



Main Features

- For corrosive gasses and liquids
- Reinforced version for harsh conditions
- Class 1 and 2 according to EN 13190
- Wetted parts Stainless steel
- Option : case material 1.4404 (316L) for aggressive atmosphere
- Option : filling fluid in the case to avoid moisture and for applications with vibrations

Applications

- Oil & Gas / Chemical
- Water & Waste water
- Energy

Technical Data

Nominal size	100, 130 mm	Minimum immersion length	Immersion tube Ø 6 mm: L2 ≥ 65 mm Immersion tube Ø 8 mm: L2 ≥ 50 mm
Temperature ranges	-70 ... 600 °C / -100 ... 1100 °F	Temperature limit	ranges ≤ 400 °C: 135 % F.S. ranges > 400 °C: 100 % F.S.
Accuracy	According to EN 13190 up to 250 °C: class 1 above 250 °C: class 2 (class 1 on request)	ATEX	Ex II2GDc (with option 0078)
Protection rating	IP 68 (EN 60529)	Vibrations	According to IEC 60068-2-6: 10-58 Hz: 0.15 mm amplitude 58-150 Hz: 2g According to MIL STD 810E, Meth. 514.4 10 Hz: 0.015 g2/Hz 40 Hz: 0.015 g2/Hz 500 Hz: 0.00015 g2/Hz
Immersion tube	Stainless steel 1.4571 (AISI 316Ti)		
Case	Stainless steel 1.4301 (AISI 304)		
Bezel ring	Stainless steel 1.4301 (AISI 304)		
Window	Instrument glass		
Window gasket	Elastomer (silicone)		
Dial	Aluminium, white		
Pointer	Aluminium, black, adjustable		

Options

ATEX II2GDc (Only with window laminated safety glass)	Code 0078
Stainless steel housing 1.4404 (316L)	Code 0110
Dampening grease	Code 0581
Laminated safety glass	Code 0751
Acrylic glass (PMMA or Plexiglass) ⁽¹⁾	Code 0752
Window polycarbonate	Code 0753
Customer specific immersion length ⁽²⁾	Code 9003_xxxx
Oil filling (silicone oil window gasket EPDM) ⁽³⁾	Code 0776
Red mark	Code 9700
Specific temperature range	Code 9704
Customer logo on dial	Code 9710
Specific technical data on dial	Code 9711

⁽¹⁾ The case must not be constantly heated over 75 °C.
⁽²⁾ xxxx = L1 in mm
⁽³⁾ Only available with fluid temperature ranges between -30 °C (-20 °F) and +250 °C (480 °F).

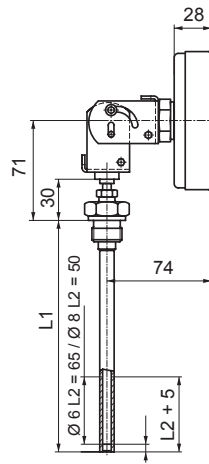
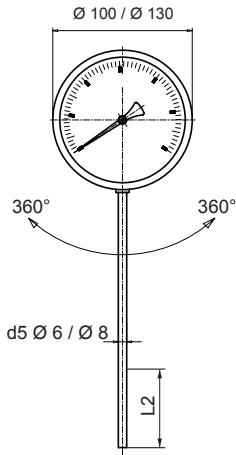
Additional ordering codes for specific process connections	Sliding	Fix
G1/4" male	9550	9551
1/4" - 18 NPT male	9560	9561
3/4" - 14 NPT male	9562	9563
1" - 11.5 NPT male	9564	9565
M18 x 1.5 male	9574	9575
M27 x 2.0 male	9576	9577
M20 x 1.5 female	9584	-
M24 x 1.5 female	9586	-

To be used with ordering code = 0 for specific connection
 Example: TBHI 100 204.162.12T / **9550**

To be ordered separately

Material certificate 3.1 EN 10204	90001132
Calibration certificate (3 points)	90001188

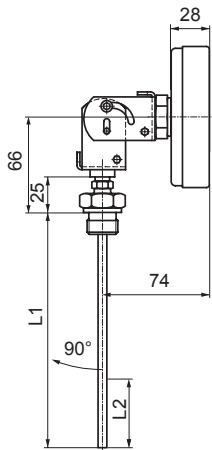
Drawing - Immersion tube center back, every angle without connection (dimensions in mm)



