


# 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 **CE**  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

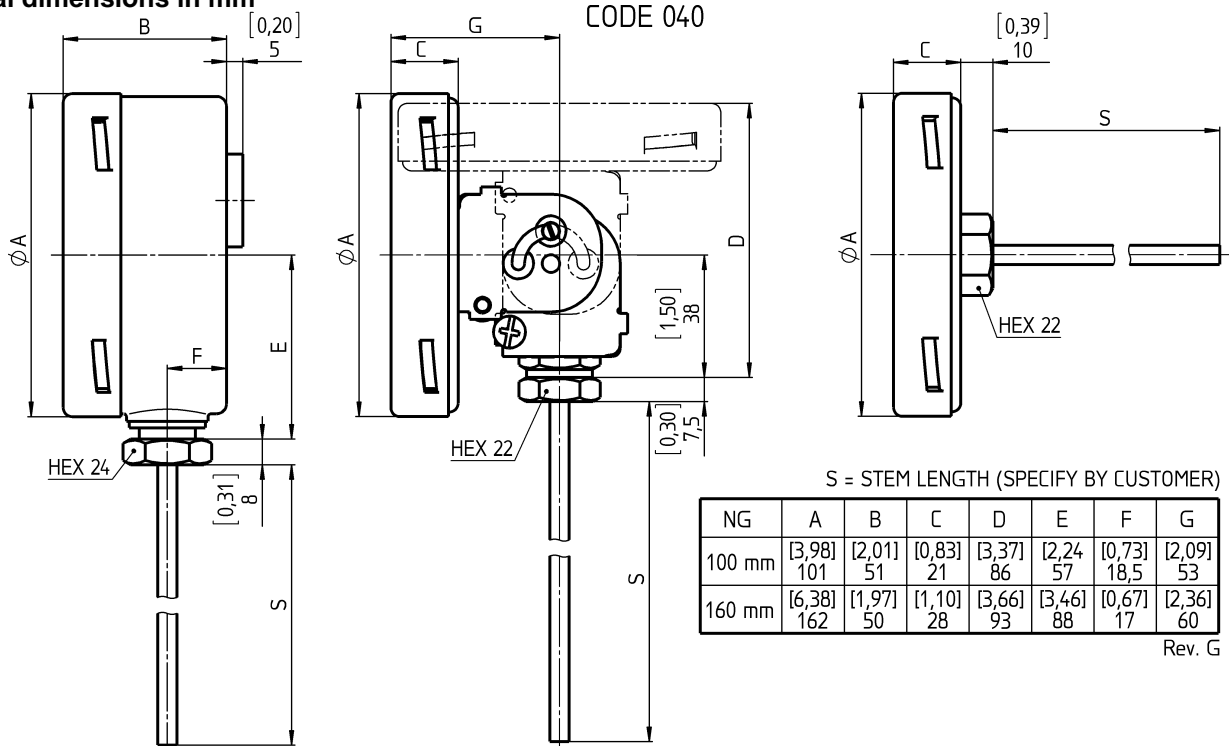
-50 ... 50 °C up to 0 ... 500 °C  
 -80 ... 120 °F up to 200 ... 1000 °F

