

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 SS construction
- Heavy-Duty glass lens
- Protection NEMA 4X/IP66
- Five-year limited warranty

SPECIFICATIONS

Ashcroft®	
Series:	EI
Dial Sizes:	2", 3", 5"
Stem Length:	2½"-60" (1)
Case & Stem:	304 SS, hermetically sealed
Stem Dia:	.250"
Window:	Heavy-duty glass, plastic or shatterproof glass optional
Dial:	Maxivision®, black figures on white background
Pointer:	Black
Connection:	Plain, pointed plain, ¼ NPT, ½ NPT, ½ NPT union and ½ NPT adjustable 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 SS tag
	XNN Paper tag
	XPD Plastic window
	XSG Shatter proof glass
	X3B 3/8" stem dia. with ½ NPT
	X02 ¼ NPT when ½ NPT is standard (3)
	XS1 Silicone free
	XYW 316 SS Housing (4) and stem

(1) 25"-60" lengths available, consult factory
 (2) Dual scale available with 3" 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°F (95°C).

HOW TO ORDER

Dial Size: 3" Code 30 _____ 30 EI 60 R 040 0/250°F XNH
 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 _____



El Series Bimetal Thermometers

El Series selection table

Case	Size	Style Code	Conn.	Code	Location	Code	Stem Lengths Available "S" Length (inches)	Code	°F* Fahrenheit	°/Div.	Fig. Inter.	°C Celsius	°/Div.	Fig. Inter.
2"	20	EI	Plain	40	Rear	R	2 1/2	025	-80/120	2	20	-50/50	1	10
			Pointed	50					-20/120††			-10/110		
			1/4 NPT	60					-40/120			-20/120		
3"	30	EI	1/2 NPT Union	42	Everyangle	E	4	040	30/130††	1	10	0/50††	1	5
			1/2 NPT	60					0/200			0/100		
			1/2 NPT	60					20/120			10/150		
5"	50	EI	1/2 NPT	60	Rear	R	9	090	0/250	2	50	0/200	2	20
			1/2 NPT	60					50/300			0/300††		
			1/2 NPT	60					50/400			0/400†		
			1/2 NPT Union	42	Lower	L	12	120	50/300	5	50	0/300††	5	50
			1/2 NPT	60					50/400			0/400†		
			1/2 NPT	60					50/550			50/450**†		
			1/2 NPT Adjust. Union	70	Everyangle	E	15	150	200/700†	10	100	100/500**†	5	50
			1/2 NPT	60					100/800†					
			1/2 NPT	60					200/1000**†					

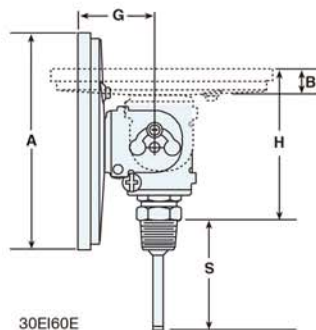
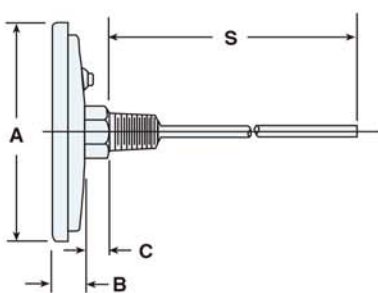
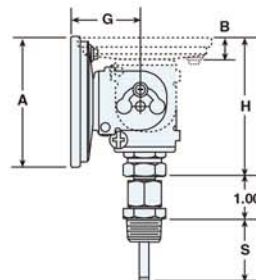
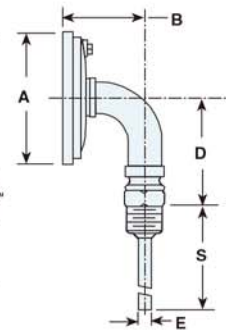
CONTACT FACTORY FOR ADDITIONAL STEM LENGTHS AND RANGES NOT LISTED