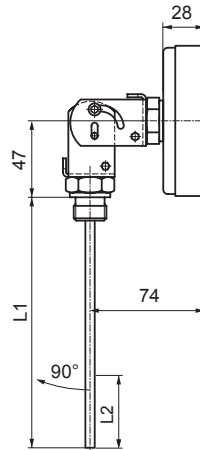
Mounted in a thermowell

NS	Weight (kg)
100	0.450
130	0.570
Add per 100 mm	
Ø 6 mm	0.007
Ø 8 mm	0.017

Drawing - Immersion tube center back, every angle with connection (dimensions in mm)

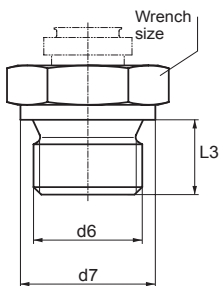


With sliding connection

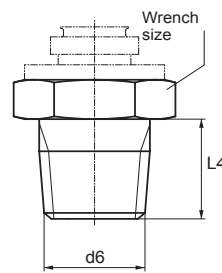


With fix connection

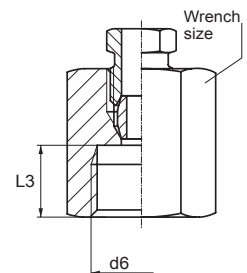
Drawings - connections



Cylindrical screw threads



Conical screw threads



Sliding screw connection female

d6	d7	L3	L4	Wrench size	Weight (kg)	
					sliding	fix
G½", male	26	15	-	27	0.095	0.090
G¾", male	32	16	-	32	0.150	0.140
G1", male	39	19	-	41	0.210	0.240
M20 x 1.5, male	27	14	-	27	0.090	0.090
M24 x 1.5, male	27	15	-	27	0.110	0.110
½" - 14 NPT", male	-	-	20	27	0.095	0.100

Temperature ranges

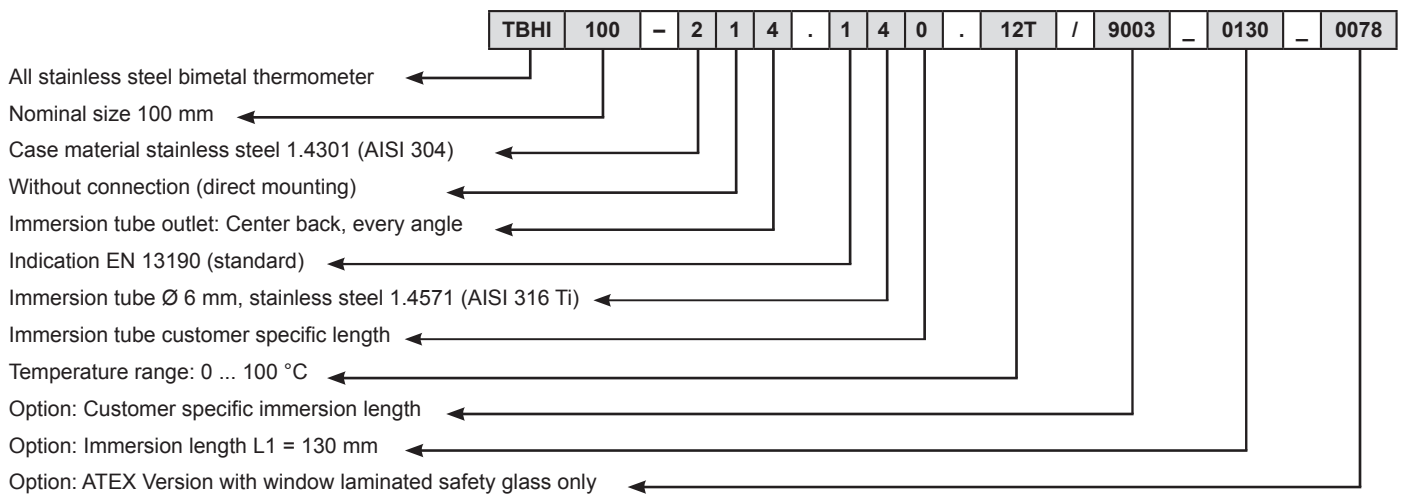
Code	Range °C
52T	-20 ... 40
54T	-20 ... 60
84T	-20 ... 100
55T	-30 ... 170
51T	-30 ... 70
68T ¹⁾	-70 ... 50
11T	0 ... 60
27T	0 ... 80
12T	0 ... 100
20T	0 ... 120
13T	0 ... 160
22T	0 ... 200
14T	0 ... 250
23T ¹⁾	0 ... 300
15T ¹⁾	0 ... 400
25T ¹⁾	0 ... 500
16T ¹⁾	0 ... 600
30T ¹⁾	100 ... 500

