

## BI-METAL THERMOMETERS DN 63-80-100-125

These instruments are designed for use in food, beverage, pharmaceutical, chemical, petrochemical processing industries. They are built to resist the most severe operating conditions created by the environment and the process medium.



### Constructive and functional characteristics:

**Measurement field:** in °C, indicating by two triangle shape located in the window.

**Accuracy class:** 2 according to DIN 16203.

**Ambient temperature:** -25...+65° C.

**Over temperature:** 10% of full scale range for temperature <400° C, max 500° C.

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

**Protection degree:** IP 65 as per IEC 529, UNI 8896.

**Process connection:** Stainless steel.

**Bulb:** AISI 304. st. st.

Ø 6-8 mm. for DN 80, DN 100, DN 125;

Ø 6 mm for DN 63.

**Bulb Standard length::** 100-150-200-250.

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

**Welding:** AISI 304 TIG.

**Case:** AISI 304.

**Ring:** stainless steel, crimped.

**Window:** Plexiglas.

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

**Pointer:** Aluminium, black.

**Window gasket:** EPDM.

### FUNCTIONAL PRINCIPLES

The bimetallic thermometers are constituted by a stainless steel tube in whose interior a bimetallic helical spiral is placed.

This spiral is welded by an end to the inferior part of the tube and by the other to a transmission rod, connected as well to an instrument pointer.

The temperature variations cause in the bimetal a deformation that, by means of the rotation of the rod, is transmitted to the instrument pointer located in the window.

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SCALES - "C" = DN 63; "D" = DN 80; "E" = DN 100; "F" = DN 125.

Simple scale in °C		
°C	DN	Bulb "S"
-20/+40	C-D-E-F	100..250
0/+60	C-D-E-F	100..250
0/+100	C-D-E-F	100..250
0/+120	C-D-E-F	100..250
0/+160	C-D-E-F	100..250
0/+200	C-D-E-F	100..250
0/+300	C-D-E-F	100..250
0/+400	C-D-E-F	150..250
0/+500	C-D-E-F	150..250

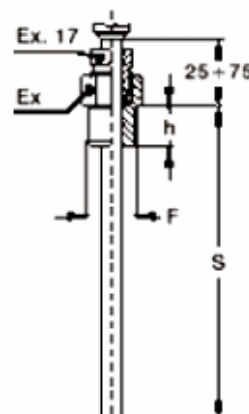
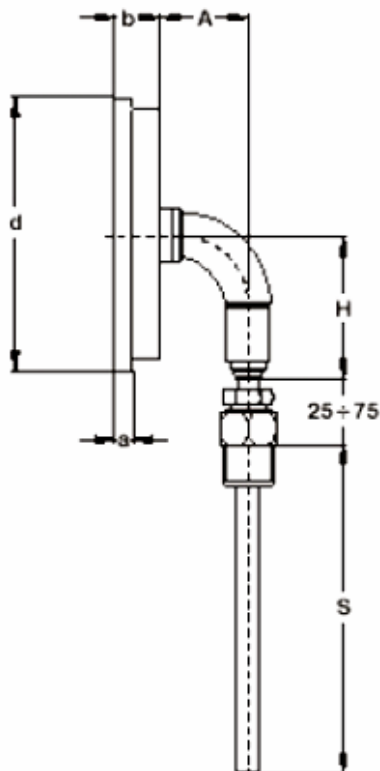
Double scale in °C & °F			
°C	°F	DN	Bulb "S"
-20/+40	-4/+104	C-D-E-F	100..250
0/+60	+32/+140	C-D-E-F	100..250
0/+100	+32/+212	C-D-E-F	100..250
0/+120	+32/+248	C-D-E-F	100..250
0/+160	+32/+320	C-D-E-F	100..250
0/+200	+32/+392	C-D-E-F	100..250
0/+300	+32/+572	C-D-E-F	100..250
0/+400	+32/+752	C-D-E-F	150..250
0/+500	+32/+932	C-D-E-F	150..250

TBR DN80-100-125  
Lower connection.

