




TR/TW/THW SERIES TRIDICATORS, BI-METAL THERMOMETERS, THERMOWELLS & HOT WATER THERMOMETERS



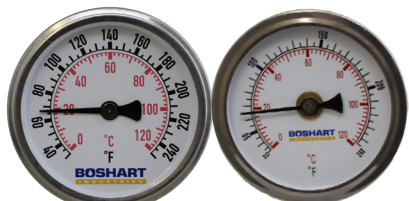
Product Booklet




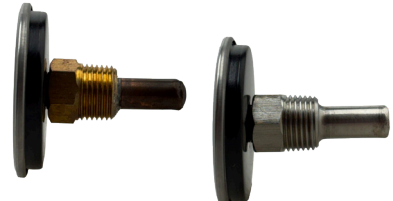
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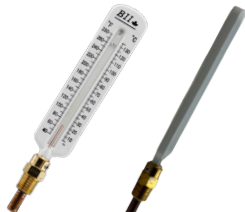
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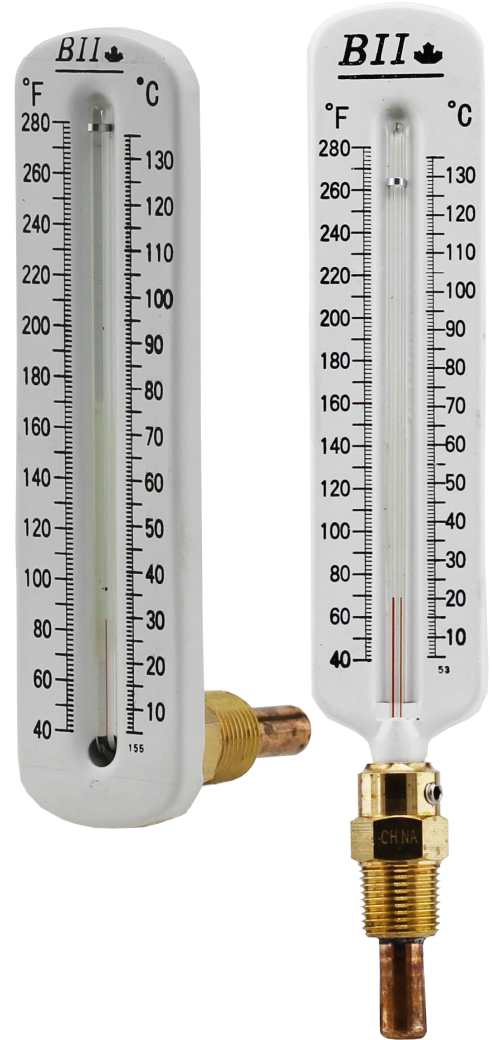
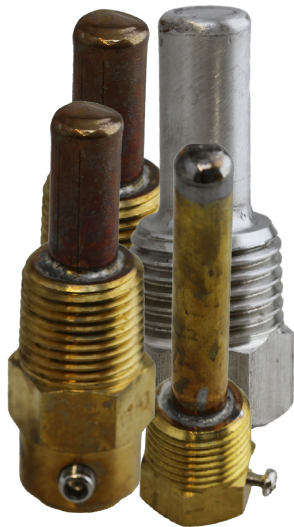
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INTRODUCTION TO TRIDICATORS, THERMOWELLS & THERMOMETERS

Tridicators, bi-metal thermometers, thermowells and hot water thermometers are commonly used in hydronic heating, plumbing and industrial systems. Tridicators monitor pressure, temperature and system altitude in boilers and pressurized hot water applications. Bi-metal thermometers provide reliable, direct temperature readings in pipes, tanks and equipment. Thermowells protect temperature instruments from pressure, flow and corrosive media while allowing for easy maintenance. Hot water thermometers are used to measure water temperature in heating and plumbing systems, ensuring safe and efficient operation.



User Responsibility Statement: It is the user's sole responsibility to determine the product's suitability for its intended use. For full details, visit Boshart Industries [Reference Documents](#) for our User Safety Responsibility Statement and other important documents.



