

Bimetal Thermometers

Industrial Series

Thermometers

Model 52

Service intended

General purpose industrial thermometer

Nominal size

25, 33, 40, 50, 63, 80, 100 and 160 mm

Temperature element

Coiled bimetal

Accuracy

Class 1 per DIN 16 203 NS 63 and above

Class 2 per DIN 16 203 NS 50 and below

Working range

Normal: measuring range per DIN 16 203

Short time (≤ 1 h): scale range per DIN 16 203

Pressure rating of stem

6 bar maximum NS 50 and below

25 bar maximum NS 63 and above

Degree of protection

IP 54 (EN 60 529 / IEC 529) NS 40 and below

IP 43 (EN 60 529 / IEC 529) NS 50 and above



Standard features

Location of stem

Centre back

Centre back with spacer

Radial bottom

Case material

Stainless steel

With location of stem radial bottom: angle piece made of aluminium

Bezel ring

Stainless steel

Connection

Stem with male thread, see table page 2.

Stem

Diameter: see table page 2

Material: stainless steel

Dial

Satin finish aluminium with black lettering

Pointer

Black aluminium NS 40 and below

Adjustable pointer NS 50 and above

Window

Instrument glass

Acrylic plastic with NS 33 only

Optional extras

- Scale range °F, °C/°F (dual scale)
- Stem 6 mm or 10 mm diameter
- Stem 4 mm diameter with tip
- Other connections
- Thermowell per DIN 43 772 or to user specifications

Scale-, measuring ranges¹⁾, limits of error per DIN 16 203

Scale range °C	Scale spacing °C		Measuring range ¹⁾ °C	Limit of error °C	
	NS 63 and below	NS 80 and above		NS 50 and below	NS 63 and above
- 30 ... + 50	1	0.5	- 20 ... + 40	2	1
- 20 ... + 60			- 10 ... + 50		
0 ... 60			+10 ... + 50		
0 ... 80			+10 ... + 70		
0 ... 100	2	1	+10 ... + 90	4	2
0 ... 120			+ 20 ... + 100		
0 ... 160			+ 20 ... + 140		
0 ... 200			+ 20 ... + 180		
0 ... 250 ²⁾	5	2	+ 30 ... + 220	5	2.5
0 ... 300 ³⁾			+ 30 ... + 270		
0 ... 400 ³⁾			+ 50 ... + 350		
0 ... 500 ³⁾			+ 50 ... + 450		
		5		-	5

1) With class 1 thermometers the measuring range is indicated on the dial by two triangular marks. Only within this range the stated limit of error is valid according to DIN 16 203.

2) not with NS 33

3) not with NS 50 and below

Models

Location of stem: centre back
(up to 250 °C)

Model	NS
A 5230	25
A 5200	33
A 5201	40
A 5202	50
A 5203	63
A 5204	80
A 5205	100
A 5206	160

Location of stem: centre back with spacer
(from 300 °C or on request)

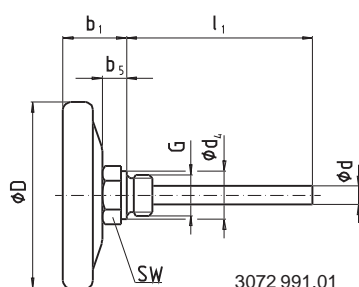
Model	NS
A 5219	63
A 5220	80
A 5221	100
A 5222	160

Location of stem: radial bottom

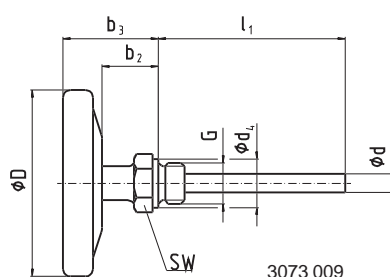
Model	NS
R 5240	63
R 5241	80
R 5242	100
R 5243	160

Dimensions

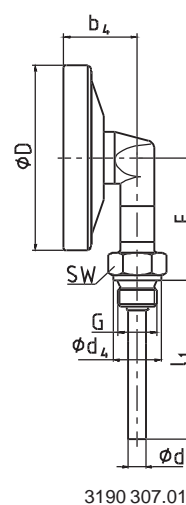
Location of stem: centre back
(up to 250 °C)



