

Bimetal Thermometers, Rigid Mount

TBiSch

Bayonet ring case stainless steel

Standard Versions

Information on general and metrological features (e.g. temperature resistance) and temperature ranges / error limits / smallest subdivision can be found in model overview 8000.

Measuring Unit

Bimetal coil

Accuracy (EN 13 190)

Class 1

Case

With bayonet ring, 1.4301 (304 stainless steel)

Case Protection Type (EN 60 529 / IEC 529)

IP 65

Nominal Case Sizes

63, 100, 160 (mm) (2½", 4", 6")

Case Configuration

Connection temperature

sensor (stem): rigid mount with neck tube

Stem position:

vertical bottom position,
optional: centre back position (rm):
for stem B1 and B4.1
without neck tube, see page 2

Mounting device:

without,
optional: for centre back connection (rm),
back flange for surface mounting (Rh),
see page 2

Temperature Ranges (EN 13 190)

Temperature differences from 60 K to 600 K

Temperature Sensor (Stem)

1.4571 (316 stainless steel),

max. static operating pressure: 25 bar

Stem models: B1, B3, B4, B4.1, B5 or B6

Stem- Ø dF: 6 or 8 mm

Stem length L: Lmin resp. L1min up to 400 mm

Please regard the minimum stem length against the active length (La) and stem model, see page 3.

Window

Instrument glass

Dial

Aluminum, black figures, white background

Pointer

Adjustable pointer aluminum, black

Zero Adjustment (± 4%)

Bottom stem position: by adjustable pointer

Centre back stem position: externally by a screw



Ordering Information, Standard Temperature Ranges, Options

See page 4

Special Versions and further Options among others

- Other connection threads and materials upon request
- Other temperature ranges and/or special scales e.g. double scale °C/°F, coloured fields or areas, dial inscriptions, etc.
- Case parts 1.4404 (316 stainless steel) upon request
- For ambient temperatures up to -60°C upon request. For ambient temperatures below -20 °C we recommend: Thermometers with crimped-on ring case model TBiSchg resp. TBiSchgG
- Position of the connection radial at 3 o'clock, 9 o'clock, 12 o'clock, others upon request or other than vertical installation (90°)
- GOST-version for Russia, Ukraine, Kazakhstan

Thermowells

See DS 8.8110 ff



Sales and Export South, West, North

ARMATURENBAU GmbH

Manometerstraße 5 • D-46487 Wesel - Ginderich
Tel.: +49 (0)28 03/91 30-0 • Fax: +49 (0)28 03/10 35
armaturenbaum.com • mail@armaturenbaum.com

Subsidiary Company, Sales and Export East

MANOTHERM Beierfeld GmbH

Am Gewerbepark 9 • D-08344 Grünhain-Beierfeld
Tel.: +49 (0)37 74/58-0 • Fax: +49 (0)37 74/58-545
manotherm.com • mail@manotherm.com

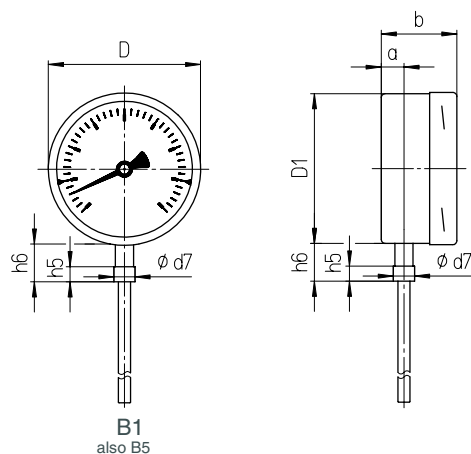
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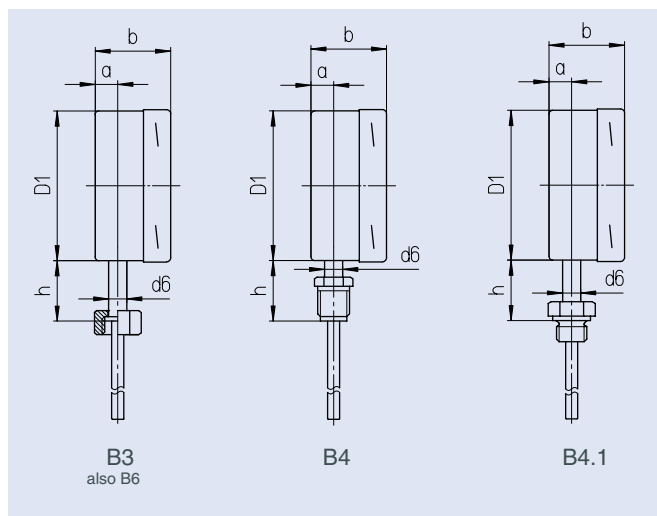
Stem Position / Case Configurations, Code Letters, Dimensional Data and Weights

