

# BIMETALL-POINTER-THERMOMETER

**Chemical version  
with crimped-on ring  
IP 65  
With or without filling  
external zero adjustment**

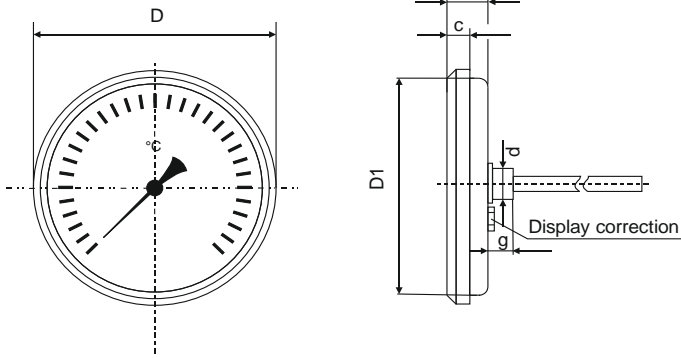


Suitable for chemical and petrochemical industry, food, pulp and paper industry and for machine and apparatus construction.

Model	B14			B15			B16			Options
Nominal size	63	80	100	63	80	100	63	80	100	
Symbol										3" ( 80 mm) 5" (125 mm)
Connection	back			bottom			turnable			
Accuracy class	1									
Measuring ranges °C	0-60, 0-80, 0-100, 0-120, 0-160, 0-200, 0-250, 0-300, 0-400, 0-500, 0-600, -50 / +50, -40 / +40, -40 / +60, -30 / +50, -30 / +70, -20 / +40, -20 / +60, -20 / +80, +50 / +300									Dual scale other on request
Applications	Permanent exposure: measurement range short-term up to 1h: 1.1 x measuring range									
Case / ring	Crimped-on ring, stainless steel 1.4301 (304)									1.4571 on request
Dial	White aluminum with black lettering									
Window	Instrument class									Acrylic glass, safety glass
Measuring element	Bimetal coil									
Sensor	Stainless steel 1.4571									
Working pressure	25 bar									
Sensor types	B1, B3, B4, B4.1, B5, B6									
Sensor length	63 up to 400 mm, The minimum probe length is a function of active length (La ) and sensor type									
Neck tube	useful up to 300°C									
Process connection	see page 3									
Filling	Measuring range up-20 to +100°C: Glycerine Measuring range -40 bis >100 to 250°C: silicone oil									
Protection	IP 65 (EN 60 529/ IEC 529)									
Display correction	externally - screw see dimensional drawings									

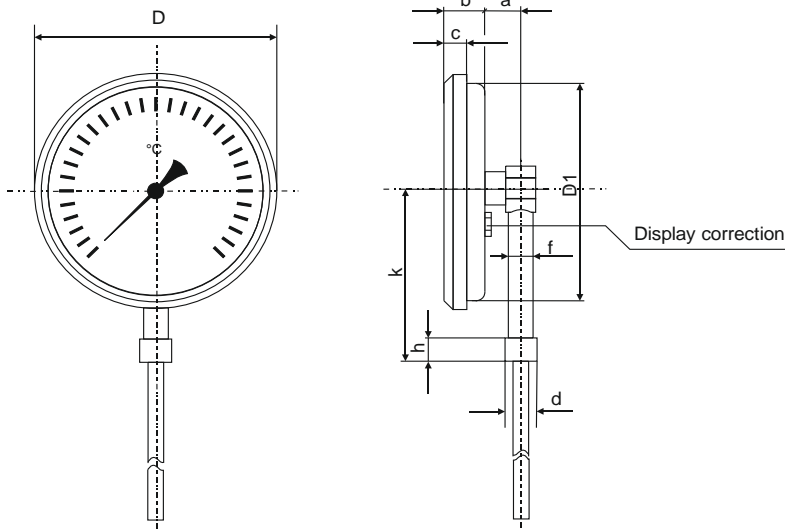
# Dimension drawings

B14



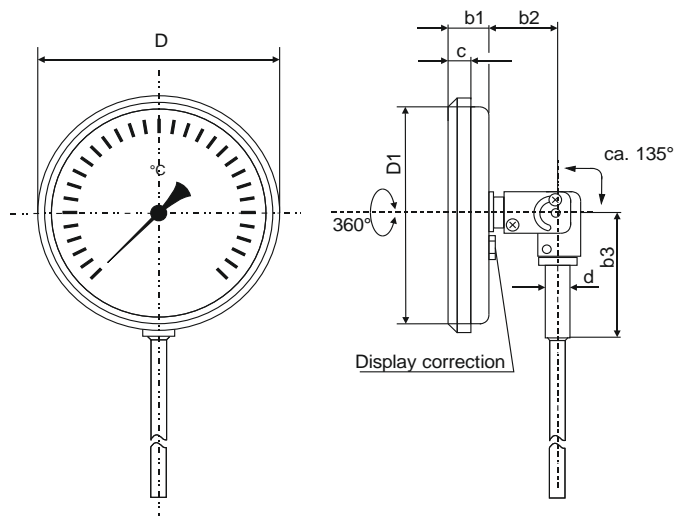
NS	63	80	100
Dimensions in mm			
D	67	86	106
D1	62	79	98
c	8	8	10
d	14	14	14
e	17	18	18
g	12,5	12,5	12,5
Weight in kg			
unfilled	0,18	0,22	0,29
filled	0,2	0,27	0,37

B15



NS	63	80	100
Dimensions in mm			
D	67	86	106
D1	62	79	98
a	18,5	18,5	18,5
b	17	18	18
c	8	8	10
d	12,5	12,5	12,5
e	14	14	14
f	12	12	12
h	10,5	10,5	10,5
k	55	65	75
Weight in kg			
unfilled	0,18	0,22	0,29
filled	0,2	0,27	0,37