Location of stem: centre back with spacer
(from 300 °C or on request)



Location of stem: radial bottom



NS	Dimensions in mm											Weight in kg		
	b ₁	b ₂	b ₃	b ₄	b ₅	Ø d	Ø d ₄	Ø D	F	G	SW	centre back	centre back with spacer	radial bottom
25	15				2	4		25		M 8	12	0.035		
33								33				0.040		
40	21				8			40		G 1/8 A	17	0.050		
50								50				0.060		
63	29	30 ¹⁾	46	34	13	8	26	63	47	G 1/2 A	27	0.160	0.200	0.220
80	30		47	36				80	56			0.200	0.240	0.270
100	35		52	40				100	66			0.250	0.290	0.330
160	39		57	42.5				160	96			0.450	0.490	0.560

1) from 300 °C or on request

Design of connection per DIN

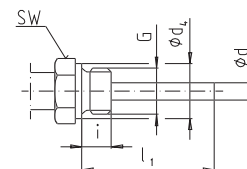
Dimensions in mm

Standard connection

Male thread

NS 25 and NS 33: M8 x 1.25, G 1/8 A
 NS 40 and NS 50: G 1/8 A, G 1/4 A
 NS 63 and above: G 1/2 A, G 3/4 A, 1/2 NPT, 3/4 NPT
 Length of stem $l_1 = 63, 100, 160, 200$ or 250 mm
 Stainless steel

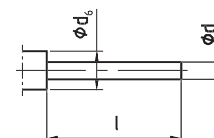
Male thread G	SW	d ₄	i
M8 x 1.25	12	-	8
G 1/8 A	17	-	8
G 1/4 A	17	-	8
G 1/2 A	27	26	14
G 3/4 A	32	32	16
1/2 NPT	22	-	19
3/4 NPT	30	-	20



Connection 1

Plain stem

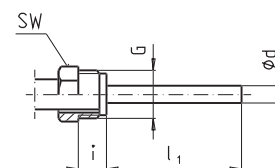
NS 25 and NS 33: d₆ = 8 mm
 NS 40 and NS 50: d₆ = 12 mm
 NS 63 and above: d₆ = 18 mm, to suit for thermowells SWT52G and SWT52S
 and compression fitting of connection 4
 Length of stem $l = 140, 200, 240$ or 290 mm
 Stainless steel



Connection 2 (only NS 63 and above)

Male nut G 1/2 A, G 3/4 A
 Length of stem $l_1 = 80, 140, 180$ or 230 mm
 Stainless steel

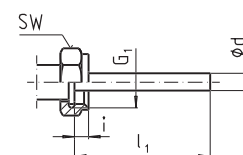
Male thread G	SW	i
G 1/2 A	27	20
G 3/4 A	32	23



Connection 3 (only NS 63 and above)

Union nut G 1/2, G 3/4
 Length of stem $l_1 = 89, 126, 186, 226$ or 276 mm
 Stainless steel

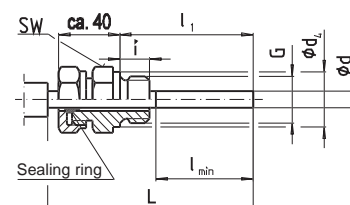
Female thread G ₁	SW	i
G 1/2	27	8.5
G 3/4	32	10.5



Connection 4 (only NS 63 and above)

Compression fitting (sliding on stem)
 G 1/2 A, G 3/4 A, 1/2 NPT or 3/4 NPT
 Minimum insertion depth l_{min} approx. 60 mm
 Length of stem $l_1 =$ variable
 Length $L = l_1 + 40$ mm
 Stainless steel

Male thread G	SW	d ₄	i
G 1/2 A	27	26	14
G 3/4 A	32	32	16
1/2 NPT	22	-	19
3/4 NPT	30	-	20



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Ordering information

State: Model / Nominal size / Scale range / Location of stem / Design and size of connection / Length of stem I, I₁ / Optional extras required



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