

Features:

- ☑ Stainless steel case and stem
- ☑ Stem length available from 50mm
- ☑ Bottom / back / every angle entry
- ☑ Silicon oil filled (optional)
- ☐ With or without thermowell
- ☐ External zero adjustment (optional)

Applications:

- ☑ Chemical
- ☑ Refinery
- ☑ Fertilizer
- ☑ Petrochemicals
- ☑ Pharmaceuticals
- ☑ Power
- ☑ Cement
- ☑ Sugar
- ☑ Food
- ☑ Beverages
- ☑ Pulp
- ☑ Paper

Standard:

- ☑ EN 13190

Standard Parameters

Accuracy	: Class 1 as per EN 13190
Ambient temperature	: -25 to +65°C
Operating pressure	: 15 Kg/cm ² (without thermowell)
Over range limit	: 110 % of full scale
Over Pressure Limit	: 8 mm
Process connection	: 1/2" BSP [M]

Materials of Construction

Case & bezel & clamp	: AISI 304 SS
Stem & connection	: AISI 316 SS
Joints	: Tig Argon Arc Welding
Protection	: IP 65
Sensing element	: Bi-metal strip coiled
Dial	: Aluminium, black graduation on white background
Pointer	: Aluminium, black coloured, slotted adjustable
Window	: Fixed for NS 50mm & 63mm
Gasket	: Sheet glass
	: Neoprene

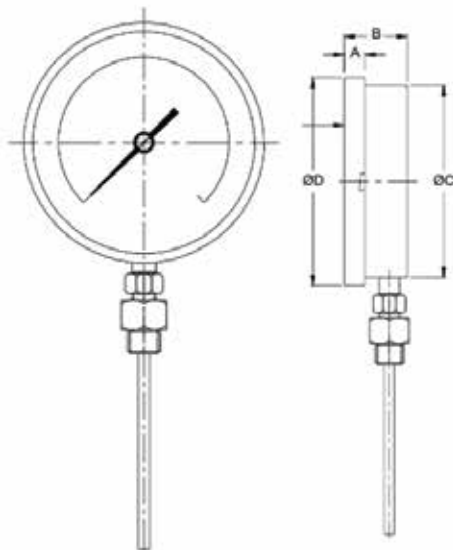
Silicon Oil Filled Version

Accuracy	: Class 1 as per EN 13190
Ambient Temperature	: Maximum 65°C
Window	: Plexi Glass
Dampening Liquids	: Glycerine 99.7%
Gasket & filling plug	: Viton

Nominal Range	-20 to +40	-20 to +60	-20 to +100	-30 to +50	-30 to +70	-40 to +40	-40 to +60	-65 to 100	0 to 60	0 to 80	0 to 100	0 to 120	0 to 150	0 to 200	0 to 250	0 to 300	0 to 400	0 to 500	0 to 600	0 to 650
Measuring Range	-10 to +30	-10 to +50	-10 to +90	-20 to +40	-20 to +60	-30 to +30	-30 to +50	-80 to +40	10 to 50	10 to 70	10 to 90	10 to 110	20 to 140	20 to 180	30 to 220	30 to 270	50 to 350	50 to 450	100 to 475	100 to 500
Limits of Error °C	1	1	2	1	1	1	1	2	1	1	1	2	2	2	2.5	5	5	5	10	10

Dimensional drawing

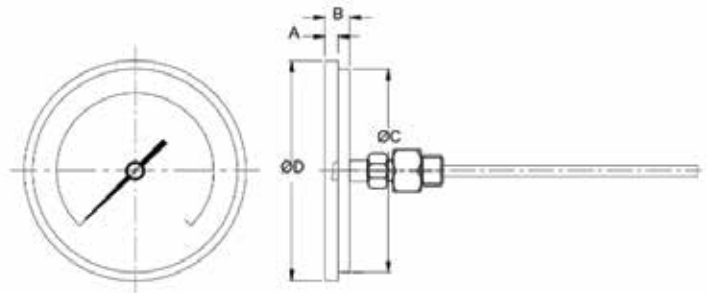
TYPE 1



NS	A	B	ØC	ØD	W
63	12.5	46	66.5	77.5	200
80	11	46	80	89.5	250
100	12.5	47	100	111	500
125	15	48	119	131	750
150	15	49	149	161	1000

W = Weight in grams with box for 300mm stem length

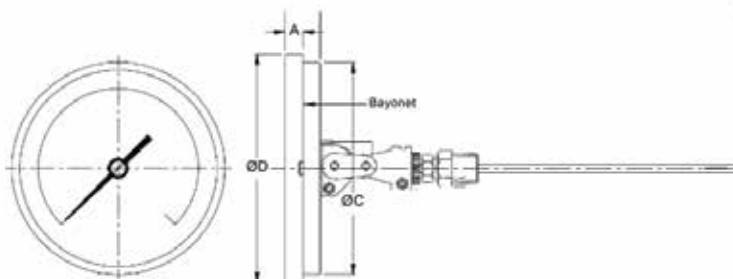
TYPE 4



NS	A	B	ØC	ØD	W
50	6.5	12	51.5	57.5	115
63	9.5	16	60	69.5	150
80	11	16	80	89.5	250
100	9.5	18	100	111	350
125	10	20	119	131.5	500
150	15	25.5	149	161	750

