

## HOT WATER THERMOMETER

- ± 1% of span throughout entire range
- Aluminum stem and case material
- Bi-metallic element

Thermometer is available with standard 1/2" or 3/4" NPT male separable socket or 1/2" or 3/4" sweatwell connection that allows easy thermometer removal while maintaining a "sealed" system.

Marsh Instruments Hot Water Thermometers are designed for accurate temperature readings in hot water lines, boilers and hydronic systems.



| DESCRIPTION    | P/N     |
|----------------|---------|
| 1/2" NPT       | L8004-1 |
| 3/4" NPT       | L8004-2 |
| 1/2" sweatwell | L8004-3 |
| 3/4" sweatwell | L8004-4 |

### SPECIFICATIONS

**ACCURACY**  
± 1% of span throughout entire range

**CASE SIZE**  
2 1/2" Diameter

**CASE MATERIAL**  
Aluminum

**STEM**  
Aluminum

**MOVEMENT**  
Bi-metallic element

**CONNECTION**  
1/2" or 3/4" NPT Center Back,  
1/2" or 3/4" Sweatwell Center Back

**RANGE**  
30-250° F & 0-120° C

**DIAL COLOR**  
White with Black & Red Markings

**POINTER**  
Aluminum, Black Painted

**RECALIBRATOR**  
Standard





## BIMETAL THERMOMETERS

- External Reset Feature for Field Recalibration (3" & 5")
- 9 Dual Scale Ranges to 1,000°F (525°C)
- Hermetically Sealed Case Design
- 2", 3" and 5" Dials
- Stem Lengths to 24"
- 1% Full Scale Accuracy

Marsh Instruments Bimetal Thermometers combine the benefits of economy and reliability for local mounted temperature indication in the dual scale ranges from -50° to 1,000°F (-40° to 525°C). Additional advantages offered by the Series "L" Bimetal Thermometers include an easy-to-read dual scale, fast speed of response, and accurate temperature indication. The hermetically sealed and ruggedly built case is resistant to shock, vibration, dust and moisture. Corrosion resistance to most chemicals is provided by the all welded type 304 Stainless Steel construction. The extremely responsive bimetal sensing element provides an accuracy to within  $\pm 1\%$  of scale. An external adjustment screw on the back of the 3" and 5" case provides convenient reset and field recalibration. Built-in over range protection is a standard feature.

Typical applications include process, offshore, power, chemical industries, HVAC and OEM applications.

