



### Special Features

- DIN case version.
- External zero adjustment
- Stainless steel case & measuring system
- Inert gas filled expansion system.
- Silicon oil filled
- Standard Followed EN 13190

### Application

- This Nitrogen filled thermometer is the most widely specified instrument for measuring exhaust gas temperatures in diesel engines.
- The Nitrogen filled system is both reliable & accurate as well as environment Friendly.
- The instruments are protected against vibration using silicone oil to ensure maximum life under the most severe conditions.
- The instrument field applications are refinery, diesel power generation sets, power, pulp & paper, shipping, offshore, DG sets, oil engines & allied process industries.

### Specifications

#### Standard Version : 100 mm & 150 mm

Accuracy	: Class 1 as per EN 13190
Ambient temperature	: -25° C to 65° C
Operating pressure	: 15 kg/cm <sup>2</sup> ( without thermowell )
Over range limit	: 120 % of Full Scale
Stem diameter	: 8 mm
Process connection	: ½" BSP (M) Adjustable

Case & bezel	: AISI 304 SS (Snap Lock type)
Movement	: Copper Alloy
Stem & connection	: AISI 316 SS
Joints	: Tig argon arc welding

Protection	: IP 65
Dial	: Aluminium, black graduation on white background
Pointer	: Aluminium, black coloured micrometer zero adjustable
Window	: Sheet Glass
Gasket	: Neoprene

#### Standard version : Silicon oil filled

Accuracy	: Class 1 as per EN 13190
Ambient temperature	: Maximum 65°C
Window	: Plexi glass
Dampening liquids	: Silicon oil (option QA)
Gasket & filling Plug*	: Viton
Other features	: Refer specification of standard version

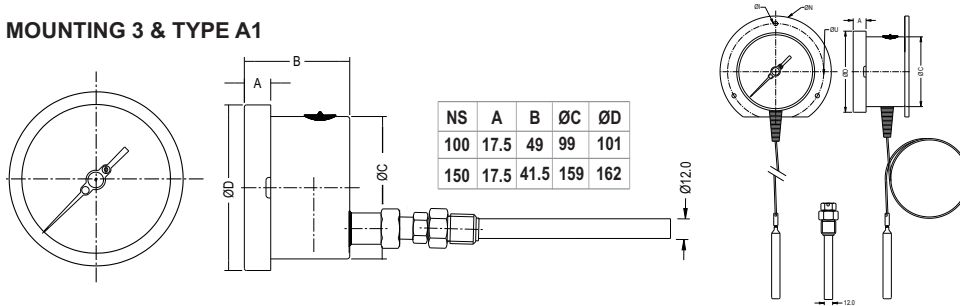
\*Gasket & Filling plug of Viton.

#### Nominal range, measuring ranges & limits of error as per EN 13190

Nominal Range (°C)	Measuring Range (°C)	Limits of Error (± °C)
-20 to +40	-10 to +30	1
-20 to +60	-10 to +50	1
-20 to +120	-10 to +110	2
-30 to +30	-20 to +20	1
-30 to +50	-20 to +40	1
-30 to +70	-20 to +60	1
-40 to +40	-30 to +30	1
-40 to +60	-30 to +50	1
-100 to +60	-80 to +40	2
0 to 60	10 to 50	1
0 to 80	10 to 70	1
0 to 100	10 to 90	1
0 to 120	10 to 110	2
0 to 160	20 to 140	2
0 to 200	20 to 180	2
0 to 250	30 to 220	2.5
0 to 300	30 to 270	5
0 to 400	50 to 350	5
0 to 500	50 to 450	5
0 to 600	100 to 500	10

