

# Bimetal thermomanometer Eco

## For pressure and temperature measurement

### Model THM10

WIKA data sheet PM 01.24

#### Applications

- Heating systems
- Combi-boilers with hot water and heating

#### Special features

- Combined indication for pressure and temperature
- Scale ranges to 0 ... 10 bar [ 0 ... 150 psi] and 0 ... 120 °C [32 ... 248 °F]
- Shut-off valve included in delivery



Fig. left: THM10.063, lower mount

Fig. right: Shut-off valve

#### Description

The model THM10 thermomanometer combines the measurement of pressure and temperature in one instrument. This enables the control of both measureands at one single measuring location. The built-in measuring elements - Bourdon tube and bimetal coil - provide for reliable measuring results.

By using the self-sealing shut-off valve, the measuring instrument can be dismantled at any time and without having to empty the heating circuit first. The bimetal thermomanometer is delivered with a shut-off valve as standard. WIKA manufactures and qualifies this instrument in accordance with the standards EN 837-1 and EN 13190.

## Specifications

Basic information	
<b>Standard</b>	
Pressure	EN 837-1 For information on the "Selection, installation, handling and operation of pressure gauges", see Technical information IN 00.05.
Temperature	EN 13190
<b>Nominal size (NS)</b>	<ul style="list-style-type: none"> <li>■ Ø 63 mm [2 ½"]</li> <li>■ Ø 80 mm [3"]</li> </ul>
<b>Connection location</b>	<ul style="list-style-type: none"> <li>■ Lower mount (radial)</li> <li>■ Centre back mount</li> </ul>
<b>Window</b>	Plastic, crystal-clear, snap-fitted in case
<b>Case</b>	Plastic, black
<b>Movement</b>	Copper alloy

Measuring element	
<b>Type of measuring element</b>	
Pressure	Bourdon tube, C-type
Temperature	Bimetal coil
<b>Material</b>	Copper alloy

Accuracy specifications	
<b>Accuracy class</b>	
Pressure	Class 2.5 per EN 837-1
Temperature	Class 2 per EN 13190
<b>Temperature error (pressure)</b>	On deviation from the reference conditions at the measuring system: ≤ ±0.4 % per 10 °C [≤ ±0.4 % per 18 °F] of full scale value
<b>Reference conditions (pressure)</b>	
Ambient temperature	+20 °C [+68 °F]

## Scale ranges for pressure

bar
0 ... 4
0 ... 6
0 ... 10

MPa
0 ... 0.4
0 ... 0.6
0 ... 1

psi
0 ... 60
0 ... 100
0 ... 150

## Scale ranges for temperature

Scale range in °C	Measuring range in °C	Scale interval in °C	Error limit ±°C
0 ... 120	20 ... 60	5	4

Other scale ranges on request

Further details on: Scale ranges		
<b>Special scale ranges</b>	Other scale ranges on request	
<b>Unit</b>		
Pressure	<input type="checkbox"/> bar <input type="checkbox"/> MPa <input type="checkbox"/> psi	
Temperature	<input type="checkbox"/> °C <input type="checkbox"/> °F	
<b>Dial</b>		
Scale colour	White	
Scale position	Pressure	Top
	Temperature	Bottom
Material	Plastic, black	
Special scale	Customer-specific dials, e.g. with red mark, circular arcs or circular sectors, on request	
<b>Pointer</b>		
Instrument pointer	Pressure	Blue
	Temperature	Red
Material	Plastic	
<b>Pointer stop pin</b>	At zero point (only for pressure scale)	

Process connection	
<b>Standard</b>	<ul style="list-style-type: none"> <li>■ EN 837-1</li> <li>■ ISO 7</li> <li>■ ANSI/B1.20.1</li> </ul>
<b>Size</b>	
EN 837-1	G ¼ B, male thread
ISO 7	R ¼, male thread
ANSI/B1.20.1	¼ NPT, male thread
<b>Material (wetted)</b>	
Process connection	Copper alloy
Bourdon tube	Copper alloy

