

# INDUSTRIAL BIMETAL THERMOMETER

The label *Trafag Industrial Components* extends the Trafag brand name to instruments manufactured by qualified partner companies.

*Trafag Industrial Components* complement the genuine Trafag product range to offer customers a complete portfolio from one single source.

The TMT502 Industrial Bimetal Thermometer for general industrial applications is externally zero adjustable and has a dial which can be adjusted to every angle for excellent readability even in complex installations.

## Applications

- Liquid & gaseous mediums
- Corrosive environments
- Oil & Gas applications
- Chemical & Petrochemical
- Food & Beverages
- Nuclear power plants



## Features

- Bimetal helix system
- Hermetically sealed
- Every angle entry
- External zero adjustment

## Reference

- EN 13190
- ATEX 2014/34/UE

07/2020

Data sheet H20018c

Standard parameters	
Accuracy	CL 1.0 (Class 1)
Ambient temperature	-20 ... +60°C
Over range limits	110% full scale
Stem pressure rating	25 bar (Without thermowell)
Weld joints	TIG argon arc welding
Measuring range	-80 ... 0 to 0 ... 600°C -110 ... 0 to 0 ... 1100°F

## Ordering code

		TMT502 - XX - XXX - XX - XXX - XX - XXXX - XX - XX - XX									
1. Dial size	80 mm / 3"	03									
	100 mm / 4"	04									
	125 mm / 4½"	05									
	150 mm / 6"	06									
2. Range	Refer "Range Table"		XXX								
3. Mounting pattern	Every Angle mounting, Centre back connection		R1								
4. Stem diameter	6,0 mm	M60									
	¼" (6,35 mm)	I14									
	8,0 mm	M80									
	9,5 mm	M95									
	10 mm	M10									
	12 mm	M12									
5. Ingress protection	IP 65	ER									
	IP 66	ES									
	IP 67	ET									
	Hermetically sealed	EU									
6. Stem length	Up to 1,500 mm		XXXX								
7. Process connection type	Fixed connection	KX									
	Adjustable connection	KW									
	Swivel / Revolving connection	BW									
	Without	99									
8. Process connection <sup>1</sup>	½" NPT (M)	14N	¾" NPT (M)	15N							
	½" BSP (M)	14B	¾" BSP (M)	15B							
	¼" NPT (M) <sup>2</sup>	12N	½" NPT (F)	04N							
	¼" BSP (M) <sup>2</sup>	12B	¾" NPT (F)	05N							
	M20 X 1.5 mm (M)	14M	M27 X 2.0 mm (M)	16M							
	3/8" BSP (M) <sup>3</sup>	13B	Without process connection	099							
	1.5" Triclover	T15	Special process connection <sup>1</sup>	ZZZ							
	9. Other options	Case & Ring in AISI 316 SS (R1)	BH	SS tag plate, AISI 304 SS	XF						
	Shatterproof safety glass	GC	SS tag plate, AISI 316 SS	XG							
	Dampening liquid, silicon oil (200°C)	OA	Dial tag marking	XT							
	Rubber parts, Viton	RA	Custom designed dial	XR							
	5 - point factory calibration certificate	TA	Dampening liquid, glycerin (65°C)	EG							
	Material test certificate 2.2	TM	ATEX Version <sup>4</sup>	AX							

Range table (°C)	Code
-20 ... +40	C01
-20 ... +60	C02
-30 ... +70	C08
-30 ... +120	C05
-50 ... +100	C11
-80 ... +120	C12

Range table (°C)	Code
0 ... 50	C13
0 ... 60	C14
0 ... 80	C15
0 ... 100	C16
0 ... 120	C17
0 ... 150	C18

Range table (°C)	Code
0 ... 200	C20
0 ... 250	C21
0 ... 300	C22
0 ... 400	C23
0 ... 500	C24
0 ... 600	C25

<sup>1</sup> For other connections, please contact factory.

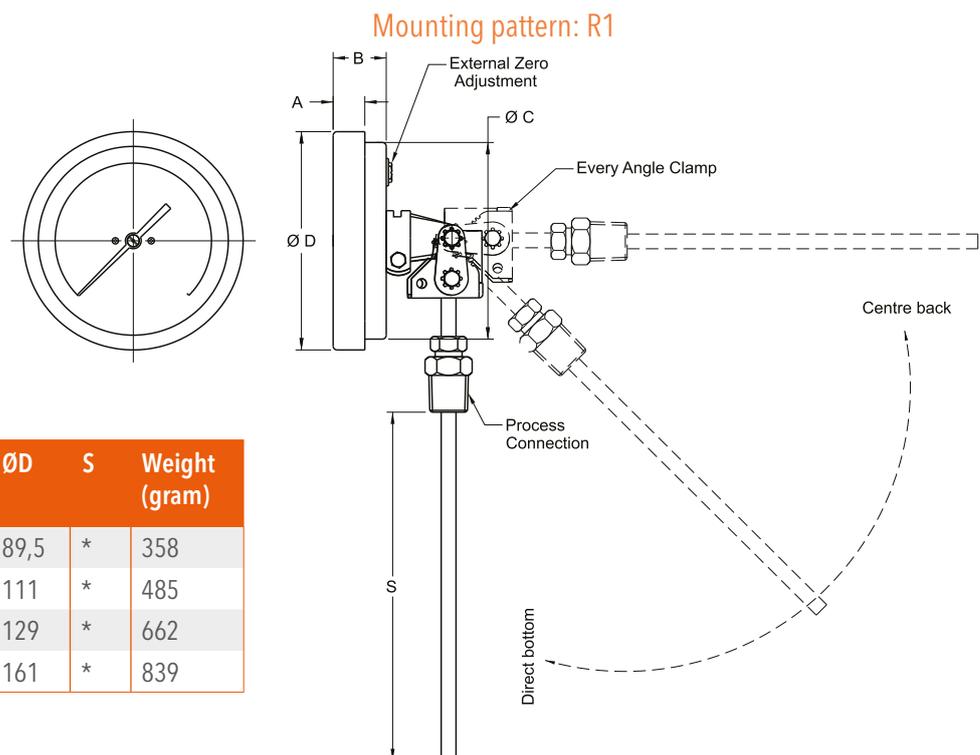
<sup>2</sup> ¼" connections are available up to ¼" (6.35 mm) stem diameter only.

