OBSOLETE

Bimetal thermometer with Pt100 electrical output signal
Model 54, stainless steel version

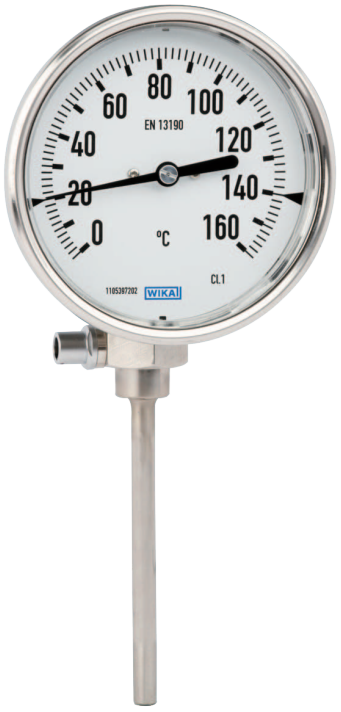
Twin-Temp

Applications

- Machine building, plant and vessel construction
- Energy and power plant technology
- Chemical industry
- Food and beverage industry

Special features

- Application ranges from -30 ... +250 °C
- Case and stem from stainless steel
- Bimetal with zero point adjustment at the back of the case
- Two independent measuring systems in one instrument (bimetal and Pt100)



Bimetal combi-thermometer, model 54

Description

The "Twin-Temp" bimetal combi-thermometer offers two measuring systems in one instrument. A bimetal thermometer enables the visualisation of measured values on site without supply voltage, while, in addition, the integrated Pt100 resistance sensor provides an electrical signal for further processing.

This design is particularly recommended for safety-critical applications and in case of limited space where the process can be opened only at one place.

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Standard version

Measuring element
Bimetal helix and Pt100

Nominal size in mm
63, 80, 100, 160

Connection design
S Standard (male thread connection)
1 Plain stem (without thread)
4 Compression fitting (sliding on stem)

Models

Model	Design
54, Twin-Temp	Back mount (axial)
	Lower mount (radial)

Accuracy class
mechanical: Class 1 per EN 13190
electrical: Class B per IEC 751, 3-wire connection

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

Case and ring
Stainless steel 1.4301

Stem and process connection
Stainless steel 1.4571

Elbow behind the case
Aluminium, only with lower mount version

Dial
Aluminium, white, black lettering

Window
Instrument glass

Pointer
Aluminium, black, adjustable pointer

Electrical connection
4-pin, ODU Mini-Snap

Permissible pressure rating of stem
max. 25 bar, static

Permissible ambient temperature at case
-20 ... +60 °C (others on request)

Temperature limits for storage and transport
-20 ... +60 °C (EN 13190)

Ingress protection
IP 65 per EN 60529 / IEC 529

Options

- Scale range °F, °C/°F (dual scale)
- Liquid damping up to max. 250 °C (at the sensor)
- Laminated safety glass, polycarbonate
- Stem Ø 6, 10 mm
- Ingress protection IP 66
- Special measuring ranges or dial printing to customer specifications (on request)

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	Minimum insertion length L_1 in mm [2]
-30 ... +50	-20 ... +40	0.5	1	80
-20 ... +60	-10 ... +50	0.5	1	80
0 ... 60	10 ... 50	1	1	80
0 ... 80	10 ... 70	1	1	80
0 ... 100	10 ... 90	1	1	80
0 ... 120	10 ... 110	2	2	80
0 ... 160	20 ... 140	2	2	80
0 ... 200	20 ... 180	2	2	65
0 ... 250	30 ... 220	5	5	65

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.
2) If the insertion length is shorter than the minimum insertion length specified, the measuring accuracy of the Twin-Temp cannot be guaranteed anymore.

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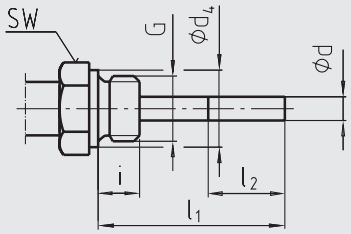
Connection design

Design standard (male thread connection)

Standard insertion length l_1 = 100, 160, 200, 250 mm

Nominal size NS	Process connection G	i	Dimensions in mm SW	d_4	Ø d
63, 80, 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



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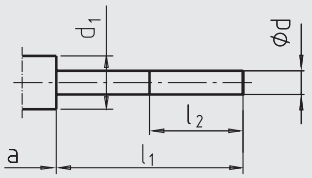
Legend:

G	Male thread	SW	Flats
i	Thread length	Ø d	Stem diameter
Ø d_4	Diameter of the sealing collar	l_2	Active length

Design 1, plain stem (without thread)

Standard insertion length l_1 = 100, 140, 160, 200, 240, 290 mm
Basis for design 4, compression fitting

Nominal size NS	Dimensions in mm d_1	Ød	a
63, 80, 100, 160	18	8	10



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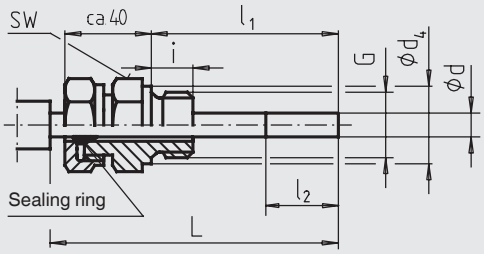
Legend:

a	Distance to case/ articulated joint	Ø d	Stem diameter
		l_2	Active length
Ø d_1	Plain diameter		

