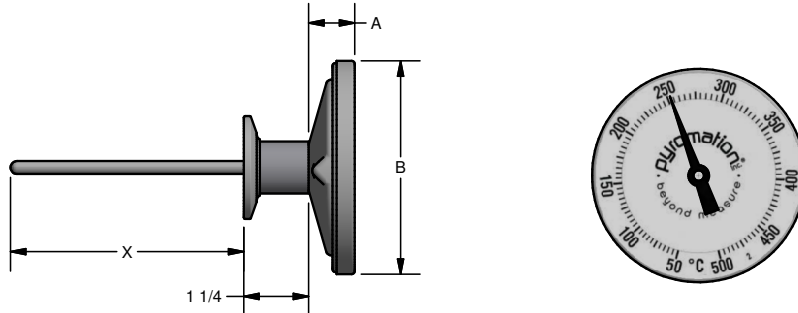


# BI-METAL THERMOMETERS

Configuration Code BM02  
Sanitary Back-Connected

General-purpose, CIP sanitary, Back-Connected Bi-Metal thermometers are used in food, dairy, beverage, pharmaceutical, and chemical processing applications where corrosion and product contamination are critical factors. The sanitary Tri-Clamp® connections listed below are the most common types used in such processes and meet 3A Standard Number 74-. All wetted parts are 316 stainless steel, and the non-contact parts are supplied standard as 304 stainless steel. They are produced with a minimum surface finish of 32 µin Ra. Surface finishes of 15 µin Ra are available upon request. The accuracy is ±1% full span per ASME B40.3 Grade A. These Sanitary Bi-Metal Thermometer (BMS) series units come with a calibration feature, and each is easily calibrated by inserting an allen wrench into the reset opening.



## ORDER CODES

**Example Order Number:** **BMS3B 68** - **002(1/2)** - **2-5** - **TG ,I** - **1180**

### 1-0 Back-Connected Type and Size

CODE	DIAL SIZE	"A" DIM	"B" DIM
BMS3B	3 Inch	0.89 Inch	3.187 Inch
BMS4B	4 Inch	0.89 Inch	4.115 Inch
BMS5B	5 Inch	1.328 Inch	5.040 Inch

### 1-1 Sheath

CODE	DIAMETER (INCHES)	MATERIAL
48	0.25	316 SS (42 Inch max length)
68	0.375	316 SS

### 2-0 Sheath Length

Specify 3 digit length in inches  
2(1/2) Inch minimum length required  
120 Inch maximum length

### 3-0 Cap Size and Style

CODE	DIAMETER (INCHES)
075-5 <sup>[1]</sup>	1/2 and 3/4 Inch Tri-Clamp®
1-5	1 and 1(1/2) Inch Tri-Clamp®
2-5	2 Inch Tri-Clamp®
3-5	2 1/2 Inch Tri-Clamp®
4-5	3 Inch Tri-Clamp®
5-5	4 Inch Tri-Clamp®

[1] Only available with 1/4 Inch sheath  
Other cap styles available - consult factory

### 4-0 Window Options

CODE	DESCRIPTION
G	Glass (Standard)
PC	Polycarbonate (up to 135 °C [300 °F])
AC	Acrylic
SG	Safety Glass
TG <sup>[1]</sup>	Tempered Glass

[1] Not available in 4 inch dial

### 4-1 Additional Options

CODE	DESCRIPTION
P	Plain Dial (No company name)
I	Stainless Steel Tag
SF <sup>[1]</sup>	Silicon-filled

[1] Only available with Safety Glass or Polycarbonate lens. Silicon filled thermometers are limited for use in process temperatures ranging from (-45 to 260) °C

### 5-0 Temperature Range

CODE	RANGE	CODE	RANGE
0100	-50 to 100 °C	0610	-40 to 160 °F
0140	-40 to 70 °C	0700	0 to 140 °F
0240	-20 to 120 °C	0740	0 to 200 °F
0270	-10 to 110 °C	0750	0 to 220 °F
0300	0 to 50 °C	0760	0 to 250 °F
0320	0 to 80 °C	0770	0 to 300 °F
0330	0 to 100 °C	0840	20 to 240 °F
0350	0 to 150 °C	0920	50 to 250 °F
0370	0 to 200 °C	0930	50 to 300 °F