<sup>3</sup> 3/8" connections are available up to 10 mm stem diameter only.

<sup>4</sup>  II 2 G Ex h IICT6÷T1 Gb X  
II 2 D Ex h IICT85°C÷T450°C Db

Specifications		
<b>Material of construction</b>	Sensing element	Coiled bimetal strip
	Case & Ring material	AISI 304 SS
	Stem & Process connection material	AISI 316LSS
	Dial	Aluminum, black graduation on white background
	Pointer	Slotted zero adjustable, aluminum, black powder coated
	Gaskets	NBR
	Window	Sheet glass
<b>Standard specifications</b>	Dial size	DN80 / DN100 / DN125 / DN150
	Range	-80 ... 0 to 0 ... 600°C / -110 ... 0 to 0 ... 1100°F
	Mounting pattern	Every Angle mounting, Centre Back connection
	Stem size	6,0 mm
	Ingress protection	IP 65
	Zero adjustment	External
	Stem length	25 mm to 1500 mm*
	Process connection type	Adjustable connection
	Process connection	½" NPT (M) / ½" BSP (M)
	<b>Standard specifications : dampening liquid filled, glycerin</b>	Gaskets & Filling plugs
Dampening liquid		Glycerin 99.7% (-20°C to 65°C) [Up to range 100°C]
Window		Shatterproof safety glass
<b>Standard specifications : dampening liquid filled, silicon</b>	Gaskets & Filling plugs	NBR
	Dampening liquids	Silicon oil [Up to range 200°C]
	Window	Shatterproof safety glass
* Depending on range & stem diameter		

## Dimensions - All dimensions are in mm



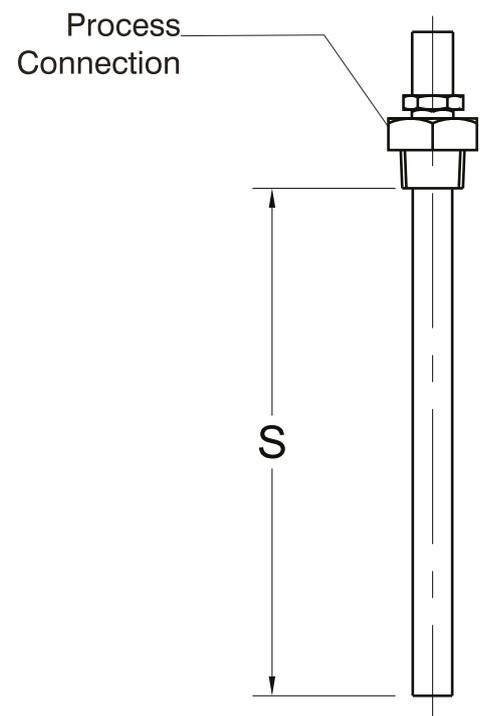
NS	A	B	ØC	ØD	S	Weight (gram)
80	9,5	23	80	89,5	*	358
100	12	23	100	111	*	485
125	15	23	118,5	129	*	662
150	15	23	149	161	*	839

\* As per customer requirement.

## Stem length chart

Stem diameter	6 mm & ¼"	8 mm	10 mm	12 mm
Range (°C)	Min. Stem Length			
	(mm)	(mm)	(mm)	(mm)
0 ... 50	130	110	110	110
0 ... 60	110	95	95	95
0 ... 80	95	70	70	70
0 ... 100	75	70	70	70
0 ... 120	70	60	60	60
0 ... 150	60	50	50	50
0 ... 200	50	45	45	45
0 ... 250	40	35	35	35
0 ... 300	60	50	50	50
0 ... 400	50	45	45	45
0 ... 500	45	40	40	40
0 ... 600	40	35	35	35

- All length mentioned above are to be considered below thread only.
- For other reduced length, contact factory before ordering.



### Additional information

Documents	Data sheet	H20018	<a href="http://www.trafag.com/H20018">www.trafag.com/H20018</a>
	Instructions	H21017	<a href="http://www.trafag.com/H21017">www.trafag.com/H21017</a>