

# Product data sheet

✉ [sales@brannan.co.uk](mailto:sales@brannan.co.uk)

☎ +44 (0)1946 816600

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## BT040 - STAINLESS STEEL BIMETAL THERMOMETERS (CLASS 1)



### Product features:

- Thermometer with heavy duty stainless steel 304 case and bayonet style bezel
- Choice of temperature ranges, dial diameters and stem lengths
- Back entry, bottom entry or adjustable angle connections
- Recalibration screw (back connection and adjustable connection only)
- Stainless steel pockets can be supplied as extra. Use of a thermowell (pocket) is always recommended
- Silicone filling available

### Applications:

- Wide range of applications including oil and gas, chemical and petrochemical, ventilation, heating and air conditioning, water/wastewater and general industrial processes

### Standard product specifications:

<b>Dial diameters</b>	63mm, 100mm 115mm & 150mm
<b>Design</b>	BS EN 13190 / ASME B40.200 Compliant
<b>Accuracy class</b>	Class 1 (EN13190)
<b>Ranges</b>	-50 to +650°C&F
<b>Case</b>	Stainless steel AISI 304
<b>Bezel</b>	Stainless steel AISI 304 - bayonet
<b>Connection</b>	Stainless steel 316, size as requested
<b>Stem</b>	Stainless steel 316L
<b>Stem length</b>	min. 63mm, max. 1000mm
<b>Stem diameter</b>	6.3mm, 8mm, 10mm or 12mm
<b>Sensor mechanism</b>	Bimetal coil
<b>Window</b>	Glass (laminated safety glass optional)
<b>Pointer</b>	Black aluminium
<b>Dial</b>	Black numbering on white background
<b>Filling</b>	Dry or silicone filled (up to 300°C)
<b>Protection</b>	IP 67 or IP 68
<b>Calibration</b>	Certificate traceable to recognised national standard or statement of conformity, if required

### Note:

Loosen the screws on either side of the adjustable bracket before gently angling thermometer as required. Tighten screws again before use. See notes on page 4 of this document.

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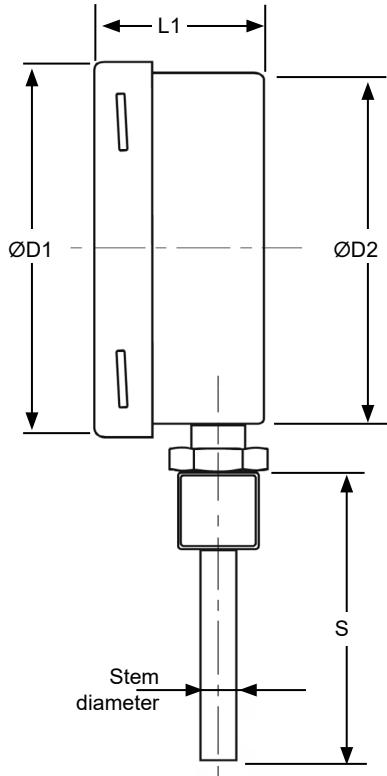
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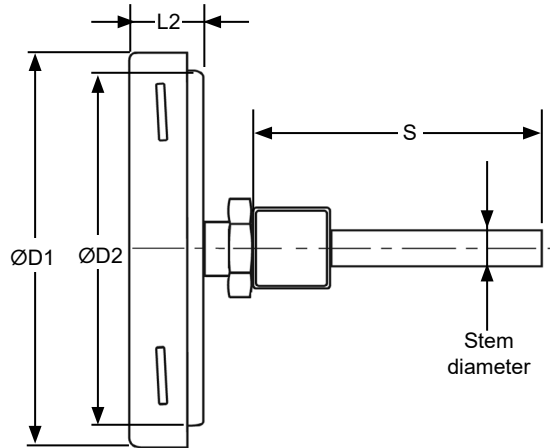
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## Dimensions:

