

**DIGITAL-FINE MANOMETER / MANOMETER** for over/under pressure and pressure difference.



**GMH 3161-01**

**GMH 3181-01**

-100 ... 2500 Pa ( $\pm 2500$  Pa \*)

**GMH 3161-07H**

-1,00 ... 70,00 mbar ( $\pm 70,00$  mbar \*)

**GMH 3161-07**

**GMH 3181-07**

-10,0 ... 350,0 mbar ( $\pm 350,0$  mbar \*)

**GMH 3161-07B**

-10,0 ... 420,0 mbar (-7,5 ... 315,0 mmHg)

**GMH 3161-13**

**GMH 3181-13**

-100 ... 2000 mbar ( $\pm 2000$  mbar \*)

Option, upcharge:

**MB -1...2 BAR**

measuring range: -1000 ... 2000 mbar \*2

Version specific data:	... - 01	... - 07H	... - 07	... - 07B	... - 13
<b>Measuring range:</b>	-100 ... 2500 Pa (-1,00 ... 25,00 mbar)	-1,00 ... +70,00 mbar	-10,0 ... +350,0 mbar	-10,0 ... +420,0 mbar (-7,5 ... 315,0 mmHg)	-100 ... 2000 mbar (optional: -1000 ... 2000 mbar)
<b>Overload:</b>	max. 100 mbar	max. 1000 mbar	max. 1 bar	max. 1 bar	max. 4 bar
<b>Resolution:</b>	1 Pa (0,01 mbar)	0,01 mbar	0,1 mbar	0,1 mbar (0,1 mmHg)	1 mbar
<b>additional pressure units:</b>	bar, kPa, PSI, mmHg, mHzO	bar, Pa, kPa, PSI, mmHg, mHzO	bar, kPa, MPa, PSI, mmHg, mHzO	bar, kPa, MPa, PSI., mHzO	bar, kPa, MPa, PSI, mmHg, mHzO

(typ. values)

hysteresis and linearity	$\pm 0,3$ % FS	$\pm 0,1$ % FS	$\pm 0,2$ % FS	$\pm 0,1$ % FS	$\pm 0,2$ % FS
temperature-influence from 0-50°C	$\pm 0,4$ % FS	$\pm 0,4$ % FS	$\pm 0,4$ % FS	$\pm 0,4$ % FS	$\pm 0,4$ % FS
Option higher accuracy available	no	already integrated	yes	already integrated	yes

**Sensor:** integrated piezo-resistive absolute pressure sensor.

*Suitable for air and non aggressive. (Note: sensor is not suitable for water!)*

**Pressure connection:** 2 metal connection pin, made of brass, nickel plated, pressure tubes 6x1 mm (4 mm inside-Ø) can be connected

\*1 measuring range possible by changing the pressure connection ports

\*2 without changing the pressure connection ports

Type specific data:	GMH 3161 - ...	GMH 3181 - ...	GMH 3160 - ... - ex	GMH 3180 - ... - ex
<b>Display:</b>	2 x 4½-digit LCD	2 x 4½-digit LCD	2 x 4½-digit LCD	2 x 4½-digit LCD
<b>Output:</b>	interface	interface or AAG	interface*	interface or AAG*
<b>- serial interface:</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>- analog output:</b>	--	0 - 1V, freely adjustable (resolution 12 bit)	--	0 - 1V, freely adjustable (resolution 12 bit)
<b>Power supply:</b>	9V-battery, d.c. connector <i>suitable 9V-battery (type IEC 6F22) in scope of supply, d.c. connector for external 10.5-12V direct voltage supply. (suitable power supply: GNG10/3000)</i>	9V-battery, d.c. connector	9V-battery, d.c. connector*	9V-battery, d.c. connector*
<b>Sensor adjustment:</b>	digital offset and scale input	digital offset and scale input	digital offset and scale input	digital offset and scale input
<b>Tare, hold, min/max value:</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>Peak value memory:</b>	--	$\geq 1$ ms	--	$\geq 1$ ms
<b>Measuring cycle: "slow"</b>	4 measurements / s	4 measurements / s	4 measurements / s	4 measurements / s
"fast" (with filter)	--	$\geq 1000$ meas. / s	--	$\geq 1000$ meas. / s
"peak-detect"	--	$\geq 1000$ meas. / s	--	$\geq 1000$ meas. / s
<b>Logger functions:</b>	--	<b>X</b>	--	<b>X</b>
<b>-manually:</b>	--	99 data sets	--	99 data sets
<b>-cycle:</b>	--	10000 data sets (max. 64 recording sequen.)	--	10000 data sets (max. 64 recording sequences)
<b>-adjustable cycle time:</b>	--	1 ... 3600 seconds	--	1 ... 3600 seconds
<b>Averaging function:</b>	--	<b>X</b>	--	<b>X</b>
<b>Min-/max-alarm:</b>	--	<b>X</b>	--	<b>X*</b>
<b>Real-time clock:</b>	--	<b>X</b>	--	<b>X</b>
<b>Power consumption:</b>	approx. 0.6 mA	approx. 0.6 mA (slow mode) max. 2.5 mA (fast = 1000Hz)	max. 0.6 mA	max. 0.6 mA (slow mode) max. 2.5 mA (fast = 100Hz)
<b>Working condition:</b>	-25 to +50 °C, 0 to +95 %RH (non-condensing)		-10 to 50 °C, 0 to 95 %RH (non-condensing)	
<b>Housing dimensions:</b>	142 x 71 x 26 mm (without pressure connection pin - pin approx. 11 mm protruding at front side of device), impact-resistant ABS plastic housing. Front side IP65			
<b>Weight:</b>	approx. 165 g	approx. 170 g	approx. 205 g (incl. case)	approx. 210 g (incl. case)

\* Please refer to note to Ex-design types at page 48