

FEATURES

- Inert gas filled expansion
- Filled versions
- Bi-metal compensation

APPLICATION

- Liquid & gaseous mediums
- Corrosive environments
- Oil & Gas applications
- Chemical & Petrochemical

Electric Contact, Dome Version



STANDARD PARAMETERS

Accuracy	: CL 1.0 (Class 1)
Permissible ambient temperature	: -40...+60°C with/without dampening liquid
Storage & Transport temperature	: -50...+70°C without liquid dampening
	: -20...+60°C with liquid dampening
Over range limits	: 110% full scale
Stem pressure rating	: 25 bar (Without thermowell)
Weld joints	: TIG argon arc welding

MATERIAL OF CONSTRUCTION

Sensing element	: Inert Gas Filled sensor bulb
Case & Ring material	: AISI 304 SS
Stem & Process connection material	: AISI 316 SS
Dial	: Aluminum, black graduation on white background
Pointer	: Micrometer zero adjustable, aluminum, black powder coated
Gaskets	: Neoprene
Window	: Polycarbonate dome

STANDARD SPECIFICATIONS

Dial size	: DN100 / DN150
Range	: -200...0...+700°C / -330...0...+1290°F
Mounting pattern	: Direct, Bottom connection
Stem size	: 6.0 mm
Ingress protection	: IP 65
Stem length	: 70 mm to 2,000 mm*
Assembly	: Direct
Process connection type	: Adjustable connection
Process connection	: 1/2" NPT (M) / 1/2" BSP (M)
Electric contact	: Double; Break contact + Make contact
Electrical termination	: 4 pin PG 13.5 connector

STANDARD SPECIFICATIONS : DAMPENING LIQUID FILLED, DIELECTRIC OIL

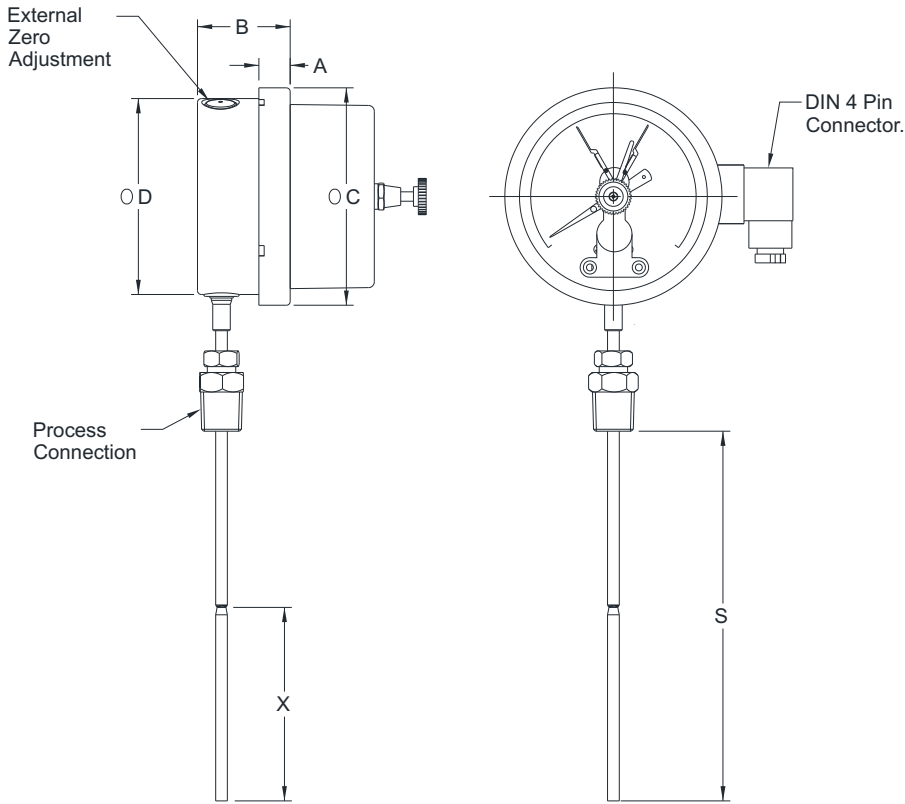
Gaskets & Filling plugs	: NBR
Dampening liquids	: Dielectric Oil