Other process connections on request


Shut-off valve	
<b>Instrument connection</b>	G ¼, female thread per EN 837-1
<b>Process connection</b>	<ul style="list-style-type: none"> <li>■ G ½ B, male thread per EN 837-1</li> <li>■ M20 x 1.5, male thread per EN 837-1</li> <li>■ R ½, male thread per ISO 7</li> <li>■ ½ NPT, male thread per ANSI/B1.20.1</li> </ul>
<b>Material (wetted)</b>	Copper alloy

Operating conditions	
<b>Medium temperature</b>	-20 ... +80 °C [-4 ... +176 °F]
<b>Ambient temperature</b>	-20 ... +60 °C [-4 ... +140 °F]
<b>Pressure limitation</b>	
Steady	3/4 x full scale value
Fluctuating	2/3 x full scale value
Short time	Full scale value
<b>Ingress protection per IEC/EN 60529</b>	IP31

## Approvals

Logo	Description	Country
-	<b>CRN</b> Safety (e.g. electr. safety, overpressure, ...)	Canada

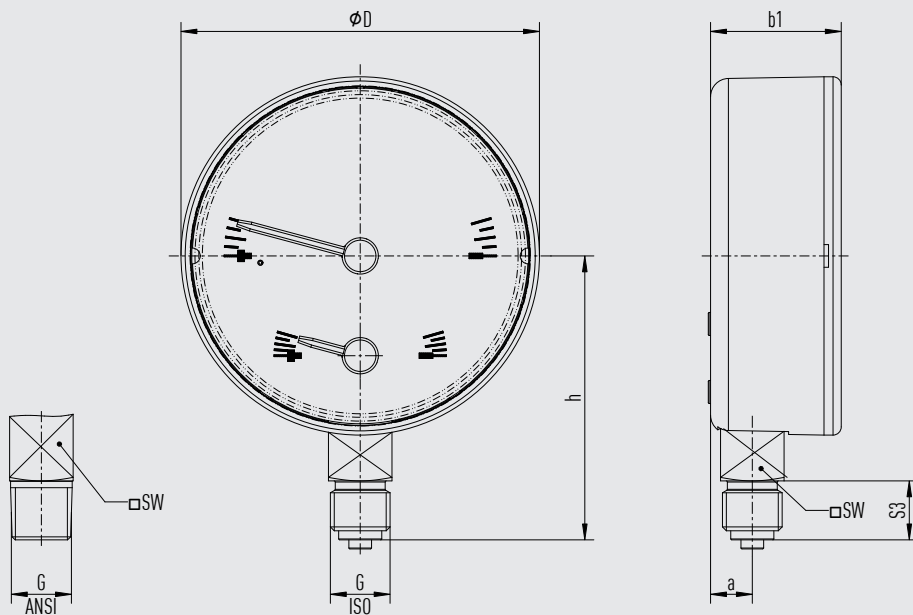
## Optional approvals

Logo	Description	Country
	<b>PAC Kazakhstan</b> Metrology, measurement technology	Kazakhstan
-	<b>MChS</b> Permission for commissioning	Kazakhstan
-	<b>PAC Ukraine</b> Metrology, measurement technology	Ukraine

