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Bimetal Thermometer Model TS

FEATURES

- Robust, fully welded stainless steel construction
- Protection upto IP65
- Dry or liquid filled
- Silicone coil dampening provides vibration dampening and improves response time

TYPICAL USES

- Water Treatment Industry
- HVAC Industry
- Maritime Industry
- Automotive Industry
- Manufacturing Industry
- Plastics and Rubber Industry
- Mechanical Engineering Industry
- Textile Industry
- Coatings Industry
- Power generation

TECHNCAL SPECIFICATIONS

Dial Size:	Ø in mm 52, 65, 80, 100 Inch 2”, 2 1/2”, 3”,4”
Connection Location:	Lower or Back
Stem Diameter	6 mm, 8 mm and 9 mm
Stem Length:	60 ... 1000 mm

MECHANICAL SPECIFICATION

Process Connection:	G 1/2 A Male 1/2 NPT Male others please see in the coding table
Accuracy	For range ≤ + 400°C ±1% For range > +400°C ±2%
Max. Overtemperature limit	For Range ≤400°C 20% of Span For Range > 400°C Peak Overload 600°C Continus Overload 520°C

KEY BENEFITS:

- **High reliability and durability**
- **Perfectly designed for our HVAC thermowells**

MATERIALS

Process Connection	Stainless steel 303 (1.4305)
Stem:	Stainless steel 316L (1.4404) or 304L (1.4306)
Case/Ring:	For Dial Size 52 mm and 65 mm: Head in rolled Stainless steel 303 (1.4305)
	For Dial Size 80 mm, 100 mm: Head in galvanized Steel, bezel in neutral colored anodized aluminium
Window:	Mineral glass, Acrylic glass
Dial:	Aluminum, black marked
Pointer:	Aluminum, black
Gaskets/Sealing:	BUNA-N (NBR)

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ORDERING CODE	EXAMPLE:	TS	H	=	052	A	L	B0704	X

Model

TS	Bimetal Thermometer

Connection Location:

H	Co-axial back [inadmissible for process connection A snd N]
V	Vertical Lower [inadmissible for mounting F; inadmissible for process connection I_ and L_]

Connection size:

052	dial size 52 mm
065	dial size 65 mm
080	dial size 80 mm
100	dial size 100 mm

Mounting

A	with unthreaded shoulder [inadmissible for process connection G2, G3, G4, G6, N2 and N4; inadmissible for connection style NX]
F	with back mounting flange [inadmissible for process connection { A_, G2, G3, G4, G6, N_ N2 and N4; inadmissible for connection style AU, AX and NX]
S	with fixed threaded connection [inadmissible for process connection} A_, I_, L_ and N_; inadmissible for connection style AU and AX]

Filling

-	Without filling
L	Field with Silicone [inadmissible for process connection} A_, I_, L_ and N_; inadmissible for connection style AU and AX]

Process Connection

A	Ø 15 Aluminium [inadmissible for connection style NX]
I	Ø 15, AISI 303 / 1.4305 [inadmissible for connection style NX]
L	Ø 15, galvanized brass
I	Ø 15, AISI [inadmissible for stem diameter and material 8I, 8X and 9X; inadmissible for connection style NX]
N	Ø 15, Nickel-plated Aluminium [inadmissible for connection style NX]
G2	G ¼, AISI 303 / 1.4305 [inadmissible for connection style AU, AX and NX]
G4	G ½, AISI 303 / 1.4305 [inadmissible for connection style AU and AX]
G6	G ¾, AISI 303 /1.4305 [inadmissible for connection style AU, AX and NX]
N2	¼ NPT, AISI 303 / 1.4305 [inadmissible for connection style AU, AX and NX]
N4	½ NPT, AISI 303 /1.4305 [total stem length L {IL} = min. 70 mm; inadmissible for connection style AU, AX and NX]

