UEi TEST INSTRUMENTS™ **SPMKIT**

Wireless Single Port Manometer

INSTRUCTION MANUAL

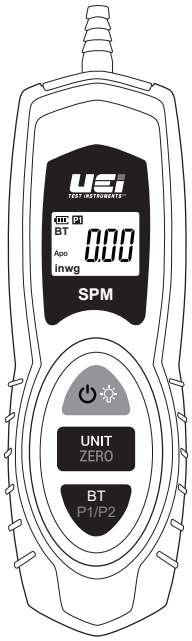
ENGLISH

CE

FC

RoHS Compliant

REACH Compliant



WARRANTY

The SPM is warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase. If within the warranty period your instrument should become inoperative from such defects, the unit will be repaired or replaced at UEi's option. This warranty covers normal use and does not cover damage which occurs in shipment or failure which results from alteration, tampering, accident, misuse, abuse, neglect or improper maintenance. Batteries and consequential damage resulting from failed batteries are not covered by warranty.

Any implied warranties, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the express warranty. UEi shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expenses or economic loss.

A purchase receipt or other proof of original purchase date will be required before warranty repairs will be rendered. Instruments out of warranty will be repaired (when repairable) for a service charge.

For more information on warranty and service, contact:

www.ueitest.com • Email: info@ueitest.com

1-800-547-5740

This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.

FEATURES

- **Measurement range:** 0 to +80 inwg
- **Single Port Pressure**
- **Magnetic Mount**
- **Backlight**
- **Wireless capability**
- **Auto Power off**
- **Low Battery Indicator**
- **Zero Button**

IMPORTANT SAFETY WARNINGS

⚠ **WARNING**

Read entire Safety Notes section regarding potential hazard and proper instructions before using this meter. In this manual the word "**WARNING**" is used to indicate conditions or actions that may pose physical hazards to the user. The word "**CAUTION**" is used to indicate conditions or actions that may damage this instrument.

- To avoid false readings, replace the batteries if a low battery indicator appears.

⚠ **WARNING**

- Do not exceed Maximum Over Pressure of **±10 PSI.**

⚠ **WARNING**

- Do not use the manometer if it operates abnormally.
- Always test the manometer before use to ensure it is operating properly.
- Always ensure that the connection hoses you are using are free from kinks, blockage or splits.
- Always double-check all connections before testing.
- While using the manometer, if you suspect gas is leaking, or if you smell gas, close off gas supply and ventilate the occupied space. Identify and repair the source of the leak before continuing with the test.
- Never connect the manometer to an unknown pressure source if the source is twice the working pressure of the instrument; the sensor may be damaged and it may cause injury to the user.
- Never open the manometer or attempt to modify it in any way. Otherwise, accident and injury may occur. And the warranty is voided.
- These manometers do not measure water pressure; under these conditions they will fail.

⚠ **WARNING**

This manometer is designed for trained trade professionals who are familiar with the hazards of their trade. Observe all recommended safety procedures and use of personal protective equipment.

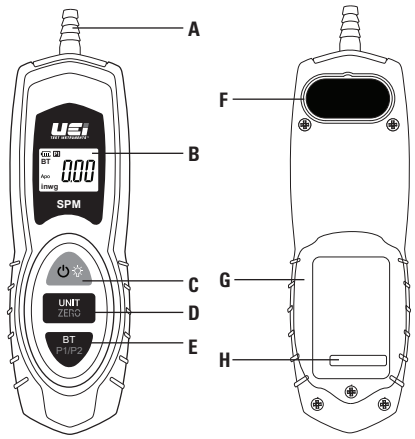
DISPLAY SYMBOLS

inwg	Inches of Water Gauge (Water Column or H_2O)
mmwg	Millimeter of Water
Pa/kPa	Pascal / Kilopascal
mbar	Millibar
bar	Bar
psi	Pound per Square Inch
Apo	Auto Power Off
▬	Negative Pressure
▭	Battery Indicator
BT	Wireless Connection
P1 P2	P1/P2

