

Bimetal thermometer Model 55, stainless steel version

WIKA data sheet TM 55.01



Applications

- Chemical, petrochemical industry
- Power engineering
- Machine building and general plant construction
- Food industry

Special features

- Application ranges from -70 ... +600 °C
- 6 different connection designs selectable
- Case and stem from stainless steel

Description

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

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

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

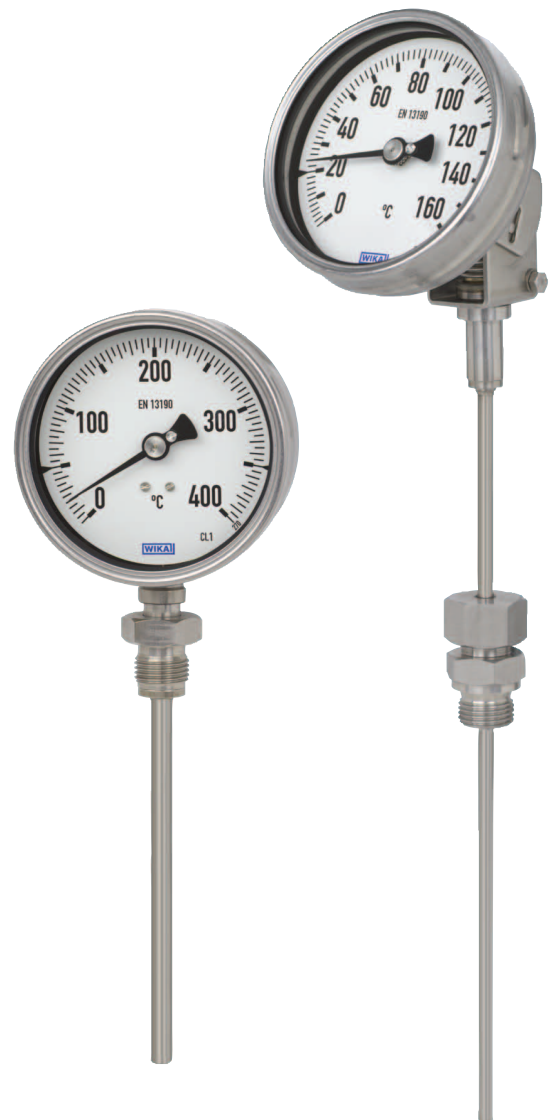


Fig. left: bimetal thermometer model R5502
Fig. right: bimetal thermometer, adjustable stem and dial model S5550

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

Class 1 per EN 13190

Working pressure

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

Case and bayonet ring

Stainless steel

Stem and process connection

Stainless steel 1.4571

Dial

Aluminium white, black lettering

Window

Instrument glass
NS 63: Window from polycarbonate

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

-20 ... +60 °C (optional: -50 ... +60 °C)

Temperature limits for storage and transport

-20 ... +60 °C (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 diameter 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 ¹⁾, error limits (EN 13190)

Scale graduation per WIKA standard

Scale range in °C	Measuring range ¹⁾ 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 ... 140	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	50 ... 450	5	5.0
0 ... 600	100 ... 500	10	10.0

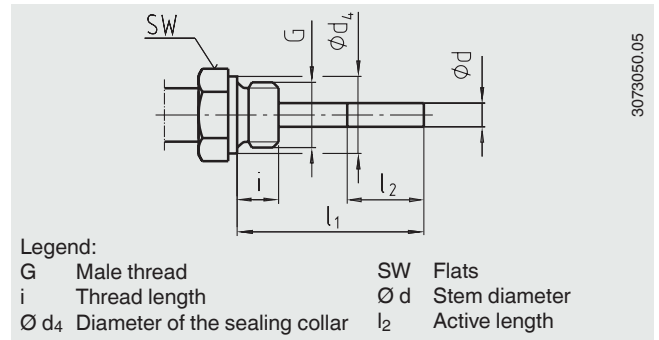
¹⁾ The measuring range is indicated on the dial by two triangular marks. Only within this range is the stated error limit valid per EN 13190.

