Bimetal Thermometers

All Stainless Steel, Case with crimped-on ring
Ø 63 mm (2½"), Ø 80 mm (3"), Ø 100 mm (4"), Ø 125 mm (5") and Ø 160 mm (6")
Lower connection (TBI), Back connection (TBIB) or Everyangle (TBIE)
Standard or liquid filled (L)

Models :
TBI / TBIB / TBIE
63 / 80 / 100 / 125 / 160

APPLICATIONS

Industrial temperature measurement, for fluid or gaseous media. The appropriate versions are suitable also for aggressive media as you find in chemical industries, petrochemistry, process technology or apparatus engineering, and for food and beverage industries.

NOMINAL HEAD DIAMETERS

Ø 63mm (2½"), Ø 80mm (3"), Ø 100mm (4"), Ø 125mm (5") and 160mm (6")

ACCURACY CLASS (DIN EN 13 190)

Accuracy 1.0 according to EN standard
(i.e. ± max. 1.0% of full span)

PRESSURE LIMITATIONS

25 bar (350 psi) static pressure at the stem
(thermowell required for higher pressure)

PROTECTION TYPE (EN 60529 / IEC 529)

IP 65

STANDARD CONFIGURATION

CASE AND BAYONET RING

304 stainless steel, crimped-on ring

STEM POSITION

Model TBI : Lower connection
Model TBIB : Centre back connection
Model TBIE : Centre back connection with everyangle

WINDOW

Single strength glass

STEM

Stainless steel 316 L
Ø 6 mm, Ø 8 mm, Ø 10 mm, Ø 12 mm, Ø 1/4"
stem length up to 450 mm
stem type and minimum stem length see page 39

MEASURING SYSTEM

Bimetallic coil

PROSES CONNECTION

1/2" NPT or 3/4" NPT

DIAL PLATE

Aluminum alloy, black figures, white background

POINTER

Aluminum black

ADJUSMENT

± 4 % with adjustment screw from outside

SPECIAL CONFIGURATIONS

⇨ Other indication ranges or other units, e.g. °F or K, special scales such as dual ranges upon request
⇨ Other connection threads resp. connection types upon request
⇨ Thermowell or flange thermowell (see pages 49 or 50)
⇨ Red mark as moveable plastic clip on the outside of the ring

HOW TO ORDER :

Please select :

TBI	100	B3	—

1. Model Code : TBI, TBIB or TBIE
2. Nominal head diameter : 63 (2½"), 80 (3"), 100 (4"), 125 (5") and 160 (6")
3. STEM TYPE
   B1 : Plain Stem,
   B2 : Rigid Male Stem Connection thread
   B3 : Male Connection thread, adjustable on the Stem
4. If liquid filled, code letter : L

EXAMPLE OF ORDER NUMBER

Thermometer everyangle
Dial size 100 mm
Range : 0-100 °C
Stem diameter : 6 mm
Stem length : 200 mm
Connection ½" NPT adjustable on the stem
order number : TBIE 100 B3, Ø 6 mm, L = 200 mm, ½" NPT

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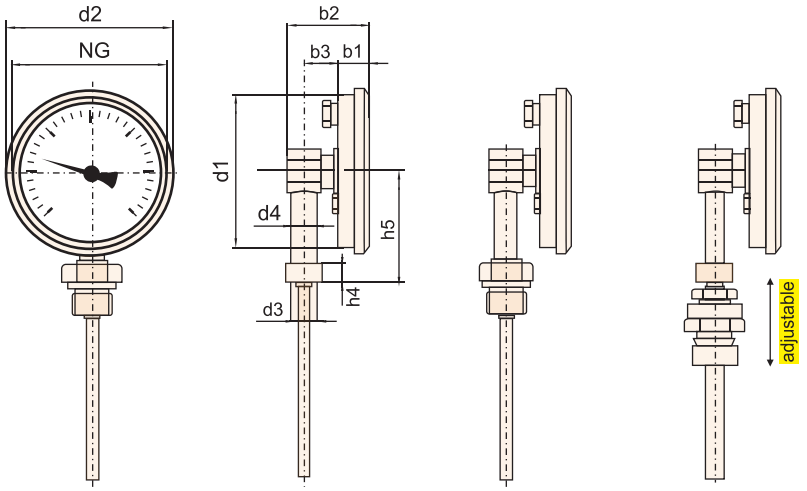
CASE CONFIGURATIONS AND DIMENSIONAL DATA

