

FEATURES

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

APPLICATION

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

Electric Contact, High Case 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	: NBR
Window	: Shatterproof safety glass

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



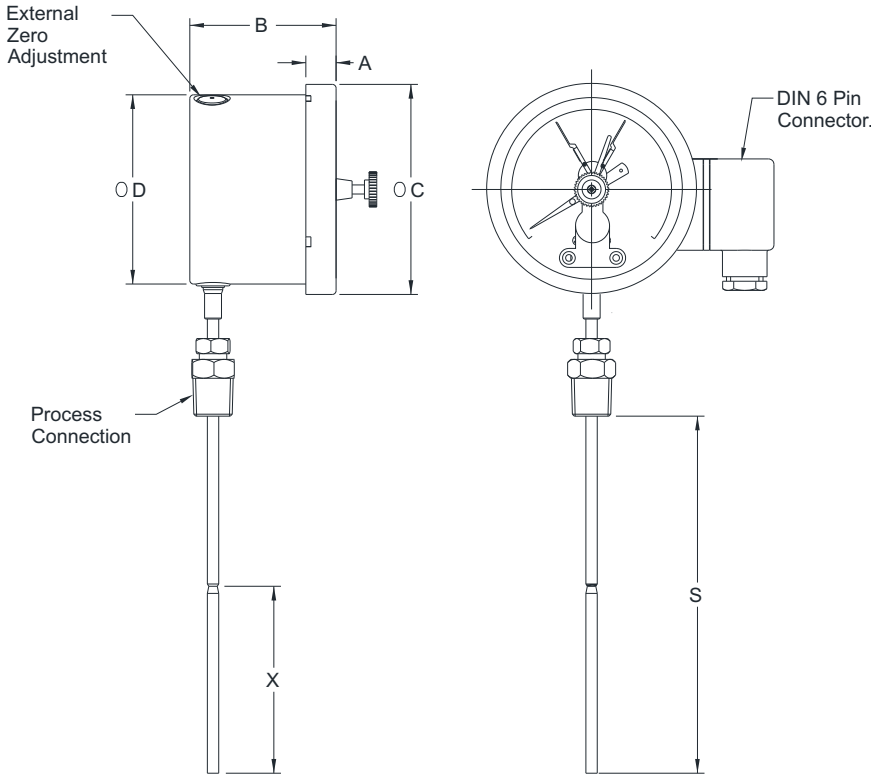
EN 13190

II 2 GD c

* Depending on range & stem diameter

DIMENSIONAL DRAWING

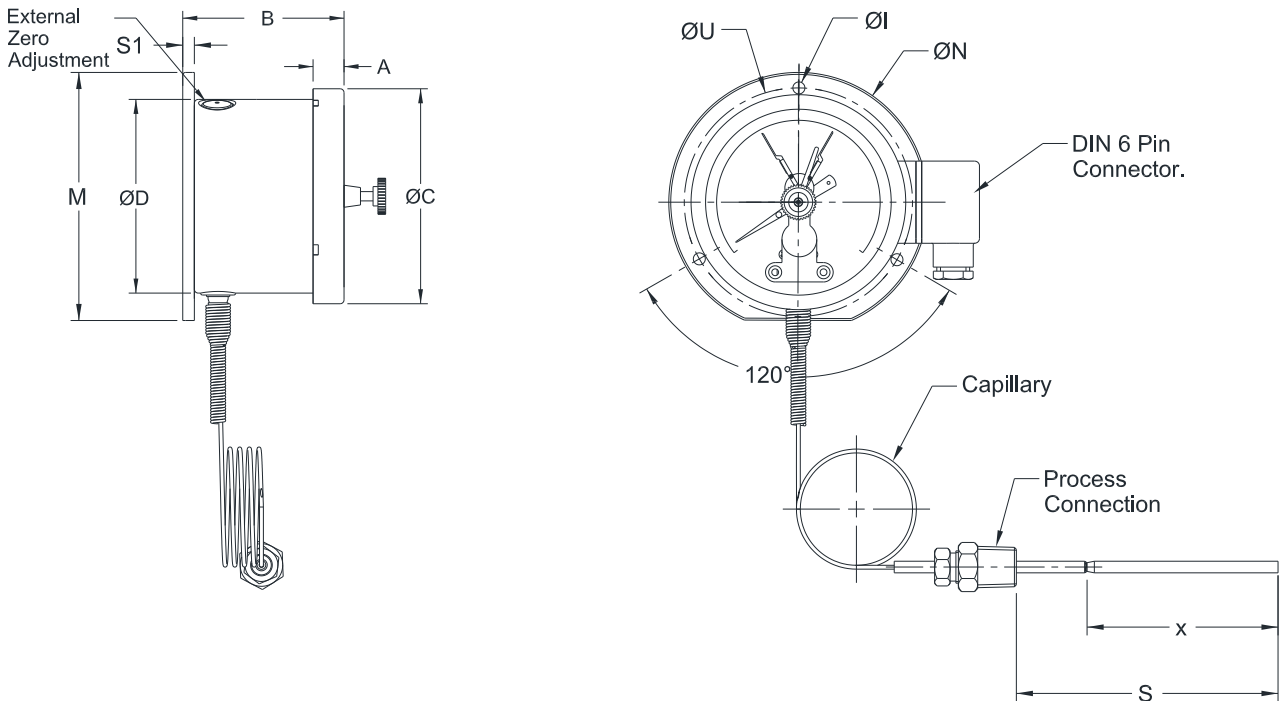
