

## Bimetal thermometer Model 55, stainless steel version

WIKA data sheet TM 55.01



### Applications

- Chemical industry, petrochemical industry, process technology and food industry
- For aggressive medium

### Special features

- Universal application
- Case and stem from stainless steel

### Description

This series of thermometers is designed for installation in pipes, vessels, plant and machinery.

Sheath and case are made of stainless steel. To allow fitting to the process, different installation lengths and process connections are available.

Through the high protection class of the thermometer (IP 65) and its liquid damping, operation under high vibration conditions is possible.

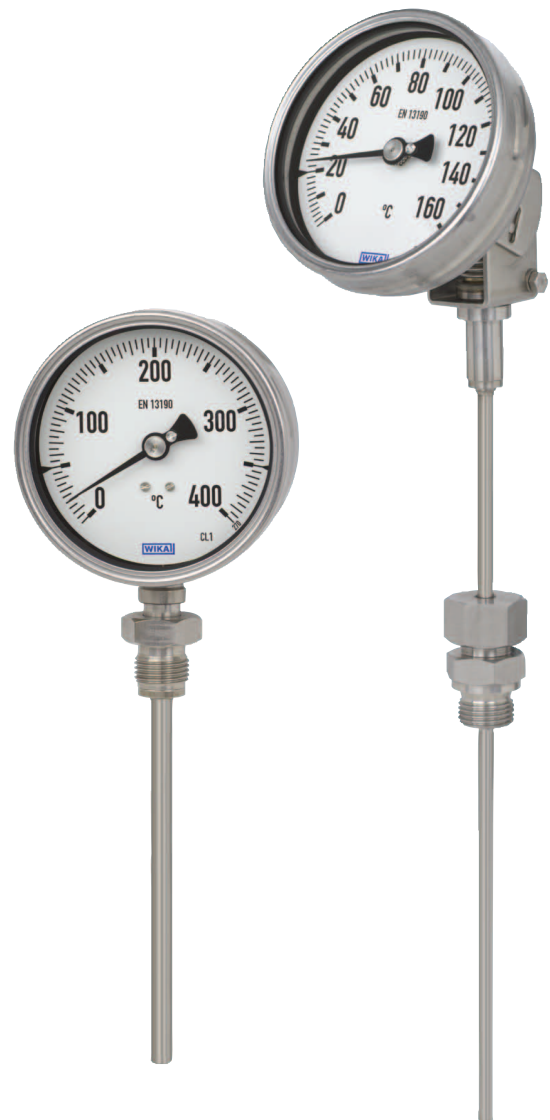


Fig. left: bimetal thermometer model R5502

Fig. right: bimetal thermometer, adjustable stem and dial model S5550

## Standard version

### Measuring element

Bimetal coil

### Nominal size in mm

63, 100, 160

### Connection design

- S Standard (male thread connection)
- 1 Plain stem (without thread)
- 2 Male nut
- 3 Union nut (female)
- 4 Compression fitting (sliding on stem)
- 5 Union nut with fitting

### Models

Model	NS	Version
A5525	63	Back mount (axial)
A5500	100	
A5501	160	
R5526	63	Lower mount (radial)
R5502	100	
R5503	160	
S5550	100	Back mount, adjustable stem and dial
S5551	160	

### Accuracy class

DIN EN 13190

### Working pressure

Normal (1 year): Measuring range (DIN EN 13190)  
Short time (24 h max.): Scale range (DIN EN 13190)

### Case and bayonet ring

stainless steel

### Stem and process connection

Stainless steel 1.4571

### Dial

Aluminium white, black lettering

### Window

Instrument glass

### Pointer

Aluminium, black, micro adjustable pointer

### Zero adjustment

on case back side, external only for adjustable stem and dial (option)

### Permissible pressure rating of stem

max. 25 bar, static

### Permissible ambient temperature at case

+60 °C max. (others on request)

### Temperature limits for storage and transport

-20 ... 60 °C (DIN EN 13190)

### Ingress protection

IP 65 per EN 60529

## Options

- Scale range °F, °C / °F (dual scale)
- Liquid damping up to max. 250 °C (at the sensor)
- Laminated safety glass, acrylic plastic
- Stem Ø 6, 10, 12 mm
- Ingress protection IP 66
- Thermometer with switch contacts (data sheet TV 25.01)
- Special measuring ranges or dial printing to customer specifications (on request)
- Version per ATEX Ex II 2 GD c TX

