

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. WIKAL manufactures and qualifies this instrument in accordance with the standards EN 837-1 and EN 13190.

Specifications

Basic information	
Standard	
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
Nominal size (NS)	<ul style="list-style-type: none"> ■ Ø 63 mm [2 ½"] ■ Ø 80 mm [3"]
Connection location	<ul style="list-style-type: none"> ■ Lower mount (radial) ■ Centre back mount
Window	Plastic, crystal-clear, snap-fitted in case
Case	Plastic, black
Movement	Copper alloy

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

Accuracy specifications	
Accuracy class	
Pressure	Class 2.5 per EN 837-1
Temperature	Class 2 per EN 13190
Temperature error (pressure)	On deviation from the reference conditions at the measuring system: ≤ ±0.4 % per 10 °C [≤ ±0.4 % per 18 °F] of full scale value
Reference conditions (pressure)	
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			
Special scale ranges		Other scale ranges on request	
Unit			
Pressure	<input type="checkbox"/> bar <input type="checkbox"/> MPa <input type="checkbox"/> psi		
Temperature	<input type="checkbox"/> °C <input type="checkbox"/> °F		
Dial			
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		
Pointer			
Instrument pointer	Pressure	Blue	
	Temperature	Red	
Material	Plastic		
Pointer stop pin	At zero point (only for pressure scale)		

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

Other process connections on request


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

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

Approvals

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

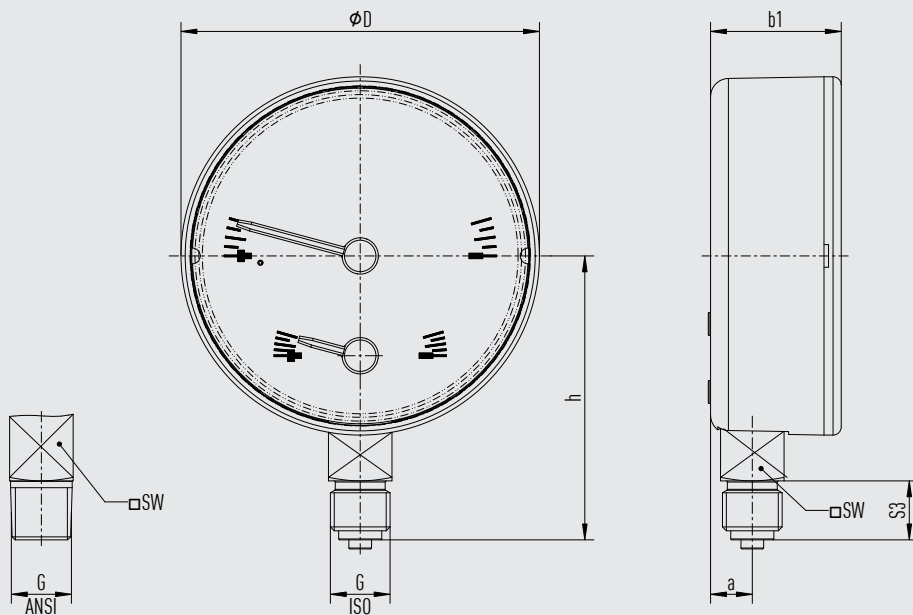
Optional approvals

Logo	Description	Country
	PAC Kazakhstan Metrology, measurement technology	Kazakhstan
-	MChS Permission for commissioning	Kazakhstan
-	PAC Ukraine Metrology, measurement technology	Ukraine

→ For approvals and certificates, see website

Dimensions in mm [in]

Lower mount (radial)

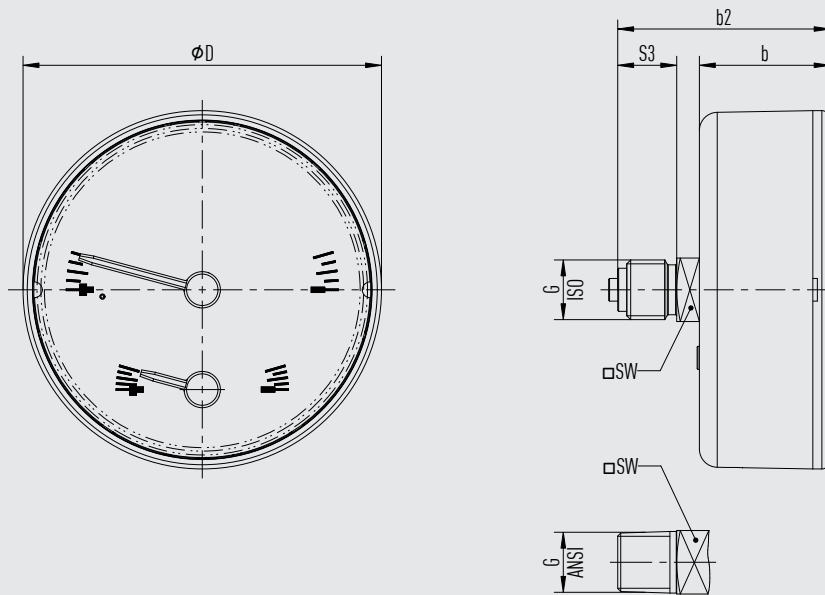


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NS	G	Dimensions in mm [in]					
		$h \pm 1$ [0.04]	S3	a	$b1 \pm 0.5$ [0.02]	D	SW
63 [2 1/2"]	G 1/4 B, 1/4 NPT, R 1/4	51.1 [2.01]	13.0 [0.51]	9.6 [0.38]	27.6 [1.09]	62.6 [2.46]	14 [0.55]
80 [3"]	G 1/4 B, 1/4 NPT, R 1/4	62.6 [2.46]	13.0 [0.51]	9.6 [0.38]	28.8 [1.13]	79.0 [3.11]	14 [0.55]

