



### 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 (Including 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) <sup>(1)</sup>	Code 0752
Window polycarbonate	Code 0753
Customer specific immersion length <sup>(2)</sup>	Code 9003_xxxx
Oil filling (silicone oil window gasket EPDM) <sup>(3)</sup>	Code 9610
Red mark	Code 9700
Specific temperature range	Code 9704
Customer logo on dial	Code 9710
Specific technical data on dial	Code 9711

<sup>(1)</sup> The case must not be constantly heated over 75°C.

<sup>(2)</sup> xxxx = L1 in mm

<sup>(3)</sup> Only available with fluid temperature ranges between -30°C (-20°F) and +250°C (480°F).

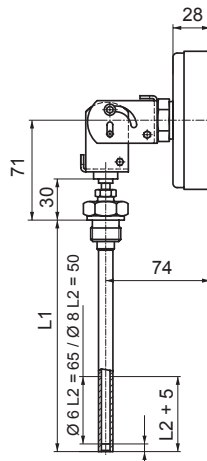
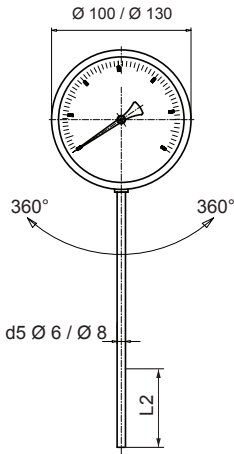
Additional ordering codes for specific process connections	Sliding	Fix
G 1/4" male	9550	9551
1/4" - 18 NPT male	9560	9561
3/4" - 14 NPT male	9562	9563
1" - 11.5 NPT male	9564	9565
M18 x 1.5 male	9574	9575
M27 x 2.0 male	9576	9577
M20 x 1.5 female	9584	-
M24 x 1.5 female	9586	-

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

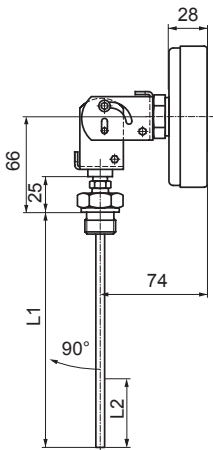
**Drawing - Immersion tube center back, every angle without connection (dimensions in mm)**



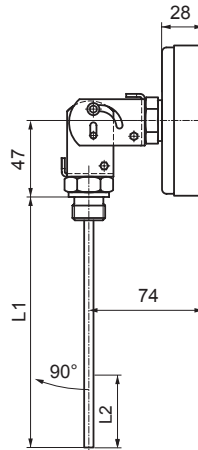
NS	Weight (kg)
100	0.450
130	0.570
Add per 100 mm	
Ø 6 mm	0.007
Ø 8 mm	0.017

Mounted in a thermowell

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

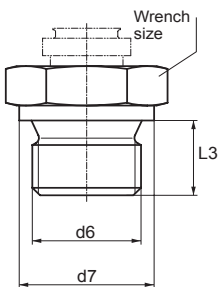


With sliding connection

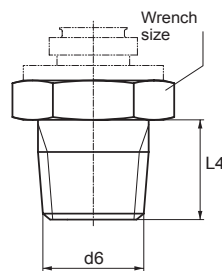


With fix connection

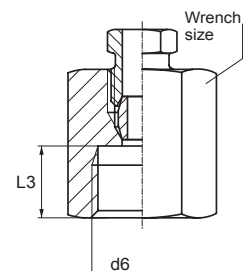
**Drawings - connections**



Cylindrical screw threads



Conical screw threads



Sliding screw connection female

d6	d7	L3	L4	Wrench size	Weight (kg)	
					sliding	fix
G ½", male	26	15	-	27	0.095	0.090
G ¾", male	32	16	-	32	0.150	0.140
G 1", male	39	19	-	41	0.210	0.240
M 20 x 1.5, male	27	14	-	27	0.090	0.090
M 24 x 1.5, male	27	15	-	27	0.110	0.110
½" - 14 NPT", male	-	-	20	27	0.095	0.100