Dimensions - Standard Version

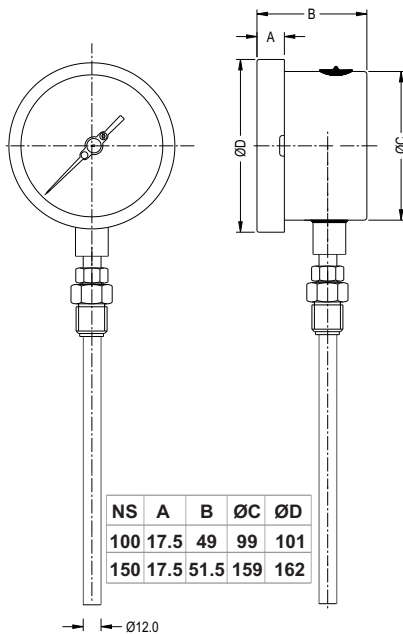
MOUNTING 3 & TYPE A1



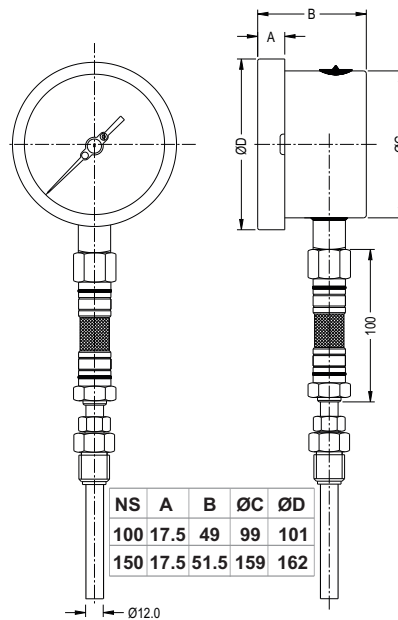
MOUNTING 1 & TYPE A2

NS	A	B	ØC	ØD	ØI	ØN	ØU
100	17.5	49	99	101	4.8	132	116
150	17.5	51.5	159	162	5.8	196	178

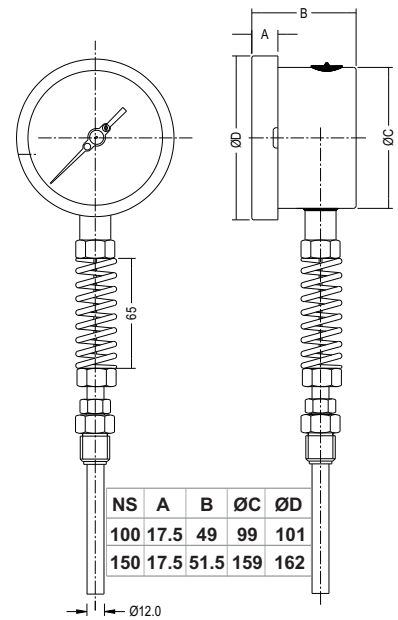
MOUNTING 2 & TYPE A1



MOUNTING 2 & TYPE A3



MOUNTING 2 & TYPE A4



Notes : • Drawings are not to scale. • All Dimensions are in mm. • NS = Nominal Size.

Range Table

Note : We offer National / International Scales like ° C, °F & Dual Scale in ° C & °F & Scales as per the requirement can be provided on request. Following are the example tables for ° C

Standard Ranges

Positive range single scale in °C			
Range	Ranage	Range	Range
0/60	0/120	0/250	0/500
0/80	0/160	0/300	0/600
0/100	0/200	0/400	50/650
Compound range single scale in °C*			
Range	Ranage	Range	Range
- 80 / 60	- 20 / 60	- 40 / 60	- 20 / 180
- 60 / 40	- 20 / 80	- 30 / 50	- 20 / 100

Refer table for limits of error as per EN13190 (On front page of CE)

ACCESSORIES (\* Refer datasheet for Thermowells)

\* Thermowell

How To Order										Example	
Basic Model										CE	
Code											
Nominal Size				F	H					X	
Type of Mounting				100 mm	150 mm						
1 Wall / surface / projection mounting with bottom entry										X	
2 Direct bottom entry											
3 Direct lower back entry											
Process Connection (# Not recommended for Revolving/ Swivel connections.)										XXX	
4BM ½" BSP (M) (Standard)* 5BM 3/4" BSP (M)											
4NM ½" NPT (M)#* 4MM M20 x 1.5 (M)*											
4TM ½" BSPT (M)#* 3BM 3/8" BSP (M)*											
* Suitable for stem diameter 6 to 10 mm, Note : Connections like Metric/ PT/ PF/ Flaired/ UNF/ G/ R etc can be provided on request.											
Process Connection Type										XX	
ZI Adjustable (Standard)		ZJ Fixed		KJ Revolving / Swivel							
Stem Diameter										XX	
1U 6 mm		2M 6.35 mm		2C 8 mm (Standard)		2I 9.5 mm		2J 10 mm 2K 12 mm			
Stem Length (Below thread Max. 600 mm)										100 mm	
Please specify in mm		Minimum stem Length (Below Thread)			130 mm		120 mm		120 mm 120 mm 110 mm		
		Stem OD			6 / 6.35mm		8 mm		9.5 mm 10 mm 12 mm		
Range										0/100 °C	
Refer range table											
Type (* Suitable stem diameter 12 mm only)										XX	
A1 With rigid stem		A3 With SS braided anti vibration*									
A2 With capillary		A4 With SS anti vibration spring*									
Capillary length (Max up to 15 Mtrs.) In meters (e.g. 1.5 = 1.5 meters 2.0 = 2 meters)										3Mtr.	
Capillary		PE AISI 304 SS			PG AISI 316 SS					XX	
Capillary covered with armour (Applicable with PE or PG if selected)										XX	
PF AISI 304 SS		PH AISI 316 SS			PI PVC (Ambient Temp. Max. 60°C)						
Optional Extras										XX	
PY Dampening liquid glycerin filled (ambient temp. Max. 65°C)		RH Custom designed dial									
PW Five point calibration certificate (for measuring range)		RX Shatterproof/safety glass									
QA Dampening liquid silicon oil (ambient temp. Above 65°C)*		RZ Toughened glass									
GH Material test certificates#		SW Dial tag marking									
		SX SS tag plate									
Gasket & Filling plug of Viton. # Material test certificates will be provided for wetted parts only with chemical composition testing. For others, please consult factory.											
Ordering Example: CE . X . X . XXX . XX . XX . 100 mm . 0/100°C . XX . 3Mtr . XX . XX . XX . XX											
For other optional items, please contact factory for delivery and minimum quantity of order.											
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.											