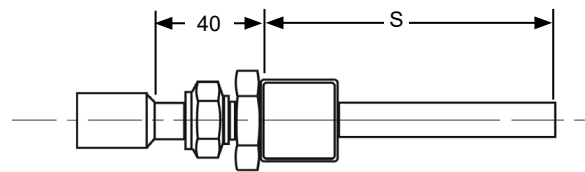
### Bottom entry dial thermometer (fixed connection)



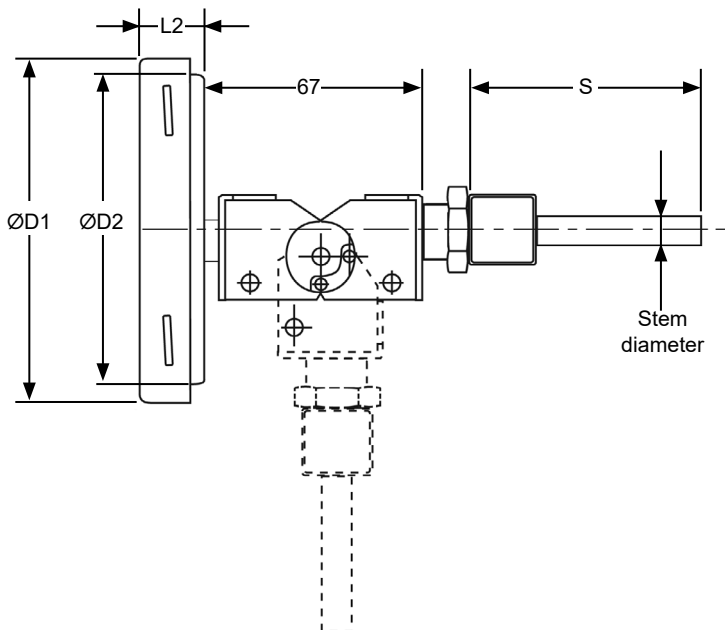
### Back entry dial thermometer (fixed connection)



### Sliding union connection



### Adjustable dial thermometer (fixed connection)



S = stem length


Dial size	ØD1	ØD2	L1	L2
63	68.6	61.6	42.5	21.5
100	109.0	98.5	49.0	23.5
115	126.5	114.5	49.0	23.5
150	166.0	152.0	49.0	25.0

Minimum sensing length for stem

Range °C	6.3mm	8mm	10mm	12mm
50	130	85	60	50
60	110	70	50	50
80	85	55	50	50
100	70	50	50	50
120	60	50	50	50
150	50	50	50	50
160	95	65	50	50
180	90	60	50	50
200	75	55	50	50
250	65	50	50	50
300	55	50	50	50
400+	50	50	50	50

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## Product numbers:

All BT040 dials are ordered to specific customer specifications. Please use below matrix to create your unique ordering product reference, using the values in bold.