Model TBI

Lower stem position



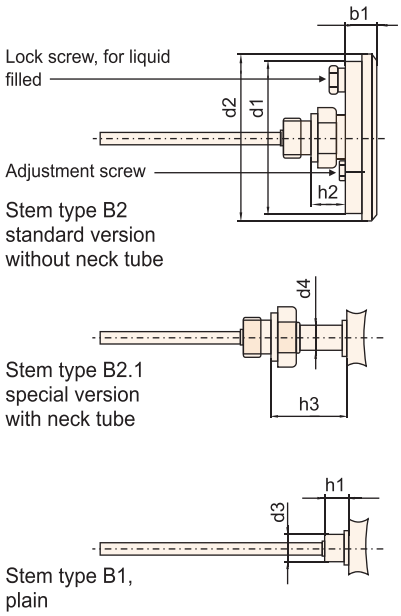
Stem type B1, plain stem

Stem type B2 rigid male connection

Stem type B3, male connection, adjustable on the stem

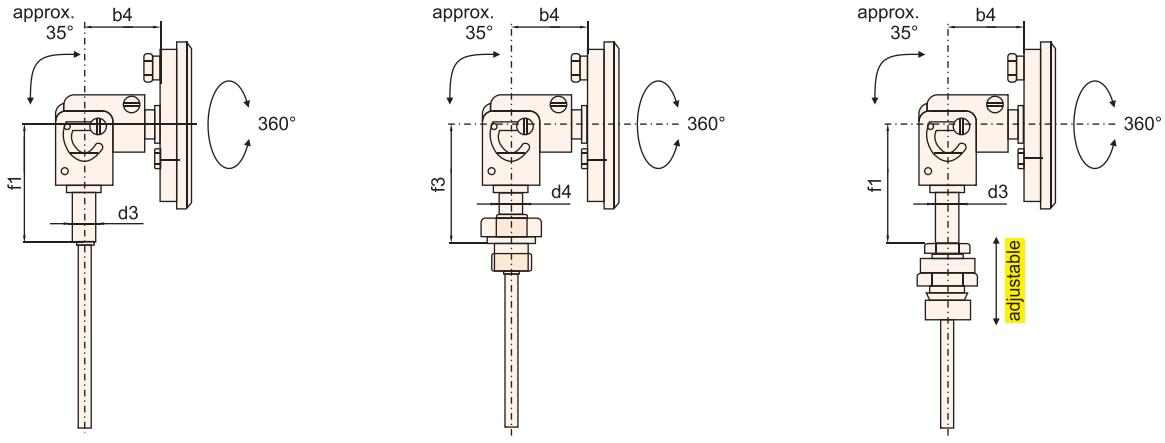
Model TBIB

Center Back Stem Position,



Model TBIE

Center back stem position, adjustable angle stainless steel, stem adjustment up to 135° and case rotation up to 360°



Stem type B1, plain

Stem type B2, rigid male connection

Stem type B3, male connection thread with adjustable on the stem

Dimensional Data (mm) and Weight (kg)

Nominal Case Size	b1	b2	b3	b4	d1	d2	d3	d4	f1	f3	h1	h2	h3	h4	h5	h6	Weight (approx.) TBI	TBIB	TBIE
63 mm (2½")	17	45	18.5	40	62	67	14	12	62	63	12.5	18.8	40	10.5	55	70	0.20	0.15	0.25
80 mm (3")	18	46			79	86									65	80	0.25	0.20	0.30
100 mm (4")					98	108									75	90	0.30	0.25	0.35
125 mm (5")	20.3	-	-	37	125	136				-	-	-	-	-	-	-	-	-	1.08

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Standard Ranges Limits of Error, Minimum Immersion Length Stem

Nominal Range °C	Scale Subdivision °C	Minimum Immersion Length Stem ETmin Ø 6 mm	Ø 8 mm
-20 / + 40	1	70	60
-20 / + 60	1	60	40
-30 / + 50	1	60	40
-40 / + 40	1	60	40
-40 / + 60	1	40	40
0 - 60	1	70	60
0 - 80	1	60	40
0 - 100	1	40	40
0 - 120	2	40	40
0 - 160	2	40	40
0 - 200	2	40	40
0 - 250	2	40	40
0 - 300	5	40	40
0 - 400	5	40	40
0 - 500	5	40	40

Nominal Range °F
0 - 150
0 - 200
0 - 250
0 - 300
-50 / +130
-40 / +160
-30 / +120
-10 / +100
+20 / +240
+30 / +140
+40 / +400
+50 / +300
+50 / +500
+100 / +800
+100 / +1000
+150 / +700

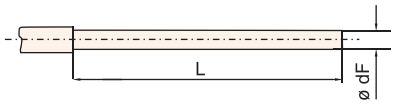
STEM TYPES AND CONNECTION TYPES

Thermowells or flange thermowell see pages 49 and 50

Material: Stem and connection pieces made of stainless steel 316 L

Stem type B 1

Plain stem (without thread connection)
Stem diameter dF: 6mm or 8 mm

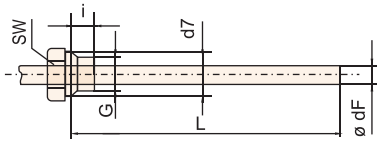


Minimum stem length Lmin = ETmin

Stem type B 2

Rigid male connection thread

dF	G	SW	d7	i
mm 6, 8, 10, 12, 1/4"	½" NPT	24	-	19
	¾" NPT	27	-	
	G ½ B ½" BSP-m	27	26	14
	G ¾ B ¾" BSP-m	32	32	16

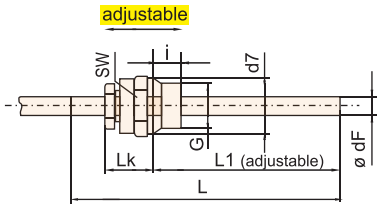


Minimum stem length Lmin = ETmin + I

Stem type B3

Male thread connection, fitting adjustable on the stem

dF	G	SW	d7	i	Lk
mm 6, 8, 10, 12, 1/4"	½" NPT	24	-	19	approx 37
	¾" NPT	27	-		
	G ½ B ½" BSP-m	27	26	14	
	G ¾ B ¾" BSP-m	32	32	16	



Minimum stem length Lmin = ETmin + 55 mm