

AUTOMATION

PRODUCTS
GROUP, INC.

Operator's Manual

LPD

Loop Powered Display

DOC. 9003708

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Automation Products Group, Inc.

APG...Providing tailored solutions for measurement applications

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- **Warranty and Warranty Restrictions**

APG warrants its products to be free from defects of material and workmanship and will, without charge, replace or repair any equipment found defective upon inspection at its factory, provided the equipment has been returned, transportation prepaid, within 24 months from date of shipment from factory.

THE FOREGOING WARRANTY IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES NOT EXPRESSLY SET FORTH HEREIN, WHETHER EXPRESSED OR IMPLIED BY OPERATION OF LAW OR OTHERWISE INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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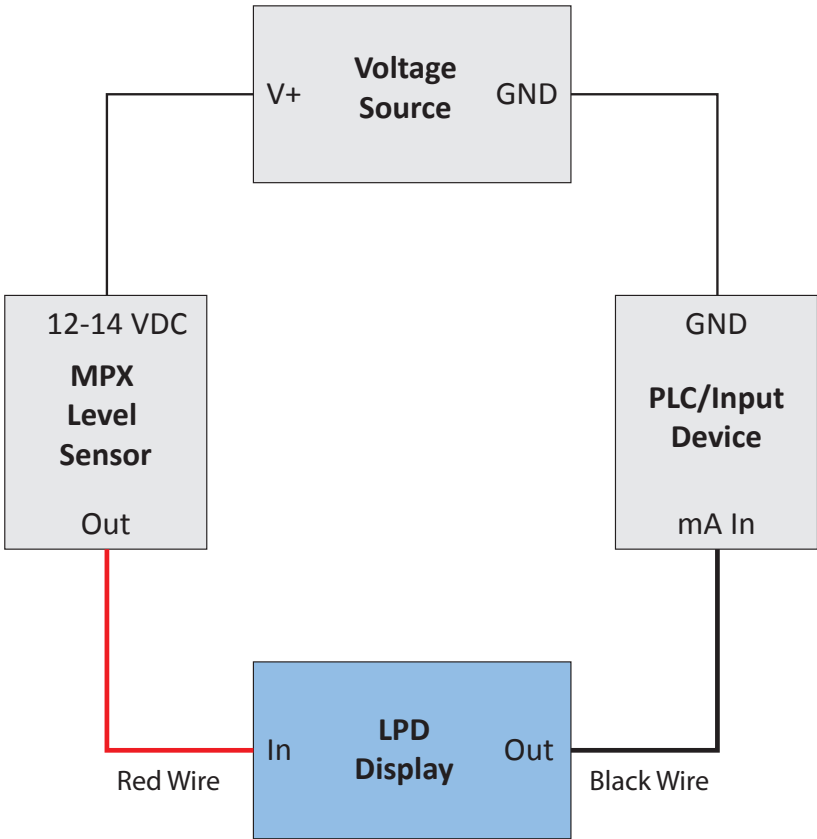
Warranty is specifically at the factory. Any on site service will be provided at the sole expense of the Purchaser at standard field service rates.

All associated equipment must be protected by properly rated electronic/ electrical protection devices. APG shall not be liable for any damage due to improper engineering or installation by the purchaser or third parties. Proper installation, operation and maintenance of the product becomes the responsibility of the user upon receipt of the product.

Returns and allowances must be authorized by APG in advance. APG will assign a Return Material Authorization (RMA) number which must appear on all related papers and the outside of the shipping carton. All returns are subject to the final review by APG. Returns are subject to restocking charges as determined by APG's "Credit Return Policy".



Display Wiring



Using the LPD

**Increase Button**

press to cycle upward through menu options or to increase mode setting values.

Decrease/Power Button

press to cycle downward through menu options or decrease mode setting values.

Enter Button

press to enter into the enter a menu or to accept a parameter setting within a menu.

***Access Modes**

The LPD has several operating modes which will limit or lock access to the setup menus. Refer to the mode descriptions at the bottom of the page for more information. To access the operating mode setting, follow the steps below.