### STANDARD RANGES & PART NUMBERS

| TYPE                           | BIMETAL THERMOMETERS |        |        |        |        |        |        |
|--------------------------------|----------------------|--------|--------|--------|--------|--------|--------|
| Size                           | 2"                   |        |        |        |        |        |        |
| Connection                     | ½ NPT                |        |        |        |        |        |        |
| Mounting                       | CB                   | CB     | CB     | CB     | CB     | CB     | CB     |
| Stem Length                    | 2½"                  | 4"     | 6"     | 9"     | 12"    | 15"    | 18"    |
| -50° to 120°F / -40° to 50°C   | L11101               | L11201 | L11301 | L11401 | L11501 | L11601 | L11701 |
| -40° to 160°F / -40° to 70°C   | L11102               | L11202 | L11302 | L11402 | L11502 | L11602 | L11702 |
| 0° to 200°F / -20° to 90°C     | L11104               | L11204 | L11304 | L11404 | L11504 | L11604 | L11704 |
| 0° to 250°F / -20° to 120°C    | L11105               | L11205 | L11305 | L11405 | L11505 | L11605 | L11705 |
| 50° to 300°F / 10° to 150°C    | L11106               | L11206 | L11306 | L11406 | L11506 | L11606 | L11706 |
| 50° to 400°F / 10° to 200°C    | L11107               | L11207 | L11307 | L11407 | L11507 | L11607 | L11707 |
| 50° to 550°F / 10° to 300°C    | L11108               | L11208 | L11308 | L11408 | L11508 | L11608 | L11708 |
| 150° to 750°F / 70° to 400°C   | L11110               | L11210 | L11310 | L11410 | L11510 | L11610 | L11710 |
| 200° to 1000°F / 100° to 525°C | L11111               | L11211 | L11311 | L11411 | L11511 | L11611 | L11711 |
| Size                           | 3"                   |        |        |        |        |        |        |
| Connection                     | ½ NPT                |        |        |        |        |        |        |
| Mounting                       | CB                   | CB     | CB     | CB     | CB     | CB     | CB     |
| Stem Length                    | 2½"                  | 4"     | 6"     | 9"     | 12"    | 15"    | 18"    |
| -50° to 120°F / -40° to 50°C   | L31101               | L31201 | L31301 | L31401 | L31501 | L31601 | L31701 |
| -40° to 160°F / -40° to 70°C   | L31102               | L31202 | L31302 | L31402 | L31502 | L31602 | L31702 |
| 0° to 200°F / -20° to 90°C     | L31104               | L31204 | L31304 | L31404 | L31504 | L31604 | L31704 |
| 0° to 250°F / -20° to 120°C    | L31105               | L31205 | L31305 | L31405 | L31505 | L31605 | L31705 |
| 50° to 300°F / 10° to 150°C    | L31106               | L31206 | L31306 | L31406 | L31506 | L31606 | L31706 |
| 50° to 400°F / 10° to 200°C    | L31107               | L31207 | L31307 | L31407 | L31507 | L31607 | L31707 |
| 50° to 550°F / 10° to 300°C    | L31108               | L31208 | L31308 | L31408 | L31508 | L31608 | L31708 |
| 150° to 750°F / 70° to 400°C   | L31110               | L31210 | L31310 | L31410 | L31510 | L31610 | L31710 |
| 200° to 1000°F / 100° to 525°C | L31111               | L31211 | L31311 | L31411 | L31511 | L31611 | L31711 |

### SPECIFICATIONS

#### ACCURACY

$\pm 1\%$  of span throughout entire range for 2" immersion in liquids, 4" in gases

#### CASE SIZES

2", 3", and 5" sizes

#### CASE MATERIAL

304 Stainless steel

#### STEM

2½", 4", 6", 9", 12", 15", 18" & 24" Stainless Steel; ¼" diameter

#### CONNECTIONS

½" NPT: CB—Center Back connection (2" case only)

½" NPT: CB—Center Back connection or AJ—Adjustable connection (3" & 5")