### Scale ranges, measuring ranges <sup>1)</sup>, error limits (DIN EN 13190)

#### Scale graduation per WIKA standard

Scale range in °C	Measuring range <sup>1)</sup> in °C	Scale spacing in °C	Error limit ± °C
-70 ... +30	-60 ... +20	1	1.0
-50 ... +50	-40 ... +40	1	1.0
-30 ... +50	-20 ... +40	1	1.0
-20 ... +60	-10 ... +50	1	1.0
0 ... 60	+10 ... +50	1	1.0
0 ... 80	+10 ... +70	1	1.0
0 ... 100	+10 ... +90	1	1.0
0 ... 120	+10 ... +110	2	2.0
0 ... 160	+20 ... +150	2	2.0
0 ... 200	+20 ... +180	2	2.0
0 ... 250	+30 ... +220	5	2.5
0 ... 300	+30 ... +270	5	5.0
0 ... 400	+50 ... +350	5	5.0
0 ... 500	+40 ... +450	5	5.0
0 ... 600	+100 ... +500	10	10.0

<sup>1)</sup> The measuring range is indicated on the dial by two triangular marks. Only within this range is the stated error limit valid per DIN EN 13190.

## Connection design

### Design standard (male thread connection)

Connection, male: G ½ B, G ¾ B, ½ NPT, ¾ NPT  
Stem length  $l_1 = 63, 100, 160, 200, 250$  mm

Nominal size NS	Process connection		Dimensions in mm		
	G	i	SW	$d_4$	$\varnothing d$
63, 100, 160	G ½ B	14	27	26	8
	G ¾ B	16	32	32	8
	½ NPT	19	22	-	8
	¾ NPT	20	30	-	8

### Design 1, plain stem (without thread)

Stem length  $l = 140, 200, 240, 290$  mm

Nominal size NS	Dimensions in mm			
	$d_1$	$\varnothing d$	a for axial	a for adjustable stem and dial
63	14	8	15	25
100, 160	18	8	15	25

### Design 2, male nut

Stem length  $l_1 = 80, 140, 180, 230$  mm

Nominal size NS	Process connection		Dimensions in mm	
	G	i	SW	$\varnothing d$
63, 100, 160	G ½ B	20	27	8

### Design 3, union nut

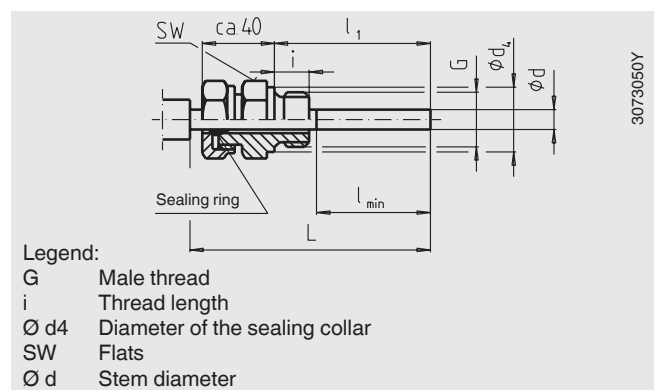
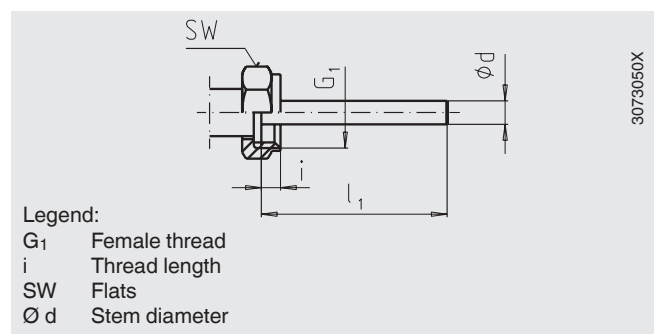
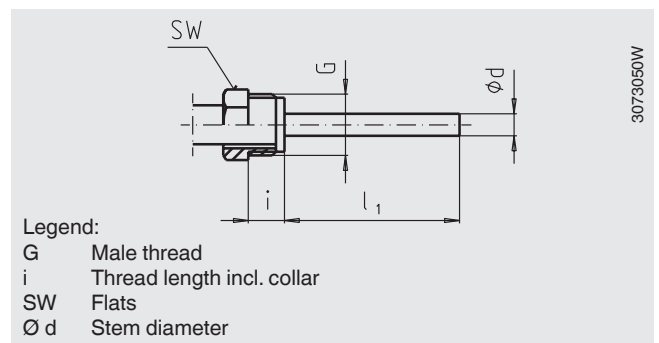
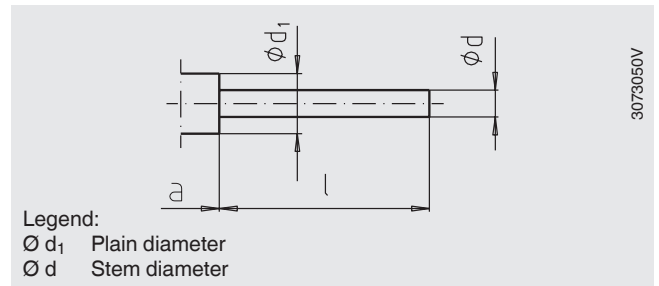
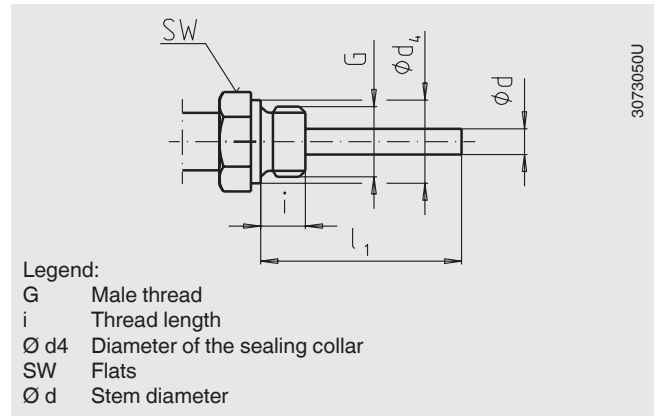
Stem length  $l_1 = 89, 126, 186, 226, 276$  mm