Make	Model	Dial dia.	Range		Units	Stem length	Stem dia.	Connection size/type	Connection orientation	Extras	
			°C:	°F:							
Brannan (BRN)	BT040 (BT40)	63mm (63)	<b>-50+150</b>	<b>-60+300</b>	°C outer / °F inner (CF)	63mm to 1000mm	6.3mm (6)	Plain stem (0)	Bottom (BO)	Laminated safety glass (LG)	
			<b>-50+100</b>	<b>-60+212</b>				Fixed 1/2" BSP (7)			
			<b>-40+40</b>	<b>-40+100</b>				Fixed 1/2" NPT (8)			
		100mm (100)	<b>-40+60</b>	<b>-40+140</b>	°F outer / °C inner (FC)	8mm (8)	Fixed 3/8" BSP (5)	Centre back (CB)	Fixed 3/8" NPT (6)	Adjustable angle (AD)	SS316L thermowell (TW316L)
			<b>-30+50</b>	<b>-20+120</b>			Fixed 1/4" BSP (3)				
			<b>-30+70</b>	<b>-20+160</b>			Fixed 1/4" NPT (4)				
		115mm (115)	<b>-20+40</b>	<b>+0+100</b>	°C only (C)	10mm (10)	Fixed 1/4" BSPT (10)	Materials test certificate (MTC)	Fixed 3/8" BSPT (11)	SS316 case material (C316)	
			<b>-20+60</b>	<b>+0+140</b>			Fixed 1/2" BSPT (12)				
			<b>-20+180</b>	<b>+0+350</b>			Sliding union 1/2" BSP (S7)				
		150mm (150)	<b>-10+50</b>	<b>+10+120</b>	°F only (F)	12mm (12)	Sliding union 1/2" NPT (S8)	Silicone filling* (S)	Sliding union 3/8" BSP (S5)		
			<b>-10+110</b>	<b>+10+230</b>			Sliding union 3/8" NPT (S6)				
			<b>0+50</b>	<b>+32+120</b>			Sliding union 1/4" BSP (S3)				
			<b>0+60</b>	<b>+32+140</b>			Sliding union 1/4" NPT (S4)				
			<b>0+80</b>	<b>+32+180</b>			Sliding union 1/4" BSPT (S10)				
			<b>0+100</b>	<b>+32+212</b>			Sliding union 3/8" BSPT (S11)				
			<b>0+120</b>	<b>+32+250</b>			Sliding union 1/2" BSPT (S12)				
			<b>0+150</b>	<b>+32+300</b>							
			<b>0+160</b>	<b>+32+320</b>							
			<b>0+200</b>	<b>+32+400</b>							
			<b>0+250</b>	<b>+32+500</b>							
			<b>0+300</b>	<b>+32+570</b>							
			<b>0+400</b>	<b>+32+750</b>							
			<b>0+450</b>	<b>+32+840</b>							
			<b>0+500</b>	<b>+32+930</b>							
<b>0+550</b>	<b>+32+1000</b>										
<b>0+600</b>	<b>+32+1110</b>										

NB. Others available on request

\* Centre back and adjustable connection only for 63mm.

\* Not for bottom entry. Max range up to 300°C. Max ambient temp 60°C

NB. When more than one extra is required, please separate each code with a hyphen when building your product reference

## Order example:

Make	Model	Dial dia.	Range	Units	Stem length	Stem dia.	Connection size/type	Connection orientation	Extras
BRN	BT40	100	-50+150	CF	200	10	7	AD	LG-TW316L

Product reference: BRNBT40/100/-50+150/CF/200/10/7/AD/LG-TW316L

## Calibration product numbers:

Calibration	No of points	Product number
Traceable to National Standards	1pt	49/099/0
	3pt	49/101/0
	4pt	49/104/0
	5pt	49/105/0

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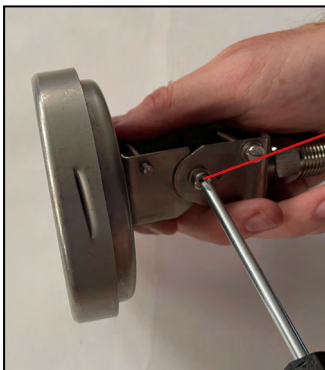
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**Please read before attempting to change angle of adjustable angle bimetal thermometers.**

## Setting the connection angle



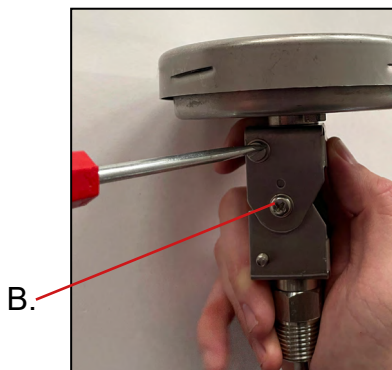
To adjust the thermometer face display angle, firstly, loosen off screws A. on either side of the adjustable bracket.



Set the thermometer face to the required angle. Retighten the screws.

## Face alignment

Before rotating the thermometer face ensure the thermometer is set in the back connection alignment. Never rotate the thermometer face when the bracket is set in an angled alignment.



Loosen off the screws B. on either side of the adjustable bracket.



Holding both the thermometer face and the adjustable bracket, rotate the thermometer face to the desired position. No more than minimum force should be required. Retighten the screw(s).