

# bi-metal thermometers

## DS 2.5", 3", 4", 5"

### (63-80-100-125 mm)

# TB7



These instruments are designed for use in food, beverage, pharmaceutical, chemical, petrolchemical processing industries. They are built to resist the most severe operating conditions created by the environment and the process medium. An Argonarc welded case/bulb strengthens the whole construction.

## 6.TB7 - Standard Model

**Designation:** EN 13190.

**Accuracy class:** 2 as per EN 13190, measuring range.

**Indication ranges:** 0...+1000 °F (-20...+500 °C).

**Measuring ranges:** +15...+840 °F (-10...+450 °C).

**Overtemperature limit:** 10% of full scale range for temperature ≤ 750 °F (400 °C); max 930 °F (500 °C).

**Ambient temperature:** -13...+149 °F (-25...+65 °C).

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

**Protection degree:** IP 55 as per IEC 529.

**Process connection:** stainless steel.

**Bulb:** ø 0.24 (cod. 4), ø 0.31" (cod. 5) (6-8 mm) AISI 316 st. st.

**Bulb length:** 3.94-5.91-7.87-9.84" (100 - 150 - 200 - 250 mm)

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

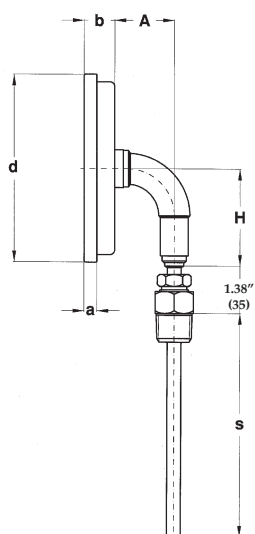
**Case:** stainless steel.

**Ring:** stainless steel, crimped.

**Window:** plexiglas.

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

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



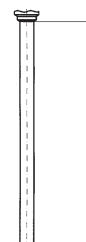
| DS                   | a              | b               | d                | A               | H             |
|----------------------|----------------|-----------------|------------------|-----------------|---------------|
| <b>D</b> 3"<br>(80)  | 0.32"<br>(8,2) | 0.67"<br>(17)   | 3.13"<br>(79,5)  | 1.36"<br>(34,5) | 2.09"<br>(53) |
| <b>E</b> 4"<br>(100) | 0.29"<br>(7,4) | 0.71"<br>(18)   | 4.32"<br>(109,8) | 1.36"<br>(34,5) | 2.09"<br>(53) |
| <b>F</b> 5"<br>(125) | 0.26"<br>(6,5) | 0.65"<br>(16,5) | 5.09"<br>(129,2) | 1.36"<br>(34,5) | 2.64"<br>(67) |

dimensions : inches (mm)

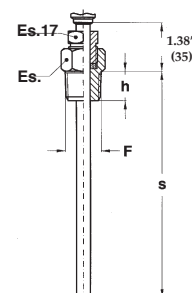
**DS 3-4-5" (80-100-125 mm)**

**1 - Lower connection**

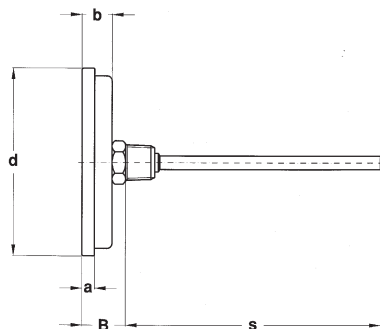
| F                        | Hex.          | h             |
|--------------------------|---------------|---------------|
| <b>41M</b><br>G 1/2 A    | 0.87"<br>(22) | 0.55"<br>(14) |
| <b>43M</b><br>1/2-14 NPT | 0.87"<br>(22) | 0.67"<br>(17) |



**0 - Without threaded connection**



**9 - Sliding male and swivel nut**



## DS 2.5-3-4-5" (63-80-100-125 mm)

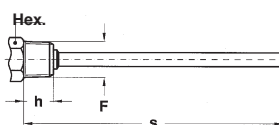
## 4 - Back connection

| DS                    | a              | b               | d                | B               |
|-----------------------|----------------|-----------------|------------------|-----------------|
| <b>C</b><br>2.5" (63) | 0.23"<br>(5,8) | 0.51"<br>(13)   | 2.67"<br>(67,9)  | 0.83"<br>(21)   |
| <b>D</b><br>3" (80)   | 0.32"<br>(8,2) | 0.67"<br>(17)   | 3.13"<br>(79,5)  | 0.98"<br>(25)   |
| <b>E</b><br>4" (100)  | 0.29"<br>(7,4) | 0.70"<br>(17,7) | 4.32"<br>(109,8) | 1.01"<br>(25,7) |
| <b>F</b><br>5" (125)  | 0.26"<br>(6,5) | 0.65"<br>(16,5) | 5.09"<br>(129,2) | 0.96"<br>(24,5) |

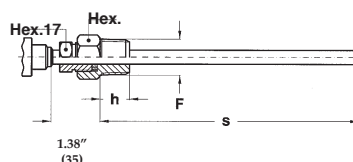
## 0 - Without threaded connection



## 3 - Fixed male



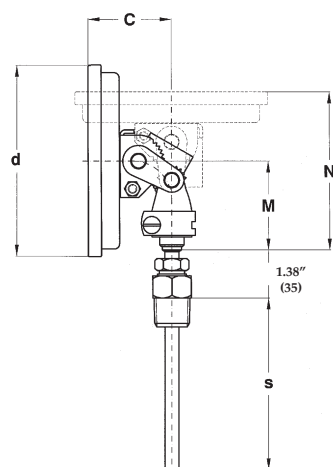
## 9 - Sliding male and swivel nut



| F                        | Hex.          | h             |
|--------------------------|---------------|---------------|
| <b>41M</b><br>G 1/2 A    | 0.87"<br>(22) | 0.55"<br>(14) |
| <b>43M</b><br>1/2-14 NPT | 0.87"<br>(22) | 0.67"<br>(17) |
| <b>21M</b><br>G 1/4 A    | 0.67"<br>(17) | 0.47"<br>(12) |

dimensions : inches (mm)

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



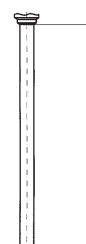
| DS                      | d                | C               | M               | N               |
|-------------------------|------------------|-----------------|-----------------|-----------------|
| <b>E</b><br>4"<br>(100) | 4.32"<br>(109,8) | 1.88"<br>(47,7) | 2.03"<br>(51,5) | 3.59"<br>(91,2) |
| <b>F</b><br>5"<br>(125) | 5.09"<br>(129,2) | 1.83"<br>(46,5) | 2.03"<br>(51,5) | 3.54"<br>(90)   |

dimensions : inches (mm)

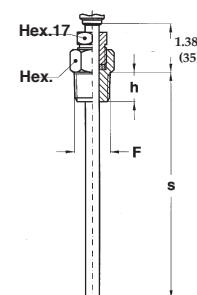
## DS 4-5" (100-125 mm)

## 9 - Every angle connection

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



## 0 - Without threaded connection



## 9 - Sliding male, swivel nut

## "HOW TO ORDER" SEQUENCE

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

|   |     |   |   |   |     |   |
|---|-----|---|---|---|-----|---|
| 6 | TB7 | 1 | 0 | C | 41M | 4 |
|   |     | 4 | 1 | D | 43M | 5 |
|   |     | 9 | 3 | E | 21M |   |
|   |     |   | 9 | F |     |   |