



### 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	<b>Additional ordering codes for specific process connections</b>	<b>Sliding</b>	<b>Fix</b>
Stainless steel housing 1.4404 (316L)	Code 0110			
Dampening grease	Code 0581	G 1/4" male	9550	9551
Laminated safety glass	Code 0751	1/4" - 18 NPT male	9560	9561
Acrylic glass (PMMA or Plexiglass) <sup>(1)</sup>	Code 0752	3/4" - 14 NPT male	9562	9563
Window polycarbonate	Code 0753	1" - 11.5 NPT male	9564	9565
Customer specific immersion length <sup>(2)</sup>	Code 9003_xxxx	M18 x 1.5 male	9574	9575
Oil filling (silicone oil window gasket EPDM) <sup>(3)</sup>	Code 9610	M27 x 2.0 male	9576	9577
Red mark	Code 9700	M20 x 1.5 female	9584	-
Specific temperature range	Code 9704	M24 x 1.5 female	9586	-
Customer logo on dial	Code 9710	To be used with ordering code = 0 for specific connection Example: TBHI 100 204.162.12T / <b>9550</b>		
Specific technical data on dial	Code 9711	<b>To be ordered separately</b>		

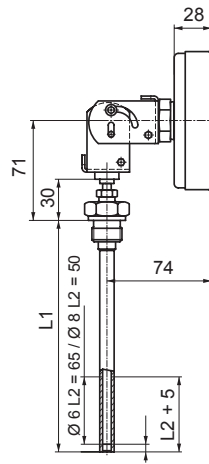
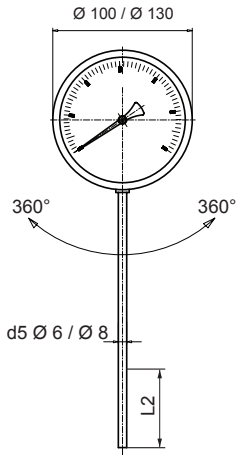
<sup>(1)</sup> The case must not be constantly heated over 75°C.

<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).

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

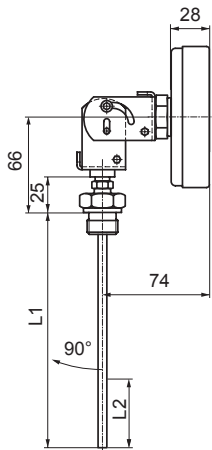
**Drawing - Immersion tube center back, every angle without connection (dimensions in mm)**



