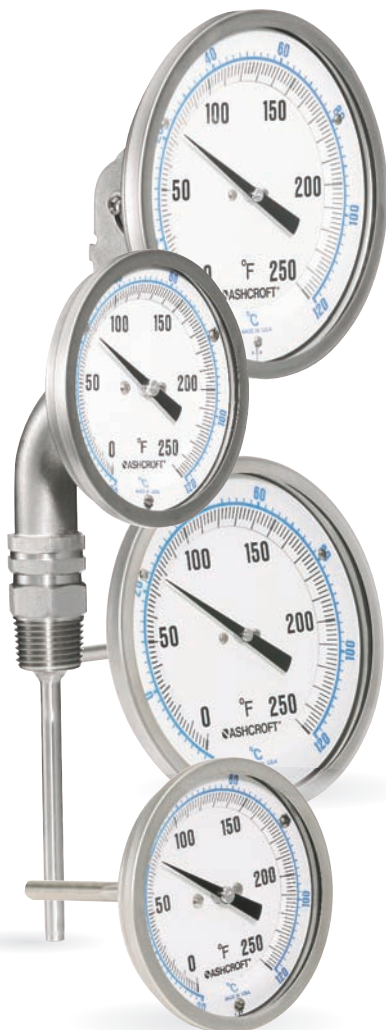


EI Series Bimetal Thermometers



FEATURES

- 1% full span accuracy ASME B40.200 (ASME B40.3 Grade A)
- Maximum ambient temp. is 200°F (94°C)
- Hermetically sealed case to prevent entry of moisture, interior corrosion and coil freeze-up.
- External adjustment permits zero reset from outside the case.
- Maxivision® dial allows readability from any angle without parallax error.
- Silicone coil dampening (up to 400°F) provides vibration dampening and improves response time.
- All-welded stainless steel construction
- Heavy-Duty glass lens
- Protection IP 65
- Five year limited warranty



SPECIFICATIONS

Ashcroft®	
Series:	EI
Dial Sizes:	2", 3", 5"
Stem Length:	2½"–24" ⁽¹⁾
Case & Stem:	304 stainless steel, hermetically sealed
Stem Dia:	.250"
Window:	Heavy-duty glass, plastic or shatter-proof glass optional
Dial:	Maxivision®, black figures on white background
Pointer:	Black
Connection:	Plain, pointed plain, ¼ NPT, ½ NPT, ½ NPT union
Connection Location:	Everyangle, Lower, Rear
Ranges:	-80/120°F — 200/1000°F -50/50°C — 100/500°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 X3B ⅜" stem dia. with ½ NPT X02 ¼ NPT when ½ NPT is standard XS1 Silicone free

(1) Special or longer length available, consult factory
 (2) Dual scale available with 3" and 5" case only
 (3) Only available on rear connection

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°F (95°C).

HOW TO ORDER

	30	EI	60	R	040	0/250°F	XNH
Dial Size: 3" Code 30	_____	_____	_____	_____	_____	_____	_____
Case Style: EI	_____	_____	_____	_____	_____	_____	_____
Stem Connection: ½ NPT Code 60	_____	_____	_____	_____	_____	_____	_____
Stem Location: Rear Code R	_____	_____	_____	_____	_____	_____	_____
Stem Length: 4" Code 040	_____	_____	_____	_____	_____	_____	_____
Range: Code 0/250°F	_____	_____	_____	_____	_____	_____	_____
Options: Stainless steel tag	_____	_____	_____	_____	_____	_____	_____

All specifications are subject to change without notice.
 All sales subject to standard terms and conditions.
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 REGISTERED FIRM
 BULLETIN BM-EI

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EI Series Bimetal Thermometers