Mounting Pattern: B0, High case type



DN	A	B	ØC	ØD	S	X
100	12	91	111	100	*	**
150	15	91	161	149	*	**

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

Mounting Pattern: B1, High case type



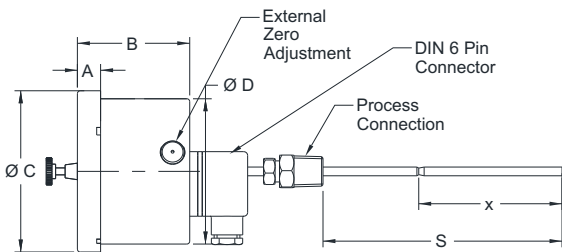
DN	A	B	ØC	ØD	ØI	ØN	M	S1	ØU	S	X
100	12	98	111	100	6	134	128	6	118	*	**
150	15	98	161	149	6	186	172.4	6	168	*	**

All dimensions are in mm.

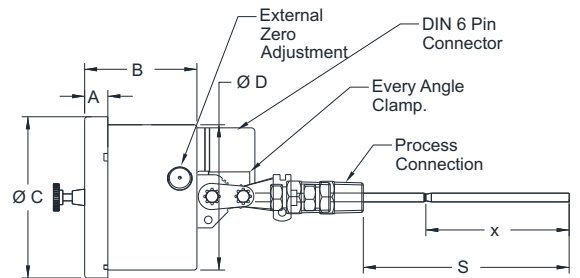
* As per customer requirement.
 ** Refer technical sheet - Temperature Gauges.