#### DIALS

Dual scale in degrees Celsius and Fahrenheit

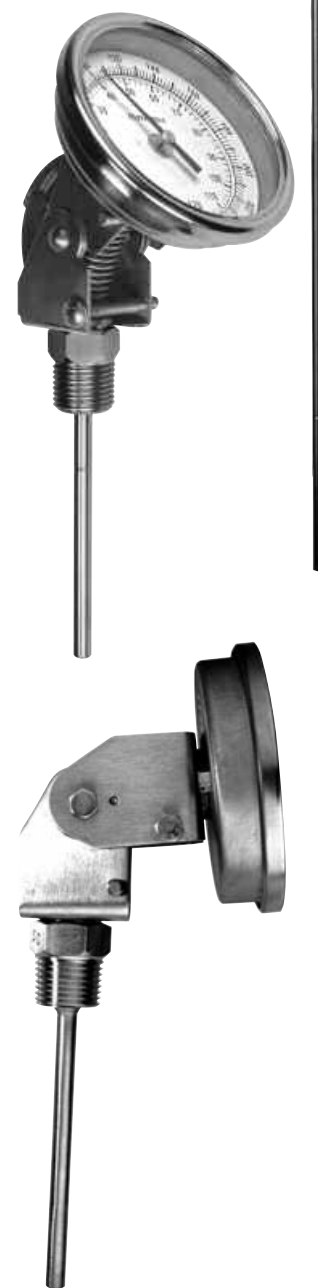
#### WINDOW

Glass, hermetically sealed



## STANDARD RANGES & PART NUMBERS

| TYPE                          |                     | BIMETAL THERMOMETERS |        |        |        |        |        |        |  |
|-------------------------------|---------------------|----------------------|--------|--------|--------|--------|--------|--------|--|
| Size                          | 3" Adjustable Angle |                      |        |        |        |        |        |        |  |
| Connection                    | ½ NPT               |                      |        |        |        |        |        |        |  |
| Mounting                      | AJ                  | AJ                   | AJ     | AJ     | AJ     | AJ     | AJ     |        |  |
| Stem Length                   | 2½"                 | 4"                   | 6"     | 9"     | 12"    | 15"    |        |        |  |
| -50° to 120°F/-40° to 50°C    | L33101              | L33201               | L33301 | L33401 | L33501 | L33601 |        |        |  |
| -40° to 160°F/-40° to 70°C    | L33102              | L33202               | L33302 | L33402 | L33502 | L33602 |        |        |  |
| 0° to 200°F/-20° to 90°C      | L33104              | L33204               | L33304 | L33404 | L33504 | L33604 |        |        |  |
| 0° to 250°F/-20° to 120°C     | L33105              | L33205               | L33305 | L33405 | L33505 | L33605 |        |        |  |
| 50° to 300°F/ 10° to 150°C    | L33106              | L33206               | L33306 | L33406 | L33506 | L33606 |        |        |  |
| 50° to 400°F/ 10° to 200°C    | L33107              | L33207               | L33307 | L33407 | L33507 | L33607 |        |        |  |
| 50° to 550°F/ 10° to 300°C    | L33108              | L33208               | L33308 | L33408 | L33508 | L33608 |        |        |  |
| 150° to 750°F/ 70° to 400°C   | L33110              | L33210               | L33310 | L33410 | L33510 | L33610 |        |        |  |
| 200° to 1000°F/ 100° to 525°C | L33111              | L33211               | L33311 | L33411 | L33511 | L33611 |        |        |  |
| Size                          | 5"                  |                      |        |        |        |        |        |        |  |
| Connection                    | ½ NPT               |                      |        |        |        |        |        |        |  |
| Mounting                      | CB                  | CB                   | CB     | CB     | CB     | CB     | CB     | CB     |  |
| Stem Length                   | 2½"                 | 4"                   | 6"     | 9"     | 12"    | 15"    | 18"    | 24"    |  |
| -50° to 120°F/-40° to 50°C    | L51101              | L51201               | L51301 | L51401 | L51501 | L51601 | L51701 | L51801 |  |
| -40° to 160°F/-40° to 70°C    | L51102              | L51202               | L51302 | L51402 | L51502 | L51602 | L51702 | L51802 |  |
| 0° to 200°F/-20° to 90°C      | L51104              | L51204               | L51304 | L51404 | L51504 | L51604 | L51704 | L51804 |  |
| 0° to 250°F/-20° to 120°C     | L51105              | L51205               | L51305 | L51405 | L51505 | L51605 | L51705 | L51805 |  |
| 50° to 300°F/ 10° to 150°C    | L51106              | L51206               | L51306 | L51406 | L51506 | L51606 | L51706 | L51806 |  |
| 50° to 400°F/ 10° to 200°C    | L51107              | L51207               | L51307 | L51407 | L51507 | L51607 | L51707 | L51807 |  |
| 50° to 550°F/ 10° to 300°C    | L51108              | L51208               | L51308 | L51408 | L51508 | L51608 | L51708 | L51808 |  |
| 150° to 750°F/ 70° to 400°C   | L51110              | L51210               | L51310 | L51410 | L51510 | L51610 | L51710 | L51810 |  |
| 200° to 1000°F/ 100° to 525°C | L51111              | L51211               | L51311 | L51411 | L51511 | L51611 | L51711 | L51811 |  |
| Size                          | 5" Adjustable Angle |                      |        |        |        |        |        |        |  |
| Connection                    | ½ NPT               |                      |        |        |        |        |        |        |  |
| Mounting                      | AJ                  | AJ                   | AJ     | AJ     | AJ     | AJ     | AJ     | AJ     |  |
| Stem Length                   | 2½"                 | 4"                   | 6"     | 9"     | 12"    | 15"    | 18"    | 24"    |  |
| -50° to 120°F/-40° to 50°C    | L53101              | L53201               | L53301 | L53401 | L53501 | L53601 | L53701 | L53801 |  |
| -40° to 160°F/-40° to 70°C    | L53102              | L53202               | L53302 | L53402 | L53502 | L53602 | L53702 | L53802 |  |
| 0° to 200°F/-20° to 90°C      | L53104              | L53204               | L53304 | L53404 | L53504 | L53604 | L53704 | L53804 |  |
| 0° to 250°F/-20° to 120°C     | L53105              | L53205               | L53305 | L53405 | L53505 | L53605 | L53705 | L53805 |  |
| 50° to 300°F/ 10° to 150°C    | L53106              | L53206               | L53306 | L53406 | L53506 | L53606 | L53706 | L53806 |  |
| 50° to 400°F/ 10° to 200°C    | L53107              | L53207               | L53307 | L53407 | L53507 | L53607 | L53707 | L53807 |  |
| 50° to 550°F/ 10° to 300°C    | L53108              | L53208               | L53308 | L53408 | L53508 | L53608 | L53708 | L53808 |  |
| 150° to 750°F/ 70° to 400°C   | L53110              | L53210               | L53310 | L53410 | L53510 | L53610 | L53710 | L53810 |  |
| 200° to 1000°F/ 100° to 525°C | L53111              | L53211               | L53311 | L53411 | L53511 | L53611 | L53711 | L53811 |  |



