



Special Features

- CE approved electrical contacts.
- Mercury filled expansion system.
- Stainless steel case & stem
- With or without thermowell
- Silicon oil filled (optional)
- Standard followed EN 13190.

Application

- All stainless steel inert gas filled thermometers are
- suitable for corrosive media / environments in process industry chemical
- Pulp
- Paper
- Refinery
- Cement & many more.

Specifications

Standard Version : 63,mm 100 mm, 150 mm, 200 mm & 250 mm

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

| | |
|-------------------|------------------------------|
| Case & bezel | : AISI 304 SS (Bayonet Type) |
| Stem & connection | : AISI 316 SS |
| Joints | : Tig Argon arc welding |

| | |
|-----------------------|--|
| Protection | : IP 68 |
| Dial | : Aluminium, black graduation on white background |
| Pointer | : Aluminium, black Coloured Micrometer Zero adjustable |
| Window | : Toughened Glass |
| Gasket & Filling Plug | : Neoprene |

Standard version : Electrical contacts

| | |
|---------------------|---|
| Accuracy | : Class 1 as per EN 13190 |
| Ambient Temperature | : Maximum 65°C |
| Window | : Polycarbonate Dome |
| Dampening Liquids | : Dielectric Oil (Optional) |
| Other Features | : Refer Specification of Standard Version |

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 |

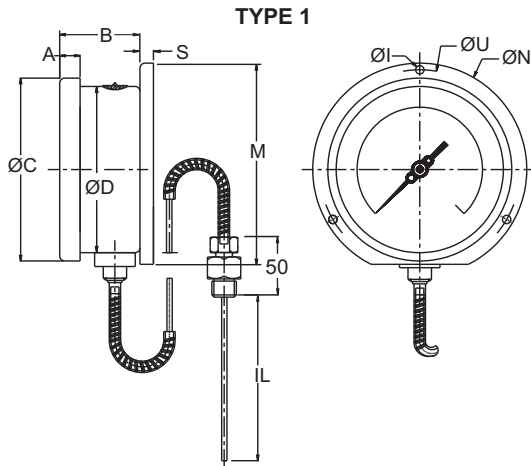
*Gasket & Filling plug of Viton.

Note : The addition of mechanical electric contacts affects the accuracy of instruments such that 1% becomes 1.5%, 1.6% becomes 2.4% etc. (Add the 50% of accuracy; If the contact is of the magnetically assisted type, this value can't be added within the ±5% of setting point.)

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 |

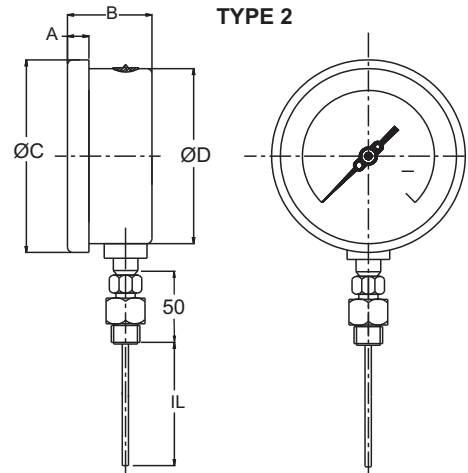
Dimensions - Standard Version



| NS | A | B | ØC | ØD | S | M | IL | ØU | ØN | ØI | Approx. Wt.# |
|-----|------|----|-----|-----|-----|-------|----|-----|-----|----|--------------|
| 100 | 12.5 | 43 | 111 | 100 | 6 | 128 | * | 118 | 134 | 6 | 1000.0 |
| 150 | 15 | 43 | 161 | 149 | 6 | 174.5 | * | 168 | 186 | 6 | 1550.0 |
| 200 | 18 | 49 | 216 | 200 | 1.5 | 229 | * | 230 | 245 | 7 | 2000.0 |
| 250 | 18 | 55 | 262 | 247 | 1.5 | 286.5 | * | 276 | 290 | 7 | 2250.0 |

(* As per customer requirement.)

