

# Gas-actuated thermometer For sanitary applications Model 74, stainless steel version

WIKA data sheet TM 74.01



## Applications

- Food industry
- Sanitary applications
- Bio and pharmaceutical industry

## Special features

- Dead space free
- Hygienic version
- Aseptic process connections
- Material and surface finish quality in accordance with pharmaceutical industry directives and standards



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, bio and pharmaceutical industries as well as in the paints and varnishes industry.

The model 74 gas-actuated thermometer is ideally suited to fulfil the high standard requirements of sanitary applications. In accordance with the testing by an independent authority (Third Party Verification) the thermometer corresponds to the 3-A standard 74-03 and is marked by us accordingly.

Stem and case are made of stainless steel. The surface of the wetted parts is polished, and 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

### Measuring principle

Gas-pressure inert gas filling

### Nominal size in mm

100

### Process connection

- VARIVENT® connection  
for pipes DN 40 to DN 125 and 1 ½" to 4", PN 25
- NEUMO BioControl®  
size 50 (mounting diameter 50 mm) for pipes DN 25 to DN 100, PN 16 or  
size 65 (mounting diameter 68 mm) for pipes DN 40 to DN 100, PN 16
- Grooved union nut DIN 11851, DN 40, PN 40 or DN 50, PN 25
- Tri-clamp, DN 1 ½", PN 40 or DN 2", PN 40

### Models

Model	NS	Design
A74.100	100	Back mount (axial)
R74.100	100	Lower mount (radial)

### Indication accuracy

Within ±1 °C within measuring range

### Working range

Normal (1 year): Measuring range (EN 13190)

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

### Rated operating ranges and conditions

EN 13190

### Temperature sensor

- Wetted parts stainless steel 1.4435
- Diameter 21 mm
- Length 30 mm

### Surface of the 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, micro adjustment

### Temperature limits for storage and transport

-50 ... +60 °C without liquid damping

-20 ... +60 °C (EN 13190) with liquid damping

### Permissible ambient temperature at case

max. 0 ... 40 °C (others on request)

### Permissible pressure rating at the temperature sensor

max. 25 bar, static

### Ingress protection

IP 65 per EN 60529 / IEC 529

## Options

- Scale range °F, °C/°F (dual scale)
- Other process connection
- Surface of the 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)
- Window from clear plastic
- Ingress protection IP 66
- Thermometer with switch contacts (data sheet TV 27.02)
- Version per ATEX Ex II 2 GD c TX

### Scale range, measuring range <sup>1)</sup>, error limit

#### Scale graduation per WIKA standard

Scale range in °C	Measuring range in °C	Scale spacing in °C	Error limit ± °C
-30 ... +50	-20 ... +40	1	1
-20 ... +100	0 ... +80	1	1
0 ... +120	+20 ... +100	1	1
0 ... +160	+20 ... +100	1	1

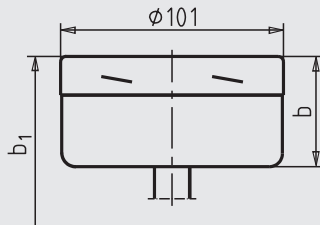
1) The measuring range is indicated on the dial by two triangular marks.  
Only within this range is the stated error limit valid.

BioControl® is a registered trademark of the company NEUMO.

## Dimensions in mm

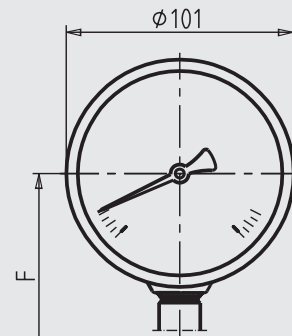
Both thermometers, model A74.100 back mount connection and model R74.100 lower mount connection, are available with all process connections shown.

**Model A74.100, back mount, standard version**



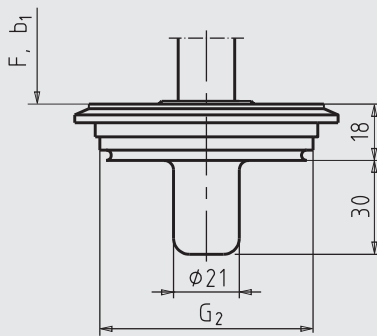
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**Model R74.100, lower mount, standard version**



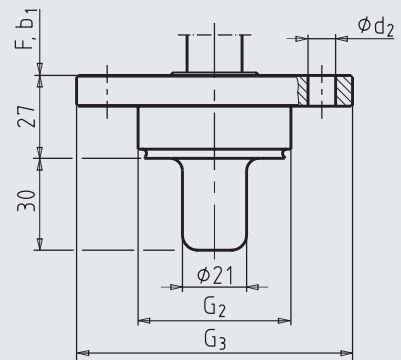
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**Process connection VARIVENT®**



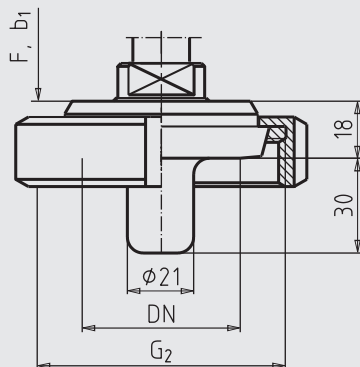
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**NEUMO BioControl process connection™**



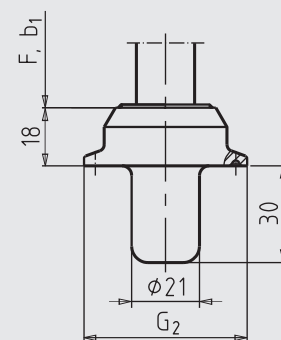
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**Process connection with grooved union nut DIN 11851**



3366231.01

**Process connection Tri-clamp**



3366304.01

Process connection	Dimensions in mm						Weight in kg
	G <sub>2</sub>	G <sub>3</sub>	Ø d <sub>2</sub>	b	b <sub>1</sub>	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 Ø 9	50	80	82	1.75
NEUMO BioControl® size 65	68	120	4 x Ø 11	50	80	82	2.40
Grooved union nut DIN 11851, DN 40	Rd 65 x 1/6	-	-	50	80	82	1.85
Grooved 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

## Ordering information

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

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