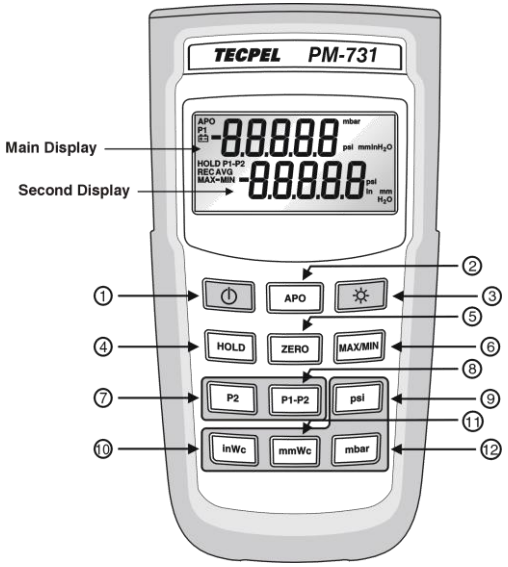
OPERATING INSTRUCTIONS

DUAL INPUT DIFFERENTIAL MANOMETER CE

TECPEL *PM-731*



INTRODUCTION

The meter is a portable standalone dual port manometer. The meter is capable of taking gas pressure as well as static pressure. The meter comes in a rugged rubber boot. The meter also has a zero adjust and a hold button to hold the currently displayed reading. The auto-power-off function conserves battery life, but can be disabled if desired.

The meter will allow you to take gas pressure up to ±60" of Wc. The meter will take differential pressure readings and display the difference between P1 and P2 at all times in the lower right corner of the LCD. The meter also has four different measurement scales including inches of water column, millimeters of water column, mbar and psi. Static pressure is possible with the resolution to 0.01" of Wc. Special purpose static pressure instruments are on the market with better accuracy and temperature compensation but they typically cost many times more than the meter.

WARNING

Before every use, check to be sure the meter and its tubing are free from breaks or blockage. While using the meter, if you suspect gas is leaking, or if you can smell gas, close off the gas supply and ventilate the occupied space. Identify and repair the source of the leak before continuing with the test.

In the interest of safety, this instrument should only be used by trained, competent professionals who know the hazard and consider the risk of working on and with industrial equipment.

The meter does not measure water pressure; under these conditions they will fail. Do not exceed 5 psi input pressure.

WARNING

Avoids gauging to the ignitability and the caustic gas, otherwise the gas sensor can damage.

FEDERAL COMMUNICATIONS COMMISSION

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. This equipment generates, uses and can radiated 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 or 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.

Shielded interface cables must be used in order to comply with emission limits.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

WIRELESS NOTE

Wireless receiver must keep a distance at least 40cm from the meter and meter to meter distance must be at least 30cm.

SPECIFICATIONS

ELECTRICAL

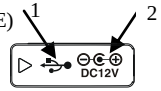
Temperature

Temperature coefficient: 0.1 x (specified accuracy) per ℃
Accuracy: Stated accuracy at 23℃ ± 5℃ (18℃ to 28℃): ±1.5% FS

GENERAL

Display: 5 digit liquid crystal display (LCD).
Overload: "----.-" or "OL" is display.
Battery: 1.5V x 4 PCS (SIZE AAA) UM-4 R03.
Battery Life: 200 hours with low battery indicator on display.
Low Battery: Symbol is displayed.
Auto-Off power: 15 minutes.
Dimensions: 171mm (H) x 83mm (W) x 40mm (D)
Weight: Approximately 230g including batteries.
Operating environment: 32℉ (0℃) to 122℉ (50℃)
Compatible Media: Dry, non-corrosive gases.
Wire Communication Protocol:
19200 baud rate. (886U/886UW/886UWE)

Back Side: (886U/886UW/886UWE)
1. USB Port
2. DC power JACK(12V)



Wireless Features:
Frequency range: 910~920MHz(886W/886UW)
868.1~868.5MHz(886WE/886UWE)
Low current consumption less than 1mA
The transmitting distance can reach 25M without magnetic interference.

Pressure

Pressure Ports: Tube connectors for 4mm
Units of Measure: inWc, mmWc, mbar, psi
Resolution: 0.01 inch Wc
Accuracy: ±1.5% FS
Measurement Range:
inWc: 0.00 to ± 60.00
mmWc: 0.0 to ± 1500.0
mbar: 0.00 to ± 150.00
psi: 0.0000 to ± 2.0000

OPERATING INSTRUCTIONS

1. "⏻" Button

When the power is off, press "⏻" button to turn on the meter. In the MAX/MIN record mode can not power off, must exit MAX/MIN recording mode then power off.

