



Handheld pressure gauge HMG operating instructions

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The handheld pressure gauge HMG is usable for measurement of differential-, over- or vacuum and absolute pressure in air and not aggressive gases.

The pressure meter is powered by a 9V- battery 6F22. The fall short of minimal supply voltage is displayed by "low bat". If "low bat" appears at the display the battery voltage is not high enough to ensure the accuracy of measurement described at the table at second page. The battery must replace in this case. The cover of the battery case is located at the backside of the instrument.

The tube connectors are usable to connect tubes with 4 mm or 6 mm diameter inside.

Realisation of pressure measurements:

After switching on the pressure gauge by using sliding switch should be adjust the zero point. A deviation of zero point will be adjusted by using the potentiometer knob at the front of HMG. A coarse adjust of zero is possible with help of the adjust screw in the hole in the middle of the enclosure's right side. To do this the zero- potentiometer at the front of HMG should turned in the middle position and after that with help of a screw driver with width of 2.5 mm adjust the screw until the display shows "000". If the zero is adjusted the tubes can be connected with the pressure gauge. To measure differential pressure you must connect the higher pressure with "P+" and the lower pressure with "P-". For measurement relative pressure (pressure against the ambient air) please use only the "p+"- connector, for measurement vacuum must be used only "P-" tube connector. The not used tube connector must be open it should not covered to avoid measurement failures.

Attention!

Don't touch tube connectors with water and other liquids!

After turn on by using sliding switch at the left hand side the 3 ½ digit LC- Display shows the pressure value in the unit "mbar" required by the range of the instrument. A zero deviation will be corrected by potentiometer. The zero potentiometer is located in the front of enclosure.

The red LED at the display turns on in case of exceeds maximum pressure range. The maximum overpressure is described at page 2 of this instruction manual.

Attention!

The exceeding of maximum overpressure may be damage the piecoresistive cell. The guarantee will be lost in this case!

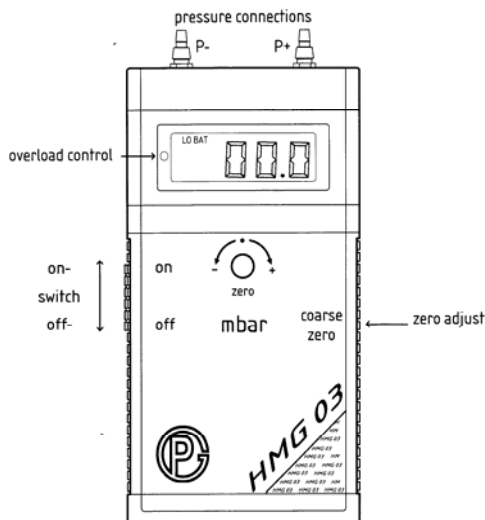
Option analogue output:

At model HMG wit output there are an analogue output 0...1 V. The plug with 3.5 mm diameter is included in delivery. The connection of plug is as follows:

center contact: = signal (+)

periphery contact: = ground (-)

Important: The ground of analogue output is not connected with minus pole of battery respectively ground of power supply!





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technical data HMG (difference pressure):

pressure range [mbar]	pressure range [kPa]	max. over-pressure [mbar]	linear error max. [± % F.S.]	temp.- error typ. [± % F.S.] 0-50 °C	long-term-stability [± % F.S. / year]	repeat-precision [± % F.S.]	measuring [1 / s]
0 - 1	0 - 0.1	250	1.0	4	2	0.3	2.5
0 - 2.5	0 - 0.25	250	0.8	2.5	2	0.3	2.5
0 - 5	0 - 0.5	350	0.8	1.2	1	0.3	2.5
0 - 10	0 - 1	350	0.8	1.0	0.5	0.2	2.5
0 - 25	0 - 2.5	350	0.7	1.0	0.1	0.1	2.5
0 - 50	0 - 5	350	0.7	1.0	0.1	0.1	2.5
0 - 100	0 - 10	350	0.5	1.0	0.1	0.1	2.5
0 - 1000	0 - 100	x 2	0.5	1.0	0.1	0.1	2.5
0 - 1999	0 - 50	x 2	0.5	1.0	0.1	0.1	2.5
0 - 10 bar	0 - 100	x 1.2	0.5	2.0	0.1	0.1	2.5

technical data HMG3 (absolute pressure):

700-1100	10-110	triple	± 0.9 mbar	2.3 mbar	0.1	0.1	2.5
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technical data HMG6 (difference pressure):

0 - 100	0 - 10	350	0.2	0.8	0.1	0.1	2.5
0 - 200	0 - 20	600	0.2	0.8	0.1	0.1	2.5
0 - 1000	0 - 100	2000	0.2	0.8	0.1	0.1	2.5

operation-temperature range: 0 to +50 °C

only use in: air and all non aggressive gases

output-signals and power supply: U_{supply} : 9V battery 6F22
analog output: 0-1 V optionally available at type HMG1/6-1
 R_w : $\geq 2 \text{ k}\Omega$

connections: electrical: connection for 3.5 mm 2-pole handle plug (optional for HMG1/6-1)
pneumatical: 2 connections for tube with 6 mm or 4 mm diameter inside

weight: app. 190 g included battery

protection class: IP 54

dimensions: 85 mm x 160 mm x 31 mm