

## bi-metal thermometers all stainless steel construction DS 4", 5", 6" (100-125-150 mm)



ATEX 2014/34/UE



These instruments are designed for use in chemical, petrolchemical processing industries. They are built to resist the most severe operating conditions created by the ambient environment and the process medium. The case and bulb TIG welding makes the whole construction more robust and prevents leakage when the instrument is filled with a dampening fluid protecting the instrument from vibrations.

### 6.TB8 - Standard Model

**Designation:** EN 13190.

**Indication ranges:** -80...+1000 °F (-50...+600 °C).

**Measuring ranges:** -60...+900 °F (-40...+500 °C); -60...+840 °F (-40...+450 °C) continuous; +840...900 °F (+450...500 °C) intermittent.

**Accuracy class:** 1 as per EN 13190, measuring range.

**Overtemperature limit:** 30% of full scale range for temperature ≤ 750 °F (400 °C); max 900 °F (500 °C).

**Special overtemperature (option F02):** 100% of full scale range for temperature ≤ 300 °F (150 °C); 50% of full scale range for temperature from +300...550 °F (+150...300 °C).

**Ambient temperature:** -4...+149 °F (-40...+65 °C).

**Max working pressure:** 200 psi - 15 bar (without thermowell).

**Protection degree:** IP 55 as per EN 60529/IEC 529.

**Process connection:** AISI 316 st.st.

**Bulb:** ø 0.24" (cod. 6), ø 0.25" (cod. 7), ø 0.31" (cod. 8), ø 0.38" (cod. 9) (ø 6-6,4-8-9,6 mm) AISI 316 st. st.

### Immersed bulb's portion length

for bulbs ø 0.23" - 0.25" (6 - 6,4mm): 2.3"-3.3" (60...85mm) (1)

for bulbs ø 0.31" - 0.37" (8 - 9,6mm): 1.9"-2.5" (50...65mm) (1)

### Immersion length:

from 3.93" to 27.55" (from 10 to 700 mm)

for bulbs ø 0.24-0.25" (6-6,4 mm);

from 3.94" to 35.43" (from 100 to 900 mm)

for bulbs ø 0.31-0.38" (8-9,6 mm) and ranges ≤ 600 °F (300 °C);

from 5.91" to 35.43" (from 150 to 900 mm)

for bulbs ø 0.31-0.38" (8-9,6 mm) and ranges > 600 °F (300 °C)

**Measuring element:** bi-metal spiral shaped.

**Case:** stainless steel.

**Ring:** stainless steel bayonet lock.

**Window:** tempered glass.

**Dial:** aluminium white with black markings.

**Pointer:** not adjustable, aluminium, black.

**Zero-Adjustment:** external zero-adjustment screw.

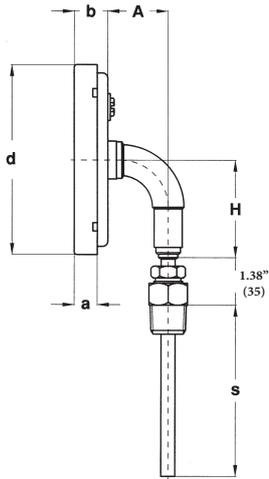
(1) according to scale range, see the corresponding catalogue sheet

### OPTIONS

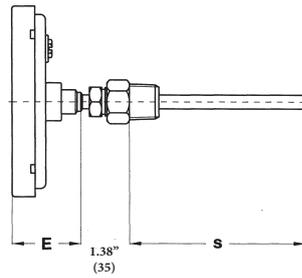
DESCRIPTION	DS 4" (100mm)	DS 5" (125mm)	DS 6" (150mm)
<b>2G2</b> - ATEX Ex II 2G h - Dry - T.a. -20...+60 °C	<i>See the ATEX temperature gauges data-sheet for technical details</i>		
<b>2D2</b> - ATEX II 2GD h - Silicon Oil <b>R11</b> - T.a. -20...+60 °C			
<b>2D0</b> - ATEX II 2GD h - Glycerine <b>R10</b> - T.a. 0...+60 °C			
<b>2D5</b> - ATEX II 2GD h - Vented housing <b>ECV</b> - T.a. -53...+60 °C			
<b>2D6</b> - ATEX II 2GD h - Special silicon oil <b>S60</b> - T.a. -60...+60 °C			
<b>R10</b> - Case glycerine filling - IP65/67 - T.a. 0...+65 °C - T.p. max +160 °C			
<b>R11</b> - Case filling with silicon oil - IP65/67 - T.a. -20...+65 °C - T.p. max +250 °C	◆	◆	◆
<b>C40</b> - Case and ring AISI 316 st.st.	◆	◆	◆
<b>T32</b> - Safety double stratified glass	◆	◆	◆
<b>ECV</b> - Vented housing version - IP65/67 - T.a. -53...+65 °C	◆		◆
<b>E67</b> - Protection degree IP65/67	◆		◆
<b>S60</b> - Special silicone oil filling - IP67 - T.a. -60...+65 °C			◆

