

Data Sheet

EI Bimetal Thermometer

FEATURES

- Hermetically sealed case to prevent entry of moisture, interior corrosion and coil freeze up
- Maxivision® dial for precise readings (minimize parallax reading errors)
- Silicone dampened coil for reduction of pointer flutter on high vibration application and provides improved response times
- External adjustment
- Customized dial printing
- Everyangle™ connection dial can be rotated 360°

TYPICAL USES

- Offshore oil rigs
- Chemical and petrochemical plants
- Water and wastewater pressure control
- Pulp and paper
- Refineries
- Power
- General industrial
- HVAC
- Equipment skids
- Pharmaceutical / Biotech
- Food and beverages



EI Bimetal
2", 3", 5" dial sizes



SPECIFICATIONS

Accuracy:	±1% of span ASME B40.200 (B40.3 Grade A)	
Stem Length:	2½" to 60"	
Sizes:	2", 3", 5"	
Dial Style:	Maxivision®, black figures on white background	
Overtemperature Limits:	Top of Range °F	Max. Over Temperature
	up to 250	100% of span
	251-550	50% of span
	551-1,000	800 °F
	Satisfactory for continuous service up to 800 °F (425 °C). Can be used for intermittent service from 800 °F to 1,000 °F (425 °C to 500 °C). Use Ashcroft Duratemp® thermometers for ranges above and below those listed above.	
Process Connection:	Plain, Pointed Stem, ½ NPT, ½ NPT Union and ½ NPT Adjustable Union	
Stem diameter:	0.250", 0.375"	
Case & Stem:	304 SS, 316 SS Hermetically sealed	
Process Connection Location:	2": Rear 3", 5": Everyangle™, Lower, Rear	
Pointer:	Black	
Window:	Glass, Acrylic, Safety Glass	
Approvals:	RoHS	

CAUTION

Thermowells should be used on all pressurized applications over 15 psi, to protect the thermometer from corrosion or physical damage, and to facilitate removal of the thermometer without disturbing the process.

KEY BENEFITS

- NEMA 4X/IP66 protection
- Able to perform quick and limited span adjustments
- All Welded stainless steel construction
- 5-year limited warranty

MIN/MAX TEMPERATURE LIMITS

Ambient

-40 °F to 200 °F (-40 °C to 93 °C)

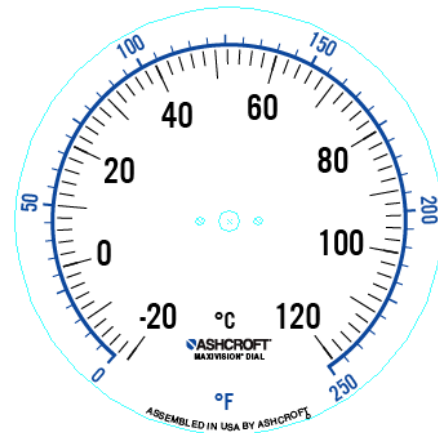
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ORDERING CODE	Example:	30EI	60	R	060	XSG	0/200°F
Dial Size and Model							
20EI - 2" External adjust bimetal (rear connection only)							
30EI - 3" External adjust bimetal		30EI					
50EI - 5" External adjust bimetal							
Stem and Connection							
40 - Plain - no connection							
42 - ½ NPT Union (Everyangle™ only) (Allows thermometer to be rotated to desired orientation)							
50 - Pointed stem - no connection (2" case only)							
60 - ½ Fixed NPT for 3 & 5" but ¼ fixed NPT for 2"			60				
70 - ½ NPT Adjustable Union (5" Everyangle™ only) (Allows thermometer to be rotated & adjust process insertion length desired)							
Connection Location							
R - Rear connection				R			
L - Lower connection							
E - Everyangle™ connection							
Stem Length (Consult factory for custom or longer stem length)							
025 - 2½"							
040 - 4"							
060 - 6"					060		
090 - 9"							
120 - 12"							
150 - 15"							
180 - 18"							
240 - 24"							
Options - (if choosing an option(s) must include an "X")							
CS - Dual scale						X_ _	
DM - Dial marking							
NH - Stainless steel tag							
PD - Acrylic window							
SG - Safety glass						SG	
YW - 316 Stainless steel construction (5" Everyangle™ connection)							
C4 - Traceable calibration certificate							
S1 - Silicone free							
3B - ⅜" stem diameter							
02 - ¼ NPT (only available on rear connection)							
Temperature Ranges (see tables on pages 3 and 4 for more ranges)							
0/200 °F							0/200 °F