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TRIDICATORS

APPLICATIONS:

A tridicator is a combination gauge commonly used in heating and boiler systems. It measures and displays three key parameters in one unit: pressure, temperature and altitude (or sometimes pressure in PSI and feet of water). They are a combination of a pressure gauge and a thermometer consisting of a bourdon tube and a coiled bi-metal element. This allows operators to easily monitor system conditions without needing multiple separate gauges.

FEATURES:

- 3" dial face comes with adjustable indicator
- Pressure Accuracy: $\pm 3\%$ - 2% - 3%
- Temperature Accuracy: $\pm 2\%$
- Equipped with relief set point indicator
- 2-1/2" dial in a red steel case, 3" dial in a black steel case



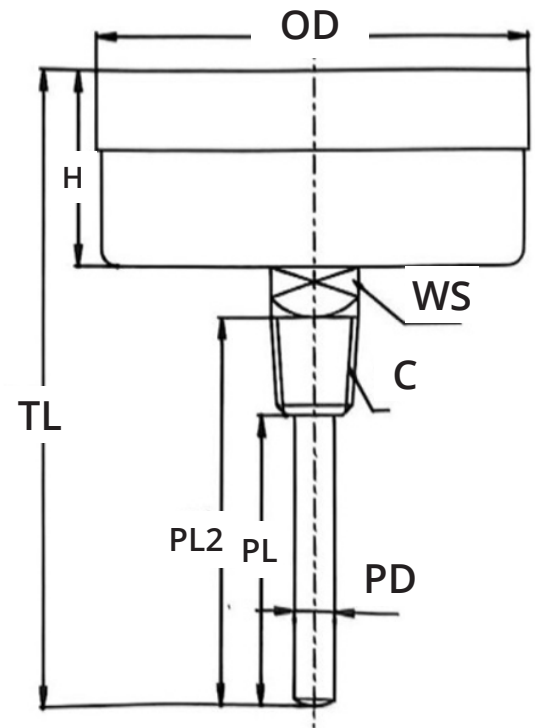
SPECIFICATIONS:

- ANSI/ASME B40.1 Pressure Gauges and Gauge Attachments

RATINGS:

Part No.	Gauge Type	Mount Type	Dial Range		Temperature Range	
			PSI	kPa	°F	°C
TR25-CB1-60/250	Standard	Back	0-75	0-500	30-250	0-120
TR25X1-CB1-60/250	Extended	Back	0-75	0-500	30-250	0-120
TR30-CB2-60/250	Standard	Back	0-75	0-500	30-250	0-120
TR30-CB2S-60/250	Short	Back	0-75	0-500	30-250	0-120
TR30-LM2-60/250	Standard	Lower	0-75	0-500	30-250	0-120
TR30-LM2-80/290	Standard	Lower	0-200	0-1400	80-290	26-143

SPECIFICATIONS	
Part Name	Material
Dial	White Aluminum
Case	Red (2-1/2") or Black (3") Steel
Lens	Glass
Connection	Brass
Bourdon Tube	Brass
Element	Coiled Bi-Metal/ Brass
Pointer	Aluminum (Anodized Black)
Welding	Tin Solder



DIMENSIONS																
Part No.	C (Connection)	WS (Wrench Size)	OD (Outside Diameter)		H (Height)		PD (Probe Diameter)		PL1 (Probe Length 1)		TL (Total Length)		PL2 (Probe Length 2)		Weight	
			in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	grams
TR25-CB1-60/250	1/4"	9/16"	2.70	68.50	1.26	32.00	0.25	6.35	1.65	42.00	3.66	93.00	2.13	54.00	0.40	181.44
TR25X1-CB1-60/250	1/4"	16mm	2.70	68.50	1.26	32.00	0.25	6.35	1.65	42.00	5.12	130.00	2.13	54.00	0.55	249.48
TR30-CB2-60/250	1/2"	7/8"	3.31	84.00	1.22	31.00	0.35	9.00	2.28	58.00	4.92	125.00	2.80	71.00	0.55	249.48
TR30-CB2S-60/250	1/2"	7/8"	3.31	84.00	1.22	31.00	0.35	9.00	0.71	18.00	3.50	89.00	1.22	31.00	0.55	249.48
TR30-LM2-60/250	1/2"	15/16	3.31	84.00	1.34	34.00	0.35	9.00	2.28	58.00	6.77	172.00	2.95	75.00	0.66	299.37
TR30-LM2-80/290	1/2"	7/8"	3.31	84.00	1.34	34.00	0.35	9.00	2.28	58.00	6.77	172.00	2.95	75.00	0.66	299.37

