

MH 3111, MH 3151 and MH 3156

MH 3111

Digital universal pressure hand-held instrument

For use with automatically recognizable exchangeable sensors MSD

- Pressure types
Overpressure, negative pressure, differential and absolute pressure, air pressure / barometer, vacuum (depending on plugged sensor)
- Inputs
1 x mini-DIN-socket
- Measuring range
-19999...19999 digit
- Accuracy
 $\pm 0.2\%$ full scale (hysteresis and linearity)
- Units
mbar, bar, Pa, kPa, MPa, mmHg, PSI, mH₂O
- PC Interface
Data link with serial PC-Interface
DC-isolated and short-circuit proof
- Measuring rate
4 measurements / s

MH 3151

Same as MH 3111

Analogue output

Logger function, alarm and real time clock

Switchable measuring rate

- Outputs
Analogue output 0...1 V
Scalable for easy data readout
- Alarm and time display
Min-max alarm signal via display, interface and buzzer
Real time clock with date and year indication
- Data storage (Log function)
STORE
99 data sets (measured value, min / max value, time, date)
Manual data set reading via keystroke
CYCLE
9999 data sets (measured value or average value, min / max value)
Automatic data set reading in the set interval
Adjustable measurement interval 1 s...60 minute

Types MH 3111, 3151 and 3156



- Measuring rates
SLOW = 4 measurements / s
FAST = 100 measurements / s
PEAK = 1000 measurements / s
- Average calculation
Via integration of measurement values at the adjustable interval

MH3156

Same as MH 3151

Additional measuring input

Expand logger function at CYCLE modus

- Inputs
2 x mini-DIN-socket
- Data storage (Log function)
CYCLE
4000 data sets (measurement1 or average1, min1 value, max1 value) (measurement2 or average2, min2 value, max2 value) (diff M1-M2 or diff AV1-AV2, diff min1-min2, diff max1-max2)
Automatic data set reading in the set interval
Adjustable measurement interval 1 s...60 minutes
- Options
Higher accuracy sensor (available from 350 mbar)
EXI-Version (Ex ib IIC T4 - 03ATEX0136X)

Pressure sensors MSD

For pressure hand-held instruments MH-Series

Nylon type

Piezoresistive pressure sensor for air as well as non-corrosive / ionizing gases and fluids with integrated sensor memory

- Inputs
2 x nylon connection plugs for pressure hose 6 x 1 mm
- Accuracy
±0.2 % full scale (hysteresis and linearity)
- Measuring ranges / resolution

Type (Nylon)	Measuring range	Over load	Resolution
MSD 2.5 MR	-2...2.5 mbar (rel.)	200 mbar	0.001 mbar
MSD 25 MR	-20...25 mbar (rel.)	300 mbar	0.01 mbar
MSD 350 MR	-200...350 mbar (rel.)	1 bar	0.1 mbar
MSD 1.3 BA	0...1.3 bar (abs.)	4 bar	1 mbar
MSD 2 BA	0...2 bar (abs.)	4 bar	1 mbar
MSD 2 BR	-1...2 bar (rel.)	4 bar	1 mbar
MSD 7 BA	0...7 bar (abs.)	10 bar	10 mbar
MSD 10 BR	-1...10 bar (rel.)	10.5 bar	10 mbar

- Electrical Connection
PVC cable (1m) with mini-DIN-plug
- Housing
Robust ABS plastic, Degree of protection IP65
- Dimensions
70 x 30 x 15 mm (H x D x W)
- Weight
Approx. 75 g

Stainless steel type

Piezoresistive pressure sensor for aggressive media, water, gases, and fluids, with internal sensor memory

- Inputs
Stainless steel connection G1/2
- Accuracy
±0.2 % full scale (hysteresis and linearity)
- Electrical connection (not part of delivery)
PVC cable (1 m) with mini-DIN-plug
- Housing
Stainless steel, Degree of protection IP65

Types MSD 250 MRE and MSD 160 BRE



- Dimensions
Approx. 23 x 85 mm (Ø x L)
- Weight
Approx. 175 g
- Measuring range / Resolution

Type (st. steel)	Measuring ranges	Over load	Resolution
MSD 100 MRE	0...100 mbar (rel.)	1 bar	0.1 mbar
MSD 250 MRE	0...250 mbar (rel.)	2 bar	0.1 mbar
MSD 400 MRE	0...400 mbar (rel.)	2 bar	0.1 mbar
MSD 1 BAE	0...1 bar (abs.)	5 bar	1 mbar
MSD 1 BRE	0...1 bar (rel.)	5 bar	1 mbar
MSD -1 / 1.5 BRE	-1...1.5 bar (rel.)	10 bar	1 mbar
MSD -1 / 3 BRE	-1...3 bar (rel.)	17 bar	1 mbar
MSD 2.5 BAE	0...2.5 bar (abs.)	10 bar	1 mbar
MSD 2.5 BRE	0...2.5 bar (rel.)	10 bar	1 mbar
MSD 4 BAE	0...4 bar (abs.)	17 bar	1 mbar
MSD 4 BRE	0...4 bar (rel.)	17 bar	1 mbar
MSD 6 BAE	0...6 bar (abs.)	35 bar	1 mbar
MSD 6 BRE	0...6 bar (rel.)	35 bar	1 mbar
MSD 10 BAE	0...10 bar (abs.)	35 bar	10 mbar
MSD 10 BRE	0...10 bar (rel.)	35 bar	10 mbar
MSD 16 BAE	0...16 bar (abs.)	80 bar	10 mbar
MSD 25 BAE	0...25 bar (abs.)	50 bar	10 mbar
MSD 25 BRE	0...25 bar (rel.)	50 bar	10 mbar
MSD 40 BRE	0...40 bar (rel.)	80 bar	10 mbar
MSD 60 BRE	0...60 bar (rel.)	120 bar	10 mbar
MSD 100 BRE	0...100 bar (rel.)	200 bar	0.1 bar
MSD 160 BRE	0...160 bar (rel.)	320 bar	0.1 bar
MSD 250 BRE	0...250 bar (rel.)	500 bar	0.1 bar
MSD 400 BRE	0...400 bar (rel.)	800 bar	0.1 bar
MSD 600 BRE	0...600 bar (rel.)	1200 bar	0.1 bar
MSD 1000 BRE	0...1000 bar (rel.)	1500 bar	1 bar

- Options for nylon and stainless steel
Higher accuracy sensor (available from 350 mbar)
EXI-Version (Ex ib IIC T4 - 03ATEX0136X)