# Temperature



## POCKET THERMOMETER

- 1" Dial
- 304 Stainless Steel Hermetically Sealed Case
- 5" long stem
- Protective Case with Stainless Steel Clip

Marsh pocket thermometers have a 1" dial, 304SS hermetically sealed case, 304SS 0.4mm diameter 5" long stem, and plastic lens. The accuracy is  $\pm 1.5\%$  of scale range. Each unit comes with a protective case with SS clip, that allows it to be safely carried in your pocket and also can be used to hold the thermometer in the medium to be tested.

Typical applications include the food industries, HVAC/R industries, and any applications requiring fast and accurate temperature.

### SPECIFICATIONS

#### ACCURACY

$\pm 1.5\%$  of span throughout entire range

#### CASE MATERIAL

304 Stainless Steel

#### RANGES

-40/160°F, 0/220°F, 50/550°F

### STANDARD RANGES & PART NUMBERS

| PART NUMBER | DESCRIPTION & RANGE         |
|-------------|-----------------------------|
| L020E       | 1" dial, 5" stem, -40/160°F |
| L041E       | 1" dial, 5" stem, 0/220°F   |
| L080E       | 1" dial, 5" stem, 50/550°F  |



## DIGITAL POCKET THERMOMETER

- 3.5 Digit LCD display
- ABS Plastic Case
- 5" long stem
- Protective Case with Stainless Steel Clip

Marsh Digital Pocket Thermometers have a 3.5 digit LCD display, ABS case and a 304SS 5" long stem. The accuracy is  $\pm 2^\circ\text{F}$  with an update time of 10 seconds. Each unit has an on-off switch for longer battery life and comes with the protective carrying case.

Typical applications include the food industries, HVAC/R industries, and any applications requiring fast and accurate temperature.

### SPECIFICATIONS

#### ACCURACY

$\pm 2^\circ\text{F}$

#### CASE MATERIAL

ABS Plastic

#### RANGE

-58 to 302 °F / -50 to 150 °C

### STANDARD RANGES & PART NUMBERS

| PART NUMBER | DESCRIPTION & RANGE                                       |
|-------------|---|
| L021DG      | 3.5 digit display, 5" stem, -58 to 302 °F / -50 to 150 °C |



## INDUSTRIAL THERMOMETER

- Standard Well & Lagging Well Option
- Mounting Options: Adjustable Angle
- Easy to Read Dual Scale
- 5 Temperature Ranges
- Aluminum or Molded Glass Fiber Case

Marsh Industrial Thermometers are designed for demanding applications. The large 9" scale permits easy reading at longer distances. The glass-reinforced nylon case is lightweight yet rugged enough for demanding installations. The adjustable stem can be locked into any position through a 180° arc. These thermometers are commonly used on hot or chilled water lines in commercial/industrial buildings.

The Marsh Industrial Thermometers have a compact design that is well suited for limited space applications such as diesel engines, steam turbines, reduction gears, pumps, condensers and pipelines.