### Dual Temperature Range

1130	0 to 140 °F	-18 to 60 °C
1170	0 to 220 °F	-10 to 100 °C
1180	0 to 250 °F	-20 to 120 °C
1200	20 to 240 °F	-10 to 110 °C
1250	50 to 300 °F	10 to 150 °C

See page BM-7 for complete range list

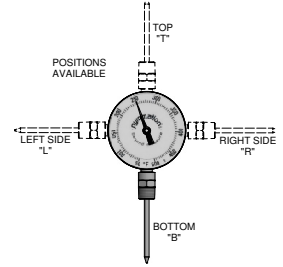
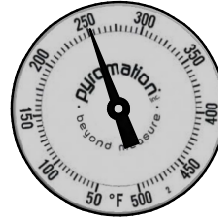
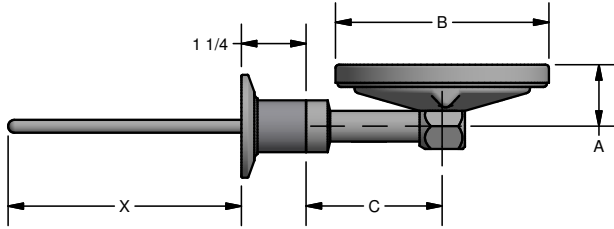
Tri-Clamp® is a registered trademark of Alfa Laval, Inc.



# BI-METAL THERMOMETERS

## Configuration Code BM02 Sanitary Side-Connected

General-purpose, CIP sanitary, Side-Connected Bi-Metal thermometers are used in food, dairy, beverage, pharmaceutical, and chemical processing applications where corrosion and product contamination are critical factors. The sanitary Tri-Clamp® connections listed below are the most common types used in such processes and meet 3A Standard Number 74-. All wetted parts are 316 stainless steel, and the non-contact parts are supplied standard as 304 stainless steel. They are produced with a minimum surface finish of 32 µin Ra. Surface finishes of 15 µin Ra are available upon request. The stem position can be provided at 90° angles to accommodate various mounting conditions. The accuracy is ±1% full span per ASME B40.3 Grade A. The Sanitary Bi-Metal Thermometer (BMS) series units come standard with a calibration feature, and each is easily calibrated by inserting an allen wrench into the reset opening.



### ORDER CODES

**Example Order Number:** **BMS4S** **48** - **B** - **004** - **075-5** - **SG,P** - **0770**

#### 1-0 Side-Connected Type and Size

CODE	DIAL SIZE	"A" DIM	"B" DIM	"C" DIM
BMS3S	3 Inch	1.187 Inch	3.187 Inch	1.875 Inch
BMS4S	4 Inch	1.187 Inch	4.115 Inch	2.625 Inch
BMS5S	5 Inch	1.625 Inch	5.040 Inch	2.625 Inch

#### 1-1 Sheath

CODE	DIAMETER (INCHES)	MATERIAL
48	0.25	316 SS (42 Inch max length)
68	0.375	316 SS

#### 2-0 Dial Location

CODE	DESCRIPTION
B	Bottom (Standard)
R	90 degree Right
L	90 degree Left
T	Top

#### 3-0 Sheath Length

Specify 3 digit length in inches  
2(1/2) Inch minimum length required  
120 Inch maximum length

#### 4-0 Cap Size and Style

CODE	DIAMETER (INCHES)
075-5 <sup>[1]</sup>	1/2 and 3/4 Inch Tri-Clamp®
1-5	1 and 1(1/2) Inch Tri-Clamp®
2-5	2 Inch Tri-Clamp®
3-5	2 1/2 Inch Tri-Clamp®
4-5	3 Inch Tri-Clamp®
5-5	4 Inch Tri-Clamp®

[1] Only available with 1/4 Inch sheath  
Other cap styles available - consult factory

#### 5-0 Window Options

CODE	DESCRIPTION
G	Glass (Standard)
PC	Polycarbonate (up to 135 °C [300 °F])
AC	Acrylic
SG	Safety Glass
TG <sup>[1]</sup>	Tempered Glass