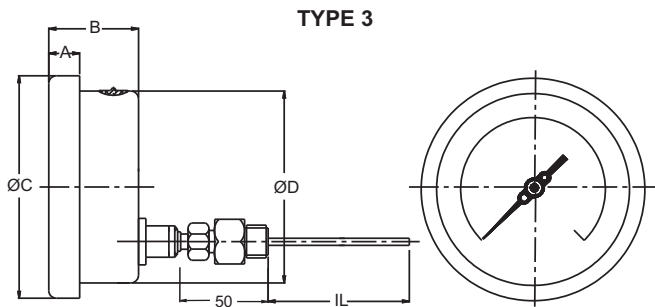
(# Weight in grams with box for 250 mm stem length & 3 meter capillary.)



| NS | A | B | ØC | ØD | IL | Approx. Wt.# |
|-----|------|----|-----|-----|----|--------------|
| 100 | 12.5 | 45 | 111 | 100 | * | 750.0 |
| 150 | 15 | 45 | 161 | 149 | * | 1250.0 |
| 200 | 18 | 49 | 216 | 200 | * | 1500.0 |
| 250 | 18 | 55 | 262 | 247 | * | 2000.0 |

(* As per customer requirement.)

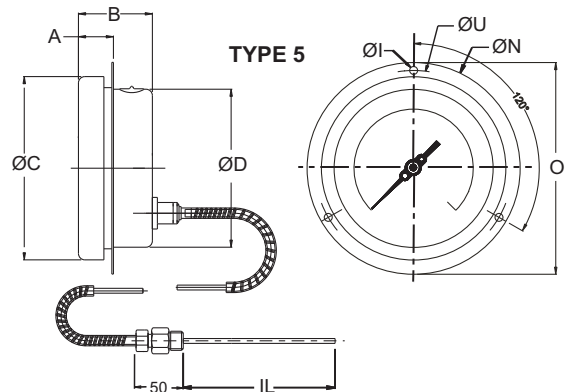
(# Weight in grams with box for 250 mm stem length.)



| NS | A | B | ØC | ØD | IL | Approx. Wt.# |
|-----|------|----|-----|-----|----|--------------|
| 100 | 12.5 | 45 | 111 | 100 | * | 750.0 |
| 150 | 15 | 45 | 161 | 149 | * | 1250.0 |
| 200 | 18 | 49 | 216 | 200 | * | 1500.0 |
| 250 | 18 | 55 | 262 | 247 | * | 2000.0 |

(* As per customer requirement.)

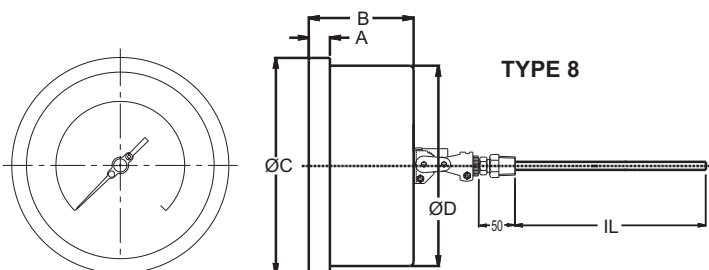
(# Weight in grams with box for 250 mm stem length.)



| NS | A | B | ØC | ØD | S | IL | ØU | ØN | ØI | Approx. Wt.# |
|-----|------|----|-----|-----|-----|----|-----|-----|----|--------------|
| 100 | 12.5 | 45 | 111 | 100 | 1 | * | 118 | 134 | 6 | 1000.0 |
| 150 | 15 | 45 | 161 | 149 | 1 | * | 168 | 186 | 6 | 1550.0 |
| 200 | 18 | 49 | 216 | 200 | 1.5 | * | 230 | 245 | 7 | 2000.0 |
| 250 | 18 | 55 | 262 | 247 | 1.5 | * | 276 | 290 | 7 | 2250.0 |

(* As per customer requirement.)

