



## APG LPU-2127 Loop Powered Ultrasonic Level Sensor Installation Guide

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### APG LPU-2127 Loop Powered Ultrasonic Level Sensor



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## Thank You


Thanks for purchasing an LPU-2127 loop powered ultrasonic level sensor from us! We appreciate your business and your trust. Please take a moment to familiarize yourself with the product and this manual before installation. If you have any questions, at any time, you can call us at [888-525-7300](tel:888-525-7300). You can also find a full list of our product manuals at: [www.apgsensors.com/resources/product-resources/user-manuals](http://www.apgsensors.com/resources/product-resources/user-manuals).

## Description

The LPU-2127 loop powered ultrasonic level sensor provides continuous level/distance measurement you can count on. It comes with a built in keypad for easy programming and is certified for installation in hazardous areas in the US and Canada by CSA for Class I, Division 2, Groups C & D and Class I, Zones 2 environments.

## How To Read Your Label

Each label comes with a full model number, a part number, and a serial number. The model number for the LPU-2127 will look something like this:

 SAMPLE: LPU-2127

The model number tells you exactly what you have. You can also call us with the model, part, or the serial number and we can help you.

You'll also find all hazardous certification information on the label.

## Warranty

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.

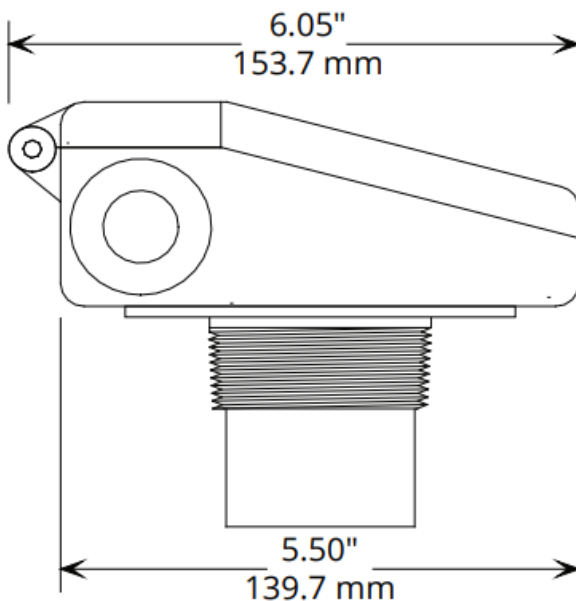
No representation or warranty, express or implied, made by any sales representative, distributor, or other agent or representative of APG which is not specifically set forth herein shall be binding upon APG. APG shall not be liable for any incidental or consequential damages, losses or expenses directly or indirectly arising from the sale, handling, improper application or use of the goods or from any other cause relating thereto and APG's liability hereunder, in any case, is expressly limited to the repair or replacement (at APG's option) of goods.

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".

## Dimensions



## Installation Guidelines

The LPU-2127 should be installed in an area—indoors or outdoors—which meets the following conditions:

- Ambient temperature between -40°C and 60°C (-40°F to +140°F)
- Ample space for maintenance and inspection

Additional care must be taken to ensure:

