

DATA SHEET
BDTB18/BDTE18 – BIMETAL THERMOMETER

Badotherm thermometer model BDTB18 is available in 63 to 160 mm diameter. The BDTB18 is available with various connections, such as: fixed stem on back, bottom, or every angle connection. These bimetal thermometers are suitable for corrosive media and environments in chemical process, petroleum, and food industries.


DESIGN INFORMATION

DESIGN NORM	INGRESS PROTECTION
EN 13190	IP 65 per EN 60529 / IEC 529

STANDARD MODEL MATERIAL SPECIFICATIONS

STEM	SOCKET	CASE	BEZEL
AISI316(L)	AISI316(L)	AISI304, bayonet	AISI304, bayonet
WINDOW	POINTER	DIAL	
glass	aluminium, black	aluminium, white with black markings	

TECHNICAL SPECIFICATIONS

	BDTB18	BDTE18
Diameter	63 / 80 / 100 / 125 / 160 mm	80 / 100 / 125 / 160 mm
Connection	1/2" BSP/NPT adjustable	1/2" BSP/NPT adjustable
Stem diameter	6 mm	6 mm
Minimum temperature	-50°C	-50°C
Maximum temperature	600°C	600°C
Accuracy	class 1	class 1
Mounting variation	A / D	every angle
Window gasket	NBR	NBR
Pointer	fixed	fixed
Zero adjustment	on the back	on the back

SPECIAL EXECUTIONS

BDTB18-S	casing and bezel in AISI316(L)
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OPTIONS

WINDOW	laminated safety glass (except 125 mm)
PROCESS CONNECTION	other
STEM DIAMETER	1/4", 3/8", 1/2", 8 mm, 10 mm, 12 mm
POINTER	adjustable slotted (except 125 mm), red pointer on dial, or drag pointer
FILLING	BPF01 (glycerine), BPF02 (silicone), BPF04 (foaming service), BPF05 (ECTFE Inert for oxygen service)
CALIBRATION CERTIFICATES	5 points (rising and falling)
ATEX	EX II 2 GD c (ATEX 94/9/EC)
ACCESSORIES	thermowells in various executions and materials

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TEMPERATURE AND PRESSURE DETAILS

WORKING TEMPERATURE

	limitations
steady	measuring range per EN 13190
short time (<1h)	1.1 x measuring range

WORKING PRESSURE

maximum 25 bar at 20°C

FILLING FLUID

		ambient	process
-	without	-40°C to 90°C	600°C
BPF01	glycerine	-20°C to 65°C	90°C
BPF02	silicone	-40°C to 65°C	90°C
BPF04	foaming service	-40°C to 60°C	90°C
BPF05	oxygen service	-40°C to 60°C	90°C

WINDOW

	ambient
glass	<400°C
safety glass	<200°C

GASKETS

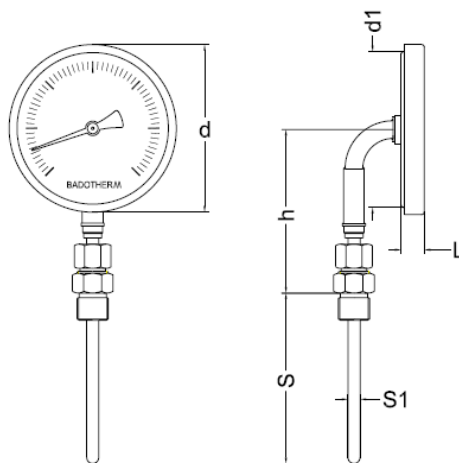
	ambient
window NBR	<100°C
fill plug NBR	<100°C

MODEL AND MOUNTING VARIATIONS

- **BDTB18** type A bottom connection, direct mounting, fixed stem
type D back connection, direct mounting, fixed stem
- **BDTE18** type every angle connection, direct mounting, fixed stem

DRAWINGS AND DIMENSION BDTB18 - A

DRAWINGS



type A

DIMENSIONS

ns	d	d1	L	h	S	S1
63	68	63	15.5	79	to specify	6
80	89	80	16	92	to specify	6
100	110.5	100.5	19	100	to specify	6
125	130	119	20	109	to specify	6
160	160	149	20	127	to specify	6

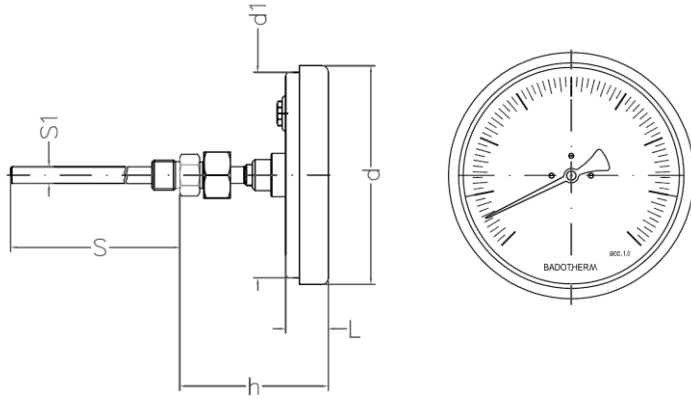
All dimensions in mm

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BDTB18 – BIMETAL THERMOMETER

DRAWINGS AND DIMENSION BDTB18 - D

DRAWINGS



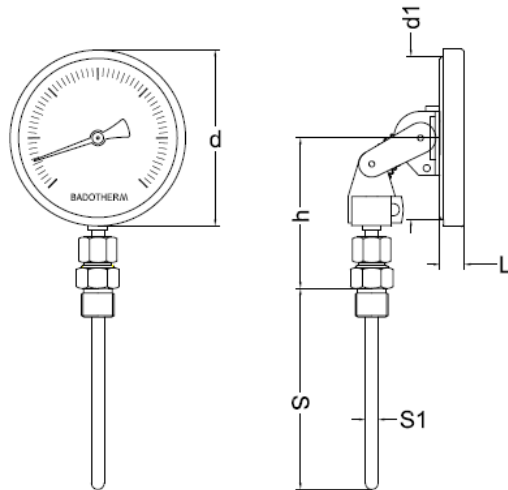
DIMENSIONS

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

All dimensions in mm

DRAWINGS AND DIMENSION BDTE18

DRAWINGS



DIMENSIONS

ns	d	d1	L	h	S	S1
80	89	80	16	80	to specify	6
100	110.5	100.5	19	80	to specify	6
125	130	119	20	80	to specify	6
160	160	149	20	80	to specify	6

All dimensions in mm

ACCURACY RANGE AND IMMERSION LENGTHS

Nominal range °C	Limits of error ± °C	Min. immersion length (mm)	Min. immersion BDTE 160MM
-20 40	1	100	100
-20 50	1	80	100
-20 60	1	63	100
-20 80	1	63	100
-20 100	2	63	100
-20 120	2	63	100
-20 140	2	63	100
-25 40	1	80	100
-30 50	1	63	100
-30 70	1	80	100
-30 100	2	63	100
-40 60	1	80	100
-40 120	2	63	100
-50 50	1	80	100
-50 550	10	100	100
0 60	1	80	100
0 80	1	100	100
0 100	1	63	100
0 120	2	63	100
0 150	2	63	100
0 160	2	63	100
0 200	2	63	100
0 250	2.5	150	150
0 300	5	150	150
0 350	5	150	150
0 400	5	150	150
0 450	5	150	150
0 500	5	150	150
0 550	10	150	150
0 600	10	150	150



Holland – United Kingdom – Romania – India – Thailand – Dubai

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