

Combined thermometer/pressure gauges TM / thermo-hydrometers TH



- Pressure and temperature measurement with at a single measuring point
- With self-sealing connection thread for fast mounting
- Bottom connection or back connection
- With mounting valve for easy replacement without downtime



Bottom connection version

Application For liquid media which are not highly viscous, do not crystallise and do not attack copper alloys. For combined measurement of pressure and temperature, especially in heating systems and heating boilers.

Description The combined thermometer/pressure gauge / thermo-hydrometer consists of a Bourdon tube measuring system for pressure measurement and a bimetal measuring system for simultaneous temperature measurement. Both values are measured and displayed by a single gauge. A self-closing mounting valve enables easy replacement of the gauge without the necessity to drain the system. An optional M18 x 1 to G $\frac{1}{4}$ adapter is available if the combined thermometer/pressure gauge has to be mounted into an existing thermowell with M18 x 1 female thread.

Technical specifications

Type

D 1/D 2

Nominal size

63 – 80

Accuracy class

Pressure gauge/hydrometer: 2.5 (EN 837-1/6)
Thermometer: 2 (EN 13190)

Application area

Pressure gauge/hydrometer:
Static load: $\frac{3}{4}$ x full scale value Dynamic load:
 $\frac{2}{3}$ x full scale value
Short-term: full scale value
Thermometer: 20/120 °C

Ranges

Pressure gauge/hydrometer:
0/4 bar to 0/10 and 0/6 mWC to 0/60 mWC
Thermometer: 20/120 °C

Operating temperature range

Medium: $T_{max} = +120$ °C
Ambient: $T_{min} = -20$ °C
 $T_{max} = +60$ °C

Temperature performance

Pressure gauge/hydrometer:

Indication error when the temperature of the measuring system deviates from the normal temperature of 20 °C:
rising temperature approx. ± 0.4 %/10 K
falling temperature approx. ± 0.4 %/10 K
of full scale value

Degree of protection

IP 32 (EN 60529)

Standard version

Connection

Brass, bottom or centre back G $\frac{1}{4}$ B with mounting valve G $\frac{1}{4}$ to R $\frac{1}{2}$

Measuring element

Pressure: Bourdon tube, copper alloy
Temperature: bimetal element

Dial

Plastic, white
Dial marking black with circular arcs (red/blue)

Pointer

Pressure gauge/hydrometer: plastic, black
Thermometer: plastic, red

Housing

D1 – plastic (ABS), highly impact-resistant
D2 – sheet steel black

Window

Clip-in plastic with adjustable red mark

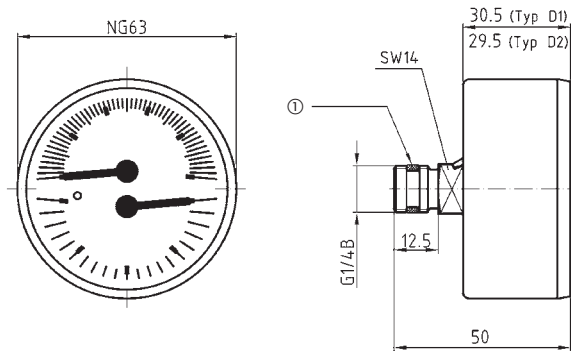
Options

- Adapter M18 x 1 to G $\frac{1}{4}$
- Special scales
- Other process connections

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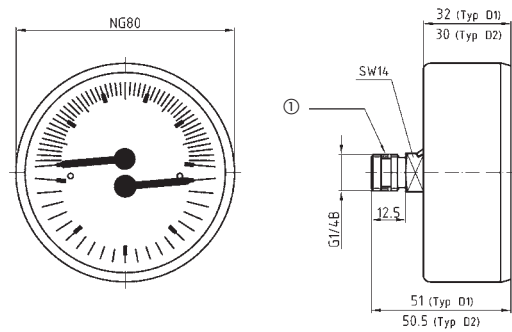
Housing types and dimensions (mm)

