

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

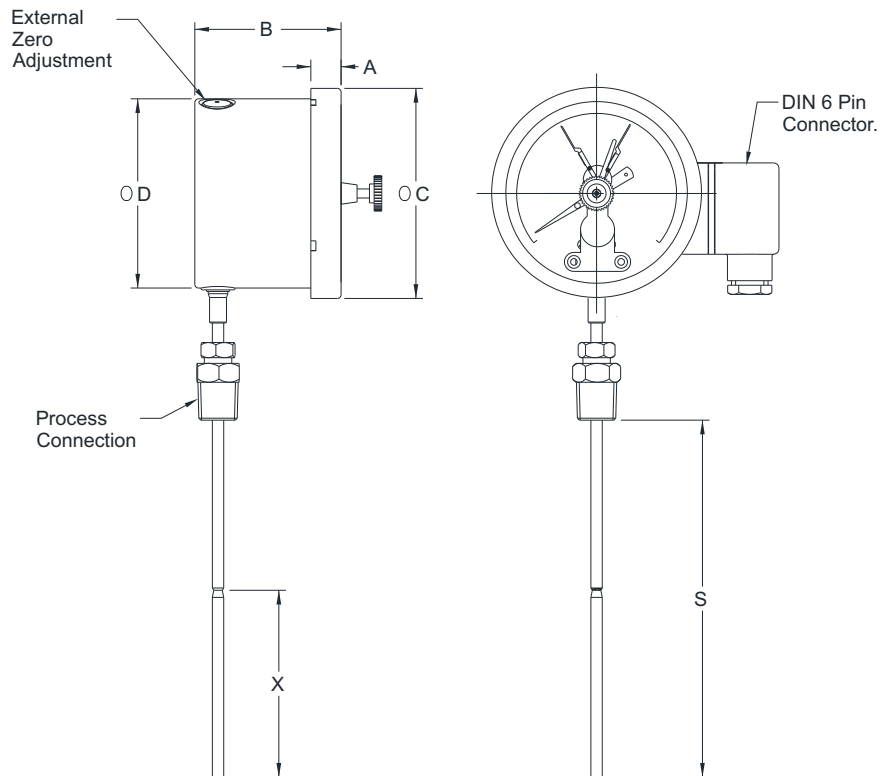


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* Depending on range & stem diameter

