13 Specification

	GMH 3181 - 002	GMH 3181 - 01	GMH 3181 - 07H	GMH 3181 - 07
Measuring ranges: [1]	-500.0 … 500.0 Pa (-5.000 … 5.000 mbar)	-1.00 … 25.00 mbar	-1.00 … 70.00 mbar	-10.0 … 350.0 mbar
Overload: [2] **(max.)**	max. 250 hPa (mbar)	max. 100 mbar	max. 1 bar	max. 1 bar
Resolution:	0.1 Pa (0.001 mbar)	1 Pa (0.01 mbar)	0.01 mbar	0.1 mbar
Accuracy: (typ.)				
Hysteresis and linearity	±0.3 % FS	±0.3 % FS	±0.1 % FS	±0.2 % FS (±0.1 % FS [3])
temp. depending 0 - 50 °C	±0.4 % FS	±0.4 % FS	±0.4 % FS	±0.4 % FS
Available units:	mbar, Pa, kPa, mmHg, PSI, m H_2O	mbar, bar, Pa, kPa, mmHg, PSI, m H_2O	mbar, bar, Pa, kPa, mmHg, PSI, m H_2O	mbar, bar, kPa, MPa, mmHg, PSI, m H_2O

	GMH 3181 - 07B	GMH 3181 - 13	GMH 3181 - 13 Option: **MB -1..2 BAR**	GMH 3181 - 12
Measuring ranges: [1]	-10.0 … 420.0 mbar (-7.5 … 315 mmHg)	-100 … 2000 mbar	-1000 … 2000 mbar	0 … 1300 mbar absolut
Overload: [2] **(max.)**	max. 1 bar	max. 4 bar	max. 4 bar	max. 4 bar abs.
Resolution:	0.1 mbar (0.1 mmHg)	1 mbar	1 mbar	1 mbar
Accuracy: (typ.)				
Hysteresis and linearity	±0.1 % FS	±0.2 % FS (±0.1 % FS [3])	±0.2 % FS (±0.1 % FS [3])	±0.2 % FS (±0.1 % FS [3])
temp. depending 0 - 50 °C	±0.4 % FS	±0.4 % FS	±0.4 % FS	±0.4 % FS
Available units:	mbar, bar, kPa, MPa, mmHg, PSI, m H_2O	mbar, bar, kPa, MPa, mmHg, PSI, m H_2O	mbar, bar, kPa, MPa, mmHg, PSI m H_2O	mbar, bar, kPa, MPa, mmHg, PSI, m H_2O

1) underpressure measurement up to the overpressure measuring range suitable (refer chapter 11.2)
2) without destruction or recalibration of sensor being necessary
3) at OPTION „higher sensor accuracy"

Pressure units: selectable
Measuring rate: slow: 4 meas./sec (ConF-Rate = Slow)
fast: >1000 meas./sec (ConF-Rate = FASt and P.dEt)
Nominal temperature: 25°C

Sensor: Piezo-resistive relative pressure sensor integrated in device.
Suitable for air and non-corrosive and non-ionizing gases and liquids.
(Not suitable for water – use air buffering)
Connection: 2 (1) metal pressure ports for connection to 6 x 1 mm (4 mm inner tube Ø) or 8 x 1 mm (6 mm inner tube Ø) tubes at the top of device

Logger: 2 Functions: individual value logger („Func–Stor") and cyclic logger („Func–CYCL")
Memory: Stor: 99 data sets
CYCL: 10000 data sets (in max. 64 recording sequences)
Cycle time CYCL: 1...3600 seconds

Display: 2 four digit LCDs (12.4mm high and 7 mm high) for measuring values, and for min/ max memories, hold function, etc. as well as additional functional arrows.

Pushbuttons: 6 membrane keys

Output: 3.5 mm audio plug, stereo
Output function: selectable as serial interface or analog output
Interface: Serial interface (3.5mm jack) can be connected to USB or RS232 interface of a PC via electrically isolated interface adapter USB3100, USB 3100 N, GRS3100 or GRS3105 (see accessories).
Analog output: 0 ... 1 Volt, freely scaleable (resolution 12 bit)

Power supply:	9V battery, type: IEC 6F22 (included in scope of supply) as well as additional d.c. connector (diameter of internal pin 1.9 mm) for external 10.5-12V direct voltage supply.  (suitable power supply: GNG10/3000)
Power consumption:	Slow measuring rate: ~ 0.6 mA Fast measuring rate: < 2.5 mA Low-Power-Logger: < 0.1 mA (for cycle time>30s, without interface communication active and no alarm horn sounding) up to 0.4 mA (at cycle time 1s)
Low battery warning:	' bAt '
Working conditions:	-20 ... +50 °C, 0 ... 95 %RH (not condensing)
Storage temperature:	-20 ... +70 °C
Housing:	impact-resistant ABS, membrane keyboard, transparent panel, Front side IP65
Dimensions:	142 x 71 x 26 mm (L x W x D) + metal pressure ports 11mm at top of device
Weight:	approx. 170 g
EMC:	The device corresponds to the essential protection ratings established in the Regulations of the Council for the Approximation of Legislation for the member countries regarding electromagnetic compatibility (2004/108/EG). Additional fault: <1%

14 Reshipment and Disposal

14.1 Reshipment

All devices returned to the manufacturer have to be free of any residual of measuring media and other hazardous substances. Measuring residuals at housing or sensor may be a risk for persons or environment

Use an adequate transport package for reshipment, especially for fully functional devices. Please make sure that the device is protected in the package by enough packing materials.

14.2 Disposal instructions

Batteries must not be disposed in the regular domestic waste but at the designated collecting points.

The device must not be disposed in the unsorted municipal waste! Send the device directly to us (sufficiently stamped), if it should be disposed. We will dispose the device appropriate and environmentally sound.