[1] Not available in 4 inch dial

#### 5-1 Additional Options

CODE	DESCRIPTION
P	Plain Dial (No company name)
I	Stainless Steel Tag
SF <sup>[1]</sup>	Silicone-filled

[1] Only available with Safety Glass or Polycarbonate lens. Silicon filled thermometers are limited for use in process temperatures ranging from (-45 to 260) °C

#### 6-0 Temperature Range

CODE	RANGE	CODE	RANGE
0100	-50 to 100 °C	0610	-40 to 160 °F
0140	-40 to 70 °C	0700	0 to 140 °F
0240	-20 to 120 °C	0740	0 to 200 °F
0270	-10 to 110 °C	0750	0 to 220 °F
0300	0 to 50 °C	0760	0 to 250 °F
0320	0 to 80 °C	0770	0 to 300 °F
0330	0 to 100 °C	0840	20 to 240 °F
0350	0 to 150 °C	0920	50 to 250 °F
0370	0 to 200 °C	0930	50 to 300 °F

#### Dual Temperature Range

1130	0 to 140 °F	-18 to 60 °C
1170	0 to 220 °F	-10 to 100 °C
1180	0 to 250 °F	-20 to 120 °C
1200	20 to 240 °F	-10 to 110 °C
1250	50 to 300 °F	10 to 150 °C

See page BM-7 for complete range list

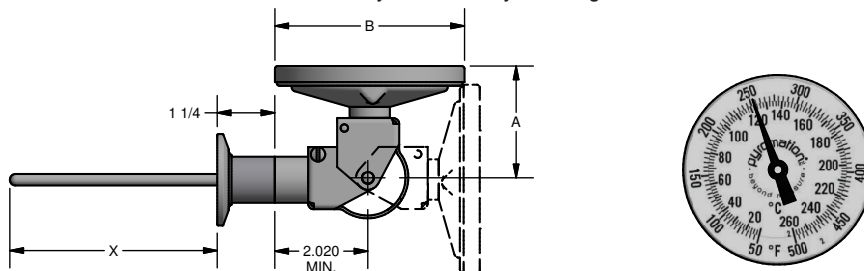
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# BI-METAL THERMOMETERS

## Configuration Code BM02 Sanitary Adjustable-Angle

General-purpose, CIP sanitary, Adjustable-Angle Bi-Metal thermometers are used in food, dairy, beverage, pharmaceutical, and chemical processing applications where corrosion and product contamination are critical factors. The sanitary Tri-Clamp® connections listed below are the most common types used in such processes and meet 3A Standard Number 74-. All wetted parts are 316 stainless steel, and the non-contact parts are supplied standard as 304 stainless steel. They are produced with a minimum surface finish of 32 µin Ra. Surface finishes of 15 µin Ra are available upon request. The adjustable harness consists of stainless steel brackets with screws that loosen to allow 360° rotation of the head and 180° adjustment of stem position. The accuracy is ±1% full span per ASME B40.3 Grade A. These Sanitary Bi-Metal Thermometer (BMS) series units come with a calibration feature, and each is easily calibrated by inserting an allen wrench into the reset opening.



### ORDER CODES

**Example Order Number:** 1-0 BMS5A 1-1 68 - 2-0 006 - 3-0 3-5 - 4-0 4-1 TG,I - 5-0 1250

#### 1-0 Adjustable-Angle Type and Size

CODE	DIAL SIZE	"A" DIM	"B" DIM
BMS3A	3 Inch	2.43 Inch	3.187 Inch
BMS4A	4 Inch	2.43 Inch	4.115 Inch
BMS5A	5 Inch	2.66 Inch	5.040 Inch

#### 1-1 Sheath

CODE	DIAMETER (INCHES)	MATERIAL
48	0.25	316 SS (42 Inch max length)
68	0.375	316 SS

#### 2-0 Sheath Length

Specify 3 digit length in inches  
2(1/2) Inch minimum length required  
120 Inch maximum length