DIMENSIONAL DRAWING

Mounting Pattern: B0, High case type

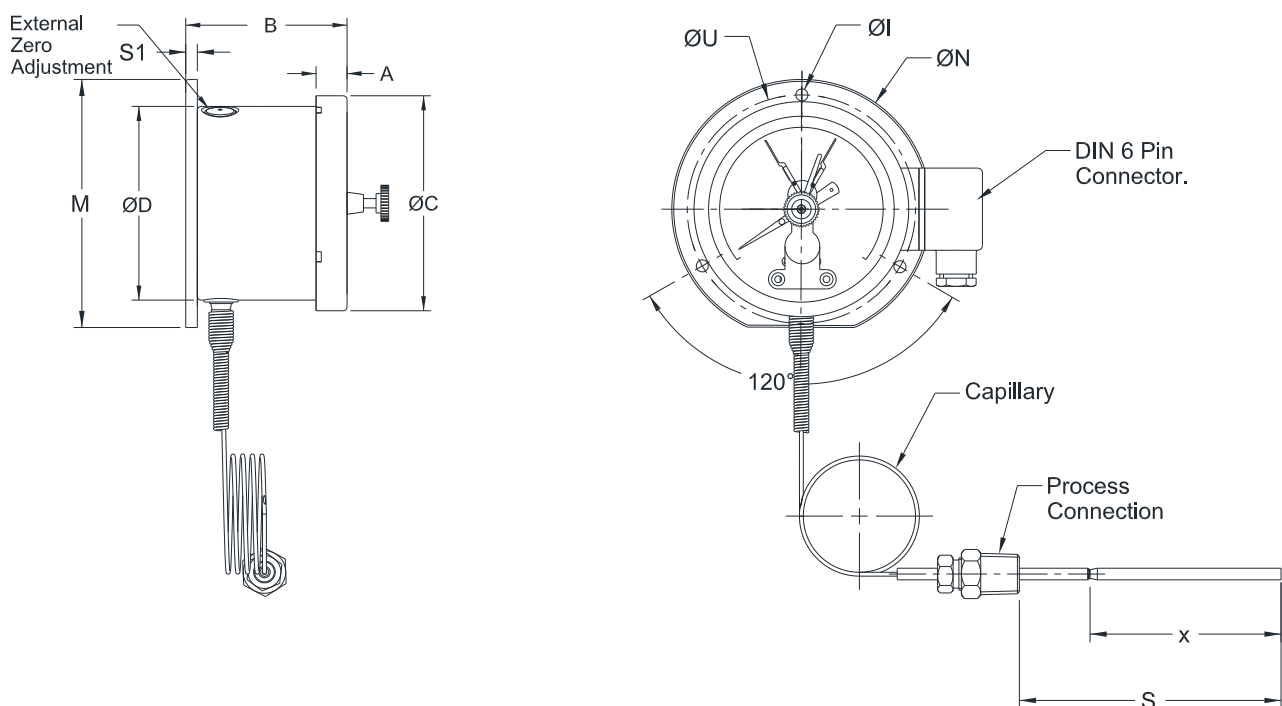


DN	A	B	ØC	ØD	S	X
100	12	91	111	100	*	**
150	15	91	161	149	*	**

* 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	*	**

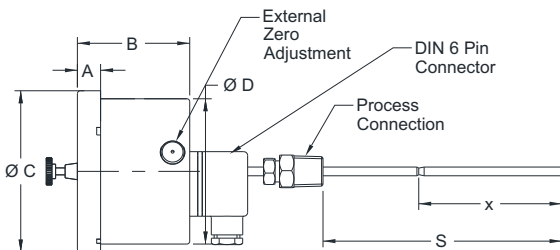
All dimensions are in mm.

* As per customer requirement.

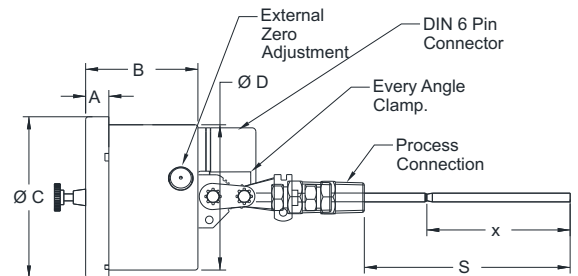
** Refer technical sheet - Temperature Gauges.

