

Gas Actuated Thermometers for Sterile Process Applications Model 74, Stainless Steel Series

WIKA Data Sheet TM 74.01



Applications

- Food industry
- Sterile process technology
- Bio and pharmaceutical industry

Special Features

- No dead space
- Hygienic design
- Aseptic process connections
- Materials and surface finish quality according to the guidelines and standards of the pharmaceutical industry
- 3A certified



Gas Actuated Thermometer Model R74.100
with VARIVENT® Connection and Liquid Damping

Description

This series of thermometers has been designed as an addition to the standard range of thermometers in order to meet the special requirements of the food, biotechnology, pharmaceutical, paint and varnish industries.

The Model 74 gas actuated thermometer is ideally suited for the high standard requirements of sterile engineering processes and is certified in accordance with the 3A Sanitary Standards.

Stem and case are made of stainless steel. The surface of the wetted parts is polished. A wide variety of process connections is available to ensure the optimal adaptation to many different process requirements. The stem is free of dead space.

Standard features

Temperature element

Inert gas expansion system (non-toxic)

Nominal size

100 mm

Process connection

- VARIVENT® connection Form N (mounting diameter 68 mm) for pipes DN 40 up to DN 125 and 1 ½" up to 4", PN 25
- NEUMO BioControl™ size 50 (mounting diameter 50 mm) for pipes DN 25 up to DN 100, PN 16 or size 65 (mounting diameter 68 mm) for pipes DN 40 up to DN 100, PN 16
- Union nut DIN 11 851, DN 40, PN 40 or DN 50, PN 25
- Tri-Clamp, DN 1 ½", PN 40 or DN 2", PN 40

Location of stem

A74.100 centre back (axial)

R74.100 radial bottom

Accuracy

within ± 1 °C in measuring range

Working range

Permanent (1 year): measuring range per EN 13 190

Short time (max. 24h): scale range per EN 13 190

Nominal use

EN 13 190

Stem

stainless steel

Diameter 21 mm

Length 30 mm

Surface of wetted parts

Polished, roughness $R_a \leq 0.8 \mu\text{m}$

Material

Wetted parts stainless steel 1.4435

Case stainless steel

Bezel

Cam ring (bayonet type) bezel, natural finish stainless steel

Dial

White aluminium with black lettering

Window

Laminated safety glass

Pointer

Adjustable black aluminium pointer

Temperature limits for storage and shipping

-50 °C ... +60 °C (EN 13 190) without liquid damping

-20 °C ... +60 °C (EN 13 190) with food-compatible liquid damping

-50 °C ... +60 °C (EN 13 190) with liquid damping

Ambient temperature limit at the case

0 °C ... +40 °C max. (others on request)

Pressure rating of stem

25 bar max., static

Approval

3A certified

Ingress protection

IP 65 (EN 60 529 / IEC 529)

Optional extras

- Scale range °F, °C/°F (dual scale)
- Other process connections
- Wetted parts electropolished
- Case with liquid damping
- Case with food-compatible liquid damping
- Acrylic window
- Alarm contacts (see data sheet AC 08.01)
- Ingress protection IP 66 (not for gauges with alarm contacts)

Scale, measuring ranges¹⁾, limits of error per EN 13 190

Scale graduation according to WIKA standard

Scale range in °C	Measuring range in °C	Scale spacing in °C	Limit of error ± °C
0 ... 120	+20 ... +100	1	1
0 ... 160	+20 ... +100	1	1

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 DIN EN 13 190.

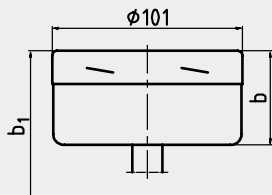
Models

Model	Nominal size	Location of stem
A74.100	100	centre back
R74.100	100	radial bottom

Dimensions in mm

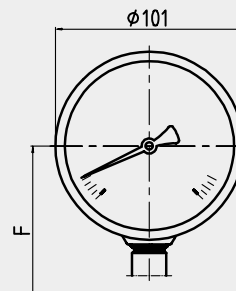
Both thermometers, Model A74.100 centre back connection and Model R74.100 radial connection are available with all process connections shown.

Model A74.100, centre back connection, standard version



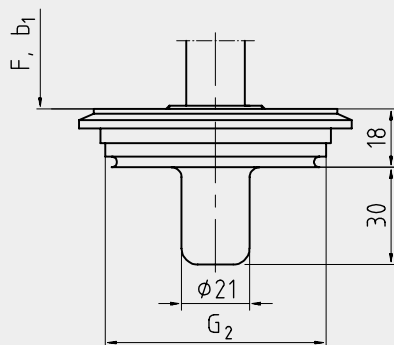
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Model R74.100, radial connection, standard version



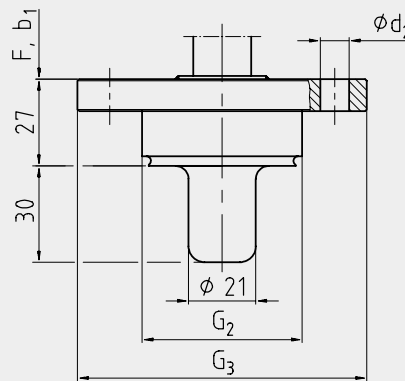
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Process connection VARIVENT® Form N



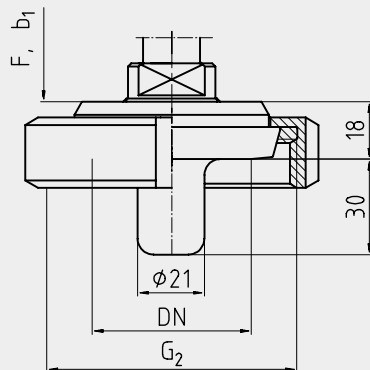
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Process connection NEUMO BioControl™



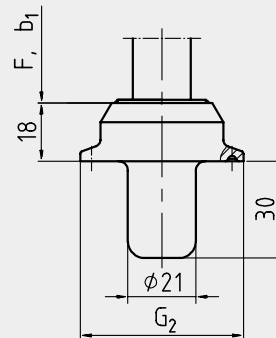
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Process connection union nut DIN 11851



3366 231.01

Process connection Tri-Clamp



3366 304.01

Process connection	Dimensions in mm						Weight in kg
	G ₂	G ₃	Ø d ₂	b	b ₁	F	
VARIVENT® Form N	68	–	–	50	80	82	1.70
NEUMO BioControl™ size 50	50	90	4 x Ø 9	50	80	82	1.75
NEUMO BioControl™ size 65	68	120	4 x Ø 11	50	80	82	2.40
Union nut DIN 11851, DN 40	Rd 65 x 1/6	–	–	50	80	82	1.85
Union nut DIN 11851, DN 50	Rd 78 x 1/6	–	–	50	80	82	1.90
Tri-Clamp, DN 1 1/2"	50	–	–	50	80	82	1.70
Tri-Clamp, DN 2"	64	–	–	50	80	82	1.85

Case depth b and b₁ is enlarged with optional alarm contact, dependent on the number of contacts and contact function.

Ordering information

Model / Scale range / Surface of wetted parts / Process connection / Optional extras required

Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.
Modifications may take place and materials specified may be replaced by others without prior notice.



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