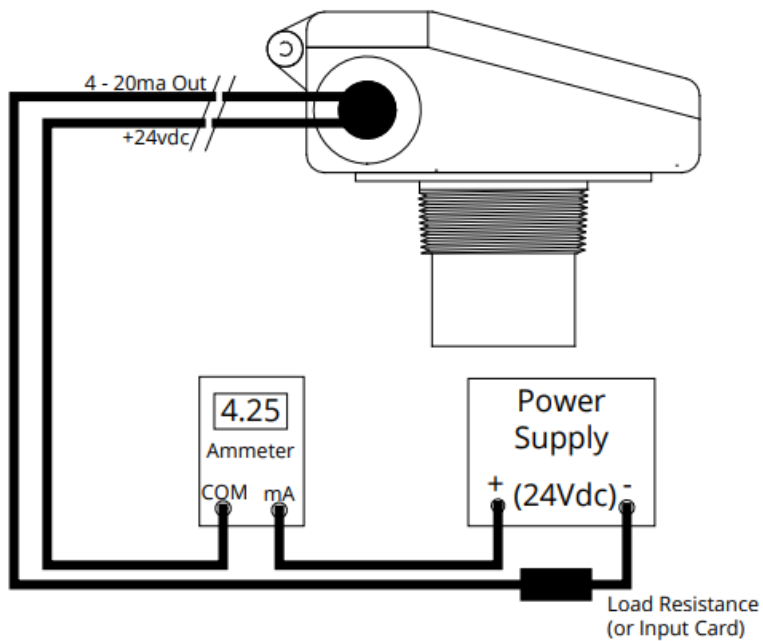
- The sensor has a clear, perpendicular sound path to the surface being monitored.
- The sensor is mounted away from tank or vessel walls and inlets.

- The sound path is free from obstructions and as open as possible for the 9° off axis beam pattern.
- The sensor is tightened by hand to avoid cross-threading.

**\*Important:** For user interface guide and sensor configuration see the full user manual.

## Sensor and System Wiring Diagrams

### LPU-2127 Wiring



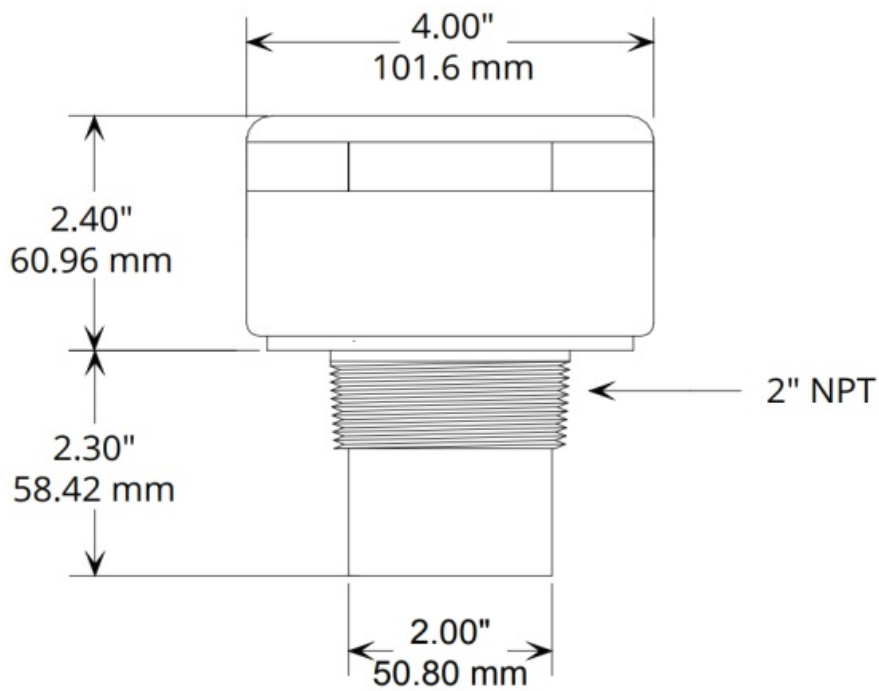
### Wiring Instructions:

- With the lid of your LPU closed, use a screwdriver to remove the cable knock out.
- Clear the flashing.
- Open the lid of your LPU and install cable gland or conduit connection.
- Connect 12-28 VDC supply wire to (+) Terminal.
- Connect 4-20 mA output wire to (-) Terminal.

**\*Note:** Load resistance @ 12VDC: 150 ohms Max and @ 24VDC: 600 ohms Max.



**IMPORTANT:** Refer to section 9 for Hazardous Location Wiring.



## General Care

Your level sensor is very low maintenance and will need little care as long as it was installed correctly. However, in general, you should periodically inspect your LPU-2127 sensor to ensure the sensor face is free of any buildup that might impede the function of the sensor. If sediment or other foreign matter becomes trapped on the sensor face, detection errors can occur.

