

MA12 || Pressure Gauge

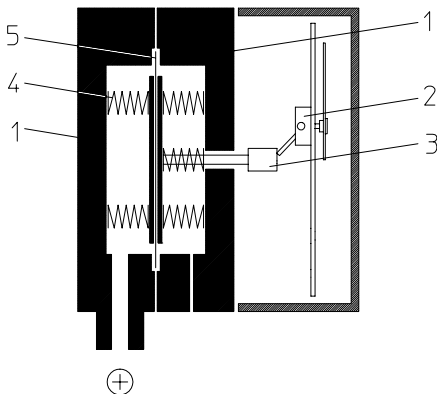
Pressure gauge, especially suited for heavy measuring conditions, e.g. in case of pressure shocks, vibrations or high demands on breaking capacity. The overpressure safe measuring system guarantees high operation safety. The pressure chamber and the measuring diaphragm are available in different materials to meet various requirements.

Construction and Operation

This pressure instrument is based on a rugged and uncomplicated diaphragm movement, suitable for overpressure and partial vacuum pressure measurements.

In non-operative state, forces of the springs on both sides of the diaphragm are balanced. Pressure or vacuum to be measured creates an unbalanced force of the springs until a new balance is reached. When subjected to excessive pressure, the diaphragm rests on metal supporting plates. A centre-mounted tappet transfers motion of the diaphragm system to indicator movement and operating elements of micro switches.

Functional Scheme



Main Features

- vibration resistant
- long service life
- rugged measuring system
- all ranges overpressure safe up to 25 bar

Applications

- process engineering
- plant engineering
- water economy
- pneumatic conveying systems

- 1 Pressure chamber
- 2 Motion work
- 3 Tappet
- 4 Measuring springs
- 5 Measuring diaphragm

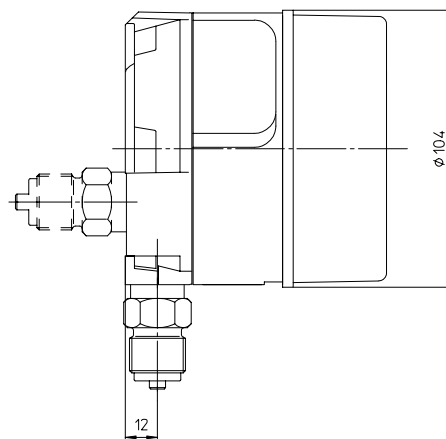
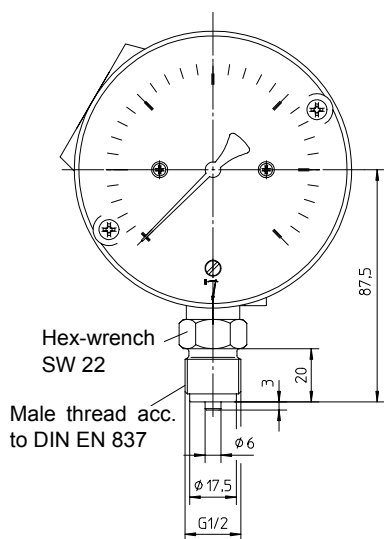


Specifications

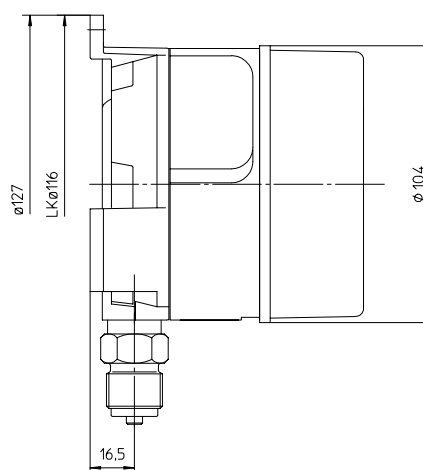
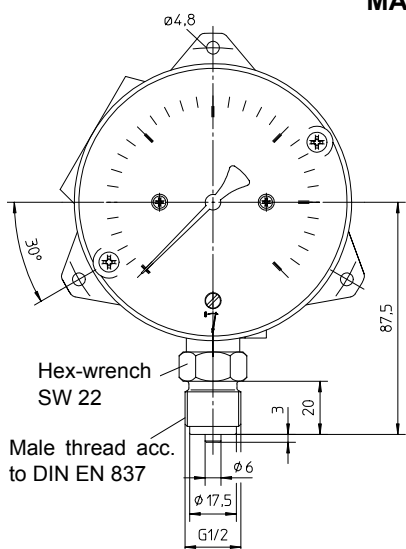
Measuring range	0..400 mbar to 0..25 bar (see Ordering Code)
Nominal pressure rating	25 bar
Max. overpressure	overpressure safe up to nominal pressure rating for all ranges, vacuum safe
Perm. ambient temperature	-10..+70°C (max. 55°C for SEV-approbations)
Perm. medium temperature	70°C
Protection class	IP54 acc. to DIN EN 60529
Mounting position	vertical, pressure port downward (rear)
Accuracy	± 1.6 % FS
Zero adjustment	located in the dial
Pressure connection	G1/2 male thread acc. to DIN EN 837
Measuring System	
ranges ≤ 16 bar	diaphragm measuring system, diaphragm of reinforced elastomer
range 0-25 bar only	diaphragm measuring system, diaphragm of DURATHERM®
Materials	
Pressure chamber	aluminium GkAlSi10Mg, varnished black; aluminium GkAlSi10Mg with HART-COAT® surface protection chrome-nickel-steel 1.4305
Measuring diaphragm	diaphragm and gaskets of NBR or Viton®; diaphragm of DURATHERM® NiCrCo-alloy
Materials, media	stainless steel 1.4310, 1.4305
Materials, housing	macrolon
Weight	with aluminium pressure chamber 1.2 kg, with 1.4305 pressure chamber 3.5 kg
Mounting / Installation	
Pipe mounting	male thread acc. to DIN EN 837; bottom or rear pressure connection
Wall mounting	3 fastening elements; bottom pressure connection
Panel mounting	with front ring 132 mm Ø; bottom or rear pressure connection (accessory DZ11)
Accessories	
	manometer accessories per data sheet MZ... e.g. shut off valves, wall holder per DIN 16281 various connecting parts