2. "APO" Button

Press the "APO" button to trigger on or off APO(auto power off) function and the "APO" annunciator is displayed. (It will auto power off when no operation for 15 mins).

3. "☼" Button

Press "☼" button to trigger on the backlight function, press the "☼" button again to cancel the backlight function. The backlight will switch-off automatically after 30 seconds.

4. "HOLD" Button

Press the "HOLD" button to enter the data hold mode, the "HOLD" annunciator is displayed at the center-left of display. When data hold mode is selected, the manometer meter held the present readings and stops all further measurements. Press the "HOLD" button again to cancel data hold mode, causing manometer meter to resume taking measurements.

5. "ZERO" Button

ZERO button just before taking the pressure readings, while at ambient pressure. This will zero both P1 and P2.

6. "MAX/MIN" Button

Press "MIN/MAX" button to enter the MIN/MAX recording mode and REC shows on the display. The beeper emits a tone when a new minimum or maximum measurement is recorded. Press the "MIN/MAX" button again to cycle through the current readings:

MAX: The highest measurement recorded.
MIN: The lowest measurement recorded.
MAX-MIN: The difference of the highest and the lowest measurement.
AVG: The average values of the measurements.

Pressing "MIN/MAX" button over two seconds to exit the function. In this mode, press "HOLD" button to stop recording, all values are frozen, press "HOLD" button again to restart recording. In this mode, the APO function and other buttons are disabled, excluding "HOLD" a Back-light buttons.

Pressing and holding down the “MAX/MIN” button for more than 2 seconds to exit the MAX/MIN function.

7. “P2” and “P1-P2” Button

Press the “P2” or “P1-P2” button you can change the display between P2 and P1-P2.

8. “psi”, “inWc”, “mmWc”, “mbar” Button:

Press the “psi” or “inWc” or “mmWc” or “mbar” button you can change pressure unit.
1 psi = 27.67990500784 inWc.
1 psi = 703.0698934059 mmWc.
1 psi = 68.94756718687 mbar.

9. WIRELESS MODE:

(886W/886UW/886WE/886UWE)

Pressing the “” key for more than two seconds to start wireless function. Pressing the “” key again for another two seconds to stop wireless function. The wireless mode will shut down if there is no wireless signal for two minutes.

To SET CH/ID to 00,00, pressing the “mbar” key and “” power key for more than 4 seconds with the meter powered down. The meter will set channel and ID to 00,00 status. The second display will show 00, which means that the channel and ID has been set to 00.

To check the channel and ID of the meter:

When the meter is off, press “APO” key and “” for 4 seconds, LCD’s main display will show channel number, the second display will show ID number.

OPERATION

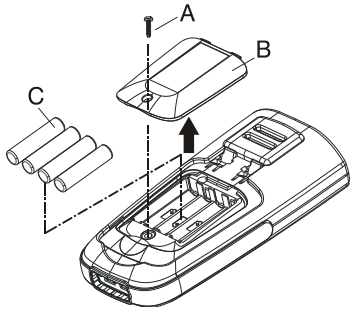
1. Zero the meter by pressing the “ZERO” button just before taking the pressure readings, while at ambient pressure. This will zero both P1 and P2.
2. Connect a single hose to get the gauge pressure relative to the ambient or ZERO pressure.
3. Connect both hoses if you want to see relative pressure, P1 minus P2.
4. By pressing the “P2” or “P1-P2” button you can change the display between P2 and P1-P2 is constantly displayed in the LCD.
5. Press the unit button makes it possible to switch between the four measurements scales of inches of water column (inWc), millimeters of water column (mmWc), mbar, and psi. The scale being viewed is displayed on the LCD.
6. 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 meter from the hoses and ZERO it relative to ambient before each reading.

MAINTENANCE

WARNING

To avoid possible electrical shock, disconnect the thermocouple connectors from the thermometer before removing the cover.

Installing and Replacing Battery



A. Screw
B. Battery Cover
C. Battery

1. Power is supplied by 4pcs 1.5V (SIZE AAA) UM-4 R03.
2. The “” appears on the LCD display when replacement is needed. To replace battery remove screw from back of meter and lift off the battery cover.
3. Remove the battery from battery contacts and replace.
4. When not use for long time remove battery.
5. Don’t keep in place with high Temp, or high humidity.

Cleaning

Periodically wipe the case with a damp cloth and detergent, do not use abrasives or solvents.