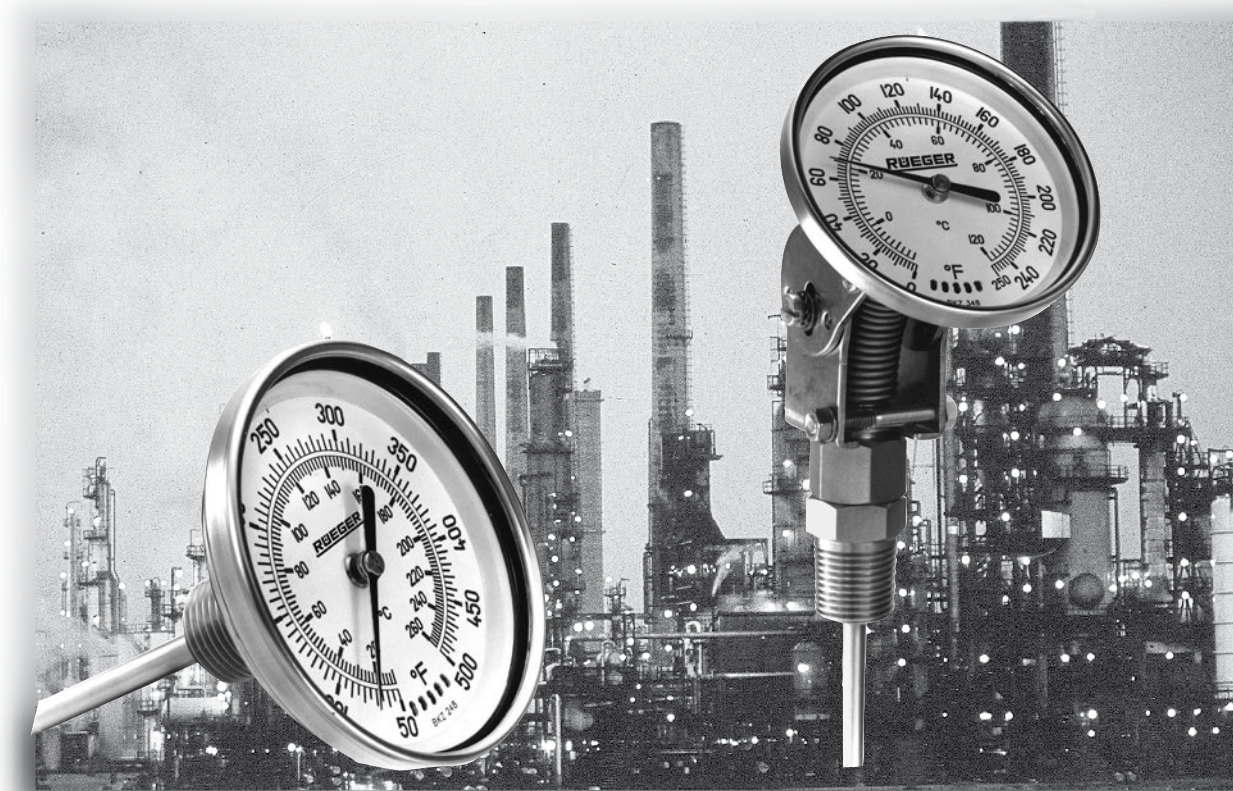


## **TH1 - *Stainless* bimetallic industrial thermometers**

A proved mechanism and a sturdy housing, for reliability under severe conditions

FT TH1-E-02.09



### **All stainless steel thermometer with °C , °F or double scales**

#### **Main features**

- Bimetallic thermometer
- Heavy duty all-stainless steel construction
- External zero adjustment in option
- Complying with ASME standard B40.3 grade A (option AA) & class 1 or 2 acc. EN 13190

#### **Technical features**

- Horizontal (THH), every angle executions (THI) and vertical (THV)
- Case diameters (in AISI 304) 3" (80 mm), 4" (100 mm), 5" (130 mm), 6" (150 mm)
- A large choice of temperature ranges
- Stem length: from 2" (60 mm) to 6' (2000 mm)
- Stem diameters: 6, 8, 9 mm

#### **Applications**

- General industry
- Foods
- Chemicals
- Petro-chemicals
- Heating & cooling systems
- Air conditioning systems
- Offshore
- Fossil-fuel
- Power stations
- Hydraulics
- Refrigeration



## Standard temperature ranges

Single scales °C		Double scales °C/°F	
-70°C ...+ 40°C (1:1)	0°C ...+300°C (1:5)	- 40°C ... + 70 °C	+10°C ... +200 °C
-30°C ...+ 70°C (1:1)	0°C ...+400°C (1:5)	- 40°F ... +160 °F	+50°F ... +400 °F
0°C ...+ 60°C (1:0.5)	0°C ...+500°C (1:10)	-20°C ... +120 °C	+10°C ... +290 °C
0°C ...+120°C (1:1)		0°F ... +250 °F	+50°F ... +550 °F
0°C ...+160°C (1:2)		+10°C ... +150 °C	+60°C ... +400 °C
0°C ...+200°C (1:2)		+50°F ... +300 °F	+150°F ... +750 °F
0°C ...+250°C (1:2)			