B16



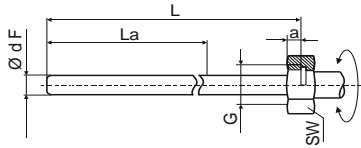
NS	63	80	100
Dimensions in mm			
D	67	86	106
D1	62	79	98
c	8	8	10
d	14	14	14
b1	17	18	18
b2	40	40	40
b3	63	63	63
Weight in kg			
unfilled	0,28	0,32	0,39
filled	0,31	0,37	0,46

## Sensor types

Type	Designation	Type acc. DIN 13 190	Dimensions
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suitable protection tubes

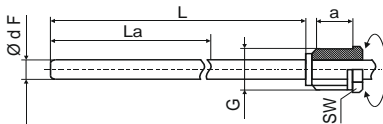
**B3** Turnable union nut Form 5



G	SW	a
G½	27	10
G¾	32	12
M20x1,5	27	10
M24x1,5	32	12
M27x2	32	12

Form 4.1  
Form 4.1F  
Form 8  
Form 9

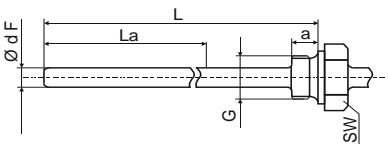
**B4** Male thread, turnable Form 4



G	SW	a
G½B	22	20
G¾B	27	23
M18x1,5	22	14
M20x1,5	22	20

Form 4  
Form 4F  
Form 5  
Form 6 and 7

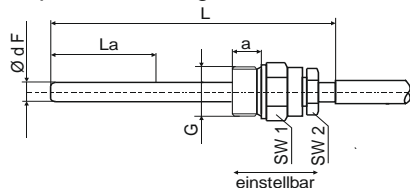
**B4.1** Male thread, rigid Form 6  
Form 7



G	SW	a
G½B	27	14
G¾B	32	16
½"NPT	27	19
¾"NPT	27	19
M18x1,5	24	14
M20x1,5	27	14

Form 4  
Form 4F  
Form 5  
Form 6 und 7

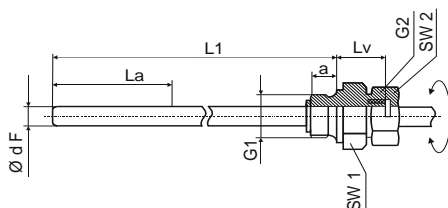
**B5** Male thread compression fitting Form 2  
Form 3



G	SW1	SW2	a	Lk
G½B	27	22	14	42
G¾B	32	22	16	42
½"NPT	27	22	19	42
¾"NPT	27	22	19	42
M20x1,5	27	22	14	42

Form 4  
Form 4F  
Form 5  
Form 6 and 7

**B6** Male thread turnable double male adapter



G1	G2	SW1	SW2	a	Lv
G½B	G½B	27	27	14	28
G¾B	G½B	32	27	16	28
½"NPT	G½B	27	27	19	28
¾"NPT	G½B	27	27	19	28
M20x1,5	M20x1,5	27	27	14	28
M24x1,5	M20x1,5	32	27	14	28
M27x2	M20x1,5	32	27	16	28

Form 4  
Form 4F  
Form 5  
Form 6 and 7

La - active stem length  
L / L1 Ordering length  
Ø dF - 6 or 8 mm

Details  
see datasheet  
protection tube

### Minimum stem length, Active lengths and maximum realisable stem length

		Stem Ø F					
		6 mm			8 mm		
		Span (temperature difference) Δ					
Model	Lenghts	Thread	≥100 K	=80K	=60K	≥80 K	=60K
all models	La	all standard threads	40	60	70	40	60
B1 B4	L1min	all standard threads	45	65	75	45	65
B3	L1min	all standard threads	52	72	82	52	72
B4.1	L1min	all standard threads	60	80	90	60	80
B5	L1min	all standard threads	95	115	125	95	115
B6	Lmin	all standard threads	60	80	90	60	80
Other on request							

The temperature difference  $\Delta T = 60K$  correspond to e.g. the temperature range 0/60°C but also -20/40°C.

The minimum length **Lmin/ L1min** of the stem is the smallest possible stem length depending on the active length **La** (sensitive portion) and the stem model.

The active length **La** of the stem has to immerse completely into the medium, to grant a measuring result, which correspond to the accuracy class.

### Indication ranges/Measuring ranges, Limits of error

Nominal ranges °C	Measuring ranges °C	Scale subdivision °C	Max. error +/- °C
0 - 60	10 - 50	1	1
0 - 80	10 - 70	1	1
0 - 100	10 - 90	1	1
0 - 120	10 - 110	2	2
0 - 160	20 - 140	2	2
0 - 200	20 - 180	2	2
0 - 250	30 - 220	5	2,5
0 - 300	30 - 270	5	5
0 - 400	50 - 350	10	5
0 - 500	50 - 450	10	5
0 - 600	100 - 500	10	10
- 50 - 50	- 40 - 40	1	1
- 40 - 40	- 30 - 30	1	1
- 40 - 60	- 30 - 50	1	1
- 30 - 50	- 20 - 40	1	1
-30 - 70	- 20 - 60	1	1
- 20 - 40	- 10 - 30	1	1
- 20 - 60	- 10 - 50	1	1
- 20 - 80	- 10 - 70	1	1
50 - 300	80 - 270	5	2,5
50 - 400	100 - 350	5	5
100 - 400	150 - 450	10	5