Nominal size NS	Process connection		Dimensions in mm	
	$G_1$	i	SW	$\varnothing d$
63, 100, 160	G ½	8.5	27	8
	G ¾	10.5	32	8
	M24 x 1.5	13.5	32	8

### Design 4, compression fitting (sliding on stem)

Standard stem length  $l_1 = 63, 100, 160, 200, 250$  mm  
Length  $L = l_1 + 40$  mm

Nominal size NS	Process connection		Dimensions in mm		
	G	i	SW	$d_4$	$\varnothing d$
63, 100, 160	G ½ B	14	27	26	8
	G ¾ B	16	32	32	8
	M18 x 1.5	12	24	23	8
	½ NPT	19	22	-	8
	¾ NPT	20	30	-	8



### Design 5, union nut with loose fitting

G ½ B, G ¾ B, M18 x 1.5 as well as ½ NPT, ¾ NPT

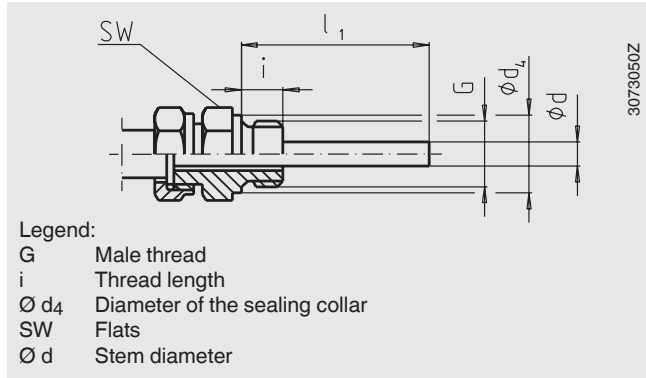
Minimum insertion depth  $l_{min}$  approx. 60 mm