#### 3-0 Cap Size and Style

CODE	DIAMETER (INCHES)
075-5 <sup>[1]</sup>	1/2 and 3/4 Inch Tri-Clamp®
1-5	1 and 1(1/2) Inch Tri-Clamp®
2-5	2 Inch Tri-Clamp®
3-5	2 1/2 Inch Tri-Clamp®
4-5	3 Inch Tri-Clamp®
5-5	4 Inch Tri-Clamp®

[1] Only available with 1/4 Inch sheath  
Other cap styles available - consult factory

#### 4-0 Window Options

CODE	DESCRIPTION
G	Glass (Standard)
PC	Polycarbonate (up to 135 °C [300 °F])
AC	Acrylic
SG	Safety Glass
TG <sup>[1]</sup>	Tempered Glass

[1] Not available in 4 inch dial

#### 4-1 Additional Options

CODE	DESCRIPTION
P	Plain Dial (No company name)
I	Stainless Steel Tag
SF <sup>[1]</sup>	Silicon-filled

[1] Only available with Safety Glass or Polycarbonate lens. Silicon filled thermometers are limited for use in process temperatures ranging from (-45 to 260) °C

#### 5-0 Temperature Range

CODE	RANGE	CODE	RANGE
0100	-50 to 100 °C	0610	-40 to 160 °F
0140	-40 to 70 °C	0700	0 to 140 °F
0240	-20 to 120 °C	0740	0 to 200 °F
0270	-10 to 110 °C	0750	0 to 220 °F
0300	0 to 50 °C	0760	0 to 250 °F
0320	0 to 80 °C	0770	0 to 300 °F
0330	0 to 100 °C	0840	20 to 240 °F
0350	0 to 150 °C	0920	50 to 250 °F
0370	0 to 200 °C	0930	50 to 300 °F

#### Dual Temperature Range

1130	0 to 140 °F	-18 to 60 °C
1170	0 to 220 °F	-10 to 100 °C
1180	0 to 250 °F	-20 to 120 °C
1200	20 to 240 °F	-10 to 110 °C
1250	50 to 300 °F	10 to 150 °C

See page BM-7 for complete range list

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# BI-METAL THERMOMETERS

## Range Table

### Temperature Range - Degrees F

CODE	RANGE	°/DIV
0500	-100 to 100 °F	2°
0560	-50 to 120 °F	2°
0610	-40 to 160 °F	2°
0700	0 to 140 °F	2°
0730	0 to 180 °F	2°
0740	0 to 200 °F	2°
0750	0 to 220 °F	2°
0760	0 to 250 °F	2°
0770	0 to 300 °F	5°
0800	0 to 500 °F	10°
0840	20 to 240 °F	2°
0850	25 to 125 °F	1°
0920	50 to 250 °F	2°
0930	50 to 300 °F	2°
0940	50 to 400 °F	5°
0950	50 to 500 °F	5°
0960	50 to 550 °F	5°
1000	100 to 800 °F	10°
1010	150 to 750 °F	10°
1030	200 to 1000 °F	10°
Internal Ranges		
0480	-150 to 150 °F	2°
0490	-125 to 350 °F	5°
0510	-100 to 150 °F	2°
0520	-100 to 350 °F	5°
0530	-100 to 600 °F	5°
0540	-80 to 120 °F	2°
0550	-60 to 210 °F	2°
0570	-50 to 300 °F	5°
0580	-50 to 400 °F	5°
0590	-40 to 60 °F	1°
0600	-40 to 120 °F	2°
0620	-25 to 75 °F	1°
0630	-20 to 120 °F	1°
0640	-20 to 200 °F	2°
0650	-20 to 340 °F	5°
0660	-20 to 675 °F	10°
0670	-10 to 220 °F	2°
0680	0 to 60 °F	1°
0690	0 to 100 °F	1°
0710	0 to 150 °F	1°
0720	0 to 160 °F	1°
0780	0 to 350 °F	5°
0790	0 to 400 °F	5°
0810	0 to 550 °F	5°
0820	0 to 600 °F	10°
0830	0 to 800 °F	10°
0860	30 to 120 °F	1°
0870	30 to 130 °F	1°
0880	30 to 300 °F	2°
0890	32 to 212 °F	2°
0900	40 to 240 °F	2°
0910	50 to 150 °F	1°
0970	100 to 200 °F	1°
0980	100 to 600 °F	5°
0990	100 to 700 °F	10°
1020	200 to 700 °F	10°

