

**EMB-001 digital handheld manometer**

**Manometer user's manual**

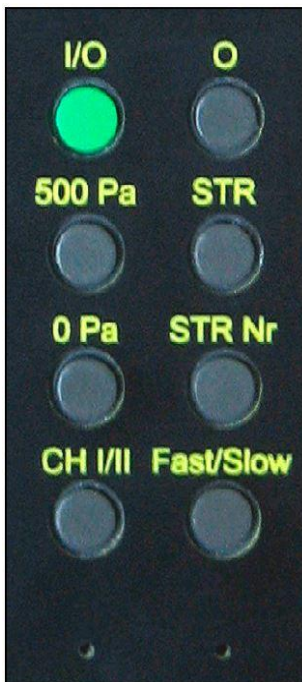
The EMB-001 digital handheld manometer contains two high-sensitivity Honeywell-SurSense™ DUXL05D pressure transducers (two channels respectively). The measurement range:  $\Delta p = \pm 1250 Pa$ , Accuracy:  $\delta \Delta p = 2 Pa$ . The LCD display unit shows only the pressure difference (with + or - sign) measured by one of the pressure transducers. The user can change the channels (and therefore pressure transducers) with the CH I/II switch. The measured values are time averaged. The averaging time can be changed between three different levels: F („fast”), M („medium”) and S („slow”), for which the time will be  $\Delta t = 1s$ ,  $\Delta t = 3s$  and  $\Delta t = 15s$ , respectively. The averaged pressure will be shown on the display with the predefined refresh rate. The instrument has a memory which can store up to 15 slots, where the measurement can be saved with the STR („store”) button. The user can switch between the memory slots with the STR Nr. button. The manometer can be calibrated; we can set the 500 Pa and 0 Pa values. It is possible to save a calibration. This can be important when a calibration has to be repeated or there is a need



Measurement CH Battery F/M/S

to use an old, but trusted calibration. The manometer can be connected to a PC with the help of the USB port. That is an easy way to transfer data: measured values can be saved to text file.

**List of buttons to be used during the measurements**



The following table lists the functions found on the front board. The functions are named in the following list, from top to bottom. The last two buttons (9) and (10) are hidden.

Nr.	Symbol	Function
1	I/O	ON / OFF switch
2	O	Factory reset
3	500 Pa	set 500Pa to calibration, confirm with (4) button (works only in „slow” averaging time mode)
4	STR	- memory save to the actual slot -confirmation of 500 Pa (calibration)
5	0 Pa	setting 0 Pa
6	STR Nr	switch between the memory slots
7	CH I/II	changing the channel (I – II)
8	Fast/Slow	averaging time (Fast/Medium/Slow)
9	(hidden)	factory calibration (no need to confirm and works only in „slow” averaging time mode)
10	(hidden)	RESET

### The manometer ports

The silicon rubber tubes which used during the measurement should be carefully connected to the manometer ports (take into account the (+)/(-) distributions), visible at the front of the instrument. There are two channels (CH I / CH II) as mentioned above.



The display unit shows only the pressure difference (with + or - sign) measured by one of the pressure transducers. The user can change channels (and therefore pressure transducers) with the CH I/II switch.

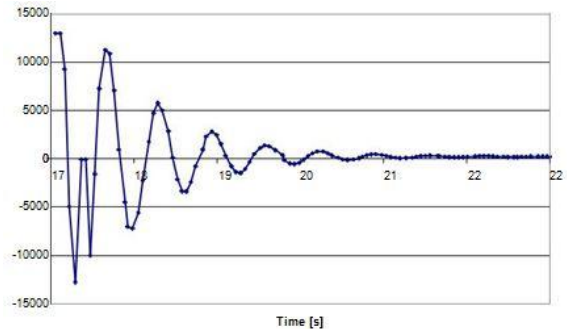
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### USB communication

The manometer is able to measure and store the pressure continuously. Furthermore, it can be connected to a PC with the help of the USB port (slot can be found at the right side) and using a JAVA application is able to store the pressure difference with 20Hz resolution in text files.



USB slot



Measured, stored and displayed surge

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### The digital handheld manometer's batteries



Battery charger slot

The digital handheld manometer works with 1 or 2 9V set-in batteries. The batteries can be full-charged with a battery charger which has to be connected to the Ø3.5mm jack adapter found on the left side. After charging, the manometer can work continuously for 15 hours per battery. The charge level can be found at the upper right corner of the display unit.