EI Series selection table

Case	Size	Style Code	Stem			Stem Lengths Available			Temperature Range							
Dial	Code		Conn.	Code	Location	Code	Length (inches)	Code	°F* Fahrenheit	% Div.	Fig. Inter.	°C Celsius	% Div.	Fig. Inter.		
2"	20		Plain	40	Rear	R	2½	025	-80/120	2	20	-50/50	1	10		
			Pointed	50					-20/120††			-20/120			2	20
			½ NPT	60					30/130††			0/50††			1	5
3"	30		½ NPT Union	42	Everyangle	E	4	040	0/200	2	20	0/100	1	10		
			½ NPT	60			6	060	50/300			0/200			2	20
			½ NPT	60			9	090	50/400			0/200			2	20
			½ NPT	60	Rear	R	12	120	50/550	0/200††	5	50	50/450***†	5	50	
			½ NPT	60	Lower	L	15	150	200/700†	100/800†			100/500***†			
			½ NPT Union	42	Everyangle	E	18	180	200/1000***†	10			100			
5"	50		½ NPT	60	Rear	R	24	240	100/800†	5	50	100/500***†	5	50		
			½ NPT	60					Lower			L			200/1000***†	
			½ NPT	60					Lower			L			200/1000***†	

EI Dimensions

Case Series	Dial Size	Connection Location	A	B	C	D	E	G	H	S	NPT	Hex	Weight in ounces ⁽³⁾
EI	2"	Rear (Plain)	2½ ₍₅₃₎	¾ ₍₁₀₎	¾ ₍₈₎	-	-	-	-	-(2)	-	1½ ₍₆₎	4½
EI	2"	Rear (Plain, pointed stem)	2½ ₍₅₃₎	¾ ₍₁₀₎	¾ ₍₈₎	-	-	-	-	-(2)	-	1½ ₍₆₎	4½
EI	2"	Rear (Threaded)	2½ ₍₅₃₎	¾ ₍₁₀₎	¾ ₍₈₎	-	-	-	-	-(2)	¼	1½ ₍₆₎	4½
EI	3"	Rear	3¾ ₍₈₀₎	1½ ₍₁₅₎	¾ ₍₈₎	-	-	-	-	-(2)	½	¾ ₍₆₎	7
EI	3"	Lower	3¾ ₍₈₀₎	1½ ₍₁₅₎	-	2½ ₍₆₇₎	¼ ₍₆₎	-	-	-(2)	½	¾ ₍₆₎	11
EI	3"	Everyangle	3¾ ₍₈₀₎	1½ ₍₁₅₎	-	-	-	1½ ₍₄₂₎	3½ ₍₈₉₎	-(2)	½	¾ ₍₆₎	10
EI	5"	Rear	5½ ₍₁₂₈₎	2¾ ₍₁₈₎	¾ ₍₈₎	-	-	-	-	-(2)	½	¾ ₍₆₎	16
EI	5"	Lower	5½ ₍₁₂₈₎	1½ ₍₁₈₎	-	3¾ ₍₉₂₎	¼ ₍₆₎	-	-	-(2)	½	¾ ₍₆₎	26
EI	5"	Everyangle	5½ ₍₁₂₈₎	2¾ ₍₁₈₎	-	-	-	1½ ₍₄₈₎	3½ ₍₉₃₎	-(2)	½	¾ ₍₆₎	25

NOTES:

- Figures in parenthesis () are in millimeters. All other dimensions are in inches.
- Standard "S" dimensions are 2½, 4, 6, 9, 12, 15, 18 and 24 inches. Standard stem diameter is ¼ inch.
- Add 1 oz. for every 2 inches of stem length.

EI Series dual scale ranges

Dual scales are available in 3" and 5" dial sizes in the following ranges:

Inner	Outer
-80/120°F	and -60/50°C
-40/120°F	and -40/50°C
-40/160°F	and -40/70°C
-20/120°F	and -30/50°C††
0/200°F	and -20/90°C
0/250°F	and -20/120°C
30/130°F	and 0/55°C††
50/300°F	and 10/150°C
50/400°F	and 10/200°C
50/550°F	and 10/290°C
100/800°F	and 50/400°C†
200/700°F	and 100/370°C†
200/1000°F	and 100/550°C**†

Overtemperature limits

Top of Range °F	Maximum Over Temperature
up to 250	100% of span
251/550	50% of span
551/1000	800°F **