### 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					
Temperature limits for ranges	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		
Stem	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 Diameter	6 mm, 8 mm, ¼" (6,4 mm), 3/8" (9,6 mm)											
Stem Length	63 ... 1000 mm, minimum length depends on range											
Process connection	Plain											
Connection location	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											
	G 1 A male, G 1 female, 1 NPT male or 1 NPT female, others on request											
Material	Fixed, adjustable or with swivel nut											
Connection	Back, lower and every angle (rotatable)											
Material	Stainless steel 316L (1.4404) or 1.4571 (316Ti)											
Stem	Stainless steel 316L (1.4404) or 1.4571 (316Ti)											
Case/ring	Stainless steel 304 (1.4301), optional 316L (1.4404)											
Window	Instrument glass, optional shatter proof glass or acrylic glass											
Dial	Aluminum, black markings on white background											
Pointer	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 94/9/EC appendix X for mechanical equipment in potential hazardous areas	Optional, Marking <b>CE</b>  II 2 GD c Tx°C IP66; 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, not for ATEX, 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	
(100) 100 mm	(AM) 6 mm	(=) Standard (no filling)	(040) Plain	(L) Lower <sup>1)</sup>	63 to 1000 mm	0/ 50 °C <sup>1)</sup>	(NH) Stainless steel tag wired	
(160) 160 mm	(AE) 8 mm	(L) Liquid filled with silicone max. range 300 °C (not for lower connection, ambient temperature maximum 65 °C)	(042) Union outlet ½ NPT male	(R) Back		0/ 60 °C <sup>1)</sup>	0/ 100 °F <sup>1)</sup>	(CS) Dual scale (DA) Dial marking (PD) Acrylic glass (SG) Shatter proof glass (SH) Red set hand stationary (EA) External zero adjustment (YW) 316L (1.4404) housing (C4) Individual calibration certificate (ATEX) ATEX Approval (not in combination with external zero adjustment EA)
	(AI) ¼" (6,4 mm)		(060) Fixed ½ NPT male	(E) Every angle		0/ 80 °C <sup>1)</sup>	0/ 150 °F <sup>1)</sup>	
	(A3B) 3/8" (9,6 mm)		(061) Fixed G ½ A male			0/100 °C	0/ 200 °F <sup>1)</sup>	
			(070) Adjustable union ½ NPT male			0/120 °C	0/ 300 °F <sup>1)</sup>	
			(071) Adjustable union G ½ A male			0/150 °C	0/ 350 °F <sup>1)</sup>	
			(072) Adjustable union ¾ NPT male			0/160 °C	0/ 500 °F <sup>1)</sup>	
			(074) Adjustable union ½ NPT female			0/200 °C	20/ 120 °F <sup>1)</sup>	
			(080) Swivel nut G ½ A male			0/250 °C <sup>1)</sup>	30/ 130 °F <sup>1)</sup>	
			(081) Swivel nut G ½ female			0/300 °C <sup>1)</sup>	30/ 240 °F <sup>1)</sup>	
						0/400 °C <sup>1)</sup>	50/ 300 °F	
						0/500 °C <sup>1)</sup>	50/ 400 °F	
						10/150 °C	50/ 550 °F <sup>1)</sup>	
			50/300 °C <sup>1)</sup>	80/ 180 °F				
			50/450 °C <sup>1)</sup>	100/ 800 °F				
			100/500 °C <sup>1)</sup>	160/ 360 °F				
			-10/ 50 °C <sup>1)</sup>	170/ 270 °F				
			-10/110 °C	200/ 400 °F				
			-20/ 40 °C <sup>1)</sup>	200/ 700 °F <sup>1)</sup>				
			-20/ 60 °C <sup>1)</sup>	200/ 1000 °F <sup>1)</sup>				
			-20/180 °C	-40/ 120 °F				
			-25/ 25 °C <sup>1)</sup>	-40/ 160 °F				
			-30/ 50 °C <sup>1)</sup>	-20/ 120 °F <sup>1)</sup>				
			-30/ 70 °C	-80/ 120 °F				
			-30/170 °C	-10/ 100 °F				
			-40/ 40 °C <sup>1)</sup>					
			-40/ 60 °C					
			-40/100 °C <sup>1)</sup>					
			-40/160 °C					
			-50/ 50 °C					

<sup>1)</sup> at the moment not available

<sup>1)</sup> minimum stem length 100 mm

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

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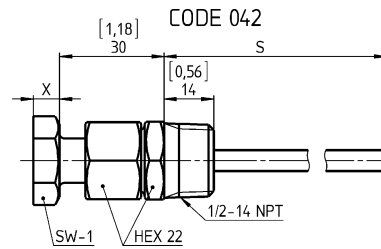
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## Detailed specification and general dimensions of process connection

### Union outlet code 042

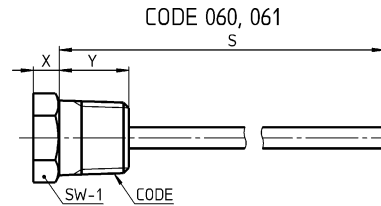
Length S is fixed, but orientation can be adjusted with union connection.  
Code 042 ½ NPT male



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

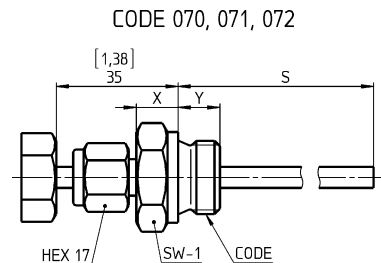
Length S is fixed.  
Code 060 ½ NPT male  
Code 061 G ½ A male



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

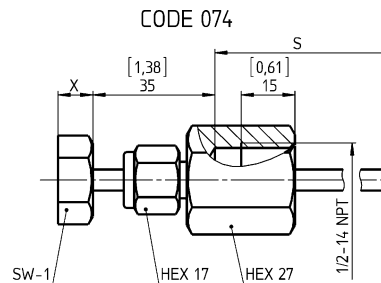
Length S and orientation can be adjusted with union connection.  
Code 070 ½ NPT male  
Code 071 G ½ A male  
Code 072 ¾ NPT male



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

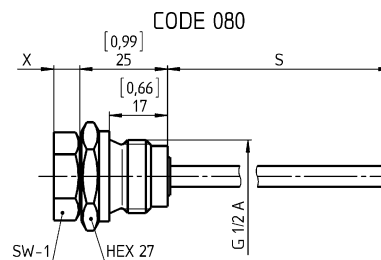
Length S and orientation can be adjusted with swivel nut.  
Code 074 ½ NPT female



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

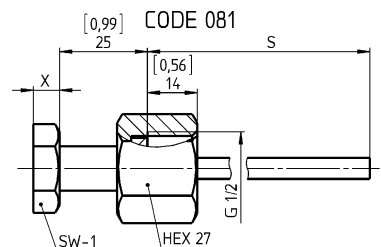
Length S is fixed, but orientation can be adjusted with swivel nut.  
Code 080 G ½ A male



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]

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