

# All stainless steel bimetal thermometer

## Model A

Nominal size 100 mm or 160 mm  
Accuracy: Class 1 according to EN 13190

### Features

- Rugged all welded stainless steel construction
- Protection IP66
- Optional ATEX approved  $\text{CE} \text{ Ex}$  II 2 GD c Tx°C IP66
- Optional external adjustment permits zero reset from outside the case.
- Dry or liquid filled
- Silicone coil dampening provides vibration dampening and improves response time



### Ranges

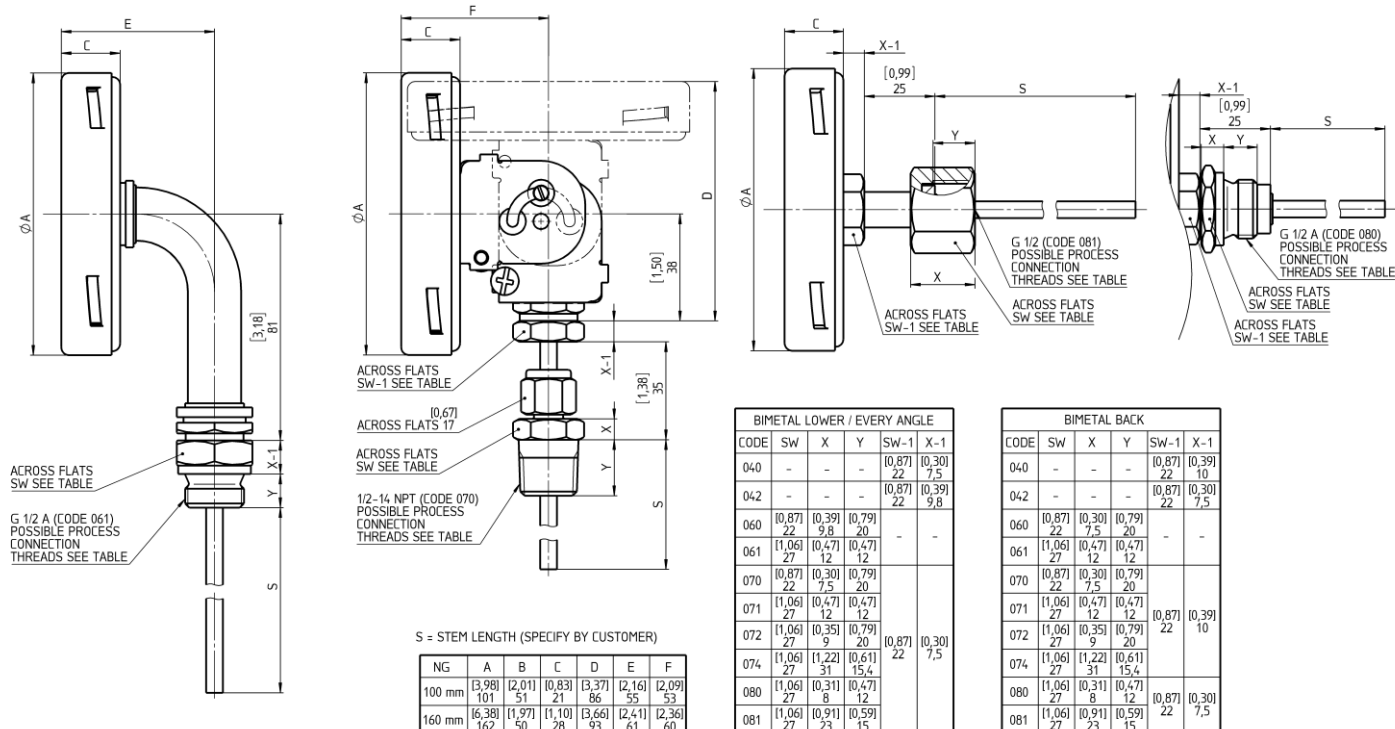
-50 ... 50 °C up to 0 ... 500 °C  
-80 ... 120 °F up to 200 ... 1000 °F

### Applications

Chemical and petrochemical industry  
Machine and apparatus construction  
Food and beverage industry  
Pulp and paper industry