Pressure $\pm -3-2-3\%$ Accuracy

Temperature $\pm 1.5\%$ Accuracy

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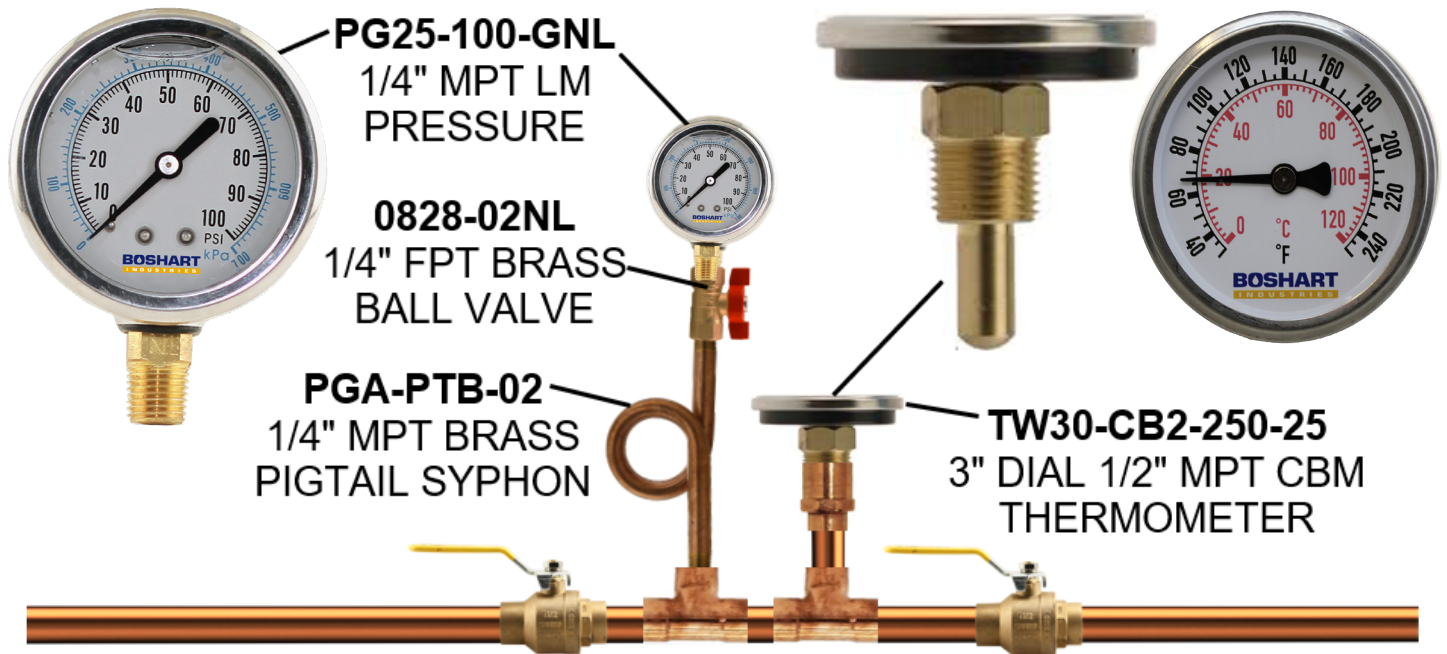
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Great alternative to using tridicators:

Yes, there is a great alternative option to using Tridicators, although this option is not as compact as a two-in-one pressure and temperature gauge. It requires two separate accessory ports, rather than just one to install both a thermometer and a separate pressure gauge on a pigtail syphon to reduce heat transfer to a standard pressure gauge. This option has four key benefits over using Tridicators as detailed below.