(# Weight in grams with box for 250 mm stem length & 3 meter capillary.)



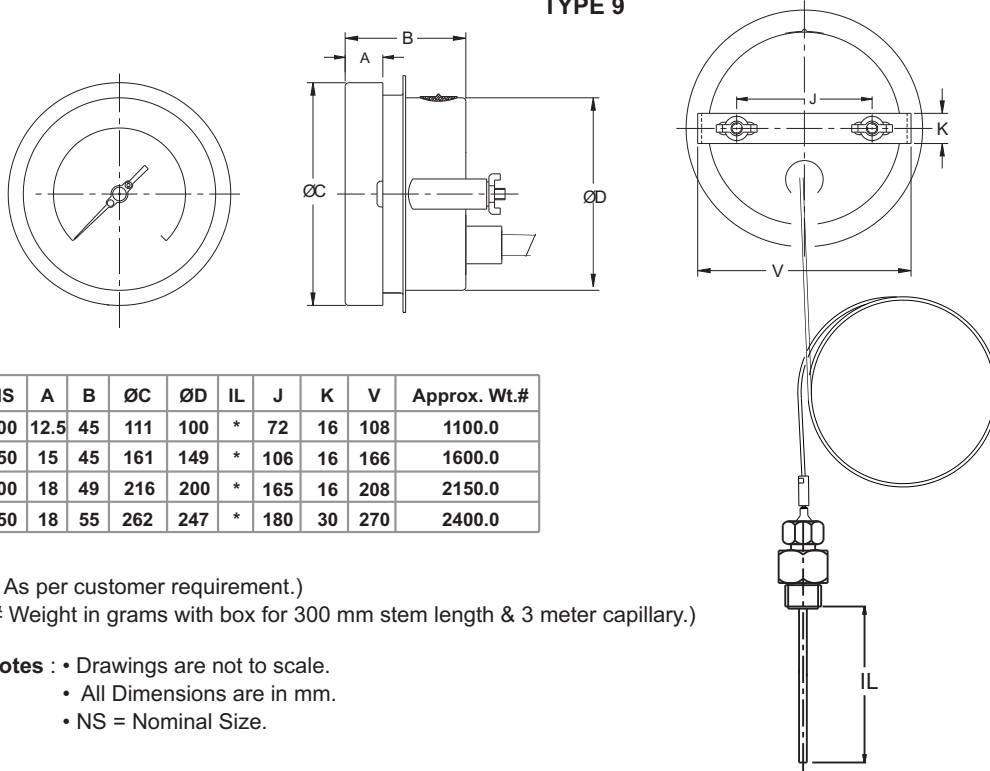
| NS | A | B | ØC | ØD | IL | Approx. Wt.# |
|-----|------|----|-----|-----|----|--------------|
| 100 | 12.5 | 45 | 111 | 100 | * | 750.0 |
| 150 | 15 | 45 | 161 | 149 | * | 1250.0 |
| 200 | 18 | 49 | 216 | 200 | * | 1500.0 |
| 250 | 18 | 55 | 262 | 247 | * | 2000.0 |

(* As per customer requirement.)

(# Weight in grams with box for 250 mm stem length.)

Dimensions - Standard Version

TYPE 9



| NS | A | B | ØC | ØD | IL | J | K | V | Approx. Wt.# |
|-----|------|----|-----|-----|----|-----|----|-----|--------------|
| 100 | 12.5 | 45 | 111 | 100 | * | 72 | 16 | 108 | 1100.0 |
| 150 | 15 | 45 | 161 | 149 | * | 106 | 16 | 166 | 1600.0 |
| 200 | 18 | 49 | 216 | 200 | * | 165 | 16 | 208 | 2150.0 |
| 250 | 18 | 55 | 262 | 247 | * | 180 | 30 | 270 | 2400.0 |

(* As per customer requirement.)