Vertical Bottom Stem Position

without additional code letter

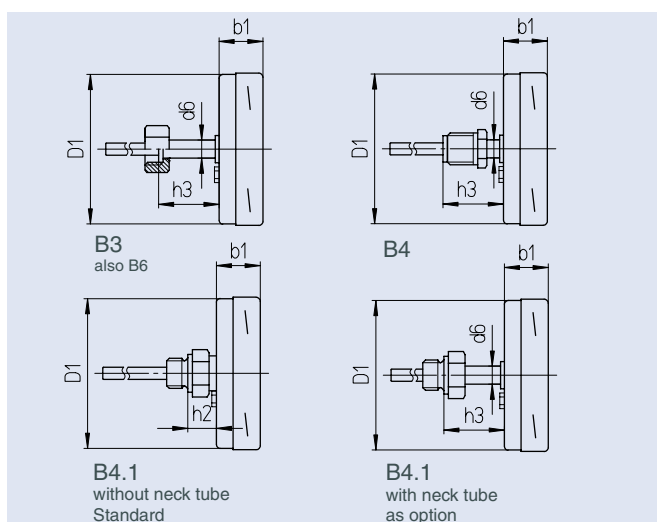
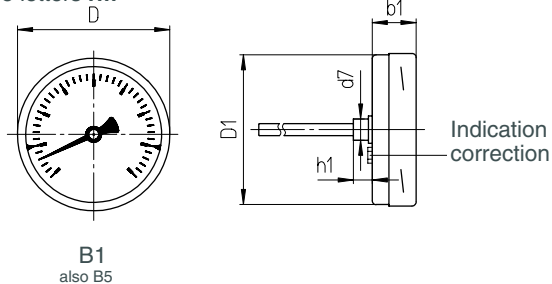


Further Stem Models



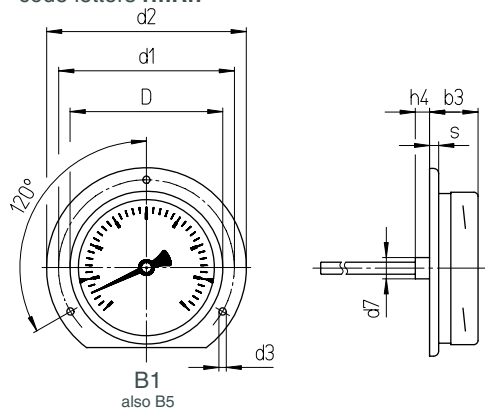
Centre Back Stem Position

code letters **rm**



Back flange for surface mounting (back flange)

code letters **rmRh**



Dimensional Data (mm / inches) and Weights (kg / lb)

