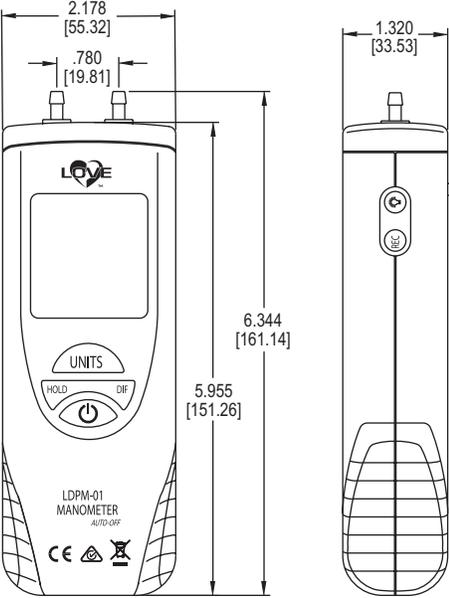




# Model LDPM Digital Differential Pressure Manometer

## Specifications - Installation and Operating Instructions

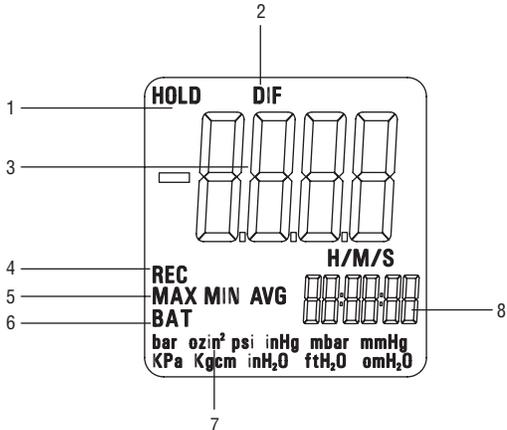
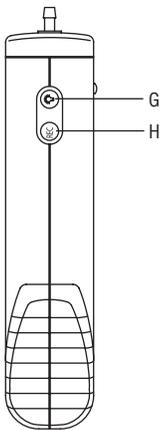
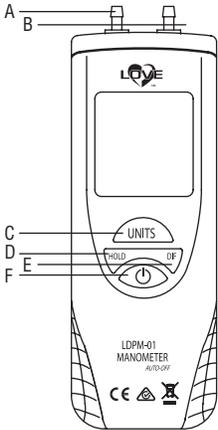


The **MODEL LDPM** Digital Differential Pressure Manometer is a versatile, handheld, battery operated manometer that can measure up to 55.4 in w.c. (140.6 cm w.c.). It is able to measure either positive, negative, or differential pressure with a  $\pm 3\%$  FS accuracy. Users are able to select from 11 common English and metric pressure units.

SPECIFICATIONS	
<b>Service:</b> Air and non-combustible, non-corrosive gases only.	<b>Display:</b> Dual-line backlit LCD.
<b>Wetted Materials:</b> Consult factory.	<b>Resolution:</b> See chart.
<b>Accuracy:</b> $\pm 3\%$ FS.	<b>Power Requirements:</b> 9 V alkaline battery, included, user replaceable.
<b>Repeatability:</b> $\pm 0.2\%$ FS.	<b>Weight:</b> 5.82 oz (165 g).
<b>Pressure Hysteresis:</b> $\pm 0.29\%$ FS.	<b>Process Connections:</b> Two barbed connections for use with 1/8" (3.18 mm) or 3/16" (4.76 mm) ID tubing.
<b>Pressure Limits:</b> 10 psi.	<b>Agency Approvals:</b> CE.
<b>Response Time:</b> 0.5 s (typ).	
<b>Temperature Limits:</b> Operating: 32 to 122°F (0 to 50°C); Storage: 14 to 140°F (-1 to 60°C).	

RANGE											
Model	in w.c.	ft w.c.	in Hg	psi	oz/in <sup>2</sup>	cm w.c.	mm Hg	bar	mbar	kPa	kg/cm <sup>2</sup>
LDPM-01	$\pm 55.40$	$\pm 4.612$	$\pm 0.407$	$\pm 2.00$	$\pm 32.00$	$\pm 140.6$	$\pm 103.4$	$\pm 0.137$	$\pm 137.8$	$\pm 13.79$	$\pm 0.140$

**PRODUCT OVERVIEW**



- A. Low Pressure Port Switch
- B. High Pressure Port Switch
- C. Units Button
- D. Hold Button

- E. Differential Button
- F. Power Button
- G. Backlight Button
- H. Record Button