### Temperature Range - Degrees C

CODE	RANGE	°/DIV
0020	-75 to 175 °C	5°
0040	-70 to 70 °C	1°
0080	-50 to 25 °C	1°
0090	-50 to 50 °C	1°
0100	-50 to 100 °C	1°
0140	-40 to 70 °C	1°
0240	-20 to 120 °C	1°
0270	-10 to 110 °C	1°
0300	0 to 50 °C	1/2°
0310	0 to 60 °C	1°
0320	0 to 80 °C	1/2°
0330	0 to 100 °C	1°
0350	0 to 150 °C	1°
0370	0 to 200 °C	2°
0380	0 to 250 °C	2°
0390	0 to 300 °C	5°
0400	0 to 400 °C	5°
0410	0 to 450 °C	5°
0460	100 to 400 °C	5°
0470	100 to 550 °C	5°
Internal Ranges		
0010	-100 to 50 °C	2°
0030	-70 to 50 °C	1°
0050	-70 to 100 °C	2°
0060	-70 to 160 °C	2°
0070	-60 to 160 °C	2°
0110	-50 to 200 °C	5°
0120	-50 to 250 °C	5°
0130	-50 to 300 °C	5°
0150	-40 to 200 °C	2°
0160	-30 to 40 °C	1/2°
0170	-30 to 50 °C	1°
0180	-30 to 60 °C	1°
0190	-30 to 70 °C	1°
0200	-30 to 170 °C	2°
0210	-25 to 25 °C	1°
0220	-20 to 50 °C	1°
0230	-20 to 70 °C	1°
0250	-20 to 200 °C	2°
0260	-10 to 50 °C	1/2°
0280	-10 to 135 °C	2°
0290	-10 to 260 °C	2°
0340	0 to 120 °C	1°
0360	0 to 160 °C	2°
0420	0 to 500 °C	5°
0430	50 to 400 °C	5°
0440	50 to 450 °C	5°
0450	50 to 500 °C	5°

### Dual Temperature Range - Degrees F & C

CODE	DUAL RANGE		°/DIV
1040	-100 to 100 °F	-75 to 40 °C	2,2°
1100	-40 to 160 °F	-40 to 70 °C	2,1°
1130	0 to 140 °F	-18 to 60 °C	2,1°
1150	0 to 180 °F	-18 to 82 °C	2,1°
1170	0 to 220 °F	-10 to 100 °C	2,1°
1180	0 to 250 °F	-20 to 120 °C	2,1°
1200	20 to 240 °F	-10 to 110 °C	2,1°
1210	25 to 125 °F	0 to 50 °C	1,(1/2)°
1250	50 to 300 °F	10 to 150 °C	2,2°
1260	50 to 400 °F	0 to 200 °C	5,2°
1270	50 to 500 °F	0 to 250 °C	5,2°
1300	150 to 750 °F	50 to 400 °C	10,5°
1310	200 to 1000 °F	100 to 550 °C	10,5°
Internal Ranges			
1050	-100 to 350 °F	-75 to 175 °C	5,5°
1060	-100 to 600 °F	-75 to 300 °C	5,5°
1070	-60 to 210 °F	-50 to 100 °C	2,1°
1080	-50 to 120 °F	-45 to 50 °C	2,1°
1090	-40 to 120 °F	-40 to 50 °C	2,1°
1110	-20 to 120 °F	-30 to 50 °C	1,1°
1120	0 to 100 °F	-18 to 38 °C	1,(1/2)°
1140	0 to 150 °F	-17 to 65 °C	1,1°
1160	0 to 200 °F	-10 to 90 °C	2,5°
1190	0 to 800 °F	-15 to 425 °C	10,5°
1220	30 to 130 °F	0 to 55 °C	1,(1/2)°
1230	30 to 300 °F	0 to 150 °C	1,1°
1240	32 to 212 °F	0 to 100 °C	2,1°
1280	50 to 550 °F	15 to 285 °C	5,5°
1290	100 to 600 °F	40 to 310 °C	5,5°