Other ranges (°C; °Kelvin; °F) are available on request



## Stems

Stem dia.	Length (L = mm or inch)	Materials available for all dias and lengths
6 mm	from 60mm (2") to 650 mm (6')	Stainless steel AISI 304 L/1.4306 (standard) or AISI 316 L/1.4404 (optional)
8, 9 mm	from 60mm (2") to 2m (6')	stainless steel AISI 304 L/1.4306 (standard) or AISI 316 L/1.4404 (optional)

Tolerance on stem diameters: 0/-0,1 mm

Vertical Thermometers	Fittings and connections supplied as accessories Min. length L2		
	+TP1	+AMX	+AMU
Types			
THV080A	25mm	37mm	30mm
THV100A	32mm	44mm	37mm
THV130A	46mm	58mm	51mm
THV150A	57mm	69mm	62mm

Important !

The fixing systems described on sheet TA 1 and supplied as accessories (e.g. the connection "AMX") require that in all cases the length L1, and lo the lengths L2 and L, be specified for vertical (bottom-connected) thermometers with unthreaded shoulder THH...A+ .../THV...A + .../THI...A+ ... The length L1 is in fact the useful length for temperature measurement.

If the instrument is ordered with pocket (thermowell) type DAE, please refer to corresponding technical leaflet. For vertical thermometers THV...A+ ... according to the head diameter and to the fixing system, the length L2 corresponds in each case to a minimum length which allows the connection to be screwed up without the spanner fouling the head.

When the length L2 exceeds 100mm, we recommend 8 or 9mm diameter stems (wall thickness 1.4 or 1.9mm respectively) to eliminate any risk of accidental bending. The connections AMX/AMU are not recommended with a stem dia. 6mm.



## Technical specifications

Characteristics	Unit	Value	Characteristics	Unit	Value
Lower range limit	°C	≥ -70	Repeatability	% FS	≤ +/- 0.2
Upper range limit	°C	≤ +500	Hysteresis	% FS	≤ +/- 0.5
Full scale (FS) ΔT	°C	-70...500	Position error	% FS	≤ +/- 0.5
Overload for range ≤ 400°C	% FS	20	Tilt error (90°) for types THI	% FS	≤ +/- 0.5
for range > 400°C			Long time stability (free of peak loads exceeding 100 g)		
feak overload	°C	550	for range ≤ 400°C	% FS/year	≤ +/- 0.3
continuous overload	°C	520	for range > 400°C	% FS/year	≤ +/- 0.8
Accuracy acc. EN 13190			Sealing	IP	65
for range ≤ 400°C	cl. 1	1			
for range > 400°C	cl. 2	2			



## Options

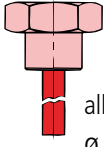
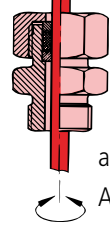
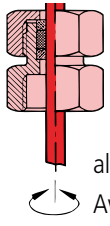
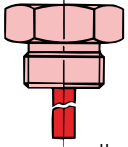
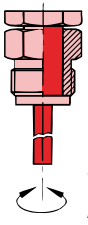
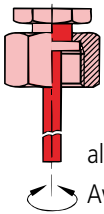
- Measuring system dampened by silicon grease for protection against vibrations C2
- Mineral glass (standard)
- Acrylic glass
- Safety glass, only with head Ø 4" (100 mm), Ø 5" (130 mm)
- Window with index pointer, only with mineral or acrylic glass, case Ø 3" (80 mm), Ø 4" (100 mm)