- 1. Hold Function
- 2. Differential Mode
- 3. Primary Data Screen
- 4. Record Mode
- 5. MAX/MIN/AVG Function
- 6. Low Battery Indicator
- 7. Pressure Unit Indicator
- 8. Relative Time Clock

## OPERATION

### Battery Installation

The unit is shipped with a 9 V alkaline battery which must be installed before operation. When battery replacement becomes necessary, use only a 9 V alkaline type. To install the batteries:

1. Remove the screw holding the back cap in place.
2. Connect the battery to the enclosed battery clip observing correct polarity. Be careful not to trap wires between the battery or case. This could make it difficult to install the battery or remove it later for replacement.
3. Replace the back cap and screw into place.

### Pressure Connectors

The LDPM has two barbed connector ports for use with 1/8" (3.18 mm) or 3/16" (4.76 mm) ID tubing.

- For a single positive pressure, connect the tubing to the high pressure port and vent the opposite to atmosphere.
- For a single negative pressure (vacuum), connect the tubing to the low pressure port and vent the opposite port to atmosphere.
- To measure differential pressure, connect the higher pressure to the high pressure port and the lower pressure to the low pressure port. The manometer will indicate the difference between the two ports. (**Note:** If pressures are reversed, LCD will display differential pressure as negative.

### On/Off Power

Press the **ON/OFF**  button to turn the unit on or off. Upon startup, the manometer defaults to the setting last used.

### Zeroing Readings

Before use and without fittings attached to the meter, press the **HOLD** button for more than 2 seconds to zero the meter. The meter will reset and display 000 from right to left. 0.000 will be displayed.

### Offsetting the Display Value

To offset the meter and display, press the **DIF** button while taking a measurement. The subsequent reading will be the difference between the current measurement and the measurement that was on the display when the button was pressed. Press the DIF \*DIF button photo\* button again to turn off this setting.

### Display Backlight

Press the **BACKLIGHT**  button to turn on the backlight. It will remain on for 40 seconds or until the **BACKLIGHT**  button is pressed again.

### Display Hold

To hold or freeze a value, press the **HOLD** button momentarily and the HOLD icon will appear in the upper left side of the display. When the Hold function is enabled, the pressure reading will not change and the unit of measure and HOLD icon will also be displayed. Press the **HOLD** button again to return to normal operation.

### Unit Measurement Mode

The manometer features a variety of engineering units to read pressure. Press the **UNITS** button momentarily and the manometer will cycle through the 11 available units of measure as indicated by the cursor on the bottom of the display.

## Statistics

The MAX/MIN mode allows the user to view only the highest (MAX), lowest (MIN), or average (AVG) readings with a relative time stamp of the recorded values.

1. Press the **REC** button once and REC appears on the display. (All other functions are locked except for Power and Backlight.) The relative clock also appears in the secondary display and starts counting.
2. Press the **REC** button again and MAX appears on the display. The display is now showing the maximum pressure and relative time it was recorded.
3. Press the **REC** button to display the minimum value MIN reading with the relative time.
4. Press the **REC** button to display the average value AVG reading with the relative time.
5. Press the **REC** button again to continue recording MIN/MAX/AVG measurements.
6. To exit the MIN/MAX/AVG mode, press the **REC** button for 3 seconds to return to normal operation.

### Auto Power Off

The manometer will automatically shut off after 20 minutes to conserve battery life. To disable the Auto Power Off function, while the unit is off, hold down the **HOLD** button and turn on the manometer. An "n" will appear on the display indicating that Auto Power Off mode is disabled. The manometer will return to normal operation when it is turned off.

### Error Codes

An error message will appear on the display if the manometer fails an internal diagnostic test.

ERROR CODE	REASON
Err. 1	Pressure value is over the positive pressure limit
Err. 2	Pressure value is below the negative pressure limit
Err. 3	Differential pressure is over the positive pressure limit
Err. 4	Differential pressure is below the negative pressure limit

### Battery Monitor

The LDPM monitors its battery voltage whenever it's powered on. When the battery power becomes low, BAT will appear on the LCD. A weak battery can cause inaccurate measurements. It is recommended to replace the battery as soon as possible to ensure top functionality. Do not leave an exhausted battery in the unit due to potential leakage.

### MAINTENANCE/REPAIR

Upon final installation of the Model LDPM Digital Differential Pressure Manometer, no routine maintenance is required. The Model LDPM is not field serviceable and is not possible to repair the unit. Field repair should not be attempted and may void warranty.

### WARRANTY/RETURN

Refer to "Terms and Conditions of Sale" in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.