Connection design

Design standard (male thread connection)

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

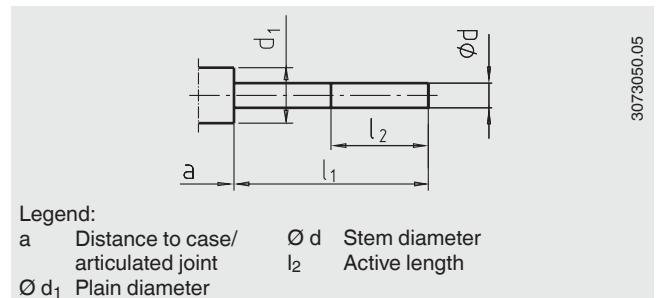
Nominal size NS	Process connection		Dimensions in mm		
	G	i	SW	d_4	$\varnothing d$
63, 100, 160	G ½ B	14	27	26	8
	G ¾ B	16	32	32	8
	½ NPT	19	22	-	8
	¾ NPT	20	30	-	8



Design 1, plain stem (without thread)

Insertion length $l_1 = 140, 200, 240, 290$ mm

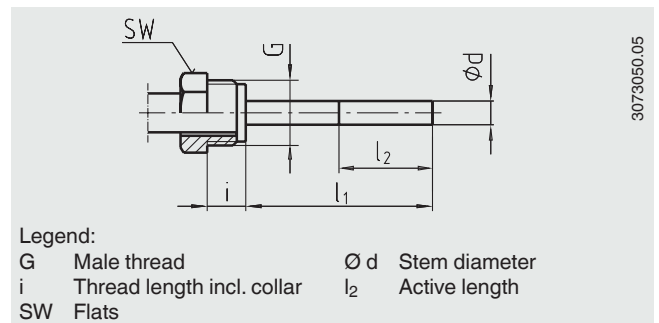
Nominal size NS	Dimensions in mm			
	d_1	$\varnothing d$	a for axial	a for adjustable stem and dial
63	14	8	15	25
100, 160	18	8	15	25



Design 2, male nut

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

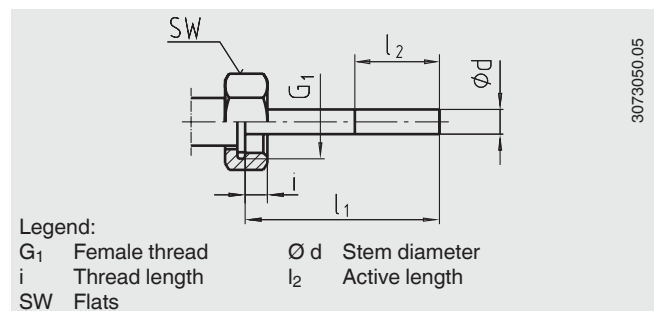
Nominal size NS	Process connection		Dimensions in mm	
	G	i	SW	$\varnothing d$
63, 100, 160	G ½ B	20	27	8



Design 3, union nut

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

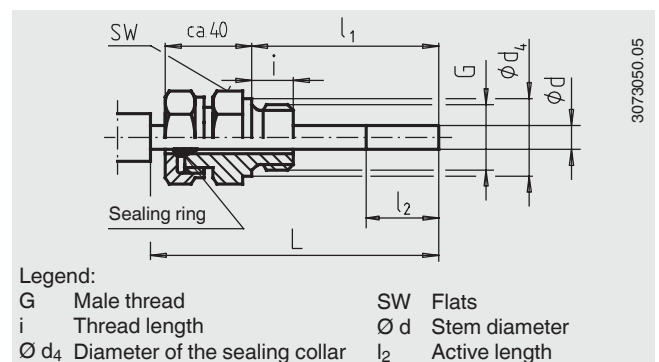
Nominal size NS	Process connection		Dimensions in mm	
	G_1	i	SW	$\varnothing d$
63, 100, 160	G ½	8.5	27	8
	G ¾	10.5	32	8
	M24 x 1.5	13.5	32	8



Design 4, compression fitting (sliding on stem)

Standard insertion 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 1/2 B, G 3/4 B, M18 x 1.5 as well as 1/2 NPT, 3/4 NPT

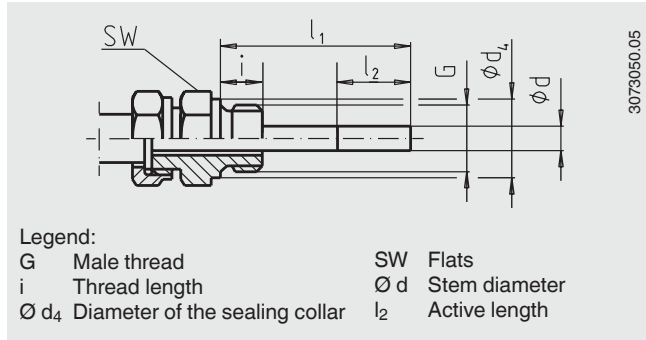
Minimum insertion depth l_{min} approx. 60 mm