DIMENSIONAL DRAWING

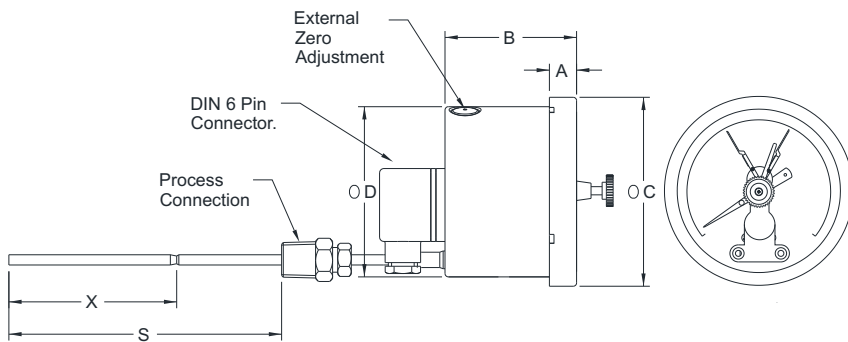
Mounting Pattern: R0, High case type



Mounting Pattern: R1, High case type



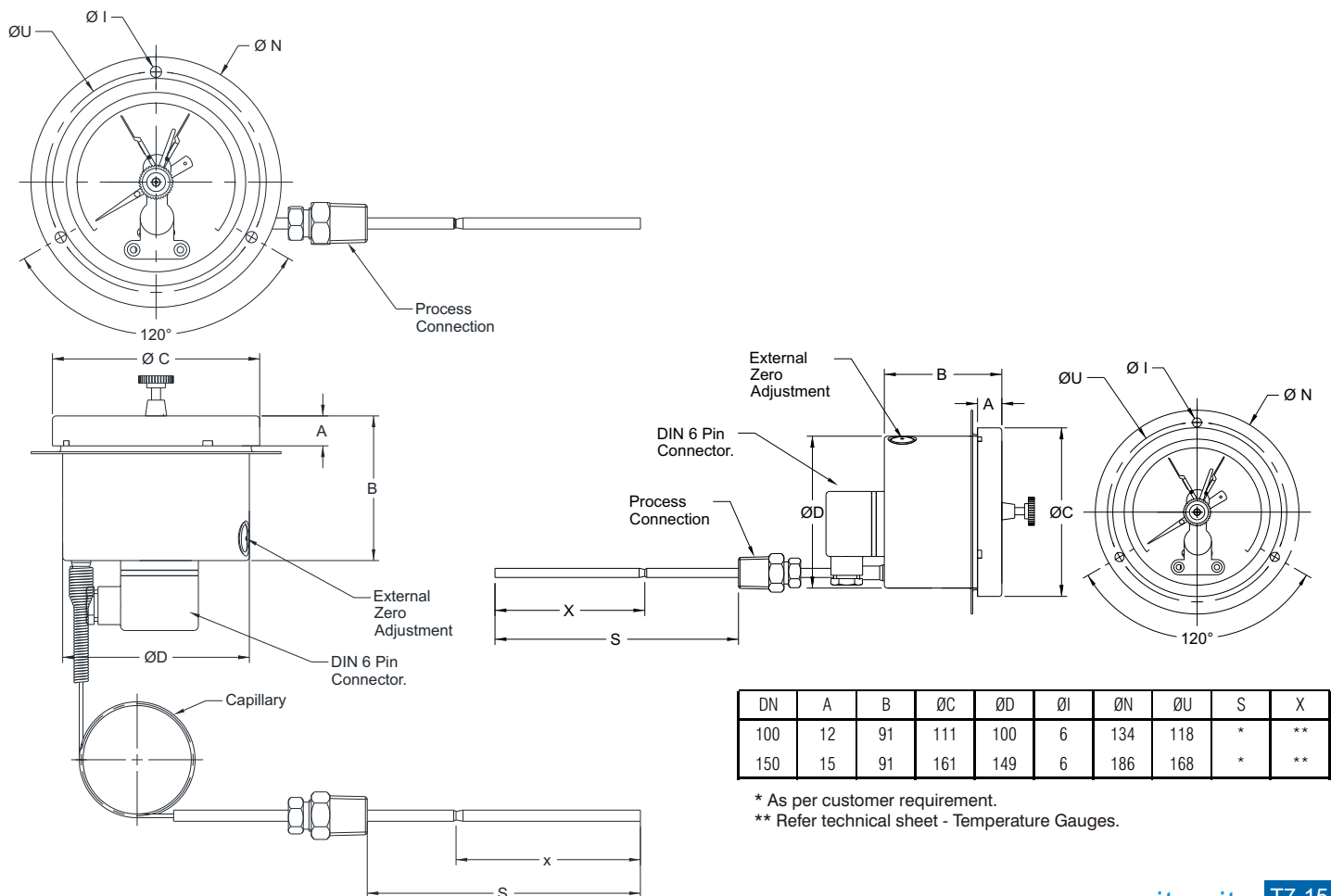
Mounting Pattern: L0, High case type



DN	A	B	ØC	ØD	S	X
100	12	91	111	100	*	**
150	15	91	161	149	*	**

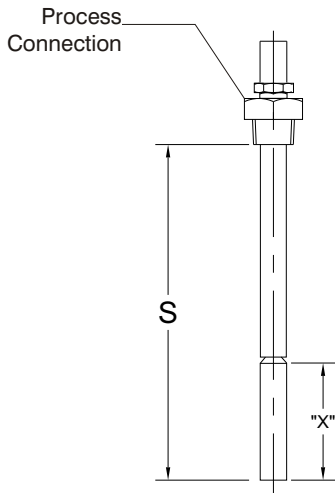
* As per customer requirement.
** Refer technical sheet - Temperature Gauges.

