

## GMH 3161 / GMH 3181 Manometer / Barometer / Vacuummeter

With high precision sensors integrated



EX-version  
 in protection bag

- Sturdy metal connector for hose connection
- field and laboratory use: with mounting bracket/belt clip
- high resolution and accuracy
- serial interface
- calibratable / traceable
- reference instrument for many calibration tasks
- Optionally as EX device for use in hazardous areas 
- Made in Germany

For GMH 3181 additionally:

- Logger
- Fast measurement with peak detection: 1000/s
- Averaging

## Characteristics

Powerful pressure gauges with integrated sensors in premium quality. The temperature compensated devices are available in numerous versions - from extremely fine resolution manometers with 0.1 Pa resolution up to 2000 hPa - the right one for every purpose.

The absolute pressure gauges GMH 31x1-12 measure down to 0 hPa abs. and are therefore excellent vacuum gauges.

Optional ISO or DAkkS calibration certificates make the purchase of a high-quality utility or factory standard based on the GMH 3100 series both amazingly affordable and easy!

GMH 3161/-81 Series – Reference instruments for professionals through sophisticated functionality.

The GMH 3161 combine the basic functions for professional use.

The GMH 3181 additionally offer a logger function paired with extremely fast measurement and averaging function - ideal companions for the investigation of fluctuating pressures: dynamic pressures, draft and clean room pressure are reliably measured.

Thanks to the data logger's low power function, leak tests can also be carried out on site over a longer period of time - without an additional power supply. Perfect for heating, ventilation, air conditioning and in plant engineering.

The GMH3181-12 vacuum gauges enable analysis and function monitoring of complex systems in vacuum potting and food vacuum packaging.

Other applications: Machine maintenance, dynamic pressure measurement and many more.

Waterproof, shockproof instruments: see GMH 51xx  
 For higher pressures see instruments with external sensors: GMH 3111/-51/-56 or GMH 51xx

## Technical Data

Pressure port	2 (Variant -12: 1) universal pressure ports for 6x1 mm (inner: Ø4 mm) hoses or others, e.g. with inner Ø 6 mm
Sensors	Piezoresistive sensors, temperature compensated
Pressure units	mbar (=hPa), bar, Pa, kPa, MPa, mmHg, PSI, m water column, depending on variant!
Media	Air and non-aggressive gases
Measuring cycle	Approx. 4 measurements /s (GMH 3181 "Fast": 1000 /s)
Display	Two 4½-digit LCD displays (12.4 mm and 7 mm), plus additional information arrows
Operating elements	6 membrane keys
Output	3-pole jack socket Ø 3,5mm, optional serial interface or analog output
Serial interface	can be connected directly to the RS232 or USB interface of a PC via interface converter GRS 3100 / GRS 3105 or USB 3100 N (accessories).
Analog output	(only GMH 3181) 0...1 V, freely scalable (resolution 13 bit, accuracy 0.05 % at nominal temperature)
Power supply	9 V battery as well as additional power supply socket for external 10.5-12 V (Not EX versions!) low battery indicator Automatic switch-off, adjustable
Battery life approx.	500 h (Fast Mode 3181: 120h)
Housing	impact-resistant ABS, membrane keypad, protection screen, mounting/suspension bracket (not EX versions) additionally with EX versions: leather protection bag
Protection class	IP40
Dimensions	142 (+16 mm socket) x 71 x 26 mm (H x W x D)
Weight approx.	170 g (-EX: approx. 210 g incl. protection bag)
Ambient conditions	-25 to 50 °C; 0 to 95 % r.h. (non-condensing)
Standard functions	Min/Max/Hold Zero and slope adjustment GMH 31x1-12: Sea level correction

### Additional functions GMH 3181:

Logger function	manual: 99 data sets (recall via display or interface) autom.: 10,000 data sets (recall via interface), low power function for long time recording without power supply unit adjustable cycle time: 1 s ... 1 h Logger start and stop via keyboard or interface. Software GSOFT 3050 is available for reading out the logger data.
Averaging	over adjustable time averaged value is output - besides min. and max. values
Alarm function	Alarm horn (Not EX versions!), display, adjustable

### Additionally GMH 31x1-EX:

Electrostatic dissipative protective leather cover (ST-R1/ST-R2)  
 EX-Approval  II 2 G Ex ib IIC T4 Gb

**Product Information**

Certificate

EPS 09 ATEX 1 227 X