Stem length  $l_1$  = variable

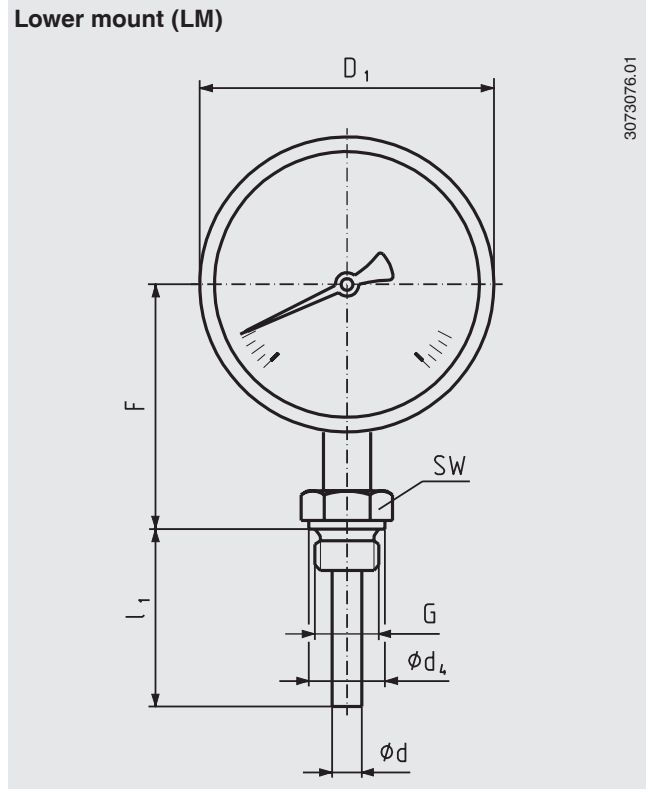
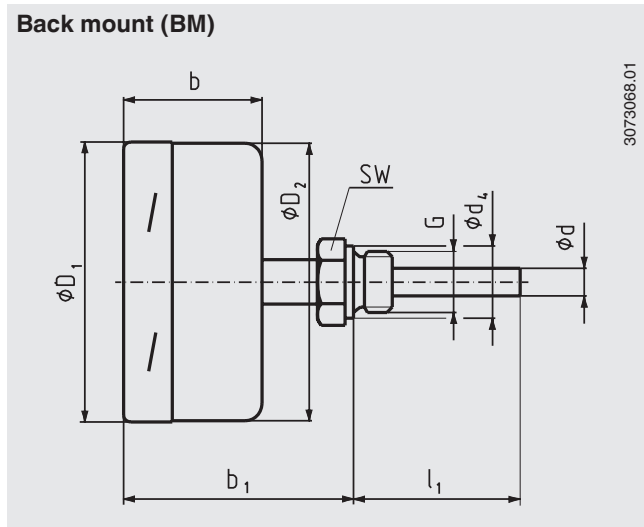
Length  $L = l_1 + 40$  mm

Stainless steel 1.4571

Nominal size NS	Process connection		Dimensions in mm		
	G	i	SW	$d_4$	$\varnothing d$
63, 100, 160	G ½ B	14	27	26	8
	G ¾ B	16	32	32	8
	M18 x 1.5	12	24	23	8
	½ NPT	19	22	-	8
	¾ NPT	20	30	-	8



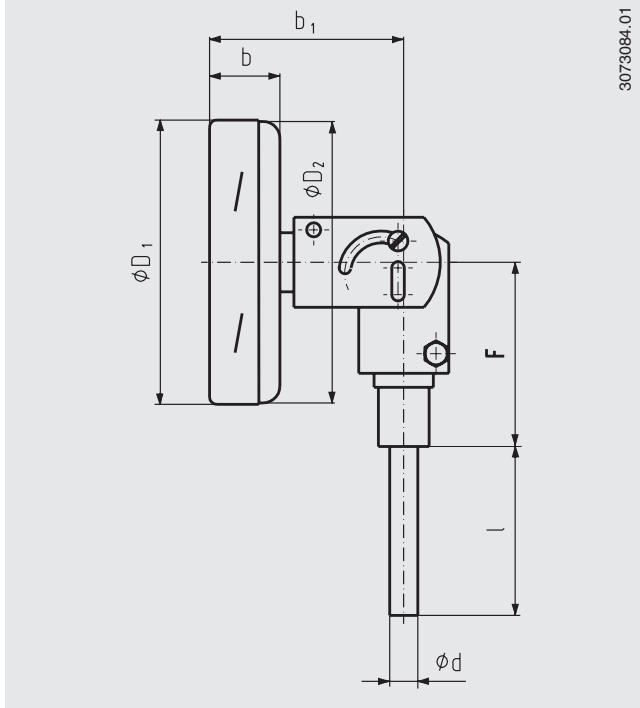
### Dimensions in mm



NS	Dimensions in mm			$d_4$	$\varnothing D_1$	$\varnothing D_2$	F <sup>1)</sup>	G	SW	Weight in kg	
	b	$b_1$ <sup>1)</sup>	$d$ <sup>2)</sup>							Model A55xx	Model R55xx
63	35	60	8	26	64	62	57	G ½ B	27	0.25	0.25
100	50	83	8	26	101	99	83	G ½ B	27	0.8	0.8
160	50	83	8	26	161	159	113	G ½ B	27	1.1	1.1

1) With scale ranges  $\geq 0 \dots 500$  °C the dimensions increase by 40 mm  
 2) Option: Stem  $\varnothing$  6, 10, 12 mm

## Adjustable stem and dial version



NS	Dimensions in mm						Weight in kg Model S55xx
	b	b1	d <sup>1)</sup>	Ø D <sub>1</sub>	Ø D <sub>2</sub>	F	
100	25	68	8	101	99	68	0.5
160	25	68	8	161	159	68	0.7

1) Option: Stem Ø 6, 10, 12 mm

## Ordering information

Model / Nominal size / Scale range / Connection size / Connection location / Options

© 2008 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.  
The specifications given in this document represent the state of engineering at the time of publishing.  
We reserve the right to make modifications to the specifications and materials.