(# Weight in grams with box for 300 mm stem length & 3 meter capillary.)

- 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 | Range | 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 | Range | Range | Range |
| - 80 / 60 | - 20 / 60 | - 40 / 60 | - 20 / 180 |
| - 60 / 40 | - 20 / 80 | - 30 / 50 | - 20 / 100 |

Note: *Compound ranges are not recommended for electrical contact option. Refer table for limits of error as per EN13190 (On First Page)

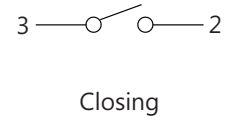
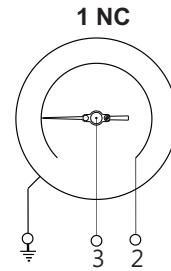
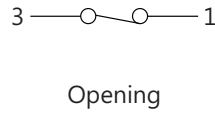
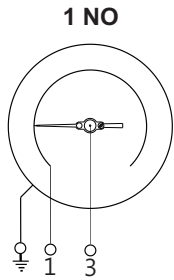
ACCESSORIES (* Refer datasheet for Thermowells)

- * Thermowell

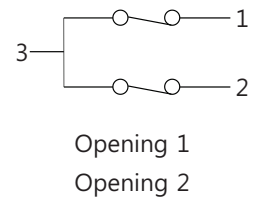
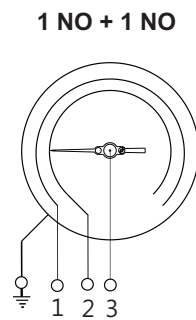
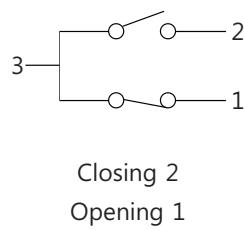
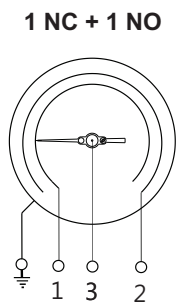
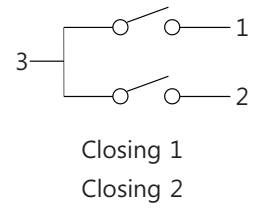
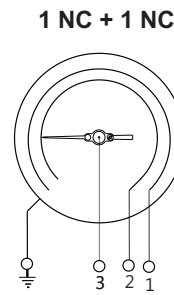
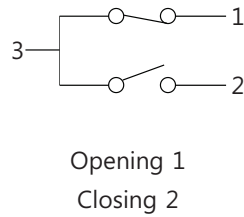
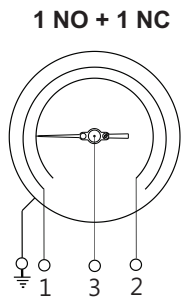
Electrical Contact Wiring Information