## Temperature ranges

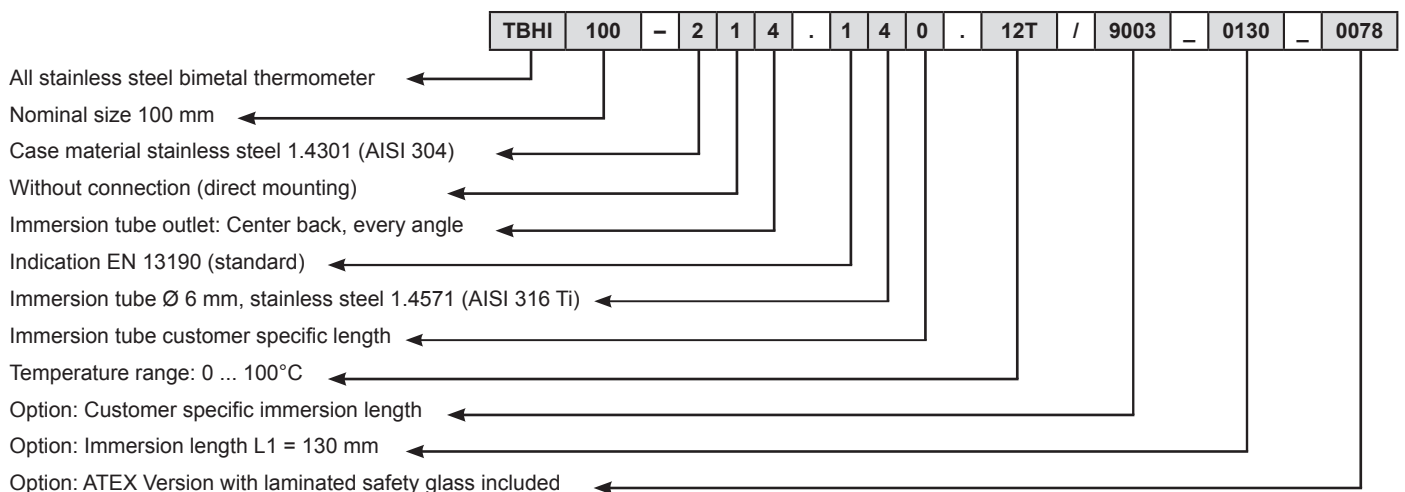
Code	Range °C
52T	-20 ... 40
54T	-20 ... 60
84T	-20 ... 100
55T	-30 ... 170
51T	-30 ... 70
68T <sup>1)</sup>	-70 ... 50
11T	0 ... 60
27T	0 ... 80
12T	0 ... 100
20T	0 ... 120
13T	0 ... 160
22T	0 ... 200
14T	0 ... 250
23T <sup>1)</sup>	0 ... 300
15T <sup>1)</sup>	0 ... 400
25T <sup>1)</sup>	0 ... 500
16T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

Code	Range °F
68U <sup>1)</sup>	-100 ... 120
09U <sup>1)</sup>	-50 ... 120
08U <sup>1)</sup>	-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 <sup>1)</sup>	30 ... 580
15U <sup>1)</sup>	30 ... 750
28U <sup>1)</sup>	100 ... 800
29U <sup>1)</sup>	200 ... 1000

Code	Range (double scale)	
	°C	/ °F
51V	-30 ... 70	/ -40 ... 160
68V <sup>1)</sup>	-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 <sup>1)</sup>	0 ... 400	/ 30 ... 750
16V <sup>1)</sup>	0 ... 600	/ 100 ... 1100

<sup>1)</sup> Not available with silicone filling (option 9610)

## Ordering example with options



## Ordering details TBHI

	TBHI			-	2			.	1		.	xxx	/
<b>Model</b>													
All stainless steel Industrial Bimetal Thermometer	TBHI												
<b>Nominal size</b>													
100 mm		1	0	0									
130 mm		1	3	0									
					-								
<b>Case</b>													
Stainless steel 1.4301 (AISI 304)					2								
<b>Connection</b>													
<b>Without connection (direct mounting)</b>													1
<b>With sliding connection:</b>													
Sliding screw connection M20 x 1.5, male <sup>(2)</sup>					2								
Sliding screw connection M24 x 1.5, male <sup>(2)</sup>					3								
Sliding screw connection G ½", male <sup>(2)</sup>					5								
Sliding screw connection ½"-14 NPT, male <sup>(3)</sup>					6								
Sliding screw connection G ¾", male <sup>(2)</sup>					7								
Sliding screw connection G 1", male <sup>(2)</sup>					8								
Sliding screw connection G ½", female					9								
Sliding screw connection G ¾", female					A								
Sliding screw connection G 1", female					B								
<b>With fix connection:</b>													
Fix screw connection G ½", male <sup>(4)</sup>					C								
Fix screw connection G ¾", male <sup>(4)</sup>					D								
Fix screw connection G 1", male <sup>(4)</sup>					E								
Fix screw connection M20 x 1.5, male <sup>(4)</sup>					S								
Fix screw connection M24 x 1.5, male <sup>(4)</sup>					T								
Fix screw connection ½"-14 NPT, male <sup>(5)</sup>					Q								
<b>Specific connection (additional code needed, see page 1)</b>					0								
<b>Immersion tube outlet</b>													
Center back, every angle										4			
<b>Indication</b>													
EN 13190 (Standard)										1			
<b>Immersion tube / diameter / material</b>													
Ø 6 mm, stainless steel 1.4571 (AISI 316 Ti)													4
Ø 8 mm, stainless steel 1.4571 (AISI 316 Ti)													6
<b>Immersion tube / installed length L1</b>													
60 mm <sup>(1)</sup>													1
100 mm													2
160 mm													4
250 mm													6
400 mm													7
600 mm													8
1000 mm													9
Customer specific length (use option 9003_ xxxx, xxxx = L1 in mm)													0
<b>Unit of measurement / Temperature ranges <sup>(6)</sup></b>													
°C													xxT
°F													xxU
°C / °F (double scale)													xxV
<b>Options to be added behind the / (see example page 3)</b>													/

<sup>(1)</sup> 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.

<sup>(2)</sup> Form 2 according to EN 13190

<sup>(3)</sup> Form 6 according to EN 13190

<sup>(4)</sup> Form 3 according to EN 13190

<sup>(5)</sup> Form 7 according to EN 13190

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