## EI Series Bimetal Thermometers



## FEATURES

- 1\% full span accuracy ASME B40. 200 (ASME B40.3 Grade A)
- Maximum ambient temp. is $200^{\circ} \mathrm{F}\left(94^{\circ} \mathrm{C}\right)$
- Hermetically sealed case to prevent entry of moisture, interior corrosion and coil freeze-up.
- External adjustment permits zero reset from outside the case.
- Maxivison ${ }^{\circledR}$ dial allows readability from any angle without parallax error.
- Silicone coil dampening (up to $400^{\circ}$ F) provides vibration dampening and improves response time.
- All-welded stainless steel construction
- Heavy-Duty glass Iens
- Protection NEMA 4X/IP66
- Five year limited warranty



## SPECIFICATIONS

Ashcroft ${ }^{\text {® }}$
Series: EI
Dial Sizes: 2," 3 ," 5 "
Stem Length: $21 / 2=60^{\prime \prime}(1)$
Case \& Stem: 304 stainless steel, hermetically
sealed
Stem Dia: . 250 "
Window: Heavy-duty glass, plastic or shatterproof glass optional
Dial: Maxivision ${ }^{\oplus}$, black figures on white background
Pointer: Black
Connection: Plain, pointed plain, $1 / 4 \mathrm{NPT}, 1 / 2$ NPT,
$1 / 2$ NPT union
Connection
Location: Everyangle ${ }^{\text {miw }}$, Lower, Rear
Ranges: $\quad-80 / 120^{\circ} \mathrm{F}-200 / 1000^{\circ} \mathrm{F}$
$-50 / 50^{\circ} \mathrm{C}-100 / 500^{\circ} \mathrm{C}$
Options: Code Description
C4 Individual calibration cert.
XCS Dual scale ${ }^{(2)}$
XDM Dial marking
XNH Stainless steel tag
XNN Paper tag
XPD Plastic window
XSG Shatter proof glass
Х 3 B $3 / 8$ " stem dia. with $1 / 2$ NPT
X02 $1 / 4$ NPT when $1 / 2$ NPT is standard ${ }^{(3)}$
XS1 Silicone free
XYW 316SS Housing ${ }^{(4)}$ and stem
(1) $25^{\prime \prime}-60^{\prime \prime}$ lengths available, consult factory
(2) Dual scale available with $3^{\prime \prime}$ and 5 " case only
(3) Only available on rear connection
(4) Only available on 5 "Everyangle"'

Thermowells must be used on all pressure or velocity applications, to protect the stem of thermometer from corrosion and physical damage, and to facilitate removal of the thermometer without disturbing the process. Maximum ambient temperature is $200^{\circ} \mathrm{F}\left(95^{\circ} \mathrm{C}\right)$.

HOW TO ORDER


## EI Series Bimetal Thermometers

| Case | Size |  | Stem |  |  | Stem Lengths Available |  |  | Temperature Range |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dial | Code | Style Code | Conn. | Code | Location | Code |  | Code | ${ }^{\circ}{ }^{F}$ * <br> Fahrenheit | \%Div. | Fig. Inter. | $\begin{gathered} { }^{\circ} \mathrm{C} \\ \text { Celsius } \end{gathered}$ | \%Div. | Fig. Inter. |
| 2" | 20 |  | Plain | 40 | Rear | R | 21/2 | 025 | -80/120 | 2 | 20 | -50/50 | 1 | 10 |
|  |  |  | Pointed | 50 |  |  |  |  | -20/120† $\dagger$ |  |  | -10/110 | 2 | 10 |
|  |  |  | $1 / 4 \mathrm{NPT}$ | 60 |  |  |  |  | -40/120 | 1 | 10 | -20/120 | 2 | 20 |
| 3" | 30 |  | 1/2NPT | 42 | Everyangle | E | 4 | $\begin{aligned} & 040 \\ & 060 \end{aligned}$ | 30/130†t | 2 | 20 | 0/50†† | 1 | 5 |
|  |  |  | Union |  |  |  | 6 |  | 0/200 |  |  | 0/100 | 1 | 10 |
|  |  |  | 1/2NPT | 60 |  |  | 9 | 090 | 20/120 |  |  | 10/150 | 2 | 20 |
|  |  |  | 1/2NPT | 60 | Rear | R | 12 | 120 | 0/250 |  | 50 | 0/200 | 2 | 20 |
| 5" | 50 |  |  |  | Everyangle | E | 15 | 150 | 50/400 | 5 | 50 | 0/300t $\dagger$ | 5 | 50 |
|  |  |  | Union | 42 |  |  | 18 | 180 | 50/550 |  |  | 0/400 | 5 | 50 |
|  |  |  | 1/2NPT | 60 |  |  | 24 | 240 | 200/700 $\dagger$ |  |  | 50/450** $\dagger$ | 5 | 50 |
|  |  |  | $1 / 2$ NPT | 60 | Rear | R |  |  | 100/800 $\dagger$ |  |  | 100/500** $\dagger$ | 5 | 50 |
|  |  |  |  |  | Lower | L |  |  | 200/1000 $\dagger$ | 10 | 100 |  |  |  |