Wiring diagrams for electric contacts

Single Contact



Double contact



| How To Order | | | | | | | Example |
|---|---|---|---|-------------------|-----------|------------|-----------------|
| Basic Model | | | | | | | MT |
| Code | | | | | | | |
| Nominal Size | 25 | 40 | 45 | 60 | 80 | 100 | XX or XXX |
| Type of Mounting(*without Capillary option) | 63 mm | 100 mm | 125 mm | 150 mm | 200 mm | 250 mm | |
| 1 Wall/surface/projection mounting With bottom entry | 5 Lower back entry with front flange | | | | | | X |
| 2 Direct bottom entry* | 8 Every angle back entry* | | | | | | |
| 3 Direct lower back entry* | 9 Lower back entry with mounting bracket | | | | | | |
| Process Connection (# Not recommended for Revolving/ Swivel connections.) | | | | | | | XXX |
| 3BM 3/8" BSP (M)* | 4BM 1/2" BSP (M) (Standard)* | 5BM 3/4" BSP (M) | | | | | |
| 3NM 3/8" NPT (M)*# | 4NM 1/2" NPT (M)*# | 4MM M20 x 1.5 (M)* | | | | | |
| 3TM 3/8" BSPT (M)*# | 4TM 1/2" BSPT (M)*# | | | | | | |
| * Suitable for stem diameter 6 to 10 mm | | | | | | | |
| Process Connection Type | | | | | | | XX |
| AD Adjustable (Standard) | FX Fixed | SL Revolving / Swivel | | | | | |
| Stem Diameter | | | | | | | XXXX |
| SD04 4 mm | SD06 6 mm (Standard) | SD08 8 mm | SD10 10 mm | SD12 12 mm | | | |
| Stem Length (Below thread Max. 600 mm) | | | | | | | 100 mm |
| Please specify in mm | Minimum stem Length (Below Thread) | | 120 mm | 100 mm | 100 mm | 80 mm | |
| | Stem OD | | 6 mm | 8 mm | 10 mm | 12 mm | |
| Range | | | | | | | 0/100 °C |
| Refer range table | | | | | | | |
| Type | ST With rigid stem | CP With capillary | | | | | XX |
| Capillary length (Max up to 15 Mtrs.) In meters (e.g. 1.5 = 1.5 meters 2.0 = 2 meters) | | | | | | | 3Mtr. |
| Capillary | S4 AISI 304 SS | S6 AISI 316 SS | | | | | XX |
| Capillary covered with armour (Applicable with S4 or S6 if selected) | | | | | | | XX |
| S4 AISI 304 SS | S6 AISI 316 SS | PV PVC (Ambient Temp. Max. 60°C) | | | | | |
| Electric Contacts (FOR NS 100 mm & 150 mm Only) (C € Approved) | | | | | | | XX |
| (With IP protection up to IP 55 & window polycarbonate dome type) | | | | | | | |
| A) Single insulated magnetic snap action type (230 V AC, 1 Amp.)(48 V DC, 0.5 Amp.) (Available for 1 kg/cm ² & above) | | | B) Inductive type (220 V AC, 0.4 Amp.) (Available for 1000 mm WC & above) | | | | XX |
| M1 Single; normally closed (1 NC) | D1 Single; normally open (1 NO) | | | | | | |
| M2 Double; normally closed + normally open (1 NC + 1 NO) | D2 Single; normally closed (1 NC) | | | | | | |
| M3 Single; normally open (1 NO) | D3 Double; normally closed + normally open (1 NC + 1 NO) | | | | | | |
| M4 Double; normally open + normally closed (1 NO + 1 NC) | D4 Double; normally open (both NO) | | | | | | |
| M5 Double; normally closed (both NC) | D5 Double; normally closed (both NC) | | | | | | |
| M6 Double; normally open (both NO) | D6 Double; normally open + normally closed (1 NO + 1 NC) | | | | | | |
| Optional Extras | | | | | | | XXX |
| CBS AISI 316 SS case & bezel** | CDD Custom designed dial | | | | | | |
| LGF Dampening liquid glycerin filled (ambient temp. Max. 65°C)* | STG Shatterproof/safety glass | | | | | | |
| LSI Dampening liquid silicon oil (ambient temp. Above 65°C)* | TND Tag No. marking on Dial | | | | | | |
| MRP Maximum reading pointer with plexi glass (for dry version)** | STP SS tag plate | | | | | | |
| MTC Material test certificates# | DOF Dielectric oil filled*** | | | | | | |
| | | | | | | | |

* Dry version & except electrical contacts. ** Available for NS 100 mm to 150 mm. Consult factory for minimum order quantity & delivery.

*** Gasket & Filling plug of Viton. # Material test certificates will be provided for wetted parts only with chemical composition testing. For others, please consult factory. **Five Point Calibration Certificate Provided With Each Gauge For Measuring Range Only.**

Ordering Example: MT- XX or XXX - X - XXX - XX - XXXX - 100 mm - 0/100 °C - XX - 3Mtr - XX - XX - XX - XXX

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.