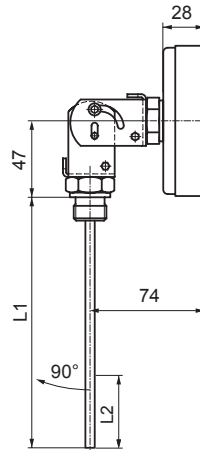
Mounted in a thermowell

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)**

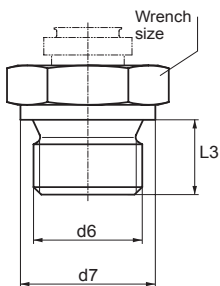


With sliding connection

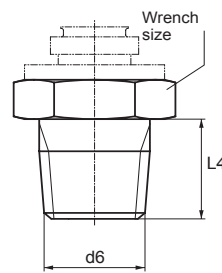


With fix connection

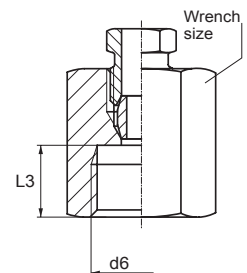
**Drawings - connections**



Cylindrical screw threads



Conical screw threads



Sliding screw connection female

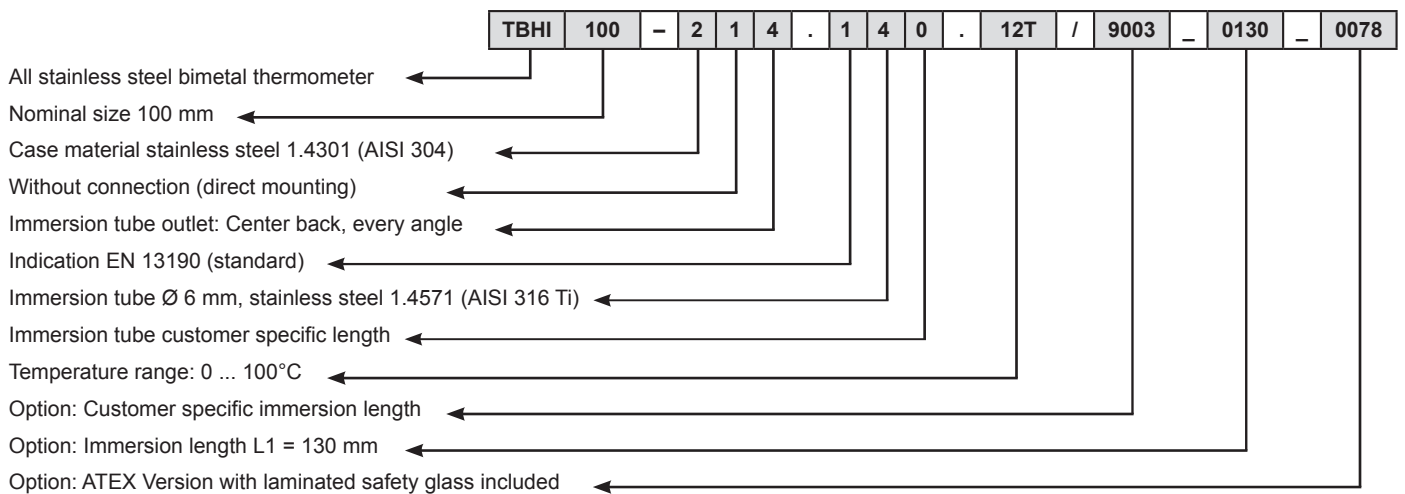
d6	d7	L3	L4	Wrench size	Weight (kg)	
					sliding	fix
G ½", male	26	15	-	27	0.095	0.090
G ¾", male	32	16	-	32	0.150	0.140
G 1", male	39	19	-	41	0.210	0.240
M 20 x 1.5, male	27	14	-	27	0.090	0.090
M 24 x 1.5, male	27	15	-	27	0.110	0.110
½" - 14 NPT", male	-	-	20	27	0.095	0.100

**Temperature ranges**

Code	Range °C	Code	Range °F	Code	Range (double scale) °C / °F
52T	-20 ... 40	68U <sup>1)</sup>	-100 ... 120	51V	-30 ... 70 / -40 ... 160
54T	-20 ... 60	09U <sup>1)</sup>	-50 ... 120	68V <sup>1)</sup>	-70 ... 50 / -100 ... 100
84T	-20 ... 100	08U <sup>1)</sup>	-40 ... 160	55V	-30 ... 170 / 0 ... 350
55T	-30 ... 170	54U	0 ... 140	11V	0 ... 60 / 30 ... 140
51T	-30 ... 70	02U	0 ... 200	20V	0 ... 120 / 30 ... 250
68T <sup>1)</sup>	-70 ... 50	03U	0 ... 250	13V	0 ... 160 / 30 ... 320
11T	0 ... 60	04U	0 ... 300	14V	0 ... 250 / 30 ... 500
27T	0 ... 80	05U	0 ... 400	15V <sup>1)</sup>	0 ... 400 / 30 ... 750
12T	0 ... 100	06U	0 ... 500	16V <sup>1)</sup>	0 ... 600 / 100 ... 1100
20T	0 ... 120	11U	30 ... 140		
13T	0 ... 160	20U	30 ... 250		
22T	0 ... 200	13U	30 ... 320		
14T	0 ... 250	22U	30 ... 400		
23T <sup>1)</sup>	0 ... 300	23U <sup>1)</sup>	30 ... 580		
15T <sup>1)</sup>	0 ... 400	15U <sup>1)</sup>	30 ... 750		
25T <sup>1)</sup>	0 ... 500	28U <sup>1)</sup>	100 ... 800		
16T <sup>1)</sup>	0 ... 600	29U <sup>1)</sup>	200 ... 1000		
30T <sup>1)</sup>	100 ... 500				

<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.