REFERENCE

EN 13190

DIMENSIONAL DRAWING

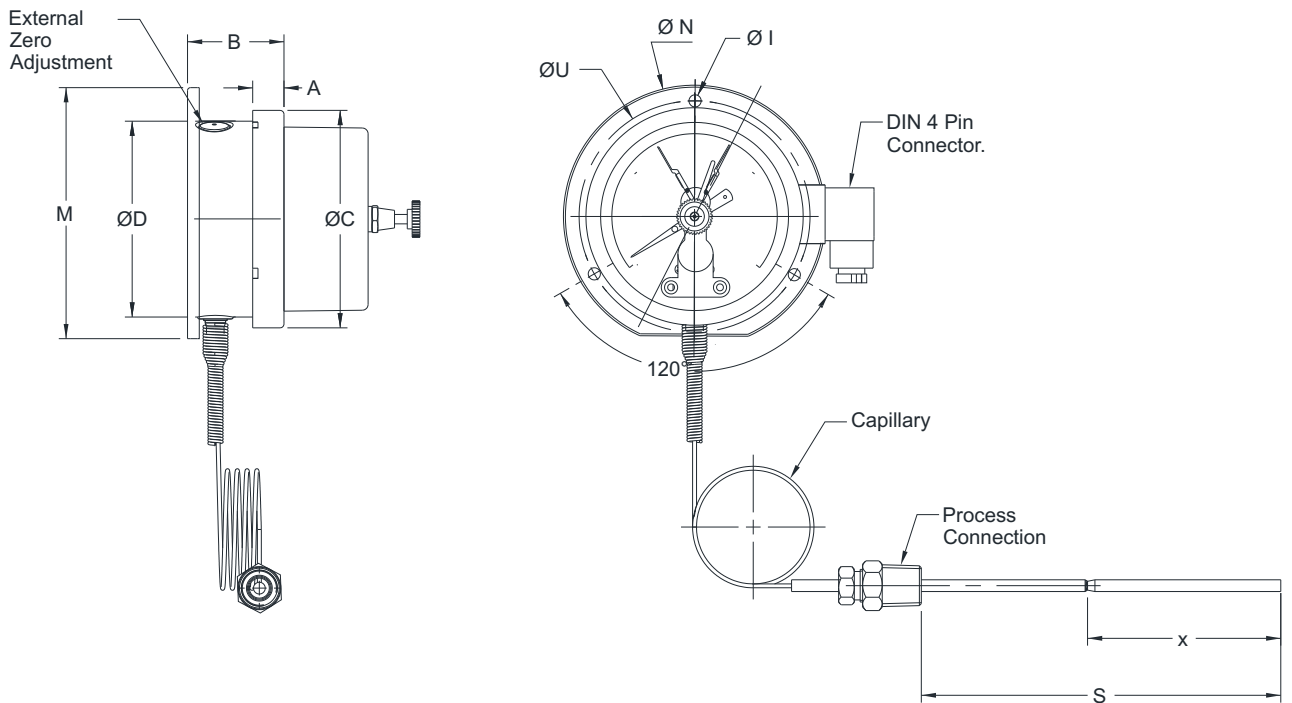
Mounting Pattern: B0, Dome type



DN	A	B	ØC	ØD	S	X
100	12	48	111	100	*	**
150	15	48	161	149	*	**

* As per customer requirement.
 ** Refer technical sheet - Temperature Gauges.