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Fahrenheit Inner Range		
Inner °F	Outer °C	Restrictions
-100/100	-70/40	
-80/120	-60/50	
-50/200	-40/93	
-50/250	-40/120	
-40/120	-40/50	4" Min for Everyangle™ and Lows only
-40/160	-40/70	
-20/120	-30/50	
0/100	-20/40	
0/150	-20/65	
0/200	-20/93	
0/250	-20/120	
0/300	-20/150	
0/350	-20/170	
0/400	-20/200	
0/500	-20/260	
20/120	-5/50	
30/130	0/55	
30/240	0/115	
50/300	10/150	
50/400	10/200	
50/550	10/290	
0/700	-20/370	4" minimum
100/800	50/430	4" minimum
150/750	65/395	4" minimum
200/700	100/370	4" minimum
200/1000	100/550	4" minimum Satisfactory continuous service from 800 °F or 426 °C. Intermittent service from 800 °F to 1,000 °F or 425 °C to 500 °C

Celsius Inner Range		
Inner °C	Outer °F	Restrictions
-50/50	-50/120	
-50/180	-50/350	
-40/100	-40/210	4" minimum
-40/160	-40/320	
-30/70	-20/160	
-20/180	0/350	
-20/120	0/250	
-10/50	20/120	
-10/110	20/230	
0/60	30/140	
0/100	30/210	
0/120	30/250	
0/150	30/300	
0/200	30/400	
0/250	30/480	
0/300	30/570	
10/150	50/300	
0/400	30/750	
0/500	30/390	4" minimum
50/450	120/840	4" minimum Satisfactory continuous service from 800 °F or 426 °C. Intermittent service from 800° to 1,000 °F or 425 °C to 500 °C
100/500	220/930	4" minimum Satisfactory continuous service from 800 °F or 426 °C. Intermittent service from 800° to 1,000 °F or 425 °C to 500 °C

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Single Scale Ranges					
Restrictions		°F	°C	Restrictions	
		-100/100			
		-80/120			
		-50/200	-50/50		
		-50/250	-50/180		
Can be Liquid filled	4" Min for Everyangle™ and Lowers only	-40/120	-40/100		
		-40/160	-40/160		
		-20/120	-30/70		
		0/100	-20/180		
		0/150	-10/50		
		0/200	-10/110		
		0/250	0/50	4" minimum	
		0/300	0/60	4" minimum	
		0/400	—		
		0/500	0/100		
		4" Min for Everyangle™ and Lowers only	20/120	0/120	
		4" Min for Everyangle™ and Lowers only	30/130	0/150	
			30/240	0/200	
			50/300	0/250	
			50/400	0/300	
			50/550	10/150	
	4" minimum	0/700	0/400	4" minimum	
	4" minimum	100/800	0/500	4" minimum	
	4" minimum	150/750	50/450	4" minimum Satisfactory continuous service from 800 °F or 426 °C. Intermittent service from 800 °F to 1,000 °F or 425 °C to 500 °C	
	4" minimum	200/700	100/500	4" minimum Satisfactory continuous service from 800 °F or 426 °C. Intermittent service from 800 °F to 1,000 °F or 425 °C to 500 °C	
	4" minimum Satisfactory continuous service from 800 °F or 426 °C. Intermittent service from 800 °F to 1,000 °F or 425 °C to 500 °C	200/1000			

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DIMENSIONS in [] are millimeters

For reference only, consult Ashcroft for specific dimensional drawings

Dial Size (Inches)	Process Connection Locations	A	B	C	D	G	H	S	NPT	Hex.	Weight (oz) ⁽¹⁾ S - 2 1/2"
2	Rear (Plain)	2 3/32 [53]	3/8 [10]	3/8 [10]				(2)		1 1/16	4 1/2
2	Rear (Plain, pointed stem)	2 3/32 [53]	3/8 [10]	3/8 [10]				(2)		1 1/16	4 1/2
2	Rear (Threaded)	2 3/32 [53]	3/8 [10]	3/8 [10]				(2)	1/4	1 1/16	4 1/2
3	Rear	3 5/32 [80]	1/2	3/8 [10]				(2)	1/2	7/8	7
3	Lower	3 5/32 [80]	1 1/2		2 5/8 [67]			(2)	1/2	7/8	11
3	Everyangle™	3 5/32 [80]	1/2			1 21/32 [42]	3 3/8	(2)	1/2	7/8	10
5	Rear	5 1/32 [128]	1 9/32	3/8 [10]				(2)	1/2	7/8	16
5	Lower	5 1/32 [128]	1 15/16 [49]		3 5/8 [92]			(2)	1/2	7/8	26
5	Everyangle™	5 1/32 [128]	1 9/32			1 3/4	3 21/32 [93]	(2)	1/2	7/8	25

NOTES:

1. Add 1 oz. for every 2" inches of stem length
2. "S" dimensions are 2 1/2, 4, 6, 9, 12, 15, 18 and 24" (STD.). Stem diameter is 1/4" (STD.)
3. Stem tolerance is ± 0.125"