CONTACT FACTORY FOR ADDITIONAL STEM LENGTHS AND RANGES NOT LISTED

| EI Dimensions |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Case Series | $\begin{aligned} & \text { Dial } \\ & \text { Size } \\ & \hline \end{aligned}$ | Connection Location | A | B | C | D | E | G | H | S | NPT | Hex | Weight in ounces ${ }^{(3)}$$S-2 \frac{1 / 2}{2}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EI | 2" | $\begin{gathered} \text { Rear } \\ \text { (Plain) } \end{gathered}$ | $\begin{aligned} & 23 / 32 \\ & (53) \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 3 / 8 \\ (10) \\ \hline \end{gathered}$ | $\begin{gathered} 3 / 8 \\ (8) \end{gathered}$ | - | - | - | - | $-^{(2)}$ | - | 11/16 | $41 / 2$ |
| EI | 2 " | Rear (Plain, pointed stem) | $\begin{aligned} & 2^{3 / 32} \\ & (53) \end{aligned}$ | $\begin{gathered} 3 / 8 \\ (10) \\ \hline \end{gathered}$ | $\begin{aligned} & \text { 5/16 } \\ & \text { (8) } \end{aligned}$ | - | - | - | - | $-^{(2)}$ | - | 11/16 | 41/2 |
| EI | 2 " | Rear (Threaded) | $\begin{aligned} & 23 / 32 \\ & (53) \\ & \hline \end{aligned}$ | $\begin{gathered} 3 / 8 \\ (10) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline 3 / 8 \\ & (8) \\ & \hline \end{aligned}$ | - | - | - | - | $-^{(2)}$ | 1/4 | 11/16 | 41/2 |
| EI | 3 " | Rear | $\begin{aligned} & \hline 35 / 32 \\ & (80) \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 19 / 32 \\ & (15) \end{aligned}$ | (8) | - | - | - | - | $\square^{(2)}$ | 1/2 | 7/8 | 7 |
| EI | 3" | Lower | $\begin{aligned} & 35 / 32 \\ & (80) \end{aligned}$ | $\begin{aligned} & 127 / 32 \\ & (47) \\ & \hline \end{aligned}$ | - | $\begin{gathered} \hline 25 / 8 \\ (67) \\ \hline \end{gathered}$ | $\begin{aligned} & 1 / 4 \\ & (6) \\ & \hline \end{aligned}$ | - | - | $-^{(2)}$ | 1/2 | 7/8 | 11 |
| EI | 3" | Everyangle | $\begin{aligned} & 35 / 32 \\ & (80) \\ & \hline \end{aligned}$ | $\begin{aligned} & 19 / 32 \\ & (15) \end{aligned}$ | - | - | - | $\begin{aligned} & 1^{21 / 32} \\ & (42) \\ & \hline \end{aligned}$ | $\begin{aligned} & 3^{1 / 32} \\ & (89) \end{aligned}$ | $\square^{(2)}$ | 1/2 | 7/8 | 10 |
| EI | 5" | Rear | $\begin{gathered} 51 / 32 \\ (128) \end{gathered}$ | $\begin{aligned} & 23 / 32 \\ & (18) \end{aligned}$ | $\begin{aligned} & \hline 3 / 8 \\ & (8) \end{aligned}$ | - | - | - | - | $\square^{(2)}$ | 1/2 | 7/8 | 16 |
| EI | 5" | Lower | $\begin{gathered} 51 / 32 \\ (128) \\ \hline \end{gathered}$ | $\begin{aligned} & 115 / 16 \\ & (49) \\ & \hline \end{aligned}$ | - | $\begin{gathered} \hline 35 \\ (92) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline 1 / 4 \\ & (6) \\ & \hline \end{aligned}$ | - | - | $-^{(2)}$ | 1/2 | 7/8 | 26 |
| EI | 5" | Everyangle | $\begin{gathered} 51 / 16 \\ (128) \end{gathered}$ | $\begin{aligned} & 23 / 32 \\ & (18) \end{aligned}$ | - | - | - | $\begin{gathered} \hline 1 / 8 \\ (48) \end{gathered}$ | $\begin{aligned} & 3^{21 / 32} \\ & (93) \\ & \hline \end{aligned}$ | $-^{(2)}$ | 1/2 | 7/8 | 25 |

