

# TRACEABLE® PRESSURE/VACUUM METER INSTRUCTIONS

## SPECIFICATIONS

Display:  $\frac{5}{8}$ " high 4-digit LCD

Range (Resolution):

Cat. No.	3165	3166
psi	-14.7 to 725 (1)	-14.70 to 29.00 (0.02)
bar	-1.0 to 50 (0.05)	-1.000 to 2.000 (0.002)
Meter/H2O	-10 to 509.5 (0.5)	-10.00 to 20.40 (0.02)
Atmospheres	-1.0 to 49.35 (0.05)	-1.000 to 1.974 (0.002)
mm/Hg	-736 to 37500 (50)	-736 to 1500 (2)
inch/Hg	-29 to 1476 (1)	-29.00 to 59.05 (0.05)
inch/H2O	-394 to 20050 (20)	-394 to 802 (1)
Kg/cm2	-1 to 50.95 (0.05)	-1.000 to 2.040 (0.002)

Accuracy: 1% full-scale plus 1 digit

Sampling Rate: Approximately 0.8 seconds

Features: Serial computer output, 40" cable  
Auto power off, Carrying case

**CONTROLS:** Power, Hold, Sensor Type, MAX/MIN, Unit, Zero

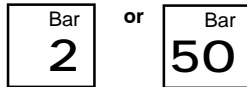
## OPERATIONS

### Sensor Type Verification

1. Connect the pressure sensor to the meter, noting the model PS100 - 50BAR or PS100 - 2BAR.
2. Press the POWER button to turn the unit on.
3. Press the SENSOR TYPE button to display the stored sensor. If the display and the information written on the sensor match you are ready to take measurements (see Measurement section). If the display and the information on the sensor do not match perform the following steps to store the correct sensor type.

### Sensor Type Selection

1. With the meter off, press and hold down the following buttons simultaneously: MAX/MIN, HOLD and SENSOR TYPE.
2. Continue to hold down buttons and press the POWER button. When all the LCD segments are lit up release the 3 buttons.
3. The display will now show the memorized sensor type. (see illustration)
4. Press the SENSOR TYPE button until the 2 or 50 (depending on your sensor) is displayed. Press the ZERO button to confirm the sensor type. The new setting has now been stored in your unit even if the power is turned off.
5. Turn the power off to complete the sensor type selection procedure.



### Measuring

1. Turn the meter on by pressing the POWER button.
2. Select the desired unit measurement by pressing the UNIT button. The unit selected will be shown on the display. (Bar, Kg/cm<sup>2</sup>, mm/Hg, m/H<sub>2</sub>O, ATP (Atmosphere), Psi, in/Hg, in/H<sub>2</sub>O).
3. Zero adjustment - press and hold the ZERO button until the display reads "0"
4. Connect the pressure sensor port connection to the equipment you wish to measure. Depending on the application, the user may wish to place Teflon tape or an appropriate sealant on the threads to make it gas tight. Turn the equipment on to apply pressure to the sensor. The meter will measure the pressure and display the value.
5. To hold a measurement on the display, press the HOLD button while a measurement is being taken. "HOLD" is shown in the upper left of display. To cancel the data hold feature simply press the HOLD button a second time.
6. To record a measurement for both Memory Recall and RS-232 Data Acquisition press the MAX/MIN button while a measurement is being taken. To deactivate the record function, press the MAX/MIN button until "REC" is removed from the display.

### Memory Recall

1. To record a reading press and hold the MAX/MIN button until "REC" is displayed. Record the reading.
2. Press the button again to recall the minimum and maximum readings. The maximum recorded value will be displayed. The letters "max" will also appear, indicating that this is the maximum or highest reading. A second press of the button will display the minimum reading. The

letters "MIN" will appear indicating that this is the minimum or lowest reading.

**NOTE:** The data record function must be on to utilize the memory recall features. Once the MAX/MIN button has been pressed a second time to deactivate the data record function, the minimum and maximum values are no longer stored.

### RS-232 PC Serial Interface

This unit features RS-232 serial output. A RS-232C output socket is located on the top of the unit. To utilize this feature, connect the unit to a PC with an accessory Data Acquisition System. (See "Accessories" section)

### ALL OPERATIONAL DIFFICULTIES

If this unit does not function properly for any reason, replace the battery with a new high-quality battery (see "Battery Replacement" section). Low battery power can occasionally cause any number of "apparent" operational difficulties. Replacing the battery with a new fresh battery will solve most difficulties.

### BATTERY REPLACEMENT

Erratic readings, a faint display, no display or a flashing display are all indicators that the battery must be replaced. To replace the battery, use a coin to remove the battery cover located on the back of the unit. Replace the exhausted battery with a new 9-volt alkaline battery. Use an alkaline battery, NOT a regular or heavy-duty battery. Properly replace the battery and the battery cover. Replacement battery Cat. No. 1112.

### ACCESSORIES

#### Cat. No.

**4138 Easy-Use™ Accessory Adaptor 115 VAC**

**4136 Data Acquisition System Accessory**

Complete DAS-3™ Data Acquisition System captures, displays, and stores readings in DOS and Windows®. Data files can be read as-is or imported into databases, spreadsheets, word processors, and statistical programs. Includes diskette (3.5") and 36" cable that plugs into instrument and computer serial port.

**4325 Data Logger**

Complete DAS-4™ System captures and stores up to 8000 bytes (over 1000 readings). Readings may be taken at intervals from 1 second to 99 hours. Stored readings may be downloaded to any PC and viewed. Data file can be read as-is or imported to spreadsheets, word processors, databases, and statistical programs. Supplied complete with 36-inch serial cable with D9F computer plug, 3.5-inch diskette (DOS and Windows®), and four AA alkaline batteries. Size is 5 x 3 x 1 inches, weight is 7 ounces.

**3150 Humidity Sponge™ Indicator Desiccant**

(40 bags/pack)

**3151 Humidity Sponge™ Regenerable Desiccant**

(40 bags/pack)

**1112 Replacement battery (9V)**

### WARRANTY, SERVICE OR RECALIBRATION

Cat. No. 3165/3166

Traceable® Pressure/Vacuum Meter Instructions

92-3165-00

Rev. 1 071504

For more information, please contact us:

ExpotechUSA  
10700 Rockley Road  
Houston, Texas 77099  
USA

281-496-0900 [voice]

281-496-0400 [fax]

E-mail: sales@expotechusa.com

Website: www.ExpotechUSA.com