GENERAL SPECIFICATIONS

- **Accuracy:** ±0.03 < 3 inwg, ±1%rdg > 3 inwg
- **Resolution:** 0.01 inwg
- **Units of Measure:** mbar, bar, psi, inwg, mmwg, Pa, kPa
- **Operating Temperature:** 32°F to 104°F/ 0°C to 40°C
- **Storage Temperature:** 14°F to 122°F/ -10°C to 50°C
- **Accuracy Temperature:** 64°F to 82°F/ 18°C to 28°C
- **Operating Humidity:** maximum relative humidity 80% for temperatures up to 88°F (31°C) decreasing linearly to 50% relative humidity at 104°F (40°C).
- **Operating Altitude:** Up to 2000m
- **Pollution Degree:** 2
- **Overvoltage Category:** I
- **Over-range:** OL is displayed
- **Apo**: Auto Power off after 30 minutes
- **Dimensions:** 2.5 x 9 x 1.2 in (51 x 150.5 x 33.4 mm)
- **Item Weight:** 6.5 oz (180g)
- **Calibration interval:** One year
- **Certifications:** CE, FCC, RoHS, REACH Compliant
- **Rated Power:** 4.5 VDC (3X1.5 VDC, LR03, AAA type batteries)

OVERVIEW



A. Pressure Sensor Inputs
- Pressure input

B. Display with Backlight
- Battery: When battery is too low for safe operation, the Low Battery indicator will display ▭. See Battery Replacement section at the end of this manual.

C. Power/Backlight Button (Red)
- Press to power on manometer. Press and Hold to power off manometer.
- Press and hold to turn on display backlight. Back light has a 60 second duration.

D. Unit/Zero Button
- 6 Selectable units of measurement
- To zero the manometer, press and hold.

E. Wireless Connection Button
- Press BT button to activate wireless connection to a device.
- Press and Hold the P1/P2 button to change P1 or P2.

F. Magnetic Mount

G. Battery Compartment Cover

H. Serial Number

SPECIFICATIONS

Units	Range (Max.)	Resolution	Accuracy
mbar	±199.3	0.01	±0.03 < 3 inwg ±1% rdg > 3 inwg
bar	±0.199	0.001	
psi	±2.890	0.001	
inwg	±80.00	0.01	
mmwg	±2032	0.1	
Pa/kPa	±19.93 kPa	1 Pa	

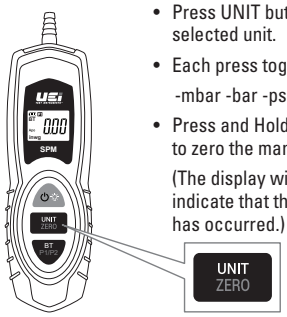
OPERATING INSTRUCTIONS

A. POWER / BACKLIGHT Button

- Press to power on manometer. Press and hold to power off manometer.
- When you press a button while the power is on, the backlight turns on.
- Backlight has a 60 second duration.

Note: The Manometer has a 10 second count down upon powering on.

B. UNIT / ZERO Button

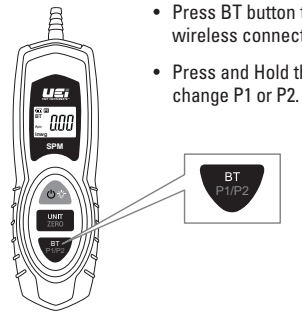


- Press UNIT button to change the selected unit.
- Each press toggles through units
  -mbar -bar -psi -inwg -mmwg -pa
- Press and Hold the **ZERO** button to zero the manometer.
  (The display will show '**8888**' to indicate that the Zero function has occurred.)

- Unit options:
  - mbar - bar - psi
  - inwg - mmwg - Pa/kPa

Note: Prior to testing, the Manometer must be zeroed. Do this in a non pressurized area with no hoses connected.

C. BT, P1/P2 Button

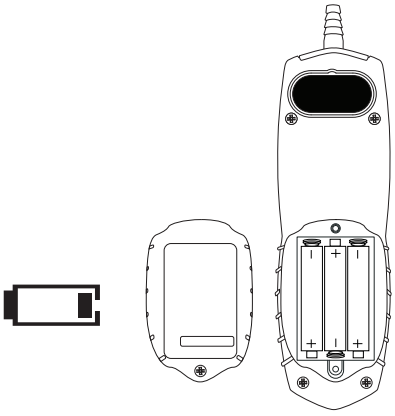


- Press BT button to activate wireless connection to a device.
- Press and Hold the P1/P2 button to change P1 or P2.