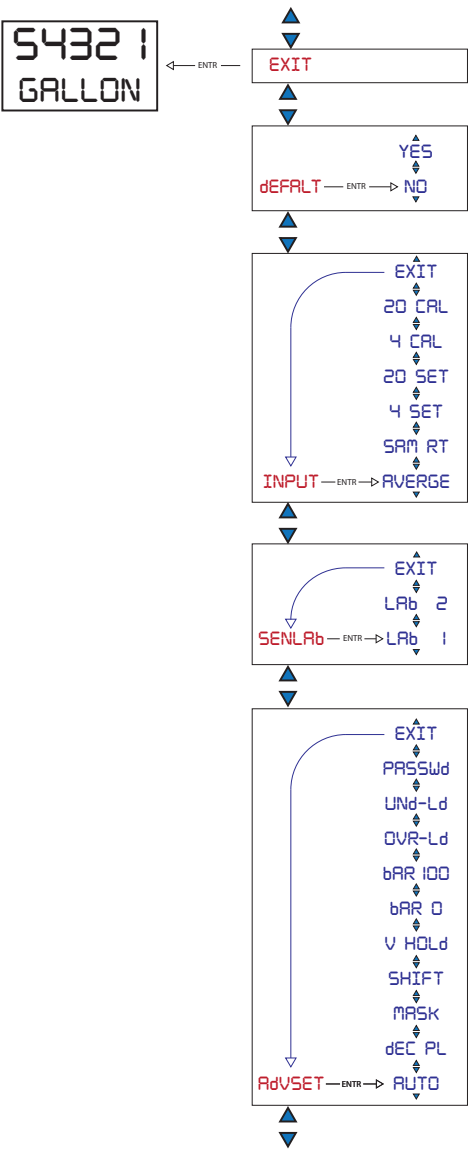
- Step 1:** Simultaneously press and hold the Decrease button and the Enter button for approximately 5 seconds to bring up the *3 digit mode access number.
- Step 2:** Use the Increase/Decrease buttons to change the value of the flashing digit, and Enter button to accept the value and advance to the next digit. The mode options are as follows:

<u>Mode</u>	<u>Description</u>
000	Full Access. All menu options are accessible, including those that may not be applicable to all LPD configurations.
001	Locks access to all setup menus. The Decrease/Power Button will turn on/off the display. The Enter button will scroll between the maximum, minimum and the current reading.
005	All menus are hidden and all buttons are lock, except the Decrease/Power button, which will power on/off the LPD.
125	Entering Mode 125 will reset all parameters to factory defaults.

*Also see “**Setting Mode Access Password**” under Sensor Label section of page 20.



Menu Flow Chart



- **AdvSET (Advanced Settings)**

dEC PL (Decimal Place): defines the decimal point position within the reading.

MASK (Digit Mask): allows the user to mask the value of the least significant digit(s), up to 3 places, so that masked digit(s) will always display 0 and will not increment.

SHIFT (Digit Shift): allows the user to shift the reading to the right by dividing the reading by 10, 100, or 1000.

V HOLD (Value Hold): limits the displayed reading to values of the 4mA and 20mA set points. When enabled, the display will stop increasing/decreasing at the set points even if the loop current is less than 4mA or greater than 20mA.

bAR 0 (Bar Graph 0%) define the readings associated with 0% on the display bar graph. Bars will appear/disappear in 10% increments of the total span.

bAR 100 (Bar Graph 100%): define the readings associated with 100% on the display bar graph. Bars will appear/disappear in 10% increments of the total span.

OVR-Ld (Overload): causes the display to flash if the reading increases above the set value.

UND-Ld (Under-load): causes the display to flash if the reading drops below the set value.

PASSWd (Password): sets the password required to enter the access mode setting. If the password is set to 10AAAA, then no password will be required to enter the access modes (see page 6 for information on the access modes).

- **SENLAb (Sensor Labels)**

Allows the user to assign 2 custom labels that will alternate on the lower display line.
If only 1 non-alternating label is desired, duplicate the label name in both Label 1 and Label 2.

- **INPUT (Analog Input)**

Used to adjust how the LPD reads the analog input signal.

AVERAGE: determines how many readings of the analog signal will be averaged together to become the displayed reading. A higher average setting will result in smoother readings but will also cause slower response to rapid changes in the input signal.

SAM RT: determines how often the LPD reads the 4-20mA input signal.

4 SET (4mA Set-point): sets the reading to be associated with a 4mA input signal.

20 SET (20mA Set-point): sets the reading associated with a 20mA input signal.

4 CAL (4mA Calibration): adjusts the reading at the 4mA end of the input signal.

Decreasing the calibration value will cause an **increase** in the reading with an input of 4mA.

20 CAL (20mA Calibration): adjusts the reading at the 20mA end of the input signal.

Increasing the calibration value will cause an increase in the reading with an input of 20mA.

- **DEFAULT (Reset to Factory Defaults)**

Resets all settings back to factory default values, including the factory 4 mA and 20 mA calibration values.

Specifications

Environmental:

Housing: IP67

Storage Temp: -40 to 160°F (-40 to 71°C)

Operating Temp: 0 to 160°F (-18 to 71°C)

Electrical:

Voltage Drop: 4.7V maximum, 4.3V typical

Display Update Rate:

Programmable; 0.1 second minimum

Case Material:

Injection molded EMI-X PDX-W-88341



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