1. With a valve on the pigtail syphon to enable isolation of the pressure gauge, the gauge can be changed out without shutting down the boiler system.
2. Bi-metal thermometers do not have water coming directly into the gauge to sense the water pressure, so there is no risk of leakage inside the gauge.
3. The installation of a thermowell allows the bi-metal thermometer to be changed without shutting down the boiler as the thermowell stays installed. The heat is transferred from the thermowell to the temperature sensing probe and bi-metal sensor,
4. There is no need to change out both gauges if one of the two gauges was to fail.



BI-METAL THERMOMETERS

APPLICATIONS:

A bi-metal thermometer is a temperature measuring device that uses a coiled bi-metal element. As the temperature changes, the metals expand at different rates, causing the strip to bend and move the pointer on the dial. This provides a simple and reliable way to read temperature without the need for electricity.

FEATURES:

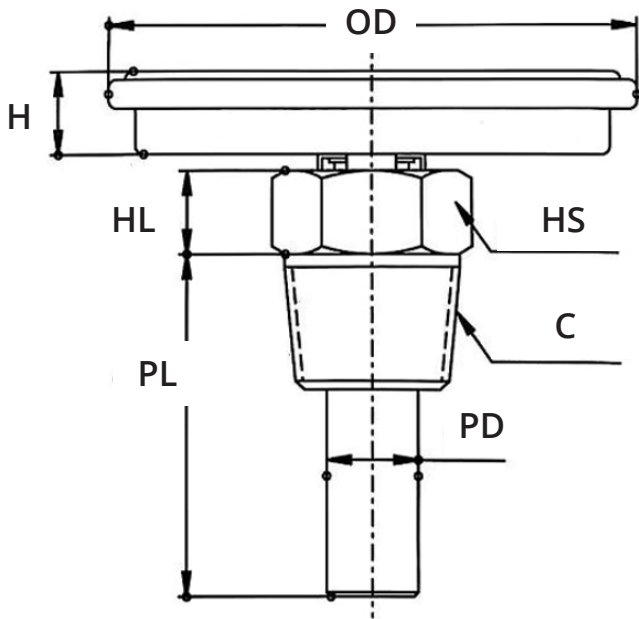
- ±2% Working Range
- Removeable thermowell - does not require any tool for 2-1/2", #2 Philips Screwdriver required for 3"

SPECIFICATIONS:

- ANSI/ASME B40.1 Pressure Gauges and Gauge Attachments

RATINGS:

- Maximum Pressure Rating: 87 PSI (600 kPa)
- Maximum Temperature Rating: -40°F to 140°F (-40°C to 60°C)



SPECIFICATIONS	
Part Name	Material
Dial	2" White Aluminum
Case	Aluminum
Lens	Acrylic
Connection	Brass/Stainless Steel
Element	Coiled Bi-Metal/ Brass
Pointer	Aluminum (Anodized Black)
Welding	Tin Solder

DIMENSIONS																
Part No.	C (Connection)	Dial Size	Material	HS (Hex Size)	OD (Outside Diameter)		H (Height)		PD (Probe Diameter)		PL (Probe Length)		HL (Hex Length)		Weight	
					mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs
TW25-CB2-250-25	1/2"	2-1/2"	Brass	21	2.52	64.00	0.39	10.00	0.43	11.00	1.57	40.00	0.39	10.00	0.22	100
TW30-CB2-250-25	1/2"	3"	Brass		3.31	84.00	0.45	11.50	0.41	10.50	2.95	75.00	0.24	6.00	0.66	300
TW25-CB2-250-SS25	1/2"	2-1/2"	Stainless		2.52	64.00	0.39	10.00	0.43	11.00	1.57	40.00	0.39	10.00	0.22	100

± 1.5% Accuracy



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THERMOWELLS

APPLICATIONS:

A thermowell is a protective fitting installed in a pipe or vessel to house a temperature sensor, such as a thermometer or tridicator. It allows the sensor to measure temperature while being shielded from direct contact with the process fluid, protecting it from pressure, flow and corrosion, and making it possible to remove or replace the sensor without shutting down the system. Must be used with bi-metal and hot water thermometers.