El Dimensions

Case Series	Dial	Connection Location	A	B	C	D	E	G	H	S	NPT	Hex	Weight in ounces ⁽²⁾ S - 2 1/2"
EI	2"	Rear (Plain)	2 3/32 (53)	3/8 (10)	3/8 (8)	-	-	-	-	— ⁽²⁾	-	1 1/16	4 1/2
EI	2"	Rear (Plain, pointed stem)	2 3/32 (53)	3/8 (10)	3/8 (8)	-	-	-	-	— ⁽²⁾	-	1 1/16	4 1/2
EI	2"	Rear (Threaded)	2 3/32 (53)	3/8 (10)	3/8 (8)	-	-	-	1/4	— ⁽²⁾	4 1/2	1 1/16	4 1/2
EI	3"	Rear	3 5/32 (80)	19/32 (15)	3/8 (8)	-	-	-	1/2	— ⁽²⁾	1/4	7/8	7
EI	3"	Lower	3 5/32 (80)	1 27/32 (47)	-	2 5/8 (67)	1/4 (6)	-	1/2	— ⁽²⁾	1/2	7/8	11
EI	3"	Everyangle	3 5/32 (80)	19/32 (15)	-	-	-	1 21/32 (42)	3 1/32 (89)	— ⁽²⁾	1/2	7/8	10
EI	5"	Rear	5 1/32 (128)	23/32 (18)	3/8 (8)	-	-	-	-	— ⁽²⁾	1/2	7/8	16
EI	5"	Lower	5 1/32 (128)	1 15/16 (49)	-	3 5/8 (92)	1/4 (6)	-	-	— ⁽²⁾	1/2	7/8	26
EI	5"	Everyangle	5 1/32 (128)	23/32 (18)	-	-	-	1 7/8 (48)	3 21/32 (93)	— ⁽²⁾	1/2	7/8	25

NOTES:

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

DIMENSIONS

 30EI60E
 50EI60E
 50EL60E

 30EI42E
 50EI42E
 50EL42E

El 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" F 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".

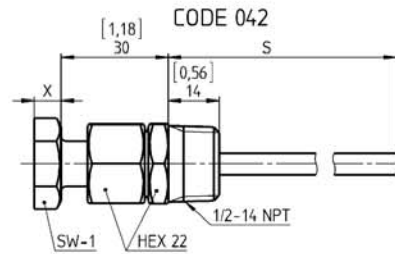


Ausführliche Spezifikation und Maßbilder der Prozessanschlüsse

Festanschluss Klemmring Kode 042

Länge S ist fest vorgegeben, das Thermometer kann jedoch im Winkel axial ausgerichtet werden.

Kode 042 1/2 NPT außen



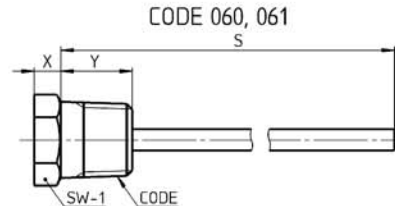
CODE 042	SW-1	X
L	24	8 [0,31]
E	22	9,8 [0,39]
R	22	7,5 [0,30]

Festanschluss Kode 060 und 061

Länge S ist fest vorgegeben.

Kode 060 1/2 NPT außen

Kode 061 G 1/2 A außen



CODE 060 1/2-14 NPT	SW-1	X	Y
L	24	8 [0,31]	20 [0,79]
E	22	9,8 [0,39]	20 [0,79]
R	22	7,5 [0,30]	20 [0,79]
CODE 061 G 1/2 A L/E/R	27	12 [0,47]	12 [0,47]

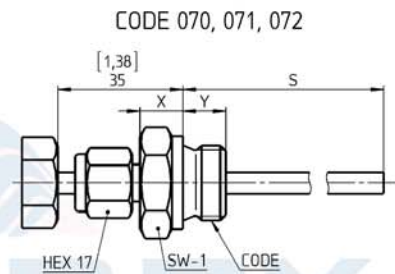
Klemmringverschraubung Kode 070, 071 und 072

Länge S ist einstellbar, das Thermometer kann im Winkel axial ausgerichtet werden.

Kode 070 1/2 NPT außen

Kode 071 G 1/2 A außen

Kode 072 3/4 NPT außen

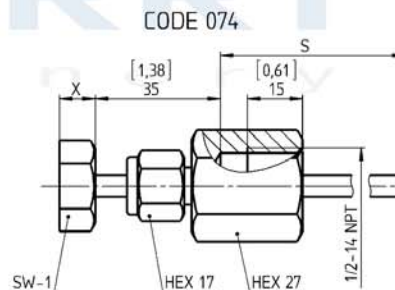


L/E/R	SW-1	X	Y
CODE 070 1/2-14 NPT	22	7,5 [0,30]	20 [0,79]
CODE 071 G 1/2 A	27	12 [0,47]	12 [0,47]
CODE 072 3/4-14 NPT	27	9 [0,35]	20 [0,79]

Klemmringverschraubung Kode 074

Länge S ist einstellbar, das Thermometer kann im Winkel axial ausgerichtet werden.

