



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
Temperature ranges	-70 ... 600°C / -100 ... 1100°F
Accuracy	According to EN 13190 up to 250°C: class 1 above 250°C: class 2 (class 1 on request)
Protection rating	IP 68 (EN 60529)
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

Minimum immersion length	Immersion tube Ø 6 mm: L2 ≥ 65 mm Immersion tube Ø 8 mm: L2 ≥ 50 mm
Temperature limit	ranges ≤ 400°C: 135% F.S. ranges > 400°C: 100% F.S.
ATEX	Ex II2GDc (with option 0078)
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

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) ⁽¹⁾	Code 0752
Window polycarbonate	Code 0753
Customer specific immersion length ⁽²⁾	Code 9003_xxxx
Oil filling (silicone oil window gasket EPDM) ⁽³⁾	Code 9610
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).

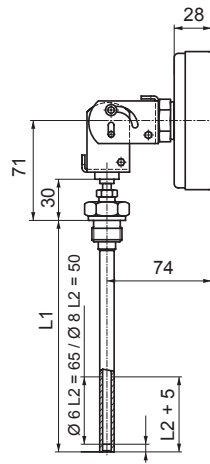
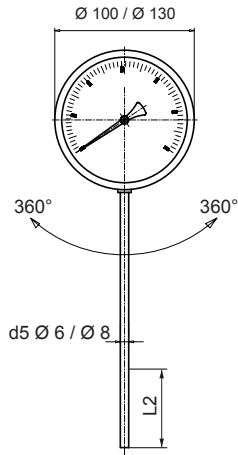
Additional ordering codes for specific process connections	Sliding	Fix
G 1/4" male	9550	9551
1/4" - 18 NPT male	9560	9561
3/4" - 14 NPT male	9562	9563
1" - 11.5 NPT male	9564	9565
M18 x 1.5 male	9574	9575
M27 x 2.0 male	9576	9577
M20 x 1.5 female	9584	-
M24 x 1.5 female	9586	-

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

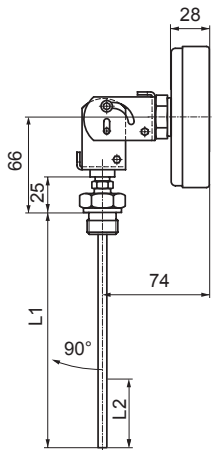
Drawing - Immersion tube center back, every angle without connection (dimensions in mm)



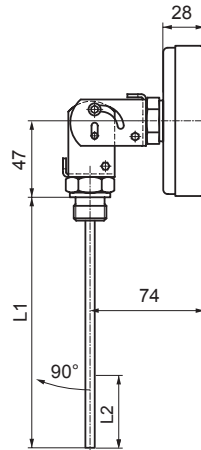
Mounted in a thermowell

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)

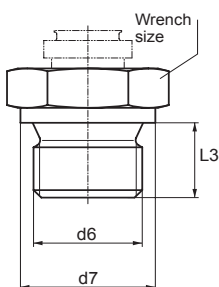


With sliding connection

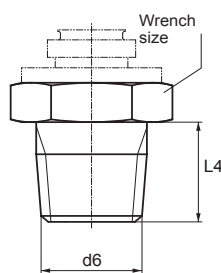


With fix connection

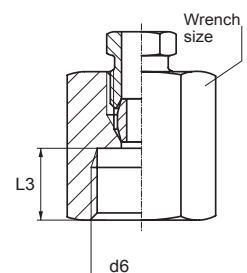
Drawings - connections



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 ¹⁾	-100 ... 120	51V	-30 ... 70 / -40 ... 160
54T	-20 ... 60	09U ¹⁾	-50 ... 120	68V ¹⁾	-70 ... 50 / -100 ... 100
84T	-20 ... 100	08U ¹⁾	-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 ¹⁾	-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 ¹⁾	0 ... 400 / 30 ... 750
12T	0 ... 100	06U	0 ... 500	16V ¹⁾	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 ¹⁾	0 ... 300	23U ¹⁾	30 ... 580		
15T ¹⁾	0 ... 400	15U ¹⁾	30 ... 750		
25T ¹⁾	0 ... 500	28U ¹⁾	100 ... 800		
16T ¹⁾	0 ... 600	29U ¹⁾	200 ... 1000		
30T ¹⁾	100 ... 500				

¹⁾ Not available with silicone filling (option 9610)

Ordering example with options

	TBHI	100	-	2	1	4	.	1	4	0	.	12T	/	9003	-	0130	-	0078
All stainless steel bimetal thermometer	←																	
Nominal size 100 mm	←																	
Case material stainless steel 1.4301 (AISI 304)	←																	
Without connection (direct mounting)	←																	
Immersion tube outlet: Center back, every angle	←																	
Indication EN 13190 (standard)	←																	
Immersion tube Ø 6 mm, stainless steel 1.4571 (AISI 316 Ti)	←																	
Immersion tube customer specific length	←																	
Temperature range: 0 ... 100°C	←																	
Option: Customer specific immersion length	←																	
Option: Immersion length L1 = 130 mm	←																	
Option: ATEX Version with laminated safety glass included	←																	

Ordering details TBHI

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

⁽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.