Temperature Range

B0704	-70 ... +40°C
B0404	-40 ... +40°C
B0307	-30 ... +70°C
B0312	-30 ... +120°C [inadmissible for measuring system C]
B0317	-30 ... +170°C [inadmissible for measuring system C]
B0204	-20 ... +40°C
C0004	0 ... +40°C
C0006	0 ... +60°C
C0012	0 ... +120°C
C0016	0 ... +160°C [inadmissible for measuring system C]
C0020	0 ... +200°C [inadmissible for measuring system C]
C0025	0 ... +250°C [inadmissible for measuring system C]
C0032	0 ... +320°C [inadmissible for measuring system C; inadmissible for open measuring system 2]
C0040	0 ... +400°C [inadmissible for measuring system C; inadmissible for open measuring system 2]
C0050	0 ... +500°C [total stem length L = min. 100 mm; inadmissible for measuring system C; inadmissible for open measuring system 2]
C0060	0 ... +600°C process wetted part max. 550°C

Others temperature ranges on request

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ORDERING CODE	EXAMPLE:	S	6I	60	AA	-	G4	60	XNH	-

Mesuring systems

S	Standard
C	Short
-	

Stem diameter & Material:

6I	Ø 6 mm, AISI 304L / 1.4306 [total stem length L= max. 650 mm; length L1 below adapter= max. 620 mm]
6X	Ø 6 mm, AISI 316L / 1.4404 [total stem length L= max. 650 mm; length L1 below adapter= max. 620 mm]
8I	Ø 8 mm, AISI 304L / 1.4306
8X	Ø 8 mm, AISI 316L / 1.4404
9X	Ø 9 mm, AISI 316L / 1.4404

Total stem length L in mm:

xxx	60 ... 1000 mm stem length in 1 mm steps

Windows

AA	Acrylic with index pointer
AM	Mineral with index pointer
VA	Acrylic glass
VM	Mineral glass

Filling

-	Without adapter [inadmissible for adapter connection size G4, G6, M5, M6, M8, M9; N4, N6 and NX; inadmissible for length L1 below adapter]
AU	AMU swiveling and sliding cap connection [inadmissible for adapter connection size __, M5, M6, M8, M9; N6 and NX]
AX	AMX swiveling and sliding threaded connection [inadmissible for adapter connection size __; length L1 below adapter) = max. 1960 mm]
NX	AMX swiveling and sliding threaded connection [inadmissible for adapter connection size __,M5,M6,M8,M9,N6,NX; inadmissible for length L1 below]

Adapter connection size

G4	G ½, AISI 303 / 1.4305
G6	G ¾, AISI 303 /1.4305
M8	M24x1,5, AISI 303
M9	M27x2, AISI 303
N4	½ NPT, AISI 303 /1.4305 [length L1 below adapter = min. 70 mm]]
N6	¾ NPT, AISI 303 [length L1 below adapter = min. 70 mm]
NX	½ NPT, AISI 316L [length L1 below adapter = min. 70 mm]

Length L1 below adapter size

60 to 970 mm stem length in 1 mm steps

Option measuring system

-	Without
2	Silicone grease for vibrations C2

Calibration reporte

-	Without
3	3 points

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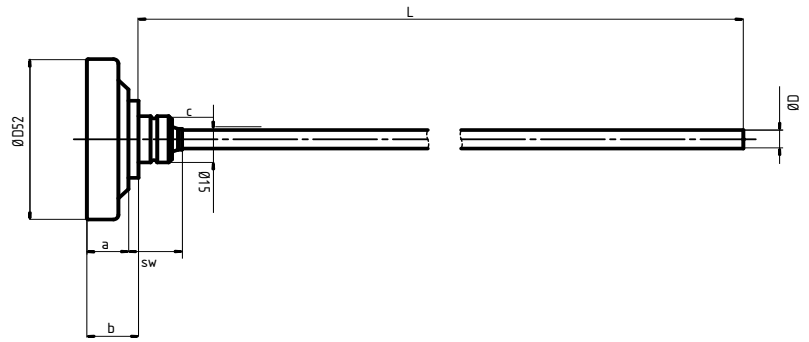
DIMENSIONS IN MM