DIMENSIONAL DRAWING

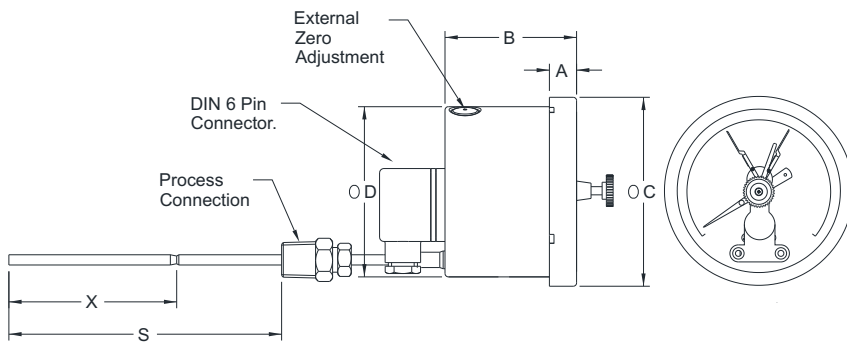
Mounting Pattern: R0, High case type



Mounting Pattern: R1, High case type



Mounting Pattern: L0, High case type

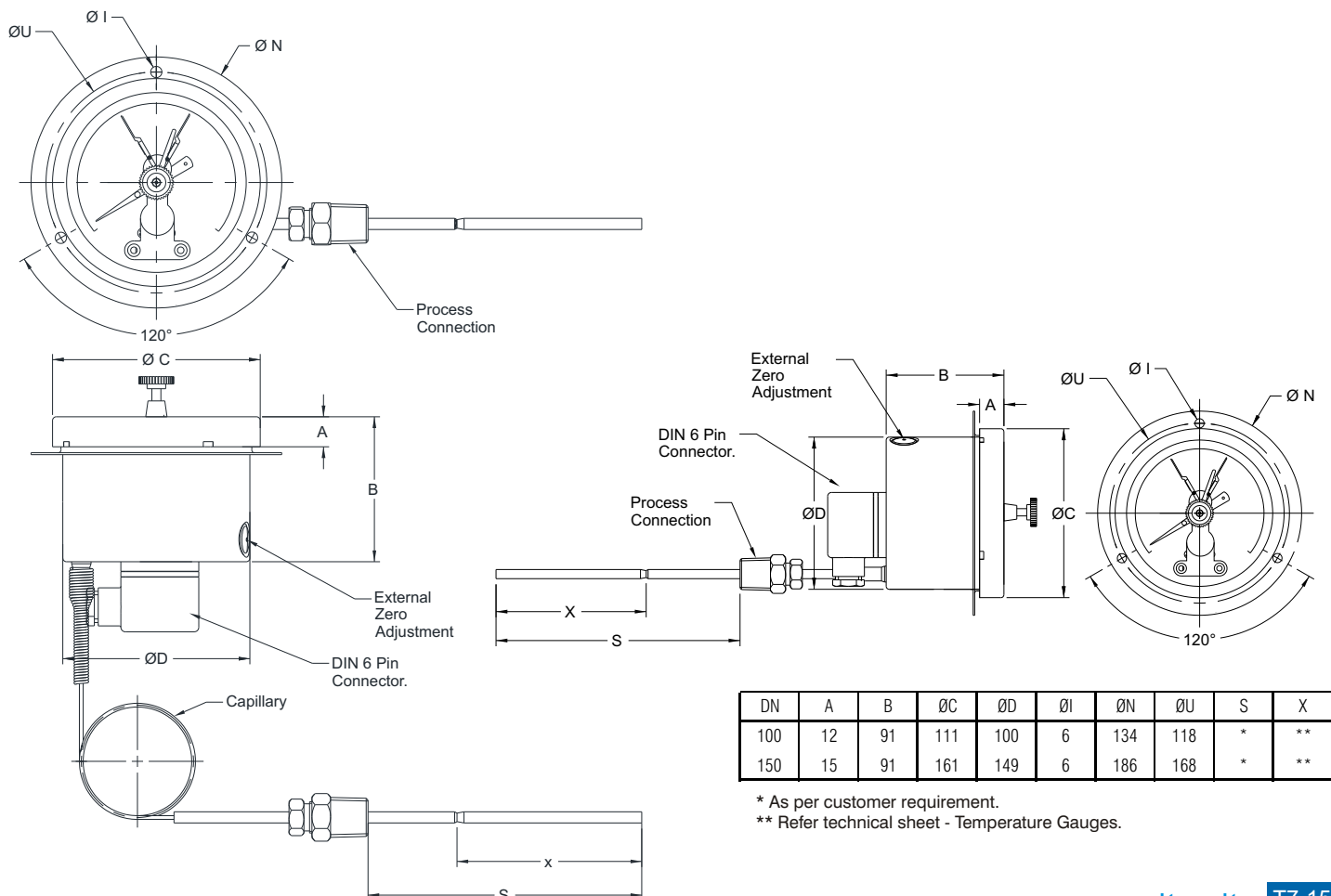


DN	A	B	ØC	ØD	S	X
100	12	91	111	100	*	**
150	15	91	161	149	*	**

* As per customer requirement.