FEATURES:

- Made from robust brass or stainless steel for use in harsh environments
- Hot water thermometer probe is hot formed from H62 leaded brass
- Allow sensors to be removed and replaced without having to drain or depressurize the system
- Available in various types and lengths to suit different installation needs

SPECIFICATIONS:

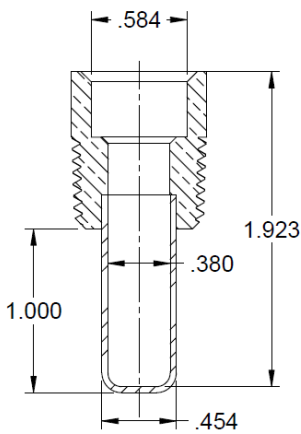
- ANSI/ASME B40.1 Pressure Gauges and Gauge Attachments

RATINGS:

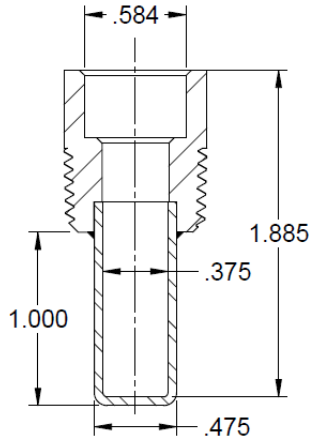
- Temperature Range: 32°F - 250°F (0°C - 120°C)
- Max Pressure Rating: 87 PSI (600 kPa)



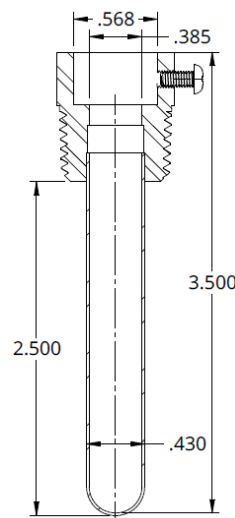
SPECIFICATIONS		
Material	Probe - H62 Leaded Brass	Body - C3604 Leaded Brass
Copper (Cu)	75.26%	57.31%
Zinc (Zn)	24.62%	40.15%
Lead (Pb)	0.03%	1.42%
Iron (Fe)	0.04%	0.38%
Tin (Sn)	0.03%	0.39%



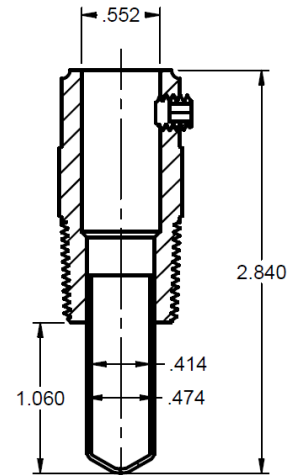
TW25BR-05MPTX1-31/32
for the
TW25-CB2-250-25



TW25SS-05MPTX1-31/32
for the
TW25-CB2-250-SS25



TW30BR-05X3-15/32
for the
TW30-CB2-250-25



THW8BR-05MPTX3-1/8
for the
THW8-A2-250
and
THW8-S2-250

± 2% Accuracy

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HOT WATER THERMOMETERS

APPLICATIONS:

8" hot water thermometers designed for use in hot water heating systems. It provides a direct reading of the water temperature, helping to monitor system performance and ensure safe, efficient operation.

FEATURES:

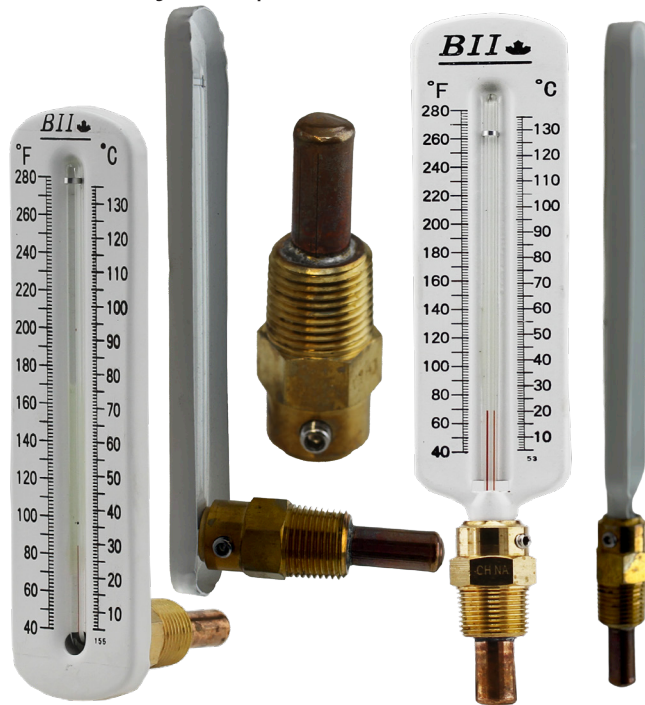
- Red Organic Kerosene Oil
- Removeable Thermowell - Requires 1/8" Allen Key