Dimensions (all units in mm unless otherwise stated)

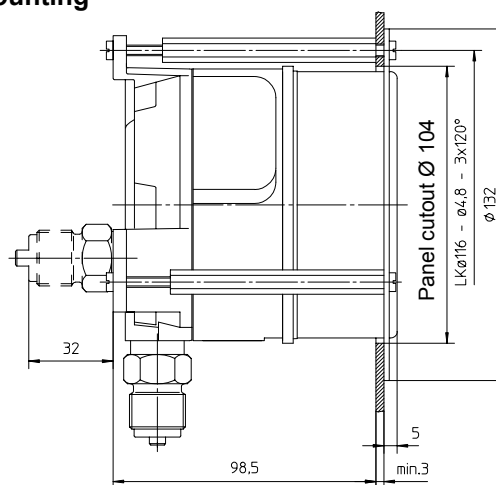
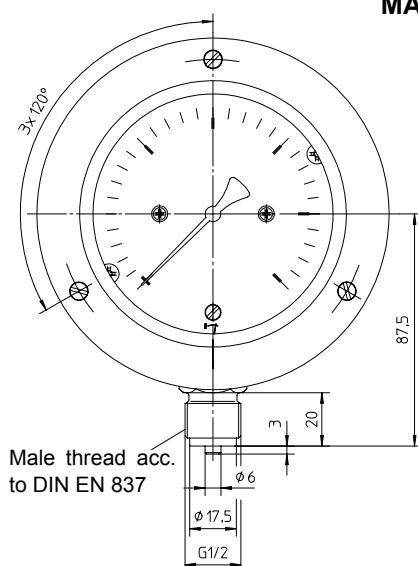
**MA12
(standard)**



MA12 Wallmounting



MA12 Panel mounting



Ordering Code

Pressure Gauge

MA12

				0		0	0	0	0	0	0
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Range

0 ... 400 mbar	>	8	3
0 ... 0.6 bar	>	0	1
0 ... 1 bar	>	0	2
0 ... 1.6 bar	>	0	3
0 ... 2.5 bar	>	0	4
0 ... 4 bar	>	0	5
0 ... 6 bar	>	0	6
0 ... 10 bar	>	0	7
0 ... 16 bar	>	0	8
0 ... 25 bar	>	0	9
-0.6 ... 0 bar	>	3	0
-1 ... 0 bar	>	3	1
-1 ... 0.6 bar	>	3	2
-1 ... 1.5 bar	>	3	3
-1 ... 3 bar	>	3	4
-1 ... 5 bar	>	3	5

Measuring Diaphragm / Gasket

NBR	NBR (for all ranges up to 16 bar)	>	N
Viton®	Viton® (for all ranges up to 16 bar)	>	V
DURATHERM®	NBR (range 0-25 bar only)	>	D
DURATHERM®	Viton® (range 0-25 bar only)	>	E

Pressure Chamber

Aluminium		>	A
Aluminium HART-COAT®		>	D
Chrome-nickel-steel 1.4305		>	W

Pressure Connection and Mounting

Bottom pressure connection, G1/2 male thread	>	0
Rear pressure connection, G1/2 male thread	>	H
Wall mounting, bottom pressure connection, G1/2 male thread	>	B
Front panel mounting, bottom pressure connection, G1/2 male thread	>	G
Front panel mounting, rear pressure connection, G1/2 male thread	>	L