

Gas-actuated thermometer Highly vibration resistant Model 75, stainless steel version

WIKA data sheet TM 75.01



for further approvals
see page 5

Applications

- For the local measurement of exhaust gas temperatures or oil temperatures in diesel engines, turbines, compressors and strongly vibrating machinery

Special features

- Instruments meet the highest mechanical and measurement-technology standards
- Very high vibration resistance
- Especially robust design with cushioning fluid for a long service life
- All stainless steel design



Gas-actuated thermometer model R75.100

Description

This series of thermometers has been designed for applications where strong shocks and vibrations occur. These thermometers measure accurately and reliably, even when exposed to extremely high mechanical loads. They are also resistant to high ambient temperatures and humidity.

The thermometers are completely made of stainless steel. Various insertion lengths and process connections are available to optimally match the requirements of each process.

Standard version

Temperature element

Inert gas expansion system (non-toxic)

Nominal size in mm

100

Design of connection

- 2 Male nut
- 3 Union nut
- 4 Compression fitting (sliding on stem)

Models

Model	NS	Version
A75.100	100	Back mount (axial)
R75.100	100	Lower mount (radial)

Accuracy class

Class 1 per EN 13190

(0 ... 40 °C ambient temperature)

Working range

Normal (1 year): Measuring range per EN 13190

Short time (24 h max.): Scale range per EN 13190

Nominal use

EN 13190

Case, bezel ring

Stainless steel 1.4301 (304)

Stem, process connection

Stainless steel 1.4571 (316Ti)

Stem diameter

13 mm

Dial

Aluminium, white, black lettering

Window

Laminated safety glass

Pointer

Aluminium, black, adjustable pointer

Liquid damping

Silicon oil, M10.000

Temperature limits for storage and transport

-50 ... +70 °C

Ambient temperature limit at the case

-50 ... +60 °C (accuracy class 1 only from 0 ... 40 °C)

Pressure rating of stem

max. 25 bar, static with design 4

max. 40 bar, static with design 2 and 3

Ingress protection

IP 66 per EN 60529 / IEC 529

Options

- Scale range °F, °C/°F (dual scale)
- With fabricated or solid machined thermowell
- Various extension neck an insertion length available
- Various process connections available
- Thermometers with electrical output signal (data sheet TV 17.02)

Scale, measuring ranges ¹⁾, limits of error (EN 13190)

Scale graduation per WIKA standard

Scale range in °C	Measuring range in °C	Scale spacing in °C	Limit of error ±°C
50 ... 600	150 ... 500	10	10
50 ... 650	150 ... 550	10	10
50 ... 700	150 ... 600	10	10

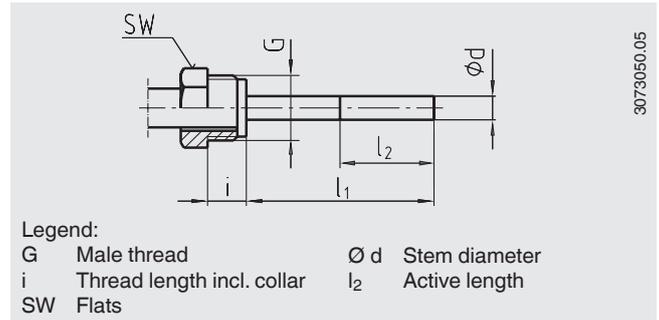
¹⁾ The measuring range is indicated on the dial by two triangular marks.
Only within this range the stated limit of error is valid according to EN 13190.

Design of connection

Design 2, male nut

Standard insertion length $l_1 = 120, 140, 180, 230$ mm

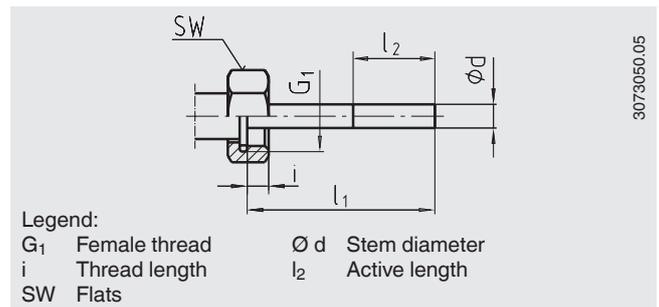
Nominal size NS	Process connection		Dimensions in mm		
	G	i	SW	$\varnothing d$	
100	G 3/4 B	22	32	13	



Design 3, union nut

Standard insertion length $l_1 = 89, 126, 186, 226, 276$ mm

Nominal size NS	Process connection		Dimensions in mm		
	G_1	i	SW	$\varnothing d$	
100	G 3/4	10.5	32	13	