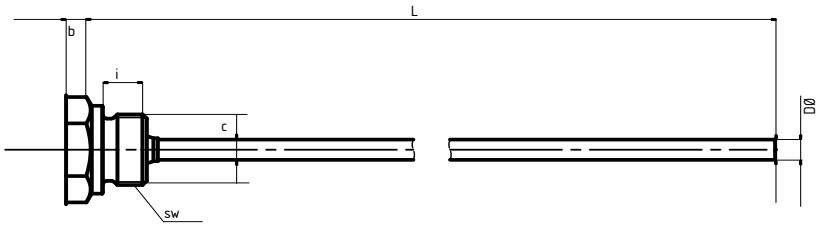
For reference only, ask us for specific dimensional drawings

HVAC BIMETAL TS

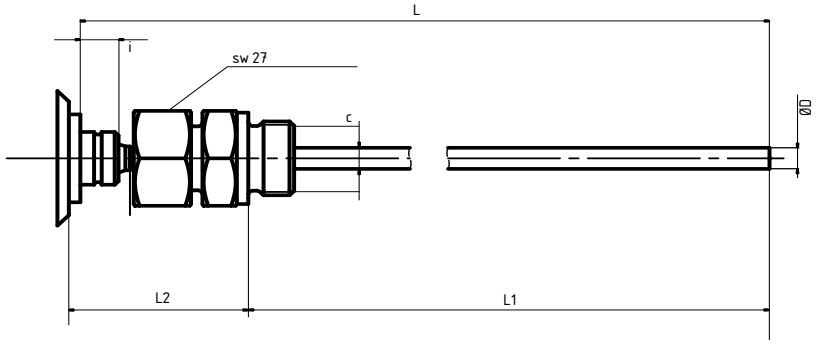
For mounting with unthreaded shoulder (A) and with fixed threaded connection (S)					
ØD	52	65	77	100	
a	9	10	12	12	
b	12	13	14	14	
c	G1/4	G3/8	G1/2	G3/4	1/4 NPT
i	10	10	12	12	17
sw	17	22	27	32	17



TS=H=A
With unthreaded Shoulder



TS=H=S
With fixed threaded connection



TS=H
with swivelling & sliding threaded connection

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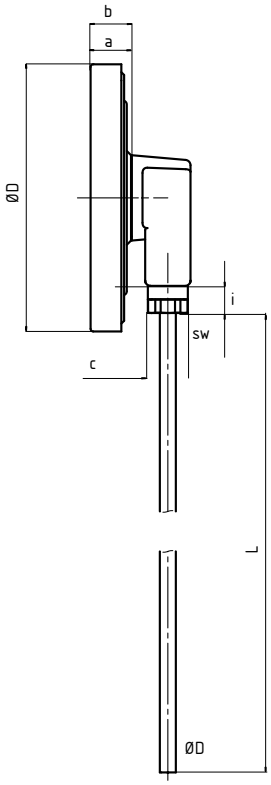
DIMENSIONS IN MM

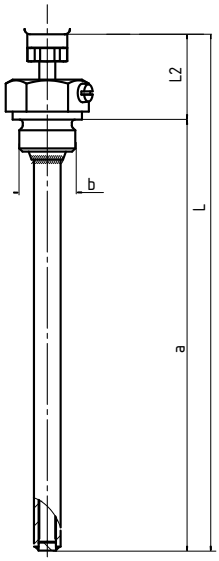
For reference only, ask us for specific dimensional drawings

For mounting with unthreaded shoulder (A) and with fixed threaded connections					
ØD	52	65	77	100	
a	9	10	12	12	
b	12	13	14	14	
e	15	15	15	29	
c	G1/4	G3/8	G1/2	G3/4	1/4 NPT
i	10	10	12	12	17
sw	17	22	27	32	17

