

MANOMETER FOR OVER/UNDER PRESSURE AND PRESSURE DIFFERENCE.



GMH 3161-13

Product-ID: 600409

Device -100 ... 2000 mbar (± 2000 mbar ^{*1})

GMH 3181-13

Product-ID: 600421

Device -100 ... 2000 mbar (± 2000 mbar ^{*1}), with data logger

Specifications:

Measuring range:	-100 ... 2000 mbar (optional: -1000 ... 2000 mbar)
Overload:	max. 4 bar
Resolution:	1 mbar
additional pressure units:	bar, kPa, MPa, PSI, mmHg, mH ₂ O
Accuracy: (typ. values)	
hysteresis and linearity:	± 0.2 % FS
temperature-influence from 0-50 °C:	± 0.4 % FS
Option higher accuracy available:	yes
Pressure connection:	2

Option:

MB -1...2 BAR
measuring range: -1000 ... 2000 mbar ^{*2}

For type specific data please refer to page 65.

^{*1} measuring range possible by changing the pressure connection ports

^{*2} without changing the pressure connection ports

VAKUUM- OR BAROMETER



FOR ABSOLUTE PRESSURE MEASUREMENT

GMH 3161-12

Product-ID: 600407

Device 0 ... 1300 mbar abs.

GMH 3181-12

Product-ID: 600419

Device 0 ... 1300 mbar abs., with data logger

Specifications:

Measuring range:	0 ... 1300 mbar abs.
Overload:	max. 4 bar abs.
Resolution:	1 mbar
Pressure units:	mbar, bar, kPa, MPa, PSI, mmHg, mH ₂ O
Accuracy: (typ. values)	
hysteresis and linearity:	± 0.2 % FS
temperature-influence from 0-50 °C:	± 0.4 % FS
Option higher accuracy available:	yes
Pressure connection:	1

Sonderfunktion:

SeaLevel-correction:
The barometric air pressure can also be related to sea level „zero“. (Correction of air pressure is achieved by entering m above „zero“)

For type specific data please refer to page 65.

ACCESSORIES

Options:

- Higher sensor accuracy**
by multi point calibration
Note: not possible for all device types!
- ISO-WPD5**
Product-ID: 602514
Certificate of calibration: 5 points increase, 5 points decrease.
- ISO-WPD10**
Product-ID: 602565
Certificate of calibration: 10 points increase, 10 points decrease.

Accessories and spare parts:

- GNG 10/3000**
Product-ID: 600273
plug-in power supply
- GRS 3100**
Product-ID: 601097
interface converter, RS232, electrically isolated
- USB 3100 N**
Product-ID: 601092
interface converter, USB, electrically isolated
- GDZ-01**
Product-ID: 601541
PVC-tube (5 bar) 6/4 (6 mm outside-Ø, 4 mm inside-Ø)
- GDZ-08**
Product-ID: 601555
Double adapter for 6/4 tube to 6/4 tube
- GDZ-18**
Product-ID: 601576
tube clamp for 6/4 tube
- GDZ-21**
Product-ID: 601582
T-piece for 6/4 tubes
- GKK 3000**
Product-ID: 601048
case (275 x 229 x 83 mm) with cut-outs for GMH3xxx
for miscellaneous accessories p.r.t. pages 62 - 63

Special design type:



Ex-protection (Ex II 2 G Ex ib IIC T4 Gb)
device type with Ex-protection

COMPLETE SOLUTIONS



GMH 3161-07-WPD5

Product-ID: 602684

Complete Solution incl. certificate of calibration WPD5 (5 points ascending / descending) and case GKK 3000.

GMH 3161-12-WPD5

Product-ID: 602685

Complete Solution incl. certificate of calibration WPD5 (5 points ascending / descending) and case GKK 3000.

GMH 3161-13-WPD5

Product-ID: 602686

Complete Solution incl. certificate of calibration WPD5 (5 points ascending / descending) and case GKK 3000.


A SERIES OF HAND-HELD MEASURING DEVICES WITH INTEGRATED SENSOR



FUNCTIONS:



HIGHLIGHTS:

- integrated pressure sensor
- sturdy metal connection pin
- tare function / zero point offset
- model with  protection available

ADDITIONAL FEATURES FOR GMH 3181-...:



Type specific data:	GMH 3161 - ...	GMH 3181 - ...	GMH 3161 - ... - ex	GMH 3181 - ... - ex
Display:	2 x 4½-digit LCD	2 x 4½-digit LCD	2 x 4½-digit LCD	2 x 4½-digit LCD
Sensor:	piezoresistive differential pressure sensor internally built into the instrument. Suitable for air and non-aggressive gases. (Note: Not suited for water!)			
Pressure connection:	2 pressure port for universal 6 x 1 mm (4 mm hose inside diameter) or 8 x 1 mm (6 mm hose inside diameter) plastic tubing			
Output:	interface	interface or AAG	interface *	interface or AAG*
- serial interface:	x	x	x	x
- analog output:	--	0 - 1 V, freely adjustable (resolution 12 bit)	--	0 - 1 V, freely adjustable (resolution 12 bit)
Power supply:	9 V-battery, d.c. connector	9 V-battery, d.c. connector	9 V-battery, d.c. connector *	9 V-battery, d.c. connector *
	suitable 9 V-battery, d.c. connector for external 10.5-12 V direct voltage supply. (suitable power supply: GNG10/3000)			
Sensor adjustment:	digital offset and scale input	digital offset and scale input	digital offset and scale input	digital offset and scale input
Peak value memory:	--	≥1 ms	--	≥1 ms
Measuring cycle: „slow“	4 measurements / s	4 measurements / s	4 measurements / s	4 measurements / s
„fast“ (with filter)	--	≥ 1000 measurements / s	--	≥ 1000 measurements / s
„peak-detect“	--	≥ 1000 measurements / s	--	≥ 1000 measurements / s
Averaging function:	--	x	--	x
Power consumption:	approx. 0.6 mA	approx. 0.6 mA (slow mode) max. 2.5 mA (fast = 1000 Hz)	approx. 0.6 mA	approx. 0.6 mA (slow mode) max. 2.5 mA (fast = 1000 Hz)
Working condition:	-25 ... +50 °C, 0 ... +95 % RH (non-condensing)		-10 ... +50 °C, 0 ... 95 % RH (non-condensing)	
Housing:	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 integrated pop-up clip for table top or suspended use.			
Weight:	approx. 165 g	approx. 170 g	approx. 205 g (incl. leather case)	approx. 210 g (incl. leather case)
Scope of supply:	Device, battery, manual		Device, battery, manual	

* Please refer to note to Ex-design types (p. 61)

Additional functions:

Serial interface: direct connection to RS232 or USB interface of a PC via electrically isolated interface adapter GRS 3100, GRS 3105 or USB 3100 N.

GMH 3181:

Low power logger mode: (only in measuring cycle „slow“) Only one measurement carried out at the end of the respective logger cycle. The battery life is considerably prolonged. For long-term recordings (e.g. leaktest).

Averaging function: integrates the meas. values during a selectable period of time and then calculates the average display value.

Controlling function: with the help of the switching module GAM3000 (optionally) electric equipment can be switched on/off or alarm monitored (see accessories)

LoggerFunctions:

- manual: 99 data sets
- cyclic: 10000 data sets (max. 64 recording sequences), adjustable cycle time: 1 ... 3600 s

Note to the pressure unit selection: (information for all GMH31xx)

The choice of a specific pressure unit is possible, if its whole measuring range is displayable within the display of the device and the sensor is supporting these resolution.