Technical specification	AM, AE, AI, A3B											
	100 mm			160 mm								
Construction	Cylindrical case with bayonet ring											
Measuring principle	Bimetallic coil											
Range in °C	0/50	0/60	0/80	0/100	0/120	0/150	0/160	0/200	0/250	0/300	0/400	0/500
Ranges in °F	10/150	50/300	50/450	100/500								
	-10/50	-10/110	-20/40	-20/60	-20/80	-20/120	-20/180					
	-25/25	-30/50	-30/70	-40/40	-40/60	-40/160	-50/50					
	0/100	0/150	0/200	0/250	0/300	0/350	0/500	20/120	30/130	30/240		
	50/300	50/400	50/550	80/180	100/800	160/360	170/270	200/400	200/700	200/1000		
	-40/120	-40/160	-20/120	-80/120	-10/100							
Temperature limits for ranges	Dual scales on request											
Max. process overtemperature	< 120 °C			≥ 120 °C and < 290 °C		≥ 290 °C						
Max. ambient temperature	100 % of span			50 % of span		max. 425 °C for continuous service						
Stem	94 °C with dry case, 65 °C with liquid filling											
Diameter	6 mm, 8 mm, ¼" (6,4 mm), 3/8" (9,6 mm)											
Length	63 ... 1000 mm, minimum length depends on range											
Process connection	Plain G ½ A male, G ½ female, ½ NPT male or ½ NPT female G ¾ A male, G ¾ female, ¾ NPT male or ¾ NPT female, M18x1,5 male or M18x1,5 female G 1 A male, G 1 female, 1 NPT male or 1 NPT female, others on request Fixed, adjustable or with swivel nut											
Connection location	Back, lower and every angle (rotatable)											
Material	Stainless steel 316L (1.4404) or 1.4571 (316Ti) Stainless steel 316L (1.4404) or 1.4571 (316Ti) Stainless steel 304 (1.4301), optional 316L (1.4404) Instrument glass, optional shatter proof glass or acrylic glass Aluminum, black markings on white background Aluminum, black											
Accuracy	Class 1 (dry) and class 2 (liquid filled) according to EN 13190											
Protection according EN 60 529/IEC 529	IP66											
Conformity according to RL 2014/34/EU appendix X for mechanical equipment in potential hazardous areas	Optional, Marking $\text{CE} \text{ Ex}$ II 2 GD c Tx°C IP66; $\text{CE} \text{ Ex}$ II 2 GD c Tx°C IP65 (for bimetal with external zero adjustment) Ta -20°C ... 60°C File no. 35088073 at notified body 0044, TUV NORD CERT (only with shatter proof glass and protection IP66)											
Filling liquids	Silicone, not for lower connection, acrylic glass is standard Maximum range up to 300 °C											
Weight in kg												
Connection location	Back	Lower	Every angle	Back	Lower	Every angle						
Dry	0,35	0,55	0,55	0,7	0,9	0,9						
Filled	0,6	---	0,8	1,0	---	1,2						
Accessories	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.											

**General dimensions in mm**



**Order information**

Size	Type and stem execution	Filling	Process connection	Connection orientation	Stem length	Range	Options
<b>(100)</b> 100 mm	<b>(AM)</b> 6 mm	<b>(=)</b> Standard (no filling)	<b>(040)</b> Plain	<b>(L)</b> Lower	<b>63 to 1000 mm</b>	<b>0/ 50 °C<sup>1)</sup></b> <b>0/ 60 °C<sup>1)</sup></b> <b>0/ 80 °C<sup>1)</sup></b> <b>0/100 °C</b> <b>0/120 °C</b> <b>0/150 °C</b> <b>0/160 °C</b> <b>0/200 °C</b> <b>0/250 °C<sup>1)</sup></b> <b>0/300 °C<sup>1)</sup></b> <b>0/400 °C<sup>1)</sup></b> <b>0/500 °C<sup>1)</sup></b> <b>10/150 °C</b> <b>50/300 °C<sup>1)</sup></b> <b>50/450 °C<sup>1)</sup></b> <b>100/500 °C<sup>1)</sup></b> <b>-10/ 50 °C<sup>1)</sup></b> <b>-10/110 °C</b> <b>-20/ 40 °C<sup>1)</sup></b> <b>-20/ 60 °C<sup>1)</sup></b> <b>-20/180 °C</b> <b>-25/ 25 °C<sup>1)</sup></b> <b>-30/ 50 °C<sup>1)</sup></b> <b>-30/ 70 °C</b> <b>-30/170 °C</b> <b>-40/ 40 °C<sup>1)</sup></b> <b>-40/ 60 °C</b> <b>-40/100 °C<sup>1)</sup></b> <b>-40/160 °C</b> <b>-50/ 50 °C</b>	<b>(NH)</b> Stainless steel tag wired
	<b>(AE)</b> 8 mm		<b>(042)</b> Union outlet ½ NPT male	<b>(R)</b> Back			
<b>(160)</b> 160 mm	<b>(AI)</b> ¼" (6,4 mm)	<b>(L)</b> Liquid filled with silicone max. range 300 °C (not for lower connection, ambient temperature maximum 65 °C)	<b>(060)</b> Fixed ½ NPT male	<b>(E)</b> Every angle			<b>(CS)</b> Dual scale
	<b>(A3B)</b> 3/8" (9,6 mm)		<b>(061)</b> Fixed G ½ A male				<b>(DA)</b> Dial marking
	<b>(070)</b> Adjustable union ½ NPT male		<b>(PD)</b> Acrylic glass				
	<b>(071)</b> Adjustable union G ½ A male		<b>(SG)</b> Shatter proof glass				
	<b>(072)</b> Adjustable union ¾ NPT male		<b>(SH)</b> Red set hand stationary				
	<b>(074)</b> Adjustable union ½ NPT female		<b>(EA)</b> External zero adjustment				
	<b>(080)</b> Swivel nut G ½ A male		<b>(YW)</b> 316L (1.4404) housing				
	<b>(081)</b> Swivel nut G ½ female		<b>(C4)</b> Individual calibration certificate				
	Others on request		<b>(ATEX)</b> ATEX Approval				