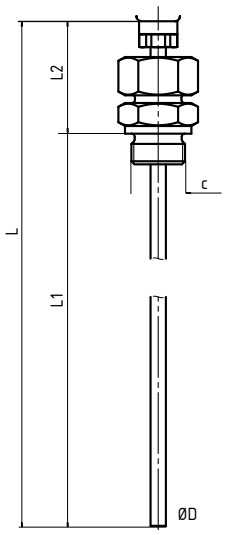
TS=V with unthreaded shoulder



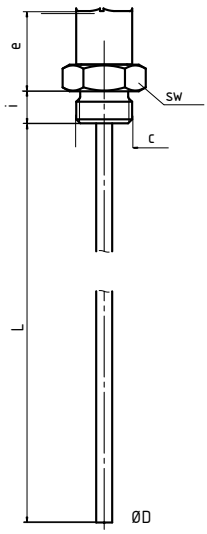
TS=V=A with thermowell



TS=V with thermowell



TS=V with swivelling sliding Threaded connection



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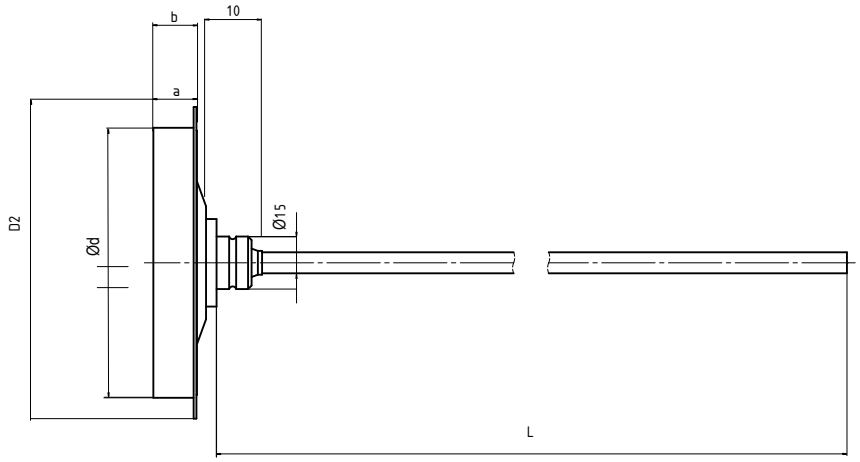
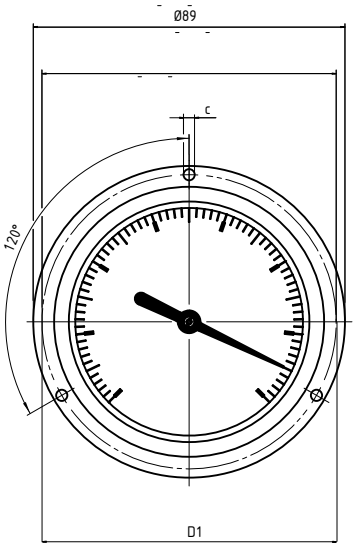
For mouting with back mouting flange			
ØD	66	77	100
D1	74	84	111
D2	80	89	120
a	11	12	13
b	14	15	15
ØC	3.2	3.2	4.3

TS=H=F
with mouting flange





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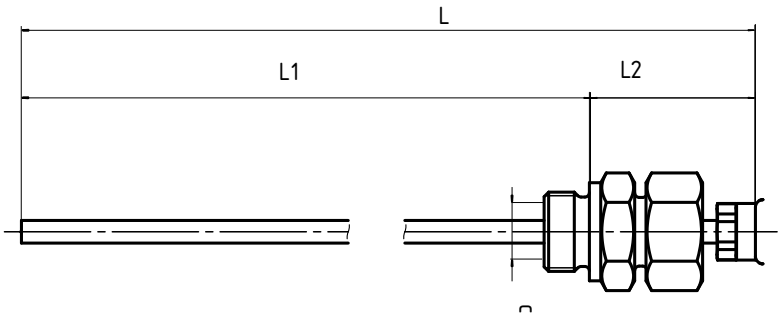
Thermometer vertical	Fitting and connections supplid as accessories Minimum Length L2 in mm		
Typ	+DAE	+AMX	+AMU
TS=V=052=A	15	37	30
TS=V=065=A	15	37	30
TS=V080=A	25	37	30
TS=V100=A	32	44	37



The fixing system descripted on sheet TA1 and supplied as accessories
(e.g the connection AMX) require that in all cases the length L1, and also the lengths L2 and L.
For vertical (bottom-connected) thermometers with unthreaded shoulder TSVA+..
The length L1 is in fact the useful length for temperature measurement.
For vertical thermometers TSV 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.
See table opposite for dimensions to this effect.

When length L2 exceeds 100 mm, we recommend 8 or 9 mm diameter stems (wall thickness 1.4 mm or 1.9 mm respectively) to eliminate any risks of occidental bending.

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