→ For approvals and certificates, see website

## Dimensions in mm [in]

### Lower mount (radial)

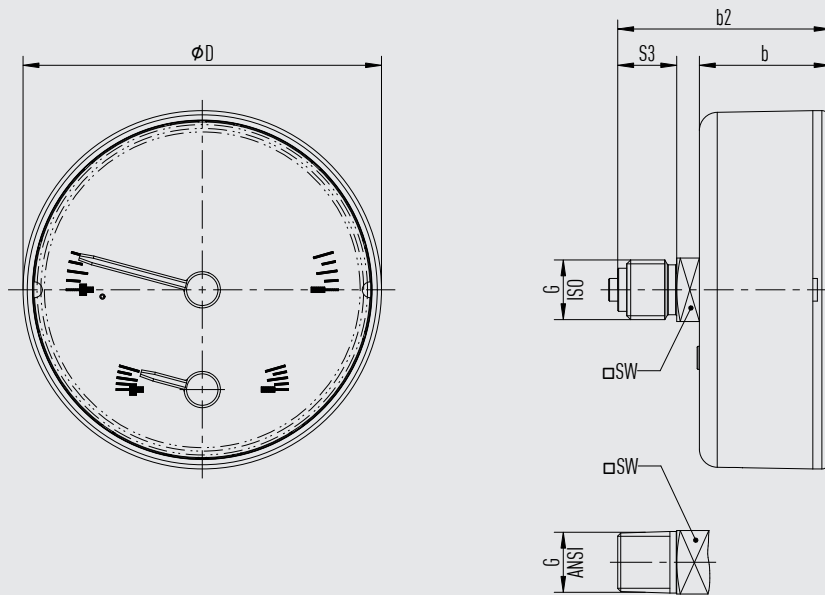


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NS	G	Dimensions in mm [in]					
		$h \pm 1$ [0.04]	S3	a	$b_1 \pm 0.5$ [0.02]	D	SW
63 [2 ½"]	G ¼ B, ¼ NPT, R ¼	51.1 [2.01]	13.0 [0.51]	9.6 [0.38]	27.6 [1.09]	62.6 [2.46]	14 [0.55]
80 [3"]	G ¼ B, ¼ NPT, R ¼	62.6 [2.46]	13.0 [0.51]	9.6 [0.38]	28.8 [1.13]	79.0 [3.11]	14 [0.55]

NS	Weight
63 [2 ½"]	0.117 kg [0.258 lb]
80 [3"]	0.137 kg [0.302 lb]

### Centre back mount

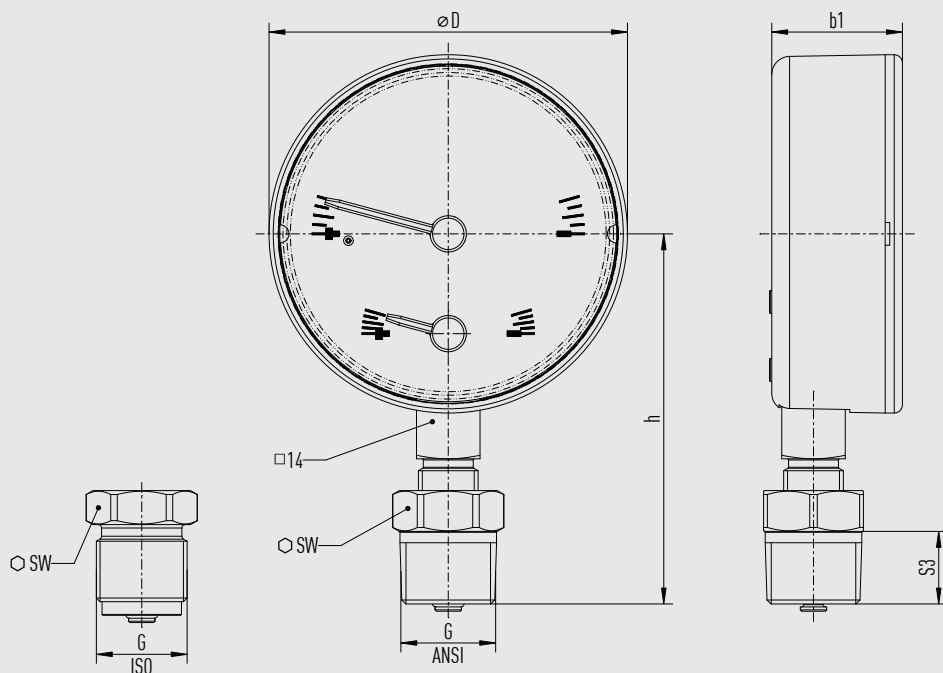


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NS	G	Dimensions in mm [in]				
		$b \pm 0.5$ [0.02]	$b2 \pm 1$ [0.04]	S3	D	SW
63 [2 ½"]	G ¼ B, ¼ NPT, R ¼	26.5 [1.04]	45 [1.77]	13 [0.51]	62 [2.44]	14 [0.55]
80 [3"]	G ¼ B, ¼ NPT, R ¼	28.8 [1.13]	46.8 [1.84]	13 [0.51]	79 [3.11]	14 [0.55]

NS	Weight in kg [lb]
63 [2 ½"]	0.122 kg [0.269 lb]
80 [3"]	0.14 kg [0.309 lb]