Mounting Pattern: B1, Dome type

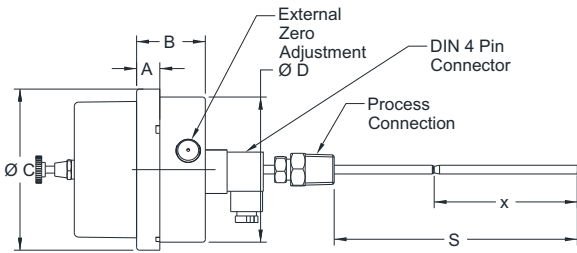


DN	A	B	ØC	ØD	ØI	ØN	M	S1	ØU	S	X
100	12	52	111	100	6	134	128	6	118	*	**
150	15	52	161	149	6	186	172.4	6	168	*	**

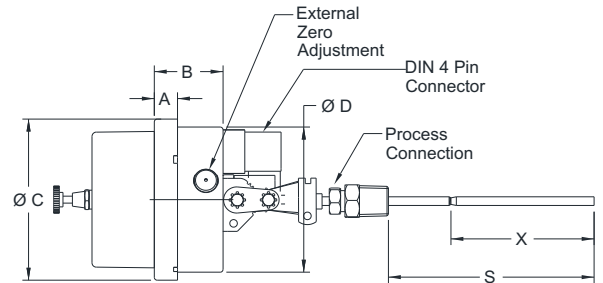
* As per customer requirement.
 ** Refer technical sheet - Temperature Gauges.

DIMENSIONAL DRAWING

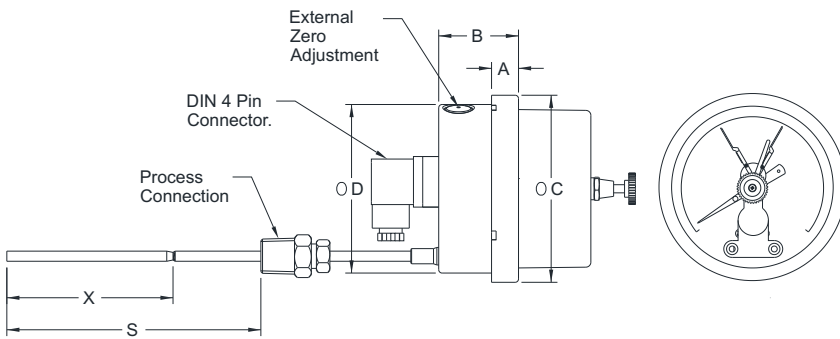
Mounting Pattern: R0, Dome type



Mounting Pattern: R1, Dome type



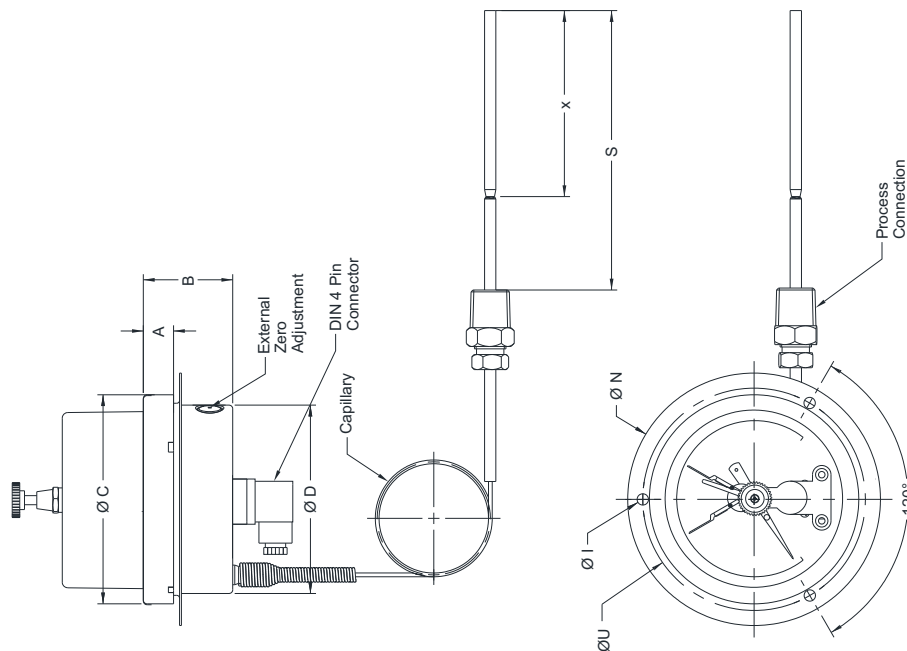
Mounting Pattern: L0, Dome type



DN	A	B	ØC	ØD	S	X
100	12	48	111	100	*	**
150	15	48	161	149	*	**

* As per customer requirement.
 ** Refer technical sheet - Temperature Gauges.