## NOTES:

1. Figures in parenthesis ( ) are in millimeters. All other dimensions are in inches.
2. Standard " $S$ " dimensions are $21 / 2,4,6,9,12,15,18$ and 24 inches. Standard stem diameter is $1 / 4$ inch.
3. Add 1 oz . for every 2 inches of stem length.

EI Series dual scale ranges
Dual scales are available in $3^{\prime \prime}$ and $5^{\prime \prime}$ dial sizes in the following ranges:

| Inner |  | Outer |
| ---: | :--- | :---: |
| $-80 / 120^{\circ} \mathrm{F}$ | and | $-60 / 50^{\circ} \mathrm{C}$ |
| $-40 / 120^{\circ} \mathrm{F}$ | and | $-40 / 50^{\circ} \mathrm{C}$ |
| $-40 / 160^{\circ} \mathrm{F}$ | and | $-40 / 70^{\circ} \mathrm{C}$ |
| $-20 / 120^{\circ} \mathrm{F}$ | and | $-30 / 50^{\circ} \mathrm{C} \dagger \dagger$ |
| $0 / 200^{\circ} \mathrm{F}$ | and | $-20 / 90^{\circ} \mathrm{C}$ |
| $0 / 250^{\circ} \mathrm{F}$ | and | $-20 / 120^{\circ} \mathrm{C}$ |
| $30 / 130^{\circ} \mathrm{F}$ | and | $0 / 55^{\circ} \mathrm{C} \dagger \dagger$ |
| $50 / 300^{\circ} \mathrm{F}$ | and | $10 / 150^{\circ} \mathrm{C}$ |
| $50 / 400^{\circ} \mathrm{F}$ | and | $10 / 200^{\circ} \mathrm{C}$ |
| $50 / 550^{\circ} \mathrm{F}$ | and | $10 / 290^{\circ} \mathrm{C}$ |
| $100 / 800^{\circ} \mathrm{F}$ | and | $50 / 400^{\circ} \mathrm{C} \dagger$ |
| $200 / 700^{\circ} \mathrm{F}$ | and | $100 / 370^{\circ} \mathrm{C} \dagger$ |
| $200 / 1000^{\circ} \mathrm{F}$ | and | $100 / 550^{\circ} \mathrm{C} * \mathrm{C}$ |


| Overtemperature limits |  |
| :---: | :---: |
| Top of Range ${ }^{\circ} \mathrm{F}$ | Maximum <br> Over Temperature |
| up to 250 | $100 \%$ of span |
| $251 / 550$ | $50 \%$ of span |
| $551 / 1000$ | $800^{\circ} \mathrm{F}^{* *}$ |

*Dual scale ranges available for all standard ${ }^{\circ} \mathrm{F}$ ranges ( $3^{\prime \prime}$ and 5 " case only)
**Satisfactory for continuous service up to $800^{\circ} \mathrm{F}$ or $425^{\circ} \mathrm{C}$. Can be used for intermittent service from 800 to $1000^{\circ}$, or 425 to $500^{\circ} \mathrm{C}$.
Use Ashcroft Duratemp ${ }^{\oplus}$ thermometers for ranges above and below those listed above.
$\dagger$ Minimum stem length for these ranges is 4 ".
$\dagger \dagger$ Minimum stem length for lower connection and Everyangle is 4".

## DIMENSIONS



All specifications are subject to change without notice. All sales subject to standard terms and conditions. © 2016 Ashcroft Inc. Rev. 01/16

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