DW25316
3/4" NPT	2.25"	DW25B-75	DW25316-75
1/2" NPT	4.25"	DW40B	DW40316
3/4" NPT	4.25"	DW40B-75	DW40316-75
1/2" NPT	6.25"	DW60B	DW60316
3/4" NPT	6.25"	DW60B-75	DW60316-75

The thermowell should be primed before thermometer installation with a heat transfer medium such as oil, graphite, or paste to provide optimal accuracy and response time.

### Pressure/Temperature Ratings

Material	Temperature					
	70°F	200°F	400°F	600°F	800°F	1000°F
Brass	1200 psi	1000 psi	200 psi	-	-	-
316SS	2100 psi	2000 psi	1900 psi	1700psi	1600psi	1400psi

V20-V25-V35-Series-U-Clamp