Kode 074 1/2 NPT innen

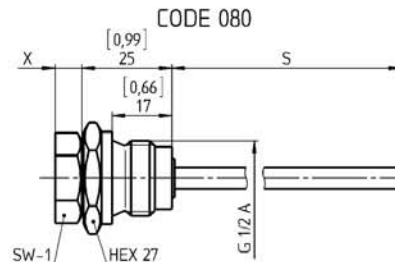


CODE 074	SW-1	X
L	24	8 [0,31]
E	22	7,5 [0,30]
R	22	10 [0,39]

Überwurfmutter Kode 080

Länge S ist fest vorgegeben, das Thermometer kann jedoch im Winkel axial ausgerichtet werden.

Kode 080 G 1/2 A außen

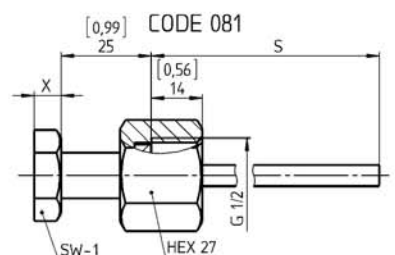


CODE 080	SW-1	X
L	24	8 [0,31]
E	22	7,5 [0,30]
R	22	7,5 [0,30]

Überwurfmutter Kode 081

Länge S ist fest vorgegeben, das Thermometer kann jedoch im Winkel axial ausgerichtet werden.

Kode 081 G 1/2 innen



CODE 081	SW-1	X
L	24	8 [0,31]
E	22	7,5 [0,30]
R	22	7,5 [0,30]

All Stainless Steel Bimetal Thermometer

Model FI

Nominal size 3" 4" 5" 6"

Accuracy: Class 1 according to EN13190

1.5% according to JB/T 8803-1998

Optional 1% F.S according to JB/T 8803-1998

Features

- Rugged stainless steel construction
- Fast response
- Protection IP65
- External zero adjustment
- Dry or liquid filled

Ranges

-50 ... 50 °C up to 0 ... 300 °C(consult factory for other ranges)