NCS	a	b	b1	b3	D	D1	d1	d2	d3	d6	d7	h ¹⁾	h1	h2	h3 ¹⁾	h4	h5	h6	approx. weight ²⁾ TBiSch
63 2½"	.47	1.87	1.02	1.14	2.52	2.44	2.95	3.35	.14	.47	.55	1.57	.49	.75	1.57	.37	.41	.98	0.18 0.39
100 4"	.59	2.17	1.10	1.24	3.98	3.9	4.57	5.2	.18	.47	.55	1.57	.49	.75	1.57	.35	.41	.98	0.35 0.77
160 6"	.59	2.17	1.06	1.18	6.34	6.26	7.01	7.72	.22	.47	.55	1.57	.49	.75	1.57	.37	.41	.98	0.65 1.43

¹⁾ Stem model B4 with G ¾ B : 50 mm (1.97")

²⁾ The information is an example and relates on version with stem B1, Ø 8 mm (0.3"), length 100 mm (4").

Stem Models

Stem Models															
Process connection:		without screw fitting, plain stem													
Stem model:		B1													
Form according to DIN 13 190:		Form 1													
Stem material:		1.4571													
Stem-Ø dF:		6 or 8 mm													
Order length:		L													
Data sheet (suitable thermowell model):		8.8140 (SK1), 8.8141 (SK2) 8.8150 (SK3.B), 8.8151 (SK4.B)													
Process connection:		Union nut		Male thread, turnable			Male thread, rigid								
Stem model:		B3		B4			B4.1								
Form according to DIN 13 190:		Form 5		Form 4			Form 6 (thread cylindrical) Form 7 (thread conical)								
Stem material:		1.4571		1.4571			1.4571								
Stem-Ø dF:		6 or 8 mm		6 or 8 mm			6 or 8 mm								
Screw fitting material:		1.4571		1.4571			1.4571								
Order length:		L		L			L								
Data sheet (suitable thermowell model):		8.8111 (SF4.1), 8.8113 (SF4.1F) 8.8130 (SF8), 8.8131 (SF9)		8.8110 (SF4), 8.8112 (SF4F) 8.8120 (SF5), 8.8121 (SF6+SF7)			8.8110 (SF4), 8.8112 (SF4F) 8.8120 (SF5), 8.8121 (SF6+SF7)								
Thread (dimension in mm):															
G			SW			i			Thermowell required!						
G ½			27			10			G	SW			i		
G ¾			32			12			G ½ B	27			20		
M 20 x 1.5			27			10			G ¾ B	32			23		
M 24 x 1.5			32			12			M 18 x 1.5	22			14		
M 27 x 2			32			12			M 20 x 1.5	27			20		

Minimum Stem Length and Active Length									
			Stem-Ø dF (mm):						
			6			8			
			Temperature difference ΔT ¹⁾						
Stem model:	Length:	Thread:	≥ 100 K	= 80 K	= 60 K	≥ 80 K	= 60 K		
all models	La	all standard threads	40	60	70	40	60		The minimum length Lmin / L1min of the stem is the smallest possible stem length against the active length La (vessel) and the stem model.
B1 B4	Lmin	all standard threads	40	60	70	40	60		
B3	Lmin	all standard threads	52	72	82	52	72	The active length La of the stem (vessel) has to immerse completely into the medium, to grant a measuring result, which corresponds to the accuracy class.	
B4.1	Lmin	all standard threads	60	80	90	60	80		
B5	Lmin	all standard threads	95	115	125	95	115		
B6	L1min	all standard threads	60	80	90	60	80		
others			upon request			upon request			

¹⁾ The temperature difference ΔT = 60 K corresponds to e.g. the temperature range 0/60 °C, but also -20/40 °C, see table on page 4

Special Versions: Please describe your requirements clearly

8101 - 02/11-GB- p4 of 4 ARMATURENBAU GmbH, Tel.: +49 (0) 2803/9130-0, E-Mail: mail@armaturenbau.com MANOTHERM Beierfeld GmbH, Tel.: +49 (0) 3774/58-0, E-Mail: mail@manotherm.com, 02/11 DE