** Refer technical sheet - Temperature Gauges.

Mounting Pattern: L1, High case type

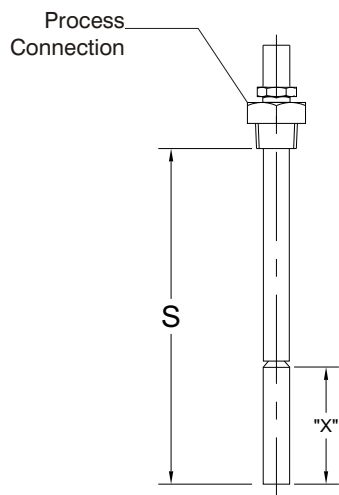


DN	A	B	ØC	ØD	ØI	ØN	ØU	S	X
100	12	91	111	100	6	134	118	*	**
150	15	91	161	149	6	186	168	*	**

* 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

04 100 mm / 4" **06** 150 mm / 6"

2. RANGE

XXX Refer "Range Table"

3. MOUNTING PATTERN

B0 Direct, Bottom connection
B1 Wall/Surface/Projection mounting, Bottom connection
B2 2" Pipe/Yoke mounting, Bottom connection
R0 Centre Back connection
R1 Every Angle mounting, Centre Back connection
L0 Lower, Back connection
L1 Panel/Front flange mounting, Lower Back connection
L2 Panel/bracket mounting, Lower Back connection

4. STEM DIAMETER

M60 6.0 mm **I14** 1/4" (6.35 mm)
M80 8.0 mm **M95** 9.5 mm
M10 10 mm **M12** 12 mm

5. INGRESS PROTECTION

ER IP 65 **ES** IP 66
ET IP 67

6. STEM LENGTH

XXXX Up to 2000 mm
 (Confirm factory before ordering)

7. PROCESS CONNECTION TYPE

KX Fixed connection
KW Adjustable connection
BW Swivel / Revolving connection

8. PROCESS CONNECTION

14N 1/2" NPT (M) **14B** 1/2" BSP (M)
12N 1/4" NPT (M)⁴ **12B** 1/4" BSP (M)⁴
14M M20 X 1.5 mm (M) **13B** 3/8" BSP (M)⁵
15N 3/4" NPT (M) **15B** 3/4" BSP (M)
04N 1/2" NPT (F) **05N** 3/4" NPT (F)
16M M27x2.0 mm (M)

9. ASSEMBLY

B8 Direct (Stem type)
B9 Remote (Capillary type)

10. CAPILLARY

OU AISI 304SS **OV** AISI 316 SS

11. ARMOUR

OX AISI 304SS **OY** AISI 316 SS
OZ PVC (Ambient max. 60°C)

12. REMOTE MOUNTING LENGTH

XXXXX 250 mm up to 10,000 mm
XXXXX 10,000 mm up to 25,000 mm

13. SWITCH CATEGORY

RS Precision contacts (Magnetic)
RT ATEX/CE approved contacts (Inductive)

14. ELECTRIC CONTACT

CD1 Break contact (1NC)
CD2 Make contact (1NO)
CD3 2 x Break contact (2NC)
CD4 2 x Make contact (2NO)
CD5 1 Break + 1 Make (1NC+1NO)
CD6 1 Make + 1 Break (1NO+1NC)
CD7 SPDT
CD8 DPDT
CI1 Break contact (1NC)
CI2 Make contact (1NO)
CI3 2 x Break contact (2NC)
CI4 2 x Make contact (2NO)
CI5 1 Break + 1 Make (1NC+1NO)
CI6 1 Make + 1 Break (1NO+1NC)
CI9 Booster relay for current up to 5A

15. OTHER OPTIONS

BA Case & Ring in AISI 316 SS (B0)
BB Case & Ring in AISI 316 SS (B1)
BC Case & Ring in AISI 316 SS (B2)
BG Case & Ring in AISI 316 SS (R0)
BH Case & Ring in AISI 316 SS (R1)
BK Case & Ring in AISI 316 SS (L0)
BL Case & Ring in AISI 316 SS (L1)
BM Case & Ring in AISI 316 SS (L2)
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 : T703-04-C16-B0-M60-ER-300-KW-14N-B8-XX-XX-XXXXXX-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.