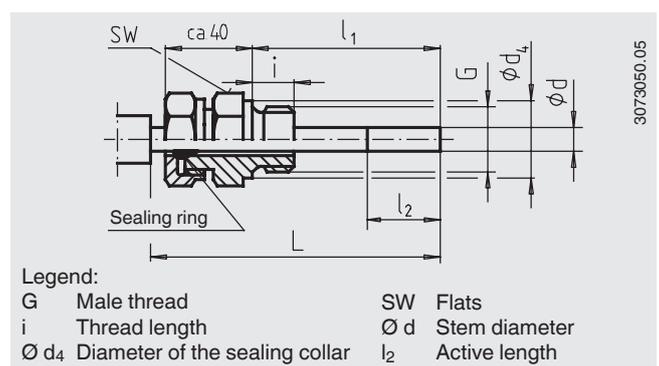


Design 4, compression fitting (sliding on stem)

Insertion length $l_1 =$ variable

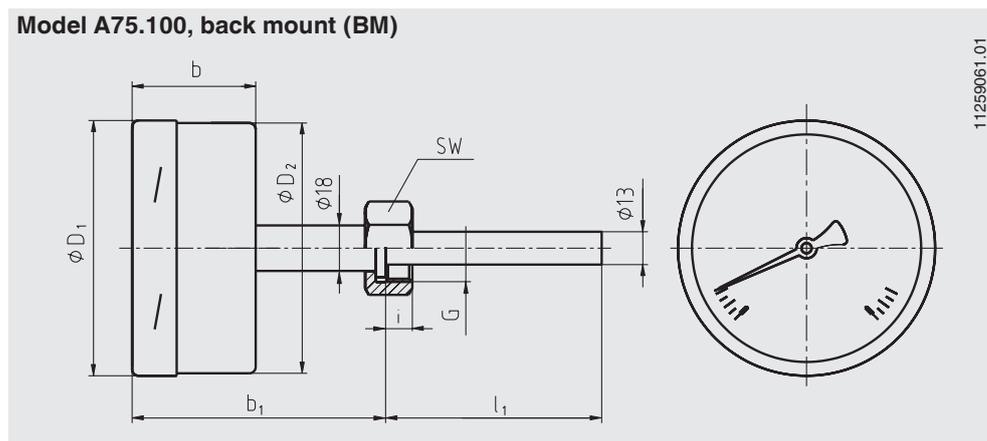
Length $L = l_1 + 40$ mm

Nominal size NS	Process connection		Dimensions in mm			
	G	i	SW	$\varnothing d_4$	$\varnothing d$	
100	G 3/4 B	16	32	32	13	
	3/4 NPT	20	30	-	13	

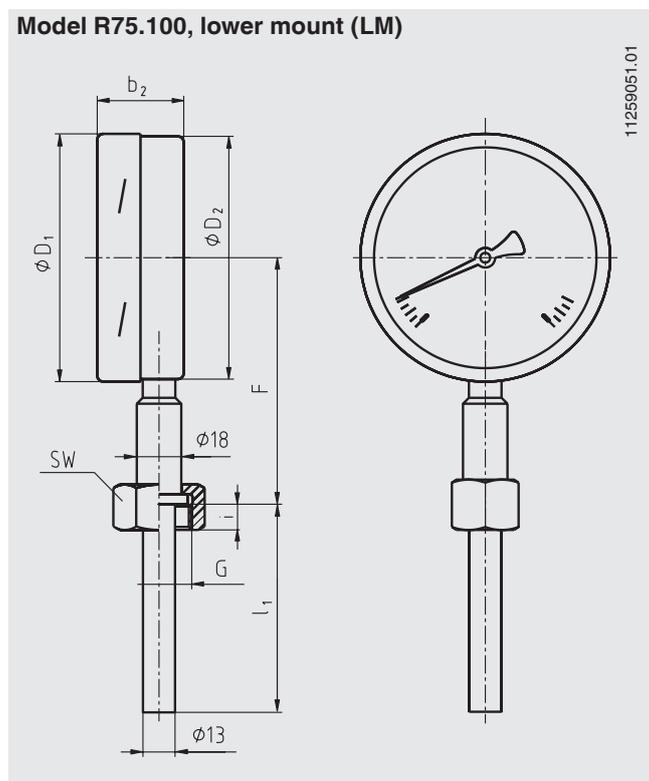


Dimensions in mm

Model A75.100, back mount (BM)



Model R75.100, lower mount (LM)



Nominal size NS	Dimensions in mm					Weight in kg	
	b	b ₁ ¹⁾	b ₂	F ¹⁾	D ₁	D ₂	
100	50	110	35	110	101	99	0.75

1) Others on request

Thermowell

At pressures greater than 10 bar, high flow rates and highly viscous media, the use of a thermowell is recommended.

With a thermowell, one can remove the thermometer without compromising the sealing of the system or stopping the process (i.e. for instrument replacement or calibration).

Comprehensive WIKA thermowell portfolio, see www.wika.de.

CE conformity

ATEX directive

94/9/EG, II 2 GD c TX

Approvals (options)

- **GOST-R**, import certificate, Russia
- **GOST**, metrology, measurement technology, Russia
- **CRN**, safety (e.g. electr. safety, overpressure, ...), Canada

Certificates (options)

- 2.2 Test report
- 3.1 inspection certificate
- DKD/DakS calibration certificate

Approvals and certificates, see website

Ordering information

Model / Nominal size / Scale range / Design of connection / Process connection / Length l_1 / Options

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