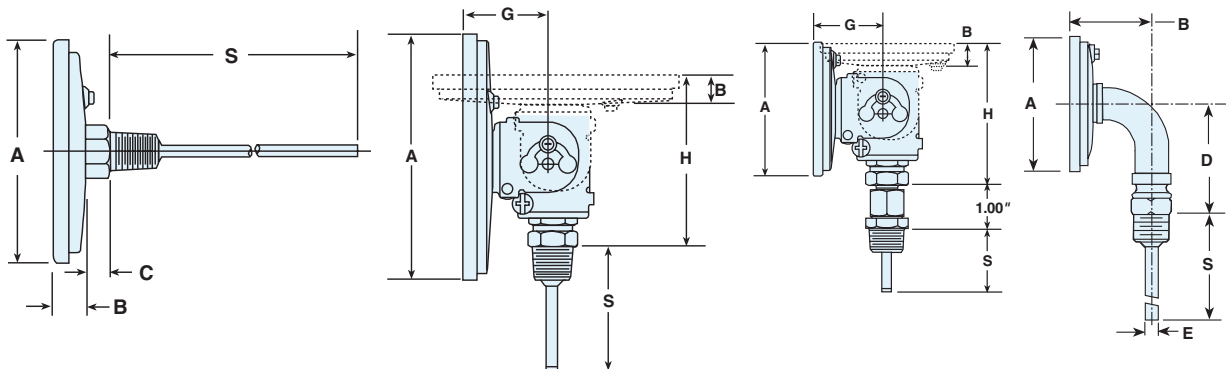
*Dual scale ranges available for all standard °F ranges (3" and 5" case only)

**Satisfactory for continuous service up to 800°F or 425°C. Can be used for intermittent service from 800 to 1000°F, or 425 to 500°C. Use Ashcroft Duratemp® thermometers for ranges above and below those listed above.

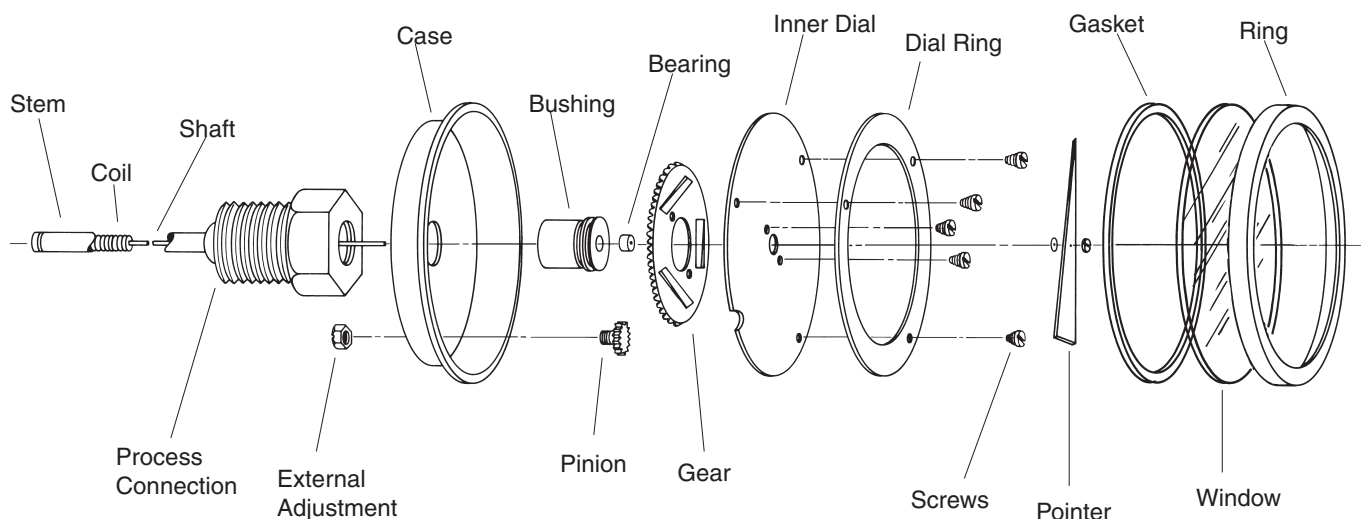
†Minimum stem length for these ranges is 4".