PRESSURE CONVERSIONS

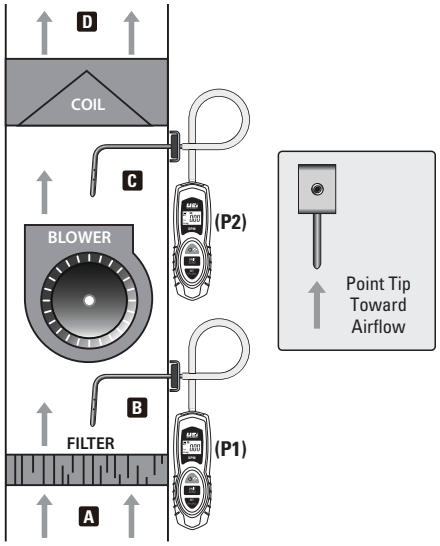
Multiply	By	To Get
inwg (inwc/inH_2O)	2.490891	mbar
inwg (inwc/inH_2O)	0.002491	bar
inwg (inwc/inH_2O)	0.036127	psi
inwg (inwc/inH_2O)	25.40002	mmwg
inwg (inwc/inH_2O)	249.0891	Pa
inwg (inwc/inH_2O)	0.249089	kPa

BATTERY REPLACEMENT



- When low battery indicator icon displays.
- Loosen the screw;captive screw is used to insure screw does not get lost, (Phillips-head screw)
- Remove battery cover.
- Replaced the batteries (3) AAA batteries
- Replace battery cover, tighten screw.
- Dispose used batteries properly

STATIC PRESSURE



Static pressure testing ensures if the equipment is operating within factory specifications.

1. Zero your SPM while in ambient pressure with any tubing/probes attached before taking measurements. For measurements less than 2 inwg, take reading within 1 minute after zeroing for best accuracy.
2. Use the included static pressure tip when checking static pressure in an airflow stream.

NOTE: The red arrow on the static probes should point toward the airflow of the stream.

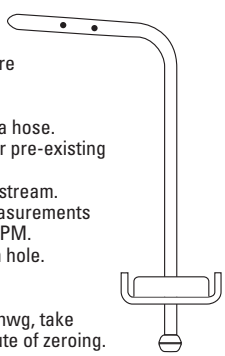
3. Place a SPM before and after the filter to measure your filter pressure drop (**B** **A**).
4. Place a SPM before and after the coil to measure your coil pressure drop (**D** **C**).
5. Place a SPM in the inlet and outlet air of the equipment to measure your total external static pressure (**C** **B**). Check with manufacturer to determine TESP test locations.

NOTE: If you are in an environment where the temperature is noticeably changing while you are taking your reading, it is advised that you disconnect the probe from the tubing and ZERO it relative to the ambient air before each reading.

1. SF100 - STEP CONNECTOR CONNECTING PROCEDURE

- Smaller end (3/16") of the step connector connects SPM tubing. Remove the installed brass fitting from tube so the step connector can be inserted.
- Step Connector
- Step Connector Tube (5/16")
- Outlet Pressure Boss

2. ASP1 - MAGNETIC STATIC PRESSURE PROBE

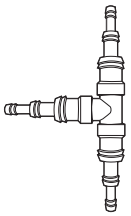


For Accurate Static Pressure Measurements.

- Connect ASP1 to SPM via hose.
- Insert ASP1 into drilled or pre-existing 1/4" hole.
- Adjust probes to face airstream.
- Read static pressure measurements from the display on the SPM.
- Remove probe and patch hole.

Note: For best accuracy on measurements less than 2inwg, take measurement within 1 minute of zeroing.

3. TF100 - TAPERED TEE



For Testing Pressure switches on live system.

- Insert Tee where inline pressure measurement is required.
- Connect Manometer to open port on TEE

APP

To use the Free App, download by scanning the QR code below.

DISPOSAL

⚠ **CAUTION:** This symbol indicates that equipment and its accessories shall be subject to separate collection and correct disposal.

FCC/IC INFORMATION

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

⚠ **WARNING**
Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CLEANING

Periodically clean your meter's case using a damp cloth. DO NOT use abrasive, flammable liquids, cleaning solvents, or strong detergents as they may damage the finish, impair safety, or affect the reliability of the structural components.

Keep pressure ports clean and free of grease and other deposits; clean with a moist cloth as required.

STORAGE

Remove the battery when instrument is not in use for a prolonged period of time. Do not expose to high temperatures or humidity. After a period of storage in extreme conditions exceeding the limits mentioned in the General Specifications section, allow the instrument to return to normal operating conditions before using it.