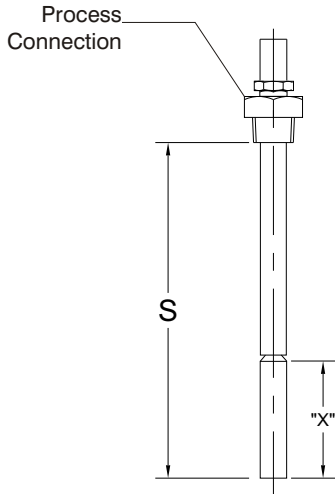
Mounting Pattern: L1, Dome type



DN	A	B	ØC	ØD	ØI	ØN	ØU	S	X
100	12	48	111	100	6	134	118	*	**
150	15	48	161	149	6	186	168	*	**

* As per customer requirement.
 ** Refer technical sheet - Temperature Gauges.

STEM LENGTH CHART



Stem / Sensor Size (mm)	(x) Sensor Length (mm)	(S) Minimum Stem Length (mm)
Rigid Stem type Inert Gas Thermometer		
Capillary type Inert Gas Thermometer (≤10 Mtr.)		
6 / 1/4"	200	240
8 / 9.5	120	160
10	90	130
12 / 14	70	110
Capillary type Inert Gas Thermometer (>10 Mtr. up to 25 Mtr.)		
8 / 9.5	170	210
10	140	180
12 / 14	90	130

1. Capillary compensation is preferred for all capillary inert gas thermometers, if capillary length is above 6 meter.
2. For other reduced length, contact factory before ordering.

RANGE TABLE

RANGE	" °C "	RANGE	" °C "	RANGE	" °C "
-20...+40	C01	-50...+100	C11	0...250	C21
-20...+60	C02	-100...+60	C12	0...300	C22
-20...+80	C03	0...50	C13	0...400	C23
-20...+100	C04	0...60	C14	0...500	C24
-20...+120	C05	0...80	C15	0...600	C25
-20...+180	C06	0...100	C16	0...650	C26
-30...+50	C07	0...120	C17	50...650	C27
-30...+70	C08	0...150	C18	100...600	C28
-40...+40	C09	0...160	C19	100...700	C29
-40...+60	C10	0...200	C20		

ELECTRIC CONTACT DETAILS

Switch type	Contacts	Action	Rating	Code
Normally closed (1NC)	Single	Break contact	230VAC/1A; 48VDC/0.5A	CD1
Normally open (1NO)	Single	Make contact	230VAC/1A; 48VDC/0.5A	CD2
Normally closed (2NC)	Double	Break contact	230VAC/1A; 48VDC/0.5A	CD3
Normally open (2NO)	Double	Make contact	230VAC/1A; 48VDC/0.5A	CD4
Normally closed + Normally open (1NC+1NO)	Double	Break contact + Make contact	230VAC/1A; 48VDC/0.5A	CD5
Normally open + Normally closed (1NO+1NC)	Double	Make contact + Brake contact	230VAC/1A; 48VDC/0.5A	CD6
SPDT	Single		230VAC/1A; 48VDC/0.5A	CD7
DPDT	Double		230VAC/1A; 48VDC/0.5A	CD8
Normally closed (1NC)	Single	Break contact	220VAC/0.4A	CI1
Normally open (1NO)	Single	Make contact	220VAC/0.4A	CI2
Normally closed (2NC)	Double	Break contact	220VAC/0.4A	CI3
Normally open (2NO)	Double	Make contact	220VAC/0.4A	CI4
Normally closed + Normally open (1NC+1NO)	Double	Break contact + Make contact	220VAC/0.4A	CI5
Normally open + Normally closed (1NO+1NC)	Double	Make contact + Brake contact	220VAC/0.4A	CI6

NOTES

1. Codes starts with "CD" denomination are magnetic contacts and "CI" are Inductive contacts.
2. Inductive contacts are ATEX approved.

