

Bimetal Thermometers, every angle

TBiGelCh

Bayonet ring case stainless steel, turnable and adjustable

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

Helical bimetallic element

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): adjustable angle

Stem position: centre back position,
compared to the case adjustable by 135°,
turnable by 360°

Mounting device: without

Temperature Ranges (EN 13 190)

Spans 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 max. 400 mm

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

Window

Instrument glass

Dial

Aluminum, black figures, white background

Pointer

Aluminum, black

Indication Adjustment (± 4%)

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. dual 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 mit crimped-on ring case models TBiGelChg resp. TBiGelChgG
- GOST-version for Russia, Ukraine, Kazakhstan

Thermowells

See DS 8.8110 ff



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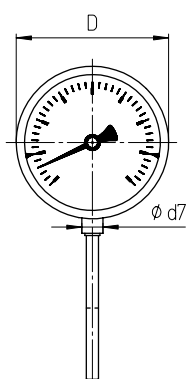
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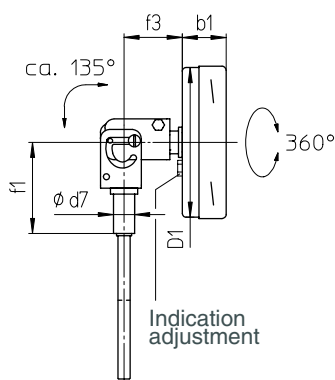
Stem Position / Case Configurations, Code Letters, Dimensional Data and Weights

Centre Back Stem Position, adjustable angle

without additional code letter

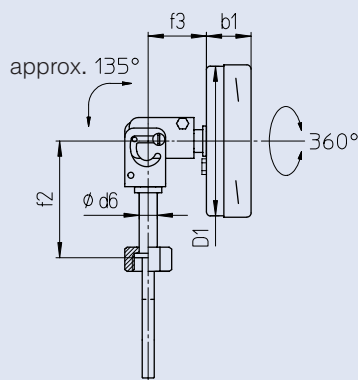


B1
also B5

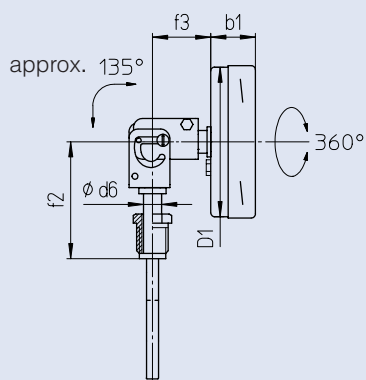


Indication adjustment

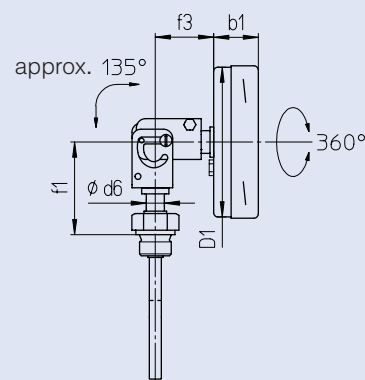
Further Stem Models



B3
also B6



B4



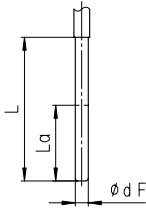
B4.1

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

NCS	b1	D	D1	d6	d7	f1	f2	f3	approx. weight ¹⁾ TBiGelCh
63	26	64	62	12	14	63	80	40	0.29
2½"	1.02	2.52	2.44	.47	.55	2.48	3.15	1.57	0.63
100	28	101	99	12	14	63	80	40	0.42
4"	1.10	3.98	3.9	.47	.55	2.48	3.15	1.57	0.93
160	27	161	159	12	14	63	80	40	0.76
6"	1.06	6.34	6.26	4.76	.55	2.48	3.15	1.57	1.67

¹⁾ 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		without screw fitting, plain stem																																																																															
Process connection:		without screw fitting, plain stem																																																																															
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Stem-Ø dF:	6 or 8																																																																																
Order length:	L																																																																																
Accessories:																																																																																	
Data sheet (suitable thermowell models):	8.8140 (SK1) 8.8141 (SK2)																																																																																
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)																																																																														
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Data sheet (suitable thermowell models):	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)																																																																														
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Stem model:	B5	B6																																																																															
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Minimum Stem Length, Active Length and maximum realisable Stem Length																																																																																	
		Stem-Ø dF:				<p>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.</p> <p>The active length La of the stem has to immerse completely into the medium, to grant a measuring result, which corresponds to the accuracy class.</p>																																																																											
		6		8																																																																													
		Span (temperature difference) ΔT¹⁾																																																																															
Stem model:	Length:	Thread:	≥ 100 K	= 80 K	= 60 K																																																																												
all models	La	all standard threads	40	60	70																																																																												
B1 B4	Lmin	all standard threads	45	65	75																																																																												
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B4.1	Lmin	all standard threads	60	80	90																																																																												
B5	Lmin	all standard threads	95	115	125																																																																												
B6	L1min	all standard threads	60	80	90																																																																												
others			upon request		upon request																																																																												

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

Ordering Information with Indication- and Temperature Ranges, Options

Basic Model: Bimetal thermometers with adjustable angle		TBiGelCh
Case filling:	without	without code letters
Nominal case size:	case-Ø 63, 100, 160 (mm) (2½", 4", 6")	63, 100, 160
Stem position / case configuration:	centre back position, adjustable angle	without code letters
Temperature ranges:	ΔT (K):	
	0 — 60 °C	60
	0 — 80 °C	80
	0 — 100 °C	100
	0 — 120 °C	120
	0 — 160 °C	160
	0 — 200 °C	200
	0 — 250 °C	250
	0 — 300 °C	300
	0 — 400 °C	400
	0 — 500 °C	500
	0 — 600 °C	600
	-50 / + 50 °C	100
	-40 / + 40 °C	80
	-40 / + 60 °C	100
	-30 / + 50 °C	80
	-30 / + 70 °C	100
	-20 / + 40 °C	60
	-20 / + 60 °C	80
	-20 / + 80 °C	100
	+50 / +300 °C	250
		e. g. 0-100 °C
		e. g. -30/+50 °C
Stem:	without screw fitting, plain stem	B1
	union nut	B3
	male thread, turnable	B4
	male thread, rigid	B4.1
	male thread, compression fitting	B5
	male thread, turnable / double male adapter	B6
Stem-Ø dF:	6 or 8 mm	dF 6, 8
Stem length:	L resp. L1 in mm	e. g. L = 100 mm
Process connection:	see page 3	e. g. G ½ B
Options:	red mark on the dial plastic clip red or green external at bayonet ring for NCS 100 and 160 window laminated safety glass acrylic glass (PMMA) polycarbonate (PC) case polished bayonet ring polished stem-Ø dF 10 mm stem length > 400 mm, max. 800 mm measuring point stainless steel-plate 12 mm x 55 mm (0.47" x 2.17"), wire mounting or marking sticker on case coverage	<i>(order at the moment still as cleartext)</i>

Example:

TBiGelCh 80, 0-100 °C, B3, dF 8, L = 140 mm, G ½

Special Versions: Please describe your requirements clearly

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