TM 63 ax



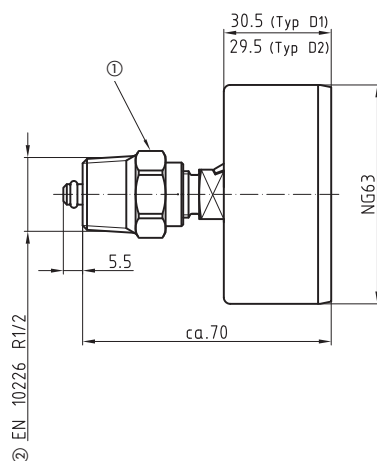
① PTFE sealing ring

TM 80 ax



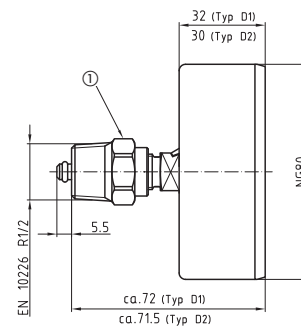
① PTFE sealing ring

TM 63 ax with mounting valve



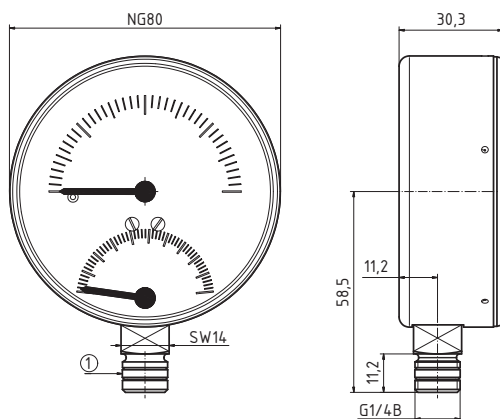
① Mounting valve
② Pipe thread

TM 80 ax with mounting valve



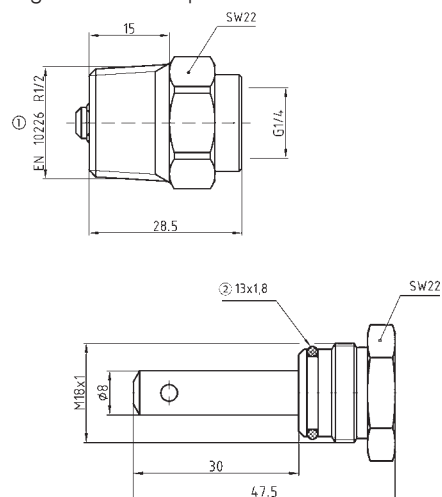
① Mounting valve
② Pipe thread

TM 80 rad



① PTFE sealing ring

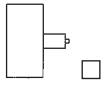
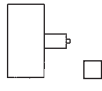
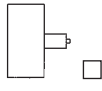
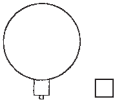
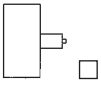
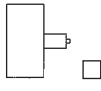
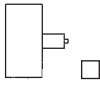
Mounting valve and adapter



① Pipe thread
② O ring (NBR)

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DG: G, PG: 2

Type	TM 63, D211	TM 63, D211	TM 80, D111	TM 80, D201	TM 80, D211	TM 80, D211	TH 80, D211
Version							
Housing Ø	63	63	80	80	80	80	80
Housing	Sheet steel, black		Plastic (ABS) highly impact resistant	Sheet steel, black	Sheet steel, black		
Accuracy class	Pressure gauge/hydrometer 2.5						
Connection	G¼B with mounting valve G¼ to R½						
Adapter	Without	With	Without	Without	Without	With	Without
Range	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
0/4 bar 20/120 °C	63318	63346	63317	63337	63341	63348	---
0/6 bar 20/120 °C	---	---	---	63338	63342	---	---
0/10 bar 20/120 °C	---	---	---	63339	63343	---	---
0/6 mWC 20/120 °C	---	---	---	---	---	---	63311
0/10 mWC 20/120 °C	---	---	---	---	---	---	63312
0/16 mWC 20/120 °C	---	---	---	---	---	---	63313
0/25 mWC 20/120 °C	---	---	---	---	---	---	63314
0/40 mWC 20/120 °C	---	---	---	---	---	---	63315
0/60 mWC 20/120 °C	---	---	---	---	---	---	63316

* Minimum order quantity for non-stock items = 100 pieces.

Blue part no. = in-stock items

Spare parts

DG: G, PG: 2	Part no.
Adapter G¼ to M18 x 1, brass	05 00 40 01



See page 516 for mounting valves.