ORDERING CODES

1. DIAL SIZE				04	12. REMOTE MOUNTING LENGTH				XXXXX
04	100 mm / 4"	06	150 mm / 6"		XXXXX	250 mm up to 10,000 mm	XXXXX	10,000 mm up to 25,000 mm	
2. RANGE				C16	13. SWITCH CATEGORY				XX
XXX	Refer "Range Table"				RR	Economic contacts (Magnetic)			
3. MOUNTING PATTERN				B0	RS	Precision contacts (Magnetic)			
B0	Direct, Bottom connection				RT	ATEX/CE approved contacts (Inductive)			
B1	Wall/Surface/Projection mounting, Bottom connection			14. ELECTRIC CONTACT				CS1	
B2	2" Pipe/Yoke mounting, Bottom connection			CS1	Break contact (1NC)				
R0	Centre Back connection			CS2	Make contact (1NO)				
R1	Every Angle mounting, Centre Back connection			CS3	2 x Break contact (2NC)				
L0	Lower, Back connection			CS4	2 x Make contact (2NO)				
L1	Panel/Front flange mounting, Lower Back connection			CS5	1 Break + 1 Make (1NC+1NO)				
L2	Panel/bracket mounting, Lower Back connection			CS6	1 Make + 1 Break (1NO+1NC)				
4. STEM DIAMETER				M60	CD1	Break contact (1NC)			
M60	6.0 mm	I14	1/4" (6.35 mm)		CD2	Make contact (1NO)			
M80	8.0 mm	M95	9.5 mm	CD3	2 x Break contact (2NC)				
M10	10 mm	M12	12 mm	CD4	2 x Make contact (2NO)				
5. INGRESS PROTECTION				ER	CD5	1 Break + 1 Make (1NC+1NO)			
ER	IP 65	ES	IP 66		CD6	1 Make + 1 Break (1NO+1NC)			
ET	IP 67			CD7	SPDT				
6. STEM LENGTH				300	CD8	DPDT			
XXXX	Up to 2000 mm (Confirm factory before ordering)				C11	Break contact (1NC)			
7. PROCESS CONNECTION TYPE				KW	C12	Make contact (1NO)			
KX	Fixed connection				C13	2 x Break contact (2NC)			
KW	Adjustable connection			C14	2 x Make contact (2NO)				
BW	Swivel / Revolving connection			C15	1 Break + 1 Make (1NC+1NO)				
8. PROCESS CONNECTION				14N	C16	1 Make + 1 Break (1NO+1NC)			
14N	1/2" NPT (M)	14B	1/2" BSP (M)		Ci9	Booster relay for current up to 5A			
12N	1/4" NPT (M) ⁴	12B	1/4" BSP (M) ⁴	15. OTHER OPTIONS				XX	
14M	M20 X 1.5 mm (M)	13B	3/8" BSP (M) ⁵	BA	Case & Ring in AISI 316 SS (B0)				
9. ASSEMBLY				B8	BB	Case & Ring in AISI 316 SS (B1)			
B8	Direct (Stem type)				BC	Case & Ring in AISI 316 SS (B2)			
B9	Remote (Capillary type)			BG	Case & Ring in AISI 316 SS (R0)				
10. CAPILLARY				XX	BH	Case & Ring in AISI 316 SS (R1)			
OU	AISI 304SS	OV	AISI 316 SS		BK	Case & Ring in AISI 316 SS (L0)			
11. ARMOUR				XX	BL	Case & Ring in AISI 316 SS (L1)			
OX	AISI 304SS	OY	AISI 316 SS		BM	Case & Ring in AISI 316 SS (L2)			
OZ	PVC (Ambient max. 60°C)			EK	Dampening liquid filled, dielectric oil				
					E9	Helium gas filled system			
					G6	6 pin, M20x1.5mm connector			
					G7	Earth terminal			
					RA	Rubber parts, Viton			
					TA	5 - point factory calibration certificate			
					TM	Material test certificate 2.2			
					XF	SS tag plate, AISI 304 SS			
					XG	SS tag plate, AISI 316 SS			
					XT	Dial tag marking			
					XR	Custom designed dial			

Ordering Example : T708-04-C16-B0-M60-ER-300-KW-14N-B8-XX-XX-XXXXX-XX-CS1

NOTES

- For other ranges, connections, please contact factory.
- Option "Case & Ring in AISI 316 SS" is applicable for DN100 & DN150 only.
- 3/8" connections are available up to 10 mm stem diameter only.

- Equivalent scales available in °F, °C/°F, °F/°C.

- 1/4" connections are available up to 1/4" (6.35 mm) stem diameter only.