Rev. H

**Order example**

Size	Type and stem execution	Filling	Process connection	Connection orientation	Stem length	Range	Engineering unit	Options
100	AM	=	071	E	160	0/200	C	NH

**Ashcroft Instruments GmbH**

Germany  
 Max-Planck-Str. 1, D-52499 Baesweiler  
 P.O. Box 11 20, D-52490 Baesweiler  
 Tel.: +49 (0) 2401 808-0, Fax: +49 (0) 2401 808-125

France  
 48, Chemin des Landes  
 F-69700 Montagny  
 Tel.: +33 (0) 9 65 32 71 31, Fax: +33 (0) 4 72 39 10 57

Website: [www.ashcroft.eu](http://www.ashcroft.eu)

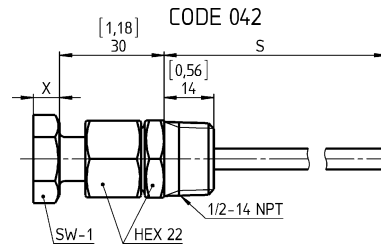
e-Mail: [sales@ashcroft.com](mailto:sales@ashcroft.com)

United Kingdom  
 Unit 17 & 18 William James House  
 Cowley Road, Cambridge CB4 0WX  
 Tel.: +44 (0) 12 23 39 55 00, Fax: +44 (0) 12 23 39 55 01

## Detailed specification and general dimensions of process connection

### Union outlet code 042

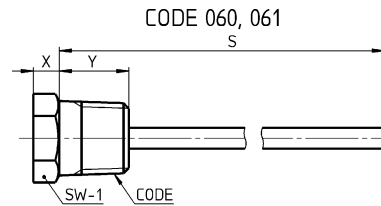
Length S is fixed, but orientation can be adjusted with union connection.  
Code 042 ½ NPT male



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

### Fixed connection code 060 and 061

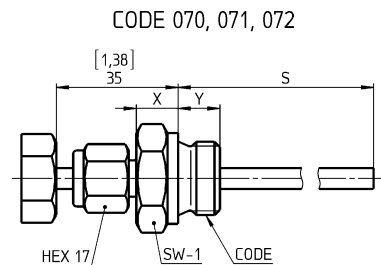
Length S is fixed.  
Code 060 ½ NPT male  
Code 061 G ½ A male



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]

### Adjustable union connection code 070, 071 and 072, 089

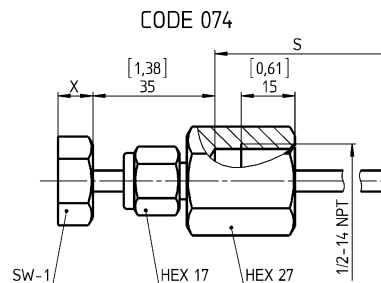
Length S and orientation can be adjusted with union connection.  
Code 070 ½ NPT male  
Code 071 G ½ A male  
Code 072 ¾ NPT male  
Code 089 M18x1,5 male



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]

### Adjustable union connection code 074, 096

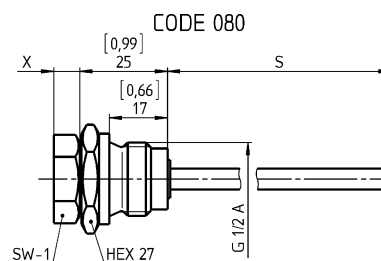
Length S and orientation can be adjusted with swivel nut.  
Code 074 ½ NPT female  
Code 096 M18x1,5 female



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

### Swivel nut connection code 080, 066

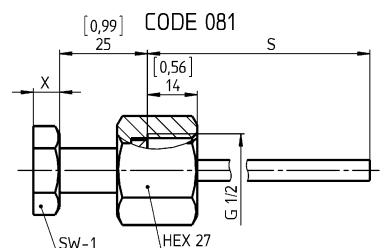
Length S is fixed, but orientation can be adjusted with swivel nut.  
Code 080 G ½ A male  
Code 088 M18x1,5 male



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

### Swivel nut connection code 081

Length S is fixed, but orientation can be adjusted with union connection.  
Code 081 G ½ female



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

## Ashcroft Instruments GmbH

Germany  
Max-Planck-Str. 1, D-52499 Baesweiler  
P.O. Box 11 20, D-52490 Baesweiler  
Tel.: +49 (0) 2401 808-0, Fax: +49 (0) 2401 808-125

France  
48, Chemin des Landes  
F-69700 Montagny  
Tel.: +33 (0) 9 65 32 71 31, Fax: +33 (0) 4 72 39 10 57

Website: [www.ashcroft.eu](http://www.ashcroft.eu)

e-Mail: [sales@ashcroft.com](mailto:sales@ashcroft.com)

## United Kingdom

Unit 17 & 18 William James House  
Cowley Road, Cambridge CB4 0WX

Tel.: +44 (0) 12 23 39 55 00, Fax: +44 (0) 12 23 39 55 01