### STANDARD RANGES & PART NUMBERS

| TYPE                         | INDUSTRIAL THERMOMETERS 9" ADJUSTABLE |         |         |
|------------------------------|---------------------------------------|---------|---------|
|                              | With 3½" Stem                         |         |         |
| Stem & Well                  | 3½" (NO)                              | 3½" SW  | 3½" LW  |
| Dual Scale                   | °F & °C                               | °F & °C | °F & °C |
| Range                        |                                       |         |         |
| -40° to 110°F / -40° to 40°C | Y1210                                 | Y1202   | Y1242   |
| 0° to 120°F / -15° to 45°C   | Y1211                                 | Y1203   | Y1243   |
| 0° to 160°F / -15° to 65°C   | Y1212                                 | Y1204   | Y1244   |
| 30° to 240°F / 0° to 115°C   | Y1214                                 | Y1206   | Y1246   |
| 30° to 300°F / 0° to 150°C   | Y1216                                 | Y1208   | Y1248   |
|                              |                                       |         |         |
|                              | With 6" Stem                          |         |         |
| Stem & Well                  | 6" (NO)                               | 6" SW   | 6" LW   |
| Dual Scale                   | °F & °C                               | °F & °C | °F & °C |
| Range                        |                                       |         |         |
| -40° to 110°F / -40° to 40°C | Y1218                                 | Y1226   | Y1234   |
| 0° to 120°F / -15° to 45°C   | Y1219                                 | Y1227   | Y1235   |
| 0° to 160°F / -15° to 65°C   | Y1220                                 | Y1228   | Y1236   |
| 30° to 240°F / 0° to 115°C   | Y1222                                 | Y1230   | Y1238   |
| 30° to 300°F / 0° to 150°C   | Y1224                                 | Y1232   | Y1240   |

| TYPE                     | SEPARABLE SOCKETS (THERMOWELLS) |         |
|--------------------------|---------------------------------|---------|
| Process Connection       | ¾ NPT                           | ¾ NPT   |
| Material                 | Brass                           | 304 SST |
| Stem Length & Well Style |                                 |         |
| 3½" Standard             | 223499-001                      | 223502  |
| 6" Standard              | 223371                          | 223512  |
| 6" with 2" Lagging       | 223389                          | 223538  |

### INDUSTRIAL THERMOMETER OPTIONS

| Option | Type     | Suffix | Available on Models |
|--------|----------|--------|---------------------|
| Case   | Aluminum | A      | All Models          |



### SPECIFICATIONS

#### ACCURACY

± 1% of scale range

#### INDICATING COLUMN

Blue liquid fill

#### SCALE

Dual scale °F & °C.

White coated aluminum

#### SCALE LENGTH

9 inches

#### CASE MATERIAL

Molded black nylon, glass fiber reinforced

#### WINDOW

Glass

#### CONNECTION & STEM

1¼"-18 swivel nut, for use with separable socket. Adjustable aluminum 3½" or 6" stem with 360° rotation

#### SEPARABLE SOCKET (THERMOWELL)

Choice of (NO) well, (SW) Standard Brass Well, or (LW) 2" Lagging Brass Extension Well.

## SUBMARINE THERMOMETER

- 5" Scale Size
- V-Shaped aluminum scale with black markings
- Lens front, red reading organic filled tube
- Gray ABS Case
- 2" nominal stem length for 3/4" OA socket

Each thermometer is manufactured to a standard accuracy of 1% of span. Gray case with red reading spirit filled tube with magnifying lens for easy readability. White aluminum scale with bold black graduations and figures. Typical applications include diesel engines, steam turbines, pumps, condensers, pipelines, boilers and chillers.



### SPECIFICATIONS

#### ACCURACY

± 1% of scale range

#### INDICATING COLUMN

Red liquid fill

#### SCALE

Dual scale °F & °C.