††Minimum stem length for lower connection and Everyangle is 4".

DIMENSIONS



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Warning: When selecting all bimetal thermometers, consider the media and the ambient operating conditions. Improper application can be detrimental to the thermometer and can cause failure and possibly personal injury or property damage. Inaccuracies resulting from improper setting of the external adjustment by the user may cause personal injury or property damage. Consult ASME B40.3 for guidance in selection and use of bimetal thermometers.

Temperature Ranges: Standard Fahrenheit and Celsius ranges have been established to encompass all normal temperature measurement requirements. A bimetal thermometer can be used at an operating temperature anywhere throughout its dial range. Provision should be made for extreme temperature conditions. No bimetal thermometer should be exposed continuously to process temperatures over 800°F (425°C).

Operating Conditions: The maximum ambient temperature of the case should be no more than 200°F (95°C); liquid-filled series 150°F (65°C). Temperatures beyond this value may cause discoloration of the dial or result in increased pressure inside the casing which would ultimately lead to failure of the window. The lowest ambient temperature should not exceed -40°F (-40°C).

Thermowells: Thermowells must be used on any application where the stem of the bimetal thermometer may be exposed to pressure, corrosive fluids or high velocity. Additionally, the use of a thermowell permits instrument interchange or calibration check without disturbing or closing down the process.

Pointers: The pointers are balanced to close tolerances, and the paint finishes are controlled to assure long-term stability under adverse ultraviolet conditions.

Cases: There are three case styles. The CI series has no adjustment but is hermetically sealed. The hermetic seal prevents

entry of moisture into the casing, minimizing the possibility of icing or fogging inside the case. The EL series provides the same features as the EI plus the added benefit of liquid filling which prolongs instrument life. Potential wear problems caused by excessive vibration are minimized through dampening, and the liquid medium improves readability. The instruments are leak-tested to ensure the integrity of the joints. Case and stem material is 304 stainless steel.

Coils: The bimetallic coils are carefully wound and inspected. Each is heat treated for optimum stability and overtemperature capability.

Bearings: The bearings are made of Teflon or other low-friction material.

Shafts: Shafts are made of specially drawn stainless steel wire with a very smooth finish.

Dials: The dials are based on computer-calculated temperature deflection data and have the Maxivision® format to minimize parallax error.

Windows: The standard window on EI and CI series are heavy-duty glass. Plastic and shatterproof glass are optional. The standard window on EL series is polycarbonate. No other options are available.

The complete line of Ashcroft® industrial bimetal thermometers and accessories provides quality choices for your temperature applications. There is a long history of superior quality in engineering, manufacturing and customer service of these products. Each Ashcroft industrial bimetal thermometer is backed by a limited five year warranty.

Each instrument is manufactured to a standard accuracy of 1% of span (ASME B40.3, Grade A) traceable to the National Institute of Standards and Technology (NIST). The bimetal coils are heat treated for stability and overtemperature capability. A single helix is used to reduce lag time. The bearings are made of a low-friction long-life material. The shafts are made of

specially drawn stainless steel with a very smooth finish. All joints are welded, and the weld between the stem and the outlet is located at the bottom of the threads to eliminate the possibility of crevice corrosion.

Silicone dampening is included for improved vibration resistance. The Ashcroft Maxivision® dial eliminates parallax error by placing the pointer in the same plane as the graduations. The dial can be rotated 360 degrees and can be angled 180 degrees with the Everyangle™ connection.

Everyangle – Case Connection: The Ashcroft Everyangle industrial bimetal thermometer dial face with Maxivision dial can be rotated 360 degrees and angled 180 degrees. It is available in the EI and EL (5" only in EL) series with either a threaded or compression type union connection.

This design provides maximum utility. Since the entire case can be rotated and angled, the instrument can be installed almost anywhere and adjusted so that the dial face can be easily read.