Lower mount (radial) with mounted shut-off valve



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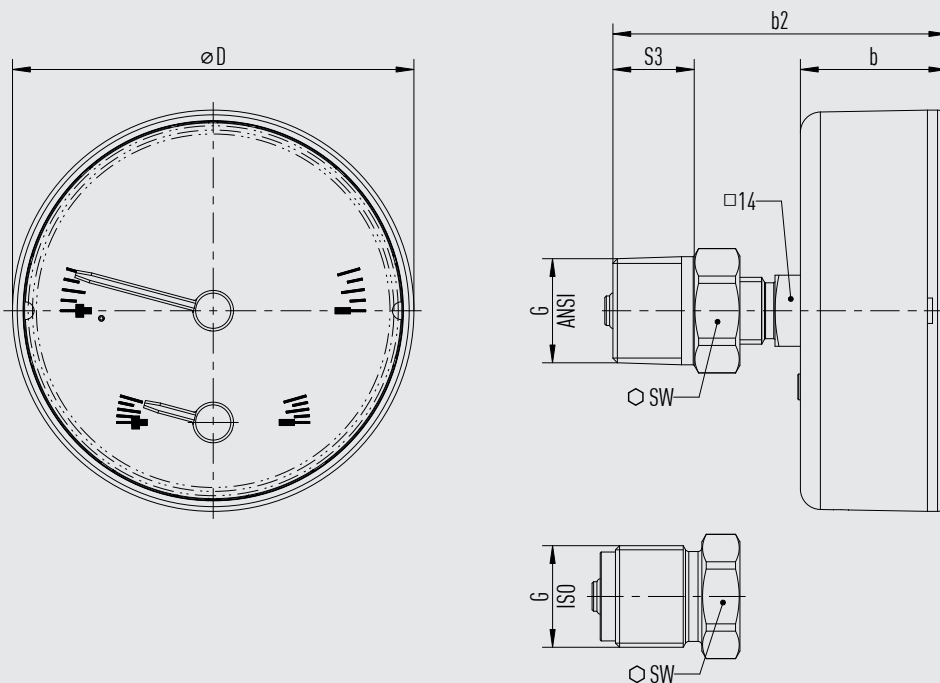
NS	G	Dimensions in mm [in]				
		$h \pm 1$ [0.04]	S3	$b1 \pm 0.5$ [0.02]	D	SW
63 [2 1/2"]	G 1/2 B, M20 x 1.5	70,1 [2.75]	16 [0.63]	27.6 [1.09]	62 [2.44]	14 [0.55]
	1/2 NPT, R 1/2	67.6 [2.66]	16 [0.63]	27.6 [1.09]	79.0 [3.11]	14 [0.55]
80 [3"]	G 1/2 B, M20 x 1.5	84.1 [3.31]	16 [0.63]	28.8 [1.13]	62 [2.44]	14 [0.55]
	1/2 NPT, R 1/2	81.6 [3.21]	16 [0.63]	28.8 [1.13]	79.0 [3.11]	14 [0.55]

NS	Weight
63 [2 1/2"]	0.172 kg [0.379 lb]
80 [3"]	0.192 kg [0.423 lb]

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Centre back mount with mounted shut-off valve




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NS	G	Dimensions in mm [in]				
		b ±0.5 [0.02]	b2 ±1 [0.04]	S3	D	SW
63 [2 ½"]	G ½ B, M20 x 1.5	26.5 [1.04]	66.5 [2.62]	16 [0.63]	62 [2.44]	22 [0.87]
	½ NPT, R ½	26.5 [1.04]	64 [2.52]	16 [0.63]	62 [2.44]	22 [0.87]
80 [3"]	G ½ B, M20 x 1.5	28.8 [1.13]	68.2 [2.69]	16 [0.63]	79 [3.11]	22 [0.87]
	½ NPT, R ½	28.8 [1.13]	65.7 [2.59]	16 [0.63]	79 [3.11]	22 [0.87]

NS	Weight in kg [lb]
63 [2 ½"]	0.177 kg [0.39 lb]
80 [3"]	0.195 kg [0.43 lb]

## Accessories and spare parts

Model	Description
 910.17	Sealings → See data sheet AC 09.08

### Ordering information

Model / Nominal size / Scale range / Process connection / Connection location / Options

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