White coated aluminum

#### SCALE LENGTH

5 inches

#### CASE MATERIAL

Gray ABS

#### WINDOW

Glass

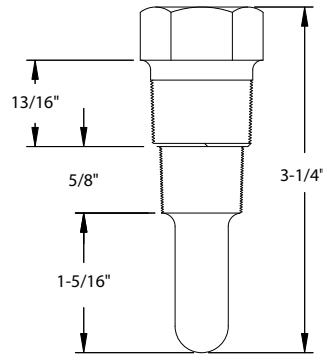
#### CONNECTION & STEM

3/4"-28" swivel nut, for use with separable socket (thermowell).

### STANDARD RANGES & PART NUMBERS

| TYPE                         | SUBMARINE THERMOMETERS |                |
|------------------------------|------------------------|----------------|
| Stem Length                  | 2"                     |                |
| Dual Scale                   | °F & °C                |                |
|                              | STRAIGHT               | 90° BACK ANGLE |
| Range                        |                        |                |
| -40° to 110°F / -40° to 40°C | Y1402                  | Y1412          |
| 20° to 180°F / -6° to 82°C   | Y1404                  | Y1414          |
| 30° to 240°F / 0° to 114°C   | Y1406                  | Y1416          |
| 50° to 400°F / 10° to 200°C  | Y1408                  | Y1418          |

| TYPE             | THERMOWELL        |
|------------------|-------------------|
| Connection       | 1/2" and 3/4" NPT |
| Material         | Brass             |
| Stem/Well Length |                   |
| 2" / 3/4" OA     | 223666            |



THERMOWELL DIMENSIONS—3/4"-28" Female Thread (internal)



## TRIDICATORS

- Back and Bottom Mounting Options
- Rotatable Set Pointer
- Rugged Construction
- Three-Color Dial
- Three Pressure Ranges
- 2½" & 3½" Sizes

Marsh Instruments Tridicators (Boiler Gauges) are designed and suitable for hot water heating systems. These instruments indicate pressure in psi and altitude for pools and spa's in feet of H<sub>2</sub>O; in °F and °C. All models feature a set hand for setting the desired pressure and altitude of the installation.

Typical applications include hot water boilers, heated pools, spa's and hot tubs.

### STANDARD RANGES & PART NUMBERS

| TYPE  | TRIDICATORS       |                   |                   |
|---|-------------------|-------------------|-------------------|
|   | 2½"               | 3½"               | 3½"               |
| Size  | 2½"               | 3½"               | 3½"               |
| Case Material                               | Steel             | Steel             | Steel             |
| Internals                                   | Copper Alloy      | Copper Alloy      | Copper Alloy      |
| Mounting/Case Style                         | CB                | LBM               | LM                |
| Connection                                  | ¼ NPT             | ½ NPT             | ½ NPT             |
| Scale Standard                              | psi/Feet of Water | psi/Feet of Water | psi/Feet of Water |
| 0 to 60 psi / 0 to 130 ft H <sub>2</sub> O  | Y22026            | Y22006            | Y22002            |
| 0 to 100 psi / 0 to 230 ft H <sub>2</sub> O |                   | Y22008            | Y22004            |
| 0 to 200 psi / 0 to 460 ft H <sub>2</sub> O |                   | Y22016            | Y22012            |
| 0 to 300 psi / 0 to 680 ft H <sub>2</sub> O |                   | Y22018            | Y22014            |



### SPECIFICATIONS

**ACCURACY**  
ASME Grade B = ±3/2/3% (±2% of range across middle half of scale)

**CASE SIZE**  
2½" Round & 3½" Square

**CASE MATERIAL**  
Steel, black painted

**CONNECTION**  
2½" case: ¼ NPT Center Back Mount, 3½" case: ½ NPT Lower Mount or Lower Back Mount

**PRESSURE RANGES**  
Dual scale in 4 ranges:  
0 to 60 psi & 0 to 130 ft. of water  
0 to 100 psi & 0 to 230 ft. of water  
0 to 200 psi & 0 to 480 ft. of water  
0 to 300 psi & 0 to 680 ft. of water

**TEMPERATURE RANGE**  
60° to 260°F & 20° to 120°C

**DIALS**  
Black markings on white

**TUBE & SOCKET**  
Copper Alloy

**POINTERS**  
Aluminum, red painted with black painted set pointer

**WINDOW**  
3½" Glass  
2½" Acrylic