Design 4, compression fitting (sliding on stem)

Insertion length l_1 = variable
Length L = l_1 + 40 mm

Nominal size NG	Process connection G	i	Dimensions in mm SW	d_4	Ød
63, 80, 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



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Legend:

G	Male thread	SW	Flats
i	Thread length	Ø d	Stem diameter
Ø d_4	Diameter of the sealing collar	l_2	Active length

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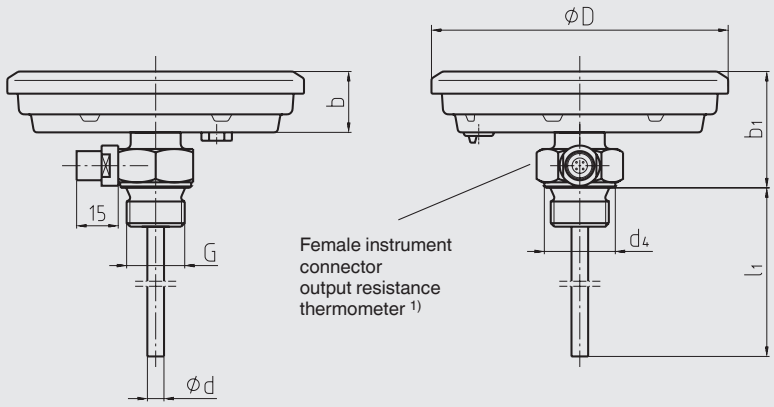
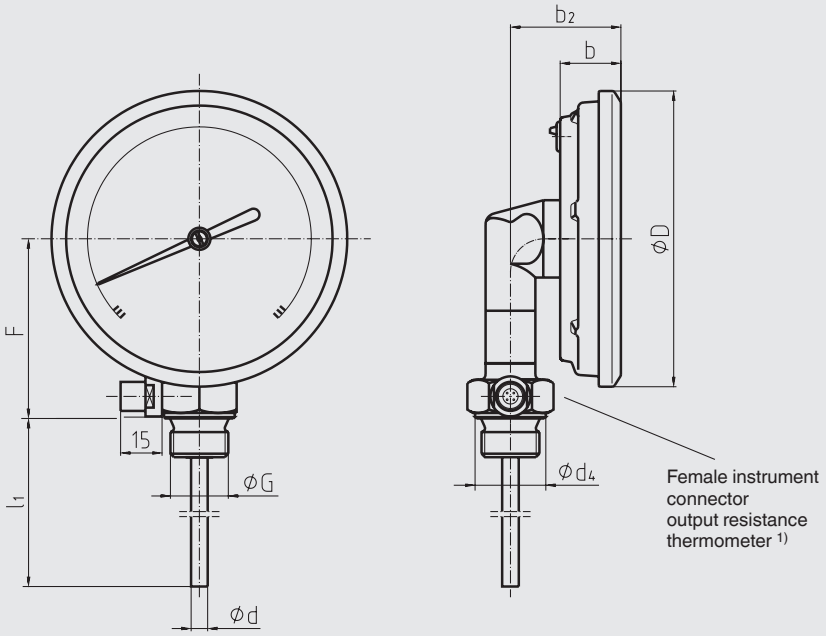
Dimensions in mm

Back mount (axial)



1) Suitable mating connectors see "Accessories"

Lower mount (radial)



1) Suitable mating connectors see "Accessories"

NS	Dimensions in mm							Weight in kg	
	b	b_1	b_2	Ø D	Ø d	Ø d_4	F	R	U
63	20	42	38	68	8	26	66	0.25	0.35
80	20	42	38	77	8	26	66	0.30	0.40
100	22	44	40	107	8	26	66	0.40	0.50
160	25	47	43	161	8	26	75	0.55	0.65

R Back mount (BM)
U Lower mount (LM)

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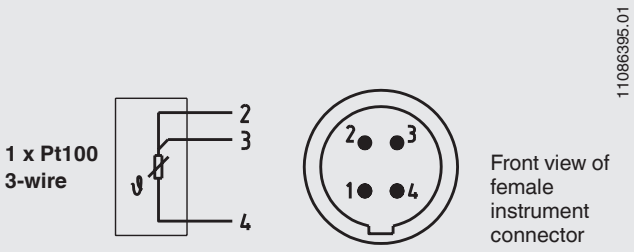
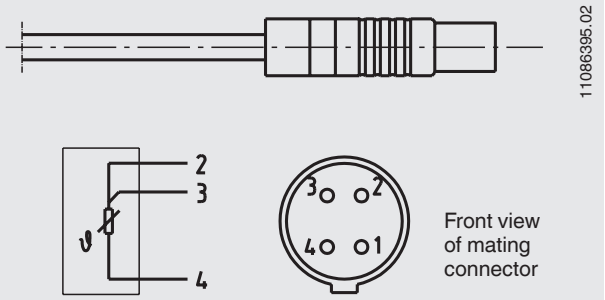
Electrical connection

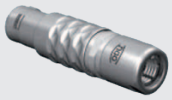
Female instrument connector with pins



Mating connector with insert (option)



Accessories

Description		Order number
ODU Mini-Snap, size 0, mating connector		11015217
ODU Mini-Snap, size 0, mating connector with 1.5 m PTFE cable		14005534
ODU Mini-Snap, size 0, mating connector with 3.0 m PTFE cable		14005545

Ordering information

Model / Nominal size / Scale range / Connection design / Connection size / Length l_1 / Options

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