

# HUBER-CALIBRATOR

TM40



- Modular design
- Generate / measure pressure
- Configurable relay output
- Absolut-, differential-, relative-pressure
- Battery operation
- Step generator-> Increase or decrease pressure stepwise (GM40 module)
- Measured units switchable during measurement
- 4,3" Resistive touchscreen
- Up to 100 measurements per second
- Easy recalibration process-> (we only need the corresponding module)

Our modular built Pressure-Calibrator TM40 is unique in its conception. The device is built completely modular. Four slide-in slots are available, to be equipped with different types of modules. Thus allowing the TM40 to be equipped individually, suiting even the most specific needs. Distinguished between three different types of modules, there are: - Measuring module (MM40) - Generator module (GM40) - Voltage / Current module (VM40)-> coming soon! The measurement module covers a freely definable range for measuring pressure (up to 10000 Pa) and uses one slot in the TM40. So for example, it is possible to cover four different measurement ranges with the TM40. Accuracy classes for the measurement modules are available up to 0.05% F.S.. Even symmetrical measurement ranges are possible (for ex. -250...+250Pa). The generator module of the TM40 has identical characteristics like the measurement modules, but is able to generate pressure and regulate it automati-

cally (by internal pressure conditioning). For example, the GM40 is able to build up and regulate a given setpoint autonomously. Even (as given setpoints defined) pressures can be increased or decreased stepwise. A GM40 needs two slots in the TM40. The control accuracy of the GM40 is 0.01 Pa. So it's possible to use two GM40's in the device (4 slots), or one GM40 and two MM40's.

The TM40 is capable of up to 100 measurements per second. The measurements can be displayed (in real time) graphically on the 4.3" touchscreen. Data transfer is done via USB com-port. For making even mobile operations efficient and comfortable, the TM40 is equipped with a li-ion accumulator. The TM40 can be used up to 8 hours with only one battery charge. Of course, our TM40 comes with temperature compensated and long term stable pressure sensors. All GM40 or MM40 modules are shipped including a SCS calibration certificate.

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## TM40 – Base unit:

Operation:	4,3" Resistive Touchscreen 480x270 Dots, incremental shaft encoder for quick workflow
Sampling rate:	max 100 Hz
Interface:	USB 2.0 VCP
Storage:	Micro SD-Card 2GB (front)
Operating temperature:	15...35 °C (not condensing)/ 0...+50 °C (optional)
Storage temperature:	-20...+70 °C
Temperature dependence:	Compensating (error included in total tolerance)
Humidity:	35 up to 85 % RH
Operating voltage:	12Vdc +/-20% max. 500mA (front)
Battery pack:	Li-Ion 7.4V/34Wh (intern)
Battery life:	up to 8 hours (depending on climate conditions)
Pneum. connectors:	Vebo quick coupling, NPT 1/8", M10x1, 4/6mm hose- connector (Others on request)
Housing dimensions:	390x 280 x 125 mm (LxWxH)
Weight:	4500g

## GM40 – Generator Module for TM40:

Measurement ranges	Measurement accuracy F.S. $\pm 1$ digit	Control accuracy
0...250.00 Pa	0,1% / 0,05%	$\pm 0,1$ Pa
-250.00...250.00 Pa	0,1% / 0,05%	$\pm 0,1$ Pa
0... 500.00 Pa	0,1% / 0,05%	$\pm 0,1$ Pa
0...7000.00 Pa	0,1% / 0,05%	$\pm 0,1$ Pa
0...10000.00 Pa	0,1% / 0,05%	$\pm 0,1$ Pa

Other measurement ranges on request. Measurement range from 0...10000.00 Pa are freely selectable.

Units of measurement:	mbar, bar, Pa, hPa, kPa, MPa, kg/cm <sup>2</sup> , kg/m <sup>2</sup> , mmHg, cmHg, mHg, inHg, mmH <sub>2</sub> O, cmH <sub>2</sub> O, mH <sub>2</sub> O, inH <sub>2</sub> O, ftH <sub>2</sub> O, psi, lb/in <sup>2</sup> , lb/ft <sup>2</sup> , torr, atm (depending on the measuring range)
Housing dimensions GM40:	230x65x100 mm (LxWxH)
Weight:	1000g

## MM40 – Measurement module:

Measurement ranges	Accuracy F.S. $\pm 1$ digit
0...250.00 Pa	0,1% / 0,05%
-250.00...250.00 Pa	0,1% / 0,05%
0...7000.00 Pa	0,1% / 0,05%

Other measurement ranges on request

Units of measurement:	mbar, bar, Pa, hPa, kPa, MPa, kg/cm <sup>2</sup> , kg/m <sup>2</sup> , mmHg, cmHg, mHg, inHg, mmH <sub>2</sub> O, cmH <sub>2</sub> O, mH <sub>2</sub> O, inH <sub>2</sub> O, ftH <sub>2</sub> O, psi, lb/in <sup>2</sup> , lb/ft <sup>2</sup> , torr, atm (depending on the measuring range)
Housing dimensions MM40:	230x33x100 mm (LxWxH)
Weight:	600g

subject of modification

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