NS	Weight
63 [2 1/2"]	0.117 kg [0.258 lb]
80 [3"]	0.137 kg [0.302 lb]

Centre back mount

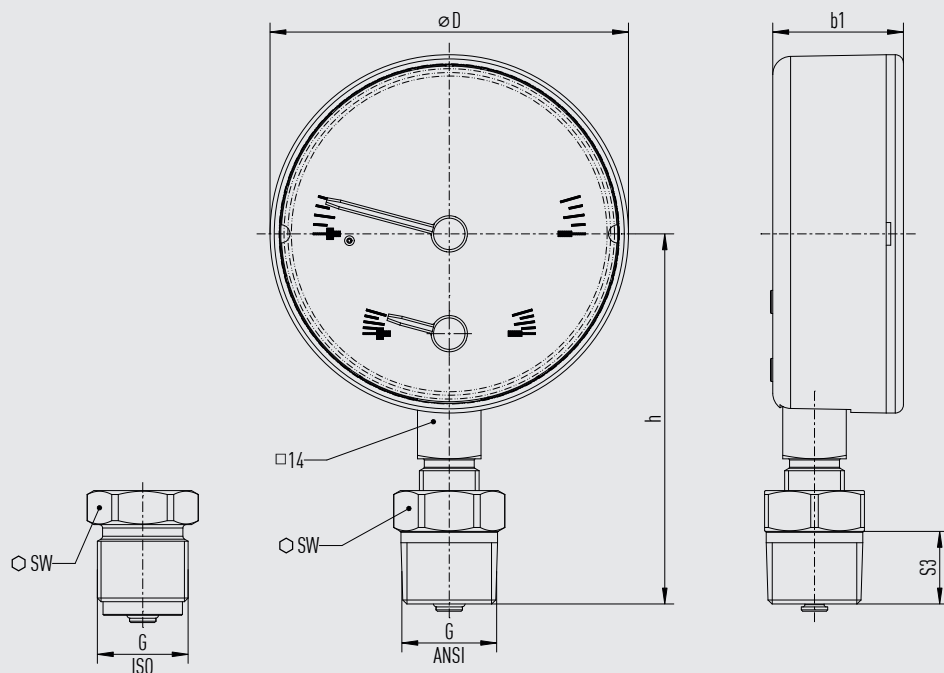


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NS	G	Dimensions in mm [in]				
		$b \pm 0.5$ [0.02]	$b2 \pm 1$ [0.04]	S3	D	SW
63 [2 ½"]	G ¼ B, ¼ NPT, R ¼	26.5 [1.04]	45 [1.77]	13 [0.51]	62 [2.44]	14 [0.55]
80 [3"]	G ¼ B, ¼ NPT, R ¼	28.8 [1.13]	46.8 [1.84]	13 [0.51]	79 [3.11]	14 [0.55]

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



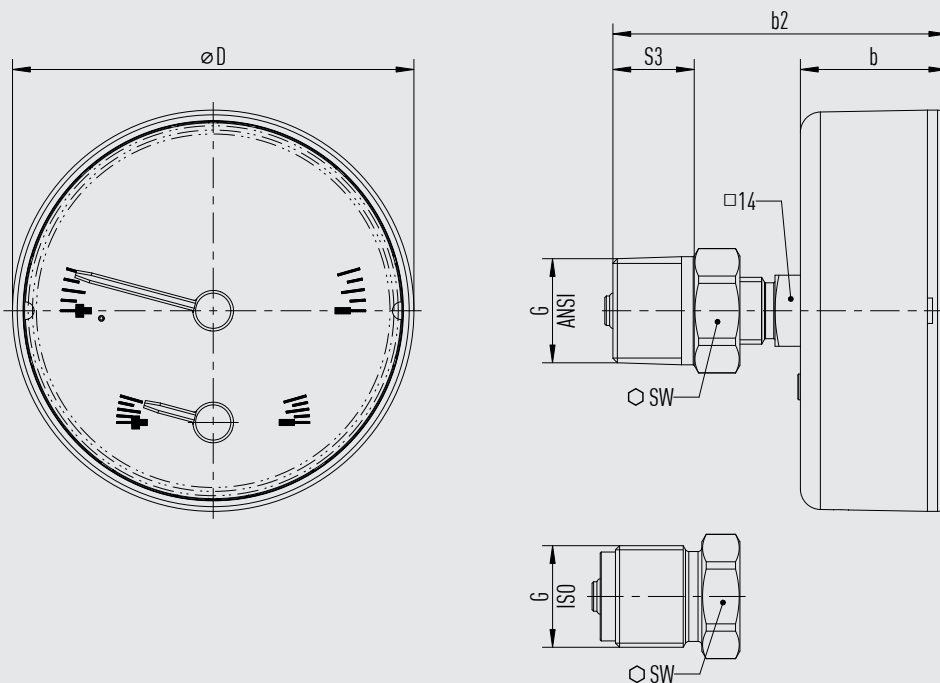
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NS	G	Dimensions in mm [in]				
		$h \pm 1$ [0.04]	S3	$b1 \pm 0.5$ [0.02]	D	SW
63 [2 1/2"]	G 1/2 B, M20 x 1.5	70,1 [2.75]	16 [0.63]	27.6 [1.09]	62 [2.44]	14 [0.55]
	1/2 NPT, R 1/2	67.6 [2.66]	16 [0.63]	27.6 [1.09]	79.0 [3.11]	14 [0.55]
80 [3"]	G 1/2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