## Connections board

### 6 connection types

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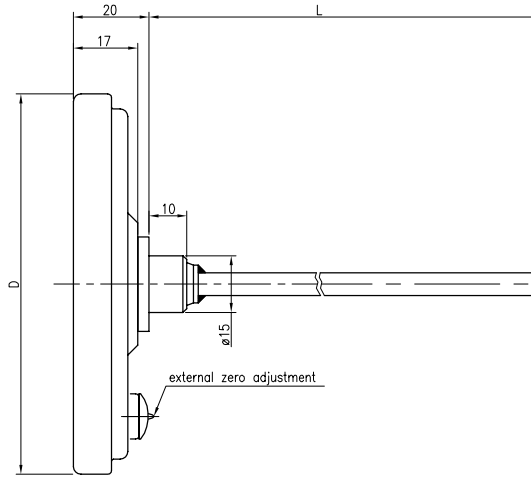
		Horizontal execution (back connection) H	Every angle execution I	Vertical execution V
<b>«A» TYPE UNTHREADED SHOULDER</b>				
 <p>all-stainless steel AISI 303/1.4305 Ø 15 x 10 mm</p>	80 mm (3") dia.	THH080A	THI080A	THV080A
	100 mm (4") dia.	THH100A	THI100A	THV100A
	130 mm (5") dia.	THH130A	THI130A	THV130A
	150 mm (6") dia.	THH150A	THI150A	THV150A
<b>«AMX» TYPE SWIVELLING AND SLIDING THREADED</b>				
 <p>all-stainless steel AISI 303/1.4305 Available threads : 1/2" NPT, G 1/2 A, G 3/4 A</p>	80 mm (3") dia.	THH080A+AMX	THI080A+AMX	THV080A+AMX
	100 mm (4") dia.	THH100A+AMX	THI100A+AMX	THV100A+AMX
	130 mm (5") dia.	THH130A+AMX	THI130A+AMX	THV130A+AMX
	150 mm (6") dia.	THH150A+AMX	THI150A+AMX	THV150A+AMX
<b>«AMU» TYPE SWIVELLING AND SLIDING CAP</b>				
 <p>all-stainless steel AISI 303/1.4305 Available threads : 1/2" NPT, G 1/2 A, G 3/4 A</p>	80 mm (3") dia.	THH080A+AMU	THI080A+AMU	THV080A+AMU
	100 mm (4") dia.	THH100A+AMU	THI100A+AMU	THV100A+AMU
	130 mm (5") dia.	THH130A+AMU	THI130A+AMU	THV130A+AMU
	150 mm (6") dia.	THH150A+AMU	THI150A+AMU	THV150A+AMU
<b>«S» TYPE THREADED CONNECTION</b>				
 <p>all-stainless steel AISI 303/1.4305 Available threads : 1/2" NPT, G 1/2 A, G 3/8 A, G 3/4 A</p>	80 mm (3") dia.	THH080S	THI080S	THV080S
	100 mm (4") dia.	THH100S	THI100S	THV100S
	130 mm (5") dia.	THH130S	THI130S	THV130S
	150 mm (6") dia.	THH150S	THI150S	THV150S
<b>«T» TYPE SWIVELLING THREADED CONNECTION</b>				
 <p>all-stainless steel AISI 303/1.4305 Available thread : G 1/2 A, M 18x1.5, M 20x1.5</p>	80 mm (3") dia.	THH080T	THI080T	THV080T
	100 mm (4") dia.	THH100T	THI100T	THV100T
	130 mm (5") dia.	THH130T	THI130T	THV130T
	150 mm (6") dia.	THH150T	THI150T	THV150T
<b>«U» TYPE SWIVELLING CAP CONNECTION</b>				
 <p>all-stainless steel AISI 303/1.4305 Available thread : G 1/2 A, G 3/4 A, M 24x1.5, M 27x2</p>	80 mm (3") dia.	THH080U	THI080U	THV080U
	100 mm (4") dia.	THH100U	THI100U	THV100U
	130 mm (5") dia.	THH130U	THI130U	THV130U
	150 mm (6") dia.	THH150U	THI150U	THV150U



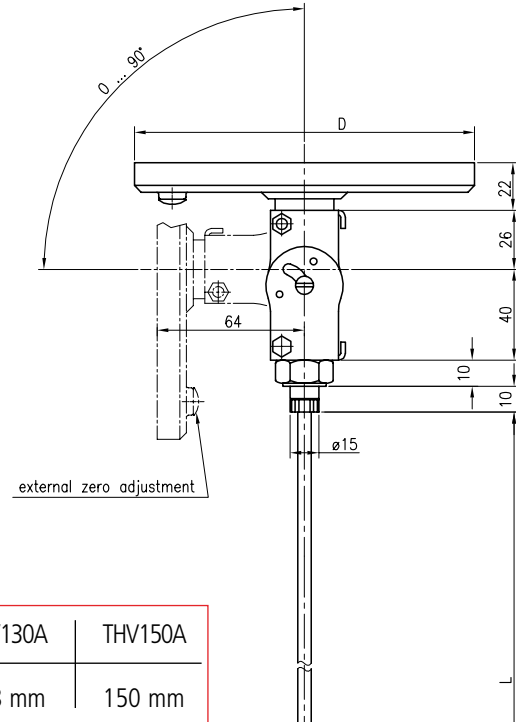
## Dimensions

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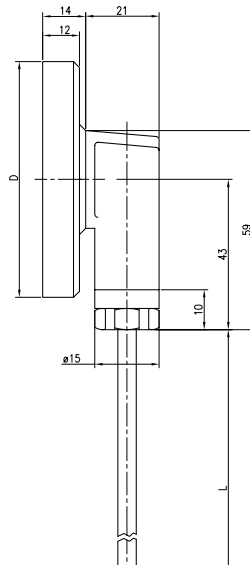
	THH080A	THH100A	THH130A	THH150A
D	77.2 mm	100.6 mm	128 mm	150 mm



	THI080A	THI100A	THI130A	THI150A
D	77.2 mm	100.6 mm	128 mm	150 mm



	THV080A	THV100A	THV130A	THV150A
D	77.2 mm	100.6 mm	128 mm	150 mm



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