


**BDTB18-D**

Badotherm bimetal model BDTB18 series thermometer is available as 63/80/100/125/160 mm.

These bimetal thermometers are suitable where ambient corrosion is a major concern and can be used in chemical process, petroleum, food industries etc. The standard connection on these thermometers is an adjustable fitting in order to give more flexibility to stem length immersions.

## stainless steel bimetal thermometer back

### mounting variations

- type A bottom connection, direct mounting
- type C surface mounting, bottom connection
- type D back connection, direct mounting
- type E panel mounting, back connection
- type F panel mounting, bottom connection
- type BDTE every angle connection, direct mounting

### technical specification model BDTB18-D

|                                  |                          |                                  |  |
|----------------------------------|--------------------------|----------------------------------|--|
| <b>diameter</b><br>63 to 160 mm  | <b>dial</b><br>aluminium | <b>window</b><br>glass           | <b>ranges</b><br>from -50/550 °C         |
| <b>casing</b><br>AISI304 bayonet | <b>stem</b><br>AISI316   | <b>element</b><br>coiled bimetal | <b>connection</b><br>1/2" bsp adjustable |
| <b>bezel</b><br>AISI304 bayonet  | <b>stem dia</b><br>6 mm  | <b>pointer</b><br>fixed          | <b>accuracy</b><br>1.0% FSD              |

Note: zero correction is standard on the outside at the back of the casing  
63 mm zero correction with adjustable pointer

### options and special executions at extra costs

|                     |  |
|---------------------|--|
| casing              | AISI316  |
| bezel               | AISI316  |
| window              | safety glass except 125 mm                           |
| dials               | customized -i.e., non standard ranges or logos       |
| certificates        | calibration-; conformity-; material                  |
| manuals             | installation and maintenance                         |
| pointer             | adjustable slotted except 125 mm                     |
| connection          | NPT, MM, BSPT, acc JIS in various sizes              |
| connection type     | fixed or without connection                          |
| connection position | top or side  |
| drag-pointer system | for dia 100/160 mm (plastic window only, max 160 °C) |
| filling             | glycerine, silicone, fluorolube up to 160 °C         |
| stem diameters      | 1/4" / 3/8" / 1/2" / 8 mm / 10 mm / 12 mm            |
| separate wells      | see index 2.3.                                       |

## BDTB18-D - technical data sheet

### operating details

#### working range

| limitations              |                                |
|--------------------------|--------------------------------|
| Permanent                | measuring range per DIN 13 190 |
| Short time ( $\leq 1$ h) | 1,1 x measuring range          |

#### temperature limitations

|                   | ambient         | process          |
|-------------------|-----------------|------------------|
| without filling   | -40 °C to 60 °C | -50 °C to 550 °C |
| glycerine filling | -25 °C to 60 °C | 15 °C to 80 °C   |
| silicone filling  | -40 °C to 60 °C | -45 °C to 250 °C |

#### pressure rating of stem

25 bar maximum

### design information

#### ingress protection

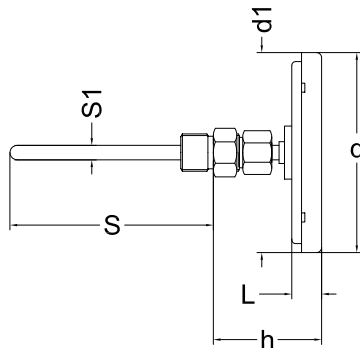
IP 54 per EN 60 529 / IEC 529

IP 65 per EN 60 529 / IEC 529 (liquid filling only)

#### design

DIN 13 190

### drawings



type A

### dimensions

| ns  | d     | d1    | L    | h    | S          | S1 | - |
|-----|-------|-------|------|------|------------|----|---|
| 63  | 68    | 63    | 15,5 | 55,5 | to specify | 6  | - |
| 80  | 89    | 80    | 16   | 56   | to specify | 6  | - |
| 100 | 110,5 | 100,5 | 19   | 59   | to specify | 6  | - |
| 125 | 130   | 119   | 20   | 60   | to specify | 6  | - |
| 160 | 160   | 149   | 20   | 60   | to specify | 6  | - |

Note : dimensions are in mm

## stainless steel bimetal thermometer minimum immersion lengths

| range<br>°C | span<br>°C | min. immersion length<br>(mm) |
|-------------|------------|-------------------------------|
| -20 + 40    | 60         | 100                           |
| -20 + 50    | 70         | 80                            |
| -20 + 60    | 80         | 63                            |
| -20 + 80    | 100        | 63                            |
| -20 + 100   | 120        | 63                            |
| -20 + 110   | 130        | 63                            |
| -20 + 120   | 140        | 50                            |
| -20 + 140   | 160        | 63                            |
| -25 + 40    | 65         | 80                            |
| -30 + 50    | 80         | 63                            |
| -30 + 70    | 100        | 80                            |
| -30 + 100   | 130        | 63                            |
| -40 + 60    | 100        | 80                            |
| -40 + 120   | 160        | 63                            |
| -50 + 50    | 100        | 80                            |
| -50 + 550   | 600        | 100                           |
| 0 + 60      | 60         | 80                            |
| 0 + 80      | 80         | 100                           |
| 0 + 100     | 100        | 63                            |
| 0 + 120     | 120        | 50                            |
| 0 + 150     | 150        | 50                            |
| 0 + 160     | 160        | 50                            |
| 0 + 200     | 200        | 50                            |
| 0 + 250     | 250        | 100                           |
| 0 + 300     | 300        | 100                           |
| 0 + 350     | 350        | 100                           |
| 0 + 400     | 400        | 100                           |
| 0 + 450     | 450        | 100                           |
| 0 + 500     | 500        | 100                           |
| 0 + 550     | 550        | 100                           |

