

Gas Actuated Thermometers for Sanitary Applications Model 74, Stainless Steel Series

WIKA Data Sheet TM 74.01



Applications

- Food industry
- Sanitary applications
- 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



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

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 sanitary applications. Furthermore, the Model 74 gas actuated thermometer is 3A marked based on a third party verification for conformance to the 3A standard 74-03.

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 version

Temperature element

Inert gas expansion system, non-toxic

Nominal size in mm

100

Process connection

- VARIVENT® connection
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

Instrument version

A74.100 back mount (axial)
R74.100 lower mount (radial)

Accuracy

Within ± 1 °C in measuring range

Working range

Permanent (1 year): measuring range per DIN EN 13 190
Short time (max. 24 h): scale range per DIN EN 13 190

Nominal use

DIN EN 13 190

Stem

Wetted parts stainless steel 1.4435
Diameter 21 mm
Length 30 mm

Surface of wetted parts

$R_a \leq 0.8 \mu\text{m}$

Case

Stainless steel 1.4301

Bezel

Cam ring (bayonet type) bezel, stainless steel 1.4301

Dial

Aluminium, white, black lettering

Window

Laminated safety glass

Pointer

Aluminium, black, adjustable pointer

Temperature limits for storage and shipping

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

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

Ambient temperature limit at the case

0 ... +40 °C max. (others on request)

Pressure rating of stem

25 bar max., static

Ingress protection

IP 65 per EN 60 529 / IEC 529

Options

- Scale range °F, °C/°F (dual scale)
- Other process connections
- Surface of wetted parts
 - $R_a \leq 0.4 \mu\text{m}$
 - Electropolished $R_a \leq 0.4 \mu\text{m}$
 - Polished and electropolished $R_a \leq 0.25 \mu\text{m}$
- Case with food-compatible liquid damping (medicinal white mineral oil KN 92)
- Acrylic window
- Ingress protection IP 66
- Thermometers with switch contacts (data sheet TV 27.02)

Scale, measuring ranges¹⁾, limits of error (DIN EN 13 190)

Scale graduation per WIKA standard

Scale range in °C	Measuring range in °C	Scale spacing in °C	Limits 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.

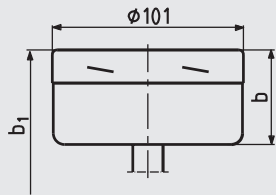
Models

Model	NS	Connection location
A74.100	100	back mount
R74.100	100	lower mount

Dimensions in mm

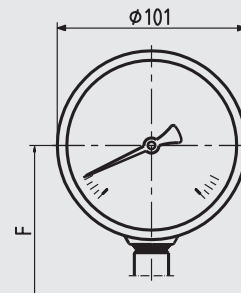
Both thermometers, Model A74.100 centre back connection and Model R74.100 radial connection are available with all process connections shown.

Model A74.100, centre back connection, standard version



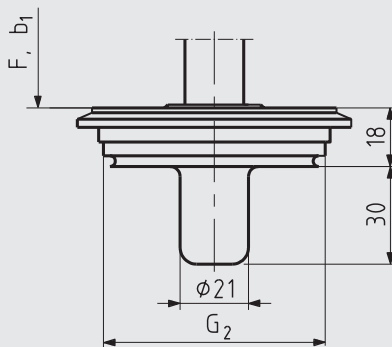
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Model R74.100, radial connection, standard version



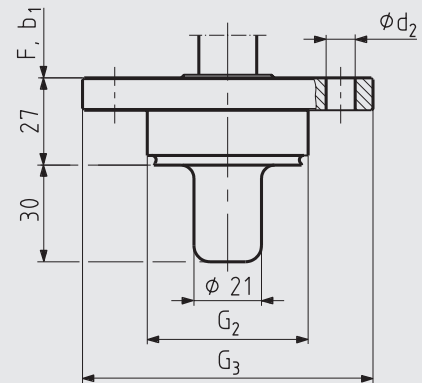
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Process connection VARIVENT®



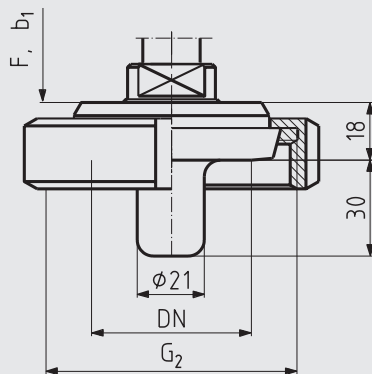
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Process connection NEUMO BioControl™



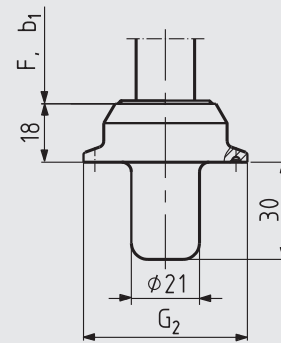
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Process connection union nut DIN 11 851



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Process connection Tri-Clamp



3366304.01

Process connection	Dimensions in mm						Weight in kg
	G_2	G_3	ϕd_2	b	b_1	F	
VARIVENT® Form N	68	-	-	50	80	82	1.70
VARIVENT® Form F	50	-	-	50	80	82	1.65
NEUMO BioControl™ size 50	50	90	4 x $\phi 9$	50	80	82	1.75
NEUMO BioControl™ size 65	68	120	4 x $\phi 11$	50	80	82	2.40
Union nut DIN 11 851, DN 40	Rd 65 x $\frac{1}{6}$	-	-	50	80	82	1.85
Union nut DIN 11 851, DN 50	Rd 78 x $\frac{1}{6}$	-	-	50	80	82	1.90
Tri-Clamp, DN 1 ½"	50	-	-	50	80	82	1.70
Tri-Clamp, DN 2"	64	-	-	50	80	82	1.85

Ordering information

Model / Scale range / Surface of wetted parts / Process connection / Options

The specifications given in this document represent the state of engineering at the time of publishing.
We reserve the right to make modifications to the specifications and materials.



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