Process connection

Without threaded connection

Sliding male and swivel nut



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

Dimensions: inches (mm)

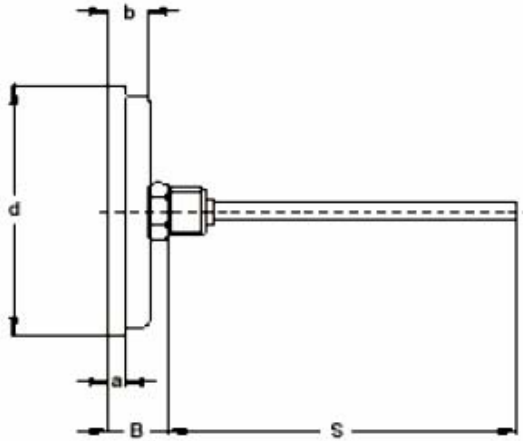
F	Hex	h
G 1/2"	0.87" (22)	0.55" (17)
1/2" NPT	0.87" (22)	0.67" (14)

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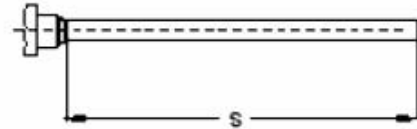
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**TBD DN63-80-100-125**  
**Back connection**

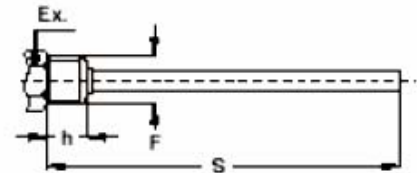


**Process connection**

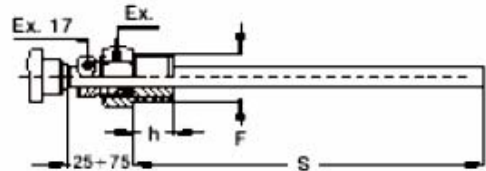
**Without threaded connection**



**Fixed male**



**Sliding male and swivel nut**



**Fixed male**

F	Hex	h
G 1/2 A	0.87" (22)	0.55" (14)
1/2-14 NPT	0.87" (17)	0.67" (17)
G 1/4 A	0.67" (17)	0.47" (12)

**Sliding male and swivel nut**

F	Hex	h
G 1/2 A	0.87" (22)	0.55" (14)
1/2-14 NPT	0.87" (22)	0.67" (17)

DS	a	b	d	B
2.5" (63)	0.23" (5,8)	0.51" (13)	2.67" (67,9)	0.83" (21)
3" (80)	0.32" (8.2)	0.67" (17)	3.13" (79.5)	0.98" (25)
4" (100)	0.29" (7.4)	0.70" (17.7)	4.32" (109.8)	1.01" (25.7)
5" (125)	0.26" (6.5)	0.65" (16.5)	5.09" (129.2)	0.96" (24.5)

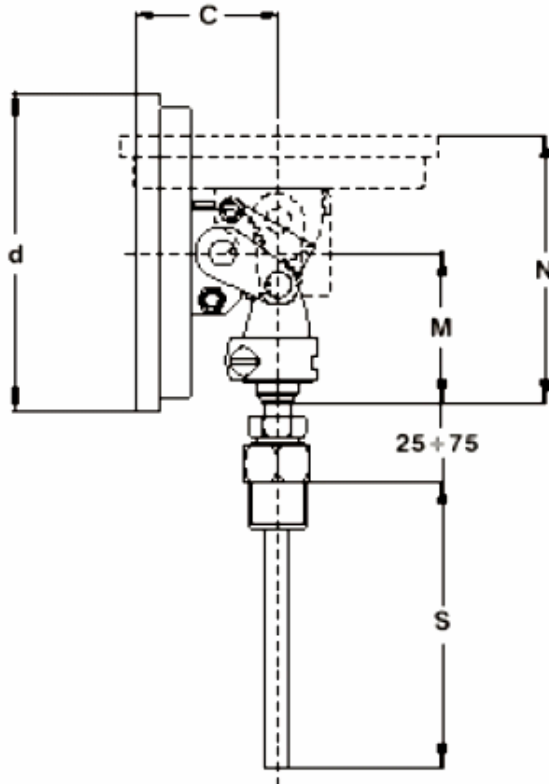
(\*) Only DN63 and fixed male

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**TBO DN100-125**  
Every angle connection

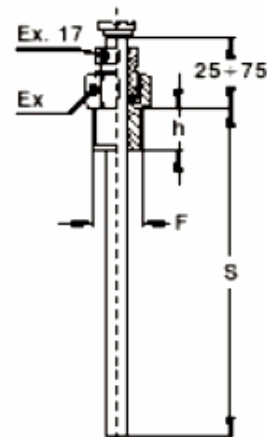


**Process connection**

**Without threaded connection**



**Sliding male, swivel nut**



DS	d	C	M	N
4" (100)	4.32" (109,8)	1.88" (47,7)	2.03" (51,5)	3.59" (91,2)
5" (125)	5.09" (129,2)	1.83" (46,5)	2.03" (51,5)	3.54" (90)

F	Ex	h
1/2" Gas	0.87 (22)	0.55" (17)
1/2" NPT	0.87 (22)	0.67" (14)

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