Dual scale on request

Applications

Chemical and petrochemical industry

Machine and apparatus construction

Food and beverage industry

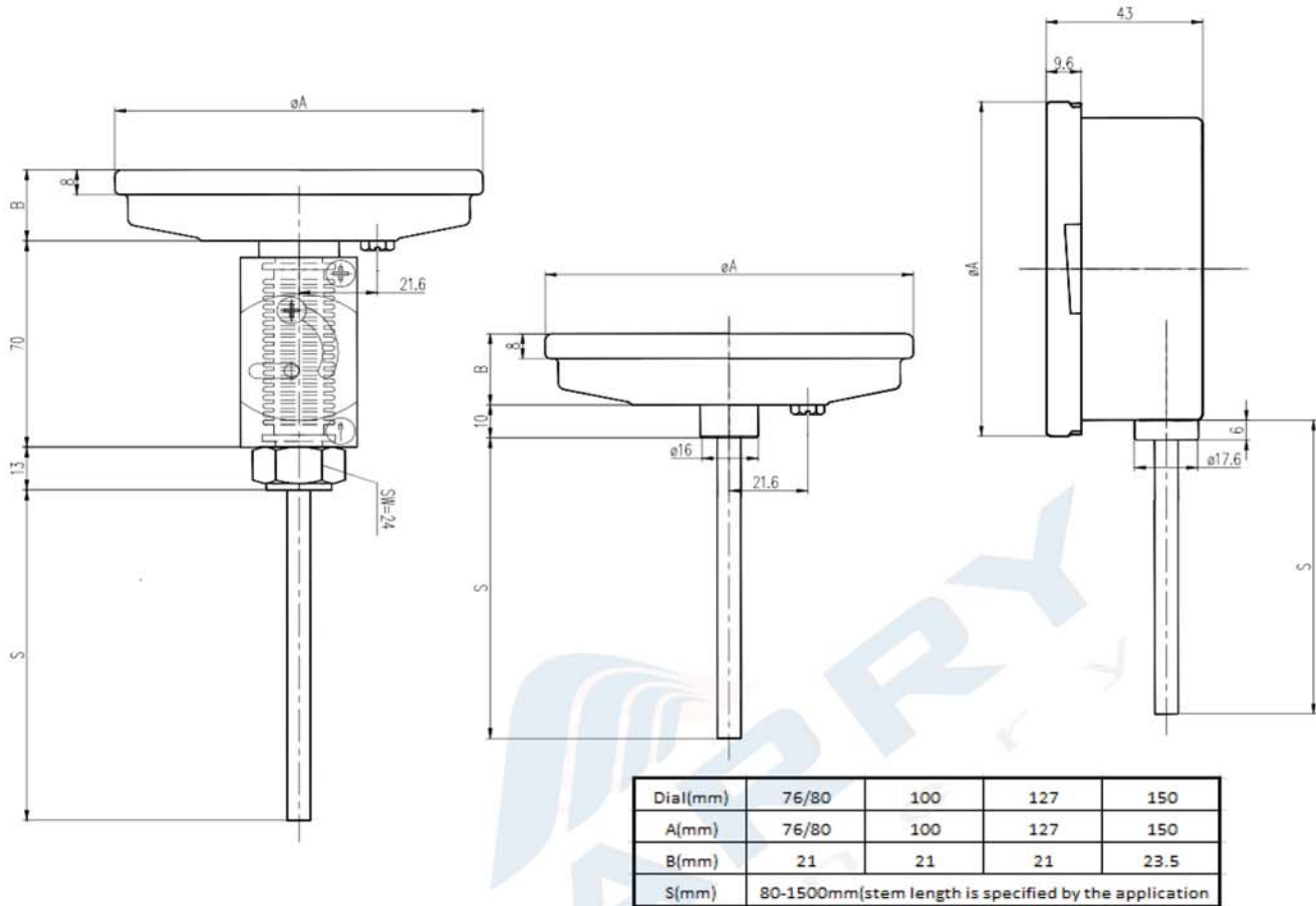
Pulp and paper industry



Technical specification		Model FI			
Dial size		80 mm(3")	100 mm(4")	127mm(5")	150mm(6")
Construction		Cylindrical case with crimp ring, hermetically sealed and external adjustment			
Measuring principle		Bimetallic coil			
Range [°C]		-50/50 -40/60 -40/80 -30/70 -20/40 -20/80 -20/120 -20/160 0/60 0/100 0/120 0/150 0/160 0/200 0/250 0/300 Note: Ranges in °F or dual scales , or other specific range on request			
Temperature limits for ranges Max. process over temperature		130% F.S			
Stem					
Diameter		1/4" (6,4 mm), optional 6mm, 8mm, 9mm and 10mm			
Length		80 ... 1500 mm, minimum length depends on range; - For length>1500mm, please consult the factory			
Process connection		Fixed 1/2 NPT male; adjustable union 1/2NPT male; others available			
Connection location		Lower, Back and every angle. See below for connection location details: - For 3"(80mm),lower/back/every angle connection - For 4"(100mm),lower/back/every angle connection - For 5"(127mm),back/every angle connection - For 6"(150mm),lower/back/every angle connection			
Material					
Connection		Stainless steel 304SS, optional 316/316LSS			
Stem		Stainless steel 316L SS			
Case/ring		Stainless steel 304SS, optional 316LSS			
Window		Instrument glass, optional laminated safety glass (safety glass not for lower connection)			
Dial		Aluminum, black markings on white background			
Pointer		Aluminum, black			
Accuracy		Class 1,according to EN13190; optional 1.5% or 1% F.S according to JB/T 8803-1998			
Protection according EN 60 529/IEC 529		IP65			
Filling liquids		Silicone; liquid filling not for lower connection Media temperature limits for liquid filled gauge: -65 °C to 250 °C			
Weight [kg] (Dry)		0.48	0.56	0.65	0.80
Accessories, options		Thermowells, optional stem diameters, dual scale, calibration certification			



General dimensions [mm]



Order information

Size	Type and stem execution	Filling	Process connection	Connection orientation	Stem length(mm)	Range	Engineering unit	Options
(30) 3" 80 mm	(FI) stem dia. 1/4" (6,4 mm) Accuracy Class 1 EN13190	(=) Standard (no filling)	(060) Fixed 1/2 NPT male	(L) Lower not for Size 50; not for liquid filling)	80 to 1500	-50/50 -40/60 -40/80 -30/70 -20/40 -20/80 -20/120 -20/160	°C	(NH) Tagging wired
(40) 4" 100 mm		(L) Liquid filled with silicone (only for media temperature -65 to 250 °C; not for lower connection)	(070) Adjustable union 1/2 NPT male	(R) Back	For stem length over 1500mm please consult factory	0/60 0/100 0/120 0/150 0/160 0/200 0/250 0/300		(CS) Dual scale
(50) 5" 127 mm						Others are available including sanitary connection; consult factory		(E) Every angle
(60) 6" 150 mm			(YW) 316LSS case					
	(SD06) stem dia. 6mm							
	(SD08) Stem dia. 8mm							
	(SD09) Stem Dia. 9mm							
	(SD10) Stem Dia. 10mm							
	(AN15) Accu. 1.5% FS							
	(AN10) Accu. 1% FS							
	(C4) Calibration Report							

How to order

Size	Type and stem execution	Filling	Process connection	Connection orientation	Stem length	Range	Engineering unit	Option
50	FI	=	060	E	150	0/200	C	NH