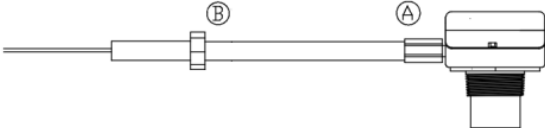
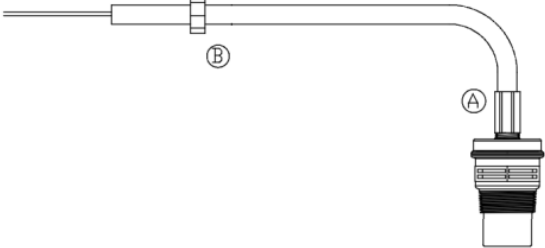
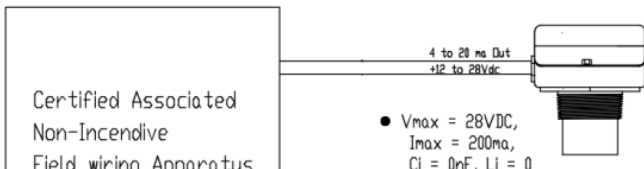
If you need to remove the sensor, be sure to store it in a dry place at a temperature between -40° and 180° F.

## Repair Information

If your LPU-2127 loop powered ultrasonic level sensor needs repair, contact us via email, phone, or online chat on our website. We will issue you an RMA number with instructions.

## Hazardous Location Wiring

REVISIONS					
ZONE	REV	DESCRIPTION	CHANGE ORDER	DATE	APPROVED
–	D2	Add French Warning	CO-2260	3-22-15	K. REID

Installation in Class I Division 2 Groups C and D Class I Zone 2 A EXnA IIB		Non-Incentives Wiring for Installation in Class I Division 2 Groups C and D, Max. Temp. 60°C	
NON-HAZARDOUS AREA	HAZARDOUS AREA	NON-HAZARDOUS AREA	HAZARDOUS AREA
LPU-2127/LPU-4127 Ultrasonic Sensor (4-20ma Loop Powered )  LPU-2428 / LPU-4428 Ultrasonic Sensor ( 4-20ma Loop Powered ) 		 Certified Associated Non-Incendive Field wiring Apparatus <ul style="list-style-type: none"> <li>• <math>V_{max} = 28VDC</math>, <math>I_{max} = 200ma</math>, <math>C_i = 0nF</math>, <math>L_i = 0</math></li> <li>• <math>V_{max} \geq V_{oc}</math>, <math>C_a \geq C_{cable} + C_i</math> <math>L_a \geq L_{cable} + L_i</math></li> </ul>	

- Install in accordance with Section 18 of the CEC or Article 500 of the NEC.
- CSA listed or NRTL/UL listed conduit seal at location A & B as required by Local Authority.
- The cable is terminated in the sensor and runs continuously from the sensor through the Hazardous area and into the Non-Hazardous area.
- Electrical equipment connected to associated apparatus should not generate more than 250 V rms.
- Tampering or replacement with non-factory components may adversely affect the safe use of the system.
- **WARNING** – POTENTIAL ELECTROSTATIC CHARGING HAZARD Clean with only with a damp cloth  
**AVERTISSEMENT** – surface non conductrices du boîtier peuvent être factures par MEDIA non conductrices, CLEAN avec un chiffon humide
- DO NOT DISCONNECT WHILE CIRCUIT IS ALIVE UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS  
AVERTISSEMENT-NE PAS DEBRANCHER TANT QUE LE CIRCUIT EST SOUS TENSION, A MOINS QU'IL NE S'AGISSE D'UN EMPLACEMENT NON DANGEREUX

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IF LOANED, IT IS SUBJECT TO RETURN UPON