Insertion length l_1 = variable

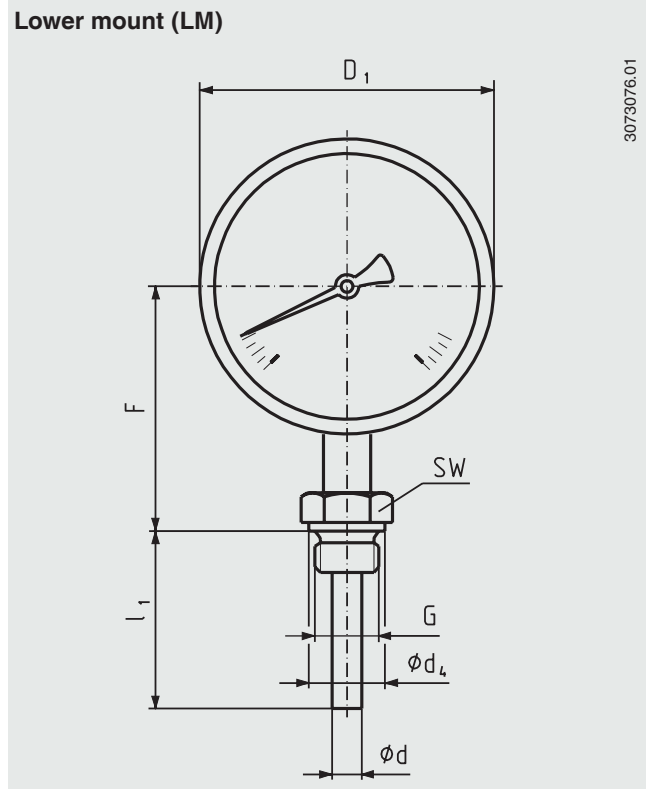
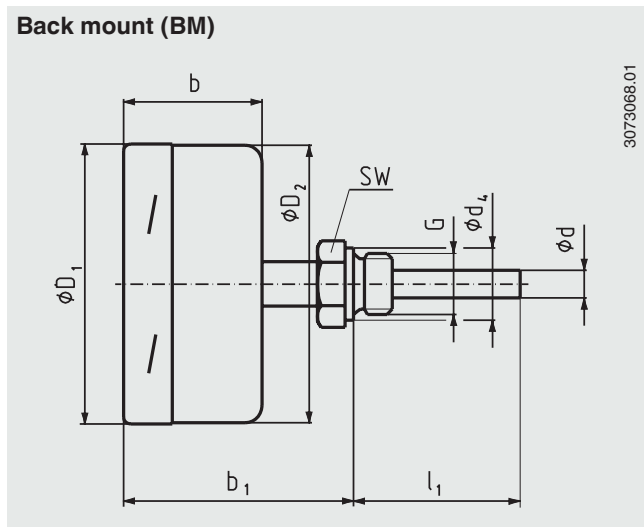
Length $L = l_1 + 40$ mm

Stainless steel 1.4571

Nominal size NS	Process connection		Dimensions in mm		
	G	i	SW	d_4	$\varnothing d$
63, 100, 160	G 1/2 B	14	27	26	8
	G 3/4 B	16	32	32	8
	M18 x 1.5	12	24	23	8
	1/2 NPT	19	22	-	8
	3/4 NPT	20	30	-	8



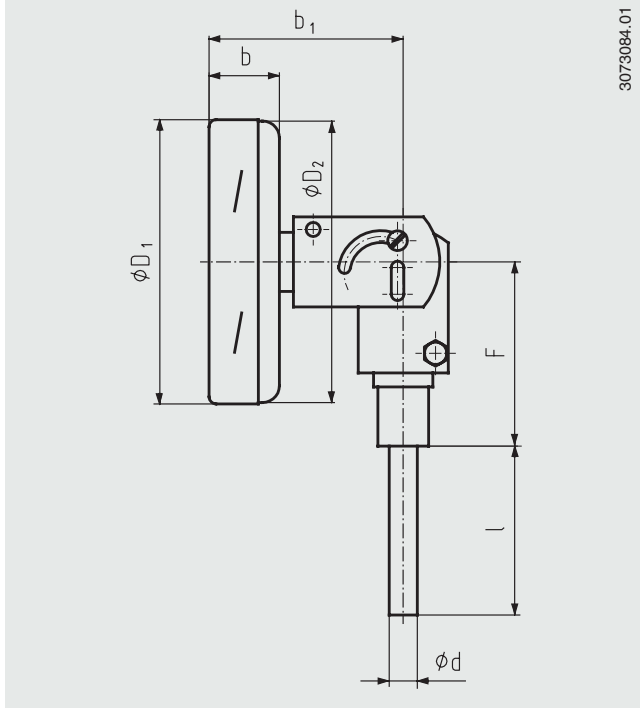
Dimensions in mm



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

1) With scale ranges $\geq 0 \dots 300$ °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 ¹⁾	Ø D ₁	Ø D ₂	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

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