(1) to be ordered with E67 option

(2) in case of orrosive atmospheres a filled model is recommended

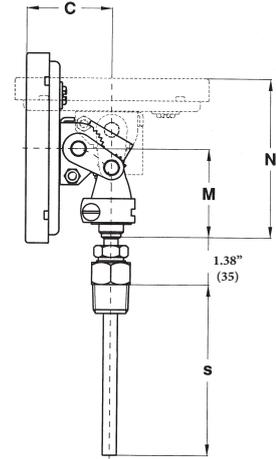


1 - LOWER CONNECTION



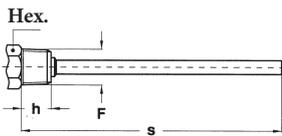
4 - BACK CONNECTION

dimensions : inches (mm)



9 - EVERY-ANGLE CONNECTION

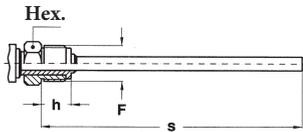
DS	A	a	b	C	d	E	H	M	N
<b>E</b> 4" (100)	1.36" (34,5)	0.51" (13)	0.75" (19)	1.93" (49)	4.35" (110,6)	1.54" (39)	2.24" (57)	2.03" (51,5)	3.64" (92,5)
<b>F</b> 5" (125)	1.36" (34,5)	0.57" (14,5)	0.77" (19,5)	1.95" (49,5)	5.12" (130)	1.56" (39,5)	2.56" (65)	2.03" (51,5)	3.66" (93)
<b>G</b> 6" (150)	1.36" (34,5)	0.59" (15)	0.79" (20)	1.97" (50)	6.34" (161)	1.57" (40)	3.23" (82)	2.03" (51,5)	3.68" (93,5)



3 - Fixed male

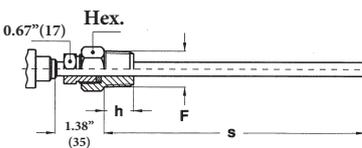
F	Hex.	h
<b>41M</b> - G 1/2 A	0.87" (22) *	0.67" (17)
<b>43M</b> - 1/2-14 NPT	0.87" (22) *	0.55" (14)

\* ø 24 for every-angle mounting



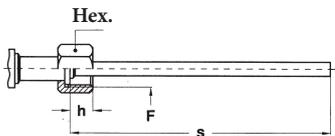
5 - Male swivel nut

F	Hex.	h
<b>41M</b> - G 1/2 A	0.87" (22)	0.55" (14)
<b>51M</b> - G 3/4 A	0.87" (22)	0.55" (14)



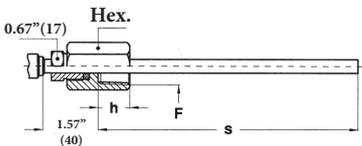
9 - Sliding male and swivel nut

F	Hex.	h
<b>41M</b> - G 1/2 A	0.87" (22)	0.55" (14)
<b>43M</b> - 1/2-14 NPT	0.87" (22)	0.67" (17)
<b>51M</b> - G 3/4 A	1.06" (27)	0.63" (16)
<b>53M</b> - 3/4-14 NPT	1.06" (27)	0.67" (17)



8 - Female swivel nut

F	Hex.	h
<b>41F</b> - G 1/2 A	0.94" (24)	0.63" (16)
<b>51F</b> - G 3/4 A	1.18" (30)	0.63" (16)



7 - Sliding female and swivel nut

F	Hex.	h
<b>43F</b> - 1/2-14 NPT	0.94" (24)	0.71" (18)
<b>53F</b> - 3/4-14 NPT	1.26" (32)	0.71" (18)

"HOW TO ORDER" SEQUENCE

Section / Model / Mounting / Connection type / Diameter / Range / Process connection / Bulb type and length / Options

<b>6</b>	<b>TB8</b>	<b>1</b>	<b>3</b>	<b>E</b>	<b>41M</b>	<b>6</b>	<b>2G2...S60</b>
		<b>4</b>	<b>5</b>	<b>F</b>	<b>43M</b>	<b>7</b>	
		<b>9</b>	<b>7</b>	<b>G</b>	<b>51M</b>	<b>8</b>	
			<b>8</b>		<b>53M</b>	<b>9</b>	
			<b>9</b>		<b>43F</b>		
					<b>53F</b>		

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