Mounting Pattern: L1, High case type



DN	A	B	ØC	ØD	ØI	ØN	ØU	S	X
100	12	91	111	100	6	134	118	*	**
150	15	91	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	10. CAPILLARY		XX		
04	100 mm / 4"		06	150 mm / 6"		OU	AISI 304SS
2. RANGE		C16	11. ARMOUR		XX		
XXX	Refer "Range Table"		OX	AISI 304SS		OY	AISI 316 SS
3. MOUNTING PATTERN		B0	12. REMOTE MOUNTING LENGTH		XXXXX		
B0	Direct, Bottom connection		XX	250 mm up to 10,000 mm		XX	10,000 mm up to 25,000 mm
B1	Wall/Surface/Projection mounting, Bottom connection	M60	13. SWITCH CATEGORY		XX		
B2	2" Pipe/Yoke mounting, Bottom connection		RS	Precision contacts (Magnetic)		RT	ATEX/CE approved contacts (Inductive)
R0	Centre Back connection	ER	14. ELECTRIC CONTACT		CD1		
R1	Every Angle mounting, Centre Back connection		CD1	Break contact (1NC)		CD2	Make contact (1NO)
L0	Lower, Back connection	300	CD3	2 x Break contact (2NC)	XX		
L1	Panel/Front flange mounting, Lower Back connection		CD4	2 x Make contact (2NO)		CD5	1 Break + 1 Make (1NC+1NO)
L2	Panel/bracket mounting, Lower Back connection	KW	CD6	1 Make + 1 Break (1NO+1NC)	XX		
4. STEM DIAMETER			M60	6.0 mm		I14	1/4" (6.35 mm)
M60	6.0 mm	14N	M80	8.0 mm	M95	9.5 mm	
M80	8.0 mm		B8	M10	10 mm	M12	12 mm
M10	10 mm	B8	5. INGRESS PROTECTION		XX		
5. INGRESS PROTECTION			ER	IP 65		ES	IP 66
6. STEM LENGTH		KW	ET	IP 67	XX		
XXXX	Up to 2000 mm (Confirm factory before ordering)		300	15. OTHER OPTIONS			
7. PROCESS CONNECTION TYPE		14N	BA	Case & Ring in AISI 316 SS (B0)	XX		
KX	Fixed connection		BB	Case & Ring in AISI 316 SS (B1)			
KW	Adjustable connection	B8	BC	Case & Ring in AISI 316 SS (B2)	XX		
BW	Swivel / Revolving connection		BG	Case & Ring in AISI 316 SS (R0)			
8. PROCESS CONNECTION		B8	BH	Case & Ring in AISI 316 SS (R1)	XX		
14N	1/2" NPT (M)		BK	Case & Ring in AISI 316 SS (L0)			
12N	1/4" NPT (M) ⁴	B8	BL	Case & Ring in AISI 316 SS (L1)	XX		
14M	M20 X 1.5 mm (M)		BM	Case & Ring in AISI 316 SS (L2)			
15N	3/4" NPT (M)	B8	EK	Dampening liquid filled, dielectric oil	XX		
15B	3/4" BSP (M)		E9	Helium gas filled system			
04N	1/2" NPT (F)	B8	G6	6 pin, M20x1.5mm connector	XX		
05N	3/4" NPT (F)		G7	Earth terminal			
16M	M27x2.0 mm (M)	B8	RA	Rubber parts, Viton	XX		
9. ASSEMBLY			TA	5 - point factory calibration certificate			
B8	Direct (Stem type)	B8	TM	Material test certificate 2.2	XX		
B9	Remote (Capillary type)		XF	SS tag plate, AISI 304 SS			
9. ASSEMBLY		B8	XG	SS tag plate, AISI 316 SS	XX		
9. ASSEMBLY			XT	Dial tag marking			
9. ASSEMBLY		B8	XR	Custom designed dial	XX		

Ordering Example : T703-04-C16-B0-M60-ER-300-KW-14N-B8-XX-XX-XXXXX-XX-CD1

NOTES

- 1/4" connections are available up to 1/4" (6.35 mm) stem diameters only.
- 3/8" connections are available up to 10 mm stem diameters only.