



MODEL: GM505

Pressure Manometer
Operation manual



Version : GM505-EN-01

A. Introduction

With thirteen selectable units: bar, mbar, Kpa, Kg/cm², mmHg, cmH₂O, Oz/in², Psi, inHg, inH₂O, ftH₂O, HPa, Pa, this unit features Data Hold/ Data Correction/ Auto Off and Connection with PC via APP for data access.

Application:

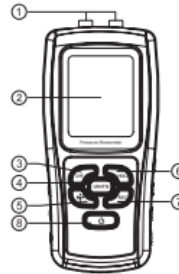
This product has been widely applied in measuring blood & breath pressure, negative pressure for dust-free workshop, micro wind pressure in operating theatre and laboratory.

B. Features

1. Large LCD
2. Data hold
3. With differential mode and record mode
4. USB port
5. Reset and data adjustment
6. Low battery indication and automatic power off

C. Components

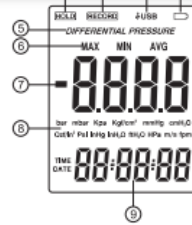
1. Pressure input
2. LCD
3. DIF mode key
4. Unit shift key
5. Backlight key
6. HOLD key
7. Record key
8. Power key



D. Display

1. Data hold function
2. Record mode
3. USB communication

4. Low battery indication
5. DIF mode
6. Minimum/maximum value
7. Main display
8. Pressure unit
9. Record time



E. Operation

1. Power supply

Press the on/off key to activate or deactivate the unit. There is an 1.5 seconds full screen display if the unit is activated and then enter into normal measurement.

2. Difference

In measuring, press the DIF key, the difference between the current measuring and the measuring value at pressing the DIF key, and DIFFERENTIAL PRESSURE appears. Press the key again to go back measuring mode.

3. Data hold

Press the HOLD key to hold on the reading, and the HOLD appears on the left upper corner of the LCD. Press the key again to go back measuring mode.

4. Record

Under record mode, users may review the MAX/ MIN/AVERAGE values with the time display (automatic turn-off is deactivated)

- (1) Press the REC key to start the timing with RECORD appears on LCD.
- (2) Press the REC key again, the MAX appears and the maximum reading with the record time corresponding will be given on the LCD
- (3) Press the REC key third time the MIN appears and the minimum reading with the record time corresponding will be given on the LCD.

- (4) Press the REC key fourth time, the AVG appears and the average of total readings with the total time taken will be given on the LCD.
- (5) Press the REC key fifth time, the unit will restart a new record period.
- (6) Press on the REC key for 2 seconds to exit the record mode.

5. Backlight

Press the backlight to activate the backlight function and press the key again to deactivate the function.

6. Automatic turn-off

To save the electricity, the unit will be turned off automatically if there is no further operation within 1 minute. Under turn-off mode, press the HOLD key and at the same time turn on the unit until NO appears after the full screen display lasts for 1.5 seconds or so.

7. Unit

Press UNITS key to select one unit among 13 units.

8. USB

Built-in USB socket allows access with PC for communication (automatic turn-off deactivated)

9. Mistake code

If there is any error arising, mistake code appears on LCD and all the keys will be deactivated.

- (1) Err1: Pressure beyond positive range;
- (2) Err2: Pressure beyond negative range;
- (3) Err3: Difference beyond positive range under DIF mode;
- (4) Err4: Difference beyond negative range under DIF mode;

10. Battery replacement

The battery icon flashes if the unit is in low battery, please replace the battery with 4 fresh 1.5VAAA batteries for normal operation.

Reset and correction

This product has been reset and calibrated before delivery from factory, and normally the users are

1. Reset

Normally the reading will be 0 after the unit is turning on. If not, please reset the product as below:

Press DIF key with DIFFERENTIAL PRESSURE, then long press on the HOLD key and backlight key at the same time until the screen appears 0 that indicates the reset is done.

2. Calibration

In operating, if there is any error appears, please calibrate the product as below:

- (1) Turning on
- (2) long press on the HOLD KEY and backlight key at the same time until "1.00" or "-1.00" appears on LCD.
- (3) Press the HOLD key to switch positive or negative unit, after the surrounding air pressure is set, press the REC key with 55 appearing indicating recording is done. Release the REC key and press the DIF key to select the point to be calibrated and press the key again for operation of the next reading record. Every 1 inH₂O is a calibrating point and long press on the DIF key to increase the number rapidly. Calibration range: -10.00inH₂O~10.00inH₂O. Press the DIF key after the LCD displays "+10.00" or "-10.00" to exit calibration mode and goes back to the normal measuring mode.

3. Restore the ex factory setup

The setup can be restored as below if any error arising from mistake operation during calibration.

- (1) Hold on DIF/HOLD/REC/backlight keys at same time;
- (2) Then press the on/off key to activate the product
- (3) Release all keys until 0000 appears on LCD
- (4) Reset done.attachment: (10inH₂O)

Note for micro pressure measurement:
This machine is not suitable for measuring micro-pressure (1Pa to 100Pa), which can be roughly estimated and cannot guarantee the accuracy

Unit	Range	Resolution	Maximum pressure
bar	±0.024	±0.001	±0.43
mbar	±24.90	±0.024	±435.89
Kpa	±2.490	±0.01	±43.58
Kg/cm ²	±0.025	±0.001	±0.44
mmHg	±18.68	±0.018	±326.94
cmH ₂ O	±25.40	±0.025	±444.50
Oz/in ²	±5.780	±0.01	±0.44
Psi	±0.361	±0.01	±6.32
inHg	±0.735	±0.01	±12.87
inH ₂ O	±10.00	±0.01	±175.0
ftH ₂ O	±0.833	±0.001	±14.58
HPa	±24.90	±0.024	±435.89
Pa	±2490	±2.49	±43589.35

Note: The unit may be damaged if there is any measure operation beyond the measuring range.

F. Definition of pressure

The pressure in this manual refers to the intensity of pressure, the force applied on a square unit.

Absolute pressure: Difference between the reading and the absolute zero.

Positive pressure means that the right pressure is bigger than the left one.

Negative pressure means that the left pressure is bigger than the right one.

G. Specification

Measuring range	±2.49kPa;
Accuracy	±0.25%FSO(25°C)
Response	Typical 0.5 s
Low battery indication	Yes
Up overload indication	Err1
Down overload indication	Err2
Operating temperature	0~50°C
Storage temperature	-10~60°C
Power supply	1.5V AAA battery*4
USB communication	Yes

Specific Declarations:
Our company shall hold no any responsibility resulting from using output from this product as an direct or indirect evidence. We reserves the right to modify product design and specification without notice.

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