SPECIFICATIONS:

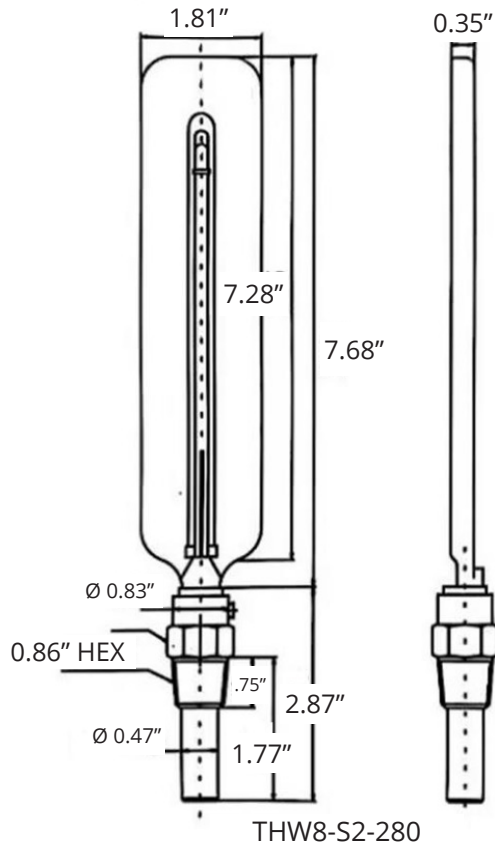
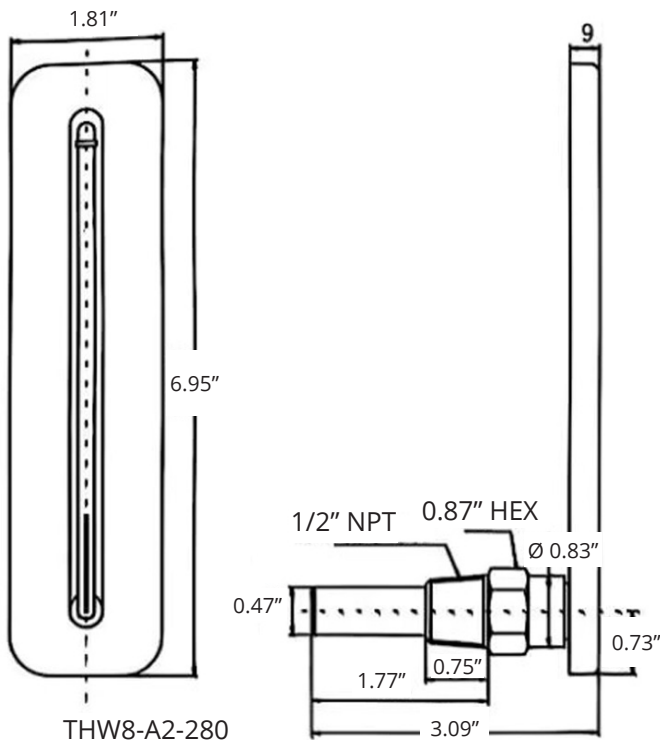
- ANSI/ASME B40.1 Pressure Gauges and Gauge Attachments

RATINGS:

- Maximum Pressure Rating: 87 PSI (600 kPa)
- Maximum Temperature Rating: 40°F - 280°F



SPECIFICATIONS	
Part Name	Material
Dial	2" White Aluminum
Case	Aluminum
Lens	Acrylic
Connection	Brass/Stainless Steel
Element	Coiled Bi-Metal/ Brass
Pointer	Aluminum (Anodized Black)
Welding	Tin Solder



± 2% Accuracy

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