W = Weight in grams with box for 300mm stem length

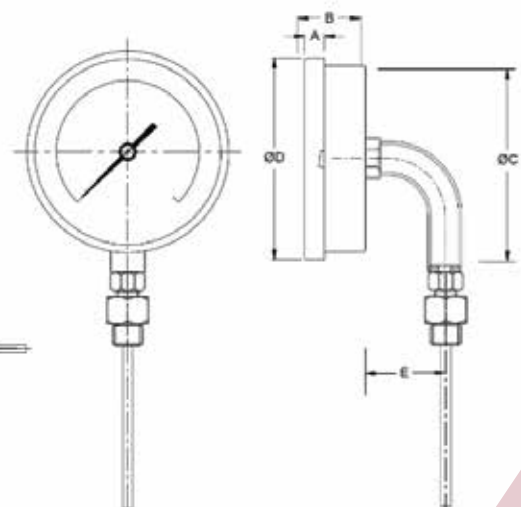
TYPE 9



NS	A	B	ØC	ØD	W
80	11	17	80	89.5	500
100	12.5	19	100	111	750
125	15	23	119	129	900
150	15	23	149	161	1000

W = Weight in grams with box for 300mm stem length

TYPE 11



NS	A	B	ØC	ØD	E	W
63	12.5	16	66.5	77.5	35	150
80	11	17	80	89.5	35	200
100	12.5	19	100	111	35	250
125	15	21	118.5	129	35	350
150	15	21	149	161	35	500

W = Weight in grams with box for 300mm stem length

Range table

The following table indicates the minimum and maximum stem lengths in mm, per stem diameter per range, the lower values indicated are the minimum immersion length (below thread) for all type of threads. During stem length selection, please select between the limits mentioned below.

(Range) °C	Ø 6 mm/ 3.4 mm	Ø 8, 9.5 & 10 mm	Ø 12 mm
-20/40	115/500	95//600	95/600
-20/60	95/500	75/600	75/600
-20/100	65/500	55/600	55/600
-30/50	115/500	95/600	95/600
-30/70	95/500	75/600	75/600
-40/40	85/500	55/600	75/600
-40/60	95/500	75/600	75/600
-65/100	85/500	75/600	75/600
0/60	65/500	55/600	55/600
0/80	115/500	95/600	95/600
0/100	95/500	75/600	75/600
0/120	65/500	50/600	75/600
0/150	50/500	40/600	55/600
0/200	45/500	35/600	55/600
0/250	40/500	30/600	45/600
0/300	45/500	45/600	45/600
0/400	65/500	55/600	55/600
0/500	55/500	45/600	45/600
0/600	55/500	45/600	45/600
0/650	55/500	45/600	45/600

Note: We offer national/ International scales like °C, °F and dual scale in °C & °F and scales as per the requirement can be provided on request. Following are the example tables for range in °C.

Standard Ranges

Positive Range single scale in °C									
0/60	0/80	0/100	0/120	0/160	0/200	0/250	0/300	0/400	0/600
Compound range single scale in °C									
-20/40	-20/60	-20/100	-30/50	-30/70	-40/40	-40/60	-50/50	-50/100	

Note: other scales are available on request

Accessories

Thermowell

Ordering codes

1. Dial Size		E	4. Process Connection Type #		AD
Code B	Nominal size		AD	Adjustable	8mm
C	50 mm		FI	Fixed	
D	63 mm		RV	Revolving / Swivel	
E	80 mm		# Welded with stem / case & not suitable for taper threaded connections)		
F	100 mm				
G	125 mm				
2. Mounting		1	5. Stem Diameter		
			6mm	6mm	
			6.35mm	6.35 mm	
			8mm	8 mm	
			9.5mm	9.5 mm	
			10mm	10 mm	
			12mm	12 mm	
1	Direct bottom* Direct center	10B	6. Stem Length		100mm
4	back entry		Below thread Max 600mm. Please specify in mm		
9	Every angle back entry□		Refer scale for min & max stem lengths		
11	Bottom entry through elbow*				
* Not applicable for NS 50 mm					
□ Not applicable for NS 50 mm & 63 mm					
3. Gauge Connection			7. Range		0/100°C
			Refer range table		
			8. Options		5C
03B	1/8" BSP[M]* (Max stem dia 6mm)		S6	AISI 316 SS case & bezel (For NS 100 mm & above)	
03N	1/8" NPT[M]* (Max stem dia 6 mm)		5C	Five-point calibration certificate	
06B	1/4" BSP[M]* (Max stem dia 6 mm)		LS	Dampening liquid silicon oil (up to 200°C)	
06N	1/4" NPT[M]* (Max stem dia 6 mm)		CD	Custom dial design	
10B	3/8" BSP[M]□ (Max stem dia 9.5 mm)		EA	External zero adjustment	
15B	1/2" BSP[M]□ (Max stem dia 12 mm)		SG	Shatterproof / safety glass	
15N	1/2" NPT[M]□ (Max stem dia 12 mm)		TG	Toughened glass	
M20	M20 X 1.5[M]□ (Max stem dia 12 mm)		DT	Dial tag marking	
TC	1 ½" Triclover□(Max stem dia 12 mm)		MT	Material test certificate**	
			ST	SS tag plate	
* Applicable only for NS 50mm & 63mm					
□Not applicable for NS 50mm					

Ordering Example: TB-E-1-10B-AD-8mm-100mm-0/100°C-5C

**Material test certificate will be provided for wetted parts only. For others, pls contact factory.

Note: Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.