Code	Range °F
68U ¹⁾	-100 ... 120
09U ¹⁾	-50 ... 120
08U ¹⁾	-40 ... 160
54U	0 ... 140
02U	0 ... 200
03U	0 ... 250
04U	0 ... 300
05U	0 ... 400
06U	0 ... 500
11U	30 ... 140
20U	30 ... 250
13U	30 ... 320
22U	30 ... 400
23U ¹⁾	30 ... 580
15U ¹⁾	30 ... 750
28U ¹⁾	100 ... 800
29U ¹⁾	200 ... 1000

Code	Range (double scale) °C / °F
51V	-30 ... 70 / -40 ... 160
68V ¹⁾	-70 ... 50 / -100 ... 100
55V	-30 ... 170 / 0 ... 350
11V	0 ... 60 / 30 ... 140
20V	0 ... 120 / 30 ... 250
13V	0 ... 160 / 30 ... 320
14V	0 ... 250 / 30 ... 500
15V ¹⁾	0 ... 400 / 30 ... 750
16V ¹⁾	0 ... 600 / 100 ... 1100

¹⁾Not available with silicone filling (option 0776)

Ordering example with options



Ordering details TBHI

	TBHI			-	2		.	1		.	xxx	/
Model	All stainless steel Industrial Bimetal Thermometer											
Nominal size	TBHI											
100 mm	1	0	0									
130 mm	1	3	0									
Case	Stainless steel 1.4301 (AISI 304)											
Connection	Without connection (direct mounting)											
With sliding connection:	Sliding screw connection M20 x 1.5, male ⁽²⁾											
	Sliding screw connection M24 x 1.5, male ⁽²⁾											
	Sliding screw connection G½", male ⁽²⁾											
	Sliding screw connection ½"-14 NPT, male ⁽³⁾											
	Sliding screw connection G¾", male ⁽²⁾											
	Sliding screw connection G1", male ⁽²⁾											
	Sliding screw connection G½", female											
	Sliding screw connection G¾", female											
	Sliding screw connection G1", female											
With fix connection:	Fix screw connection G½", male ⁽⁴⁾											
	Fix screw connection G¾", male ⁽⁴⁾											
	Fix screw connection G1", male ⁽⁴⁾											
	Fix screw connection M20 x 1.5, male ⁽⁴⁾											
	Fix screw connection M24 x 1.5, male ⁽⁴⁾											
	Fix screw connection ½"-14 NPT, male ⁽⁵⁾											
Specific connection (additional code needed, see page 1)												
Immersion tube outlet	Center back, every angle											
Indication	EN 13190 (Standard)											
Immersion tube / diameter / material	Ø 6 mm, stainless steel 1.4571 (AISI 316 Ti)											
	Ø 8 mm, stainless steel 1.4571 (AISI 316 Ti)											
Immersion tube / installed length L1	60 mm ⁽¹⁾											
	100 mm											
	160 mm											
	250 mm											
	400 mm											
	600 mm											
	1000 mm											
	Customer specific length (use option 9003_xxxx, xxxx = L1 in mm)											
Unit of measurement / Temperature ranges ⁽⁶⁾	°C											
	°F											
	°C / °F (double scale)											
Options to be added behind the / (see example page 3)	xxT											
	xxU											
	xxV											

⁽¹⁾ L1 < 100 mm: only for immersion tube Ø 8 mm and only for temperature ≤ 250 °C. The case must not be heated over 110 °C.

⁽²⁾ Form 2 according to EN 13190

⁽³⁾ Form 6 according to EN 13190

⁽⁴⁾ Form 3 according to EN 13190

⁽⁵⁾ Form 7 according to EN 13190

⁽⁶⁾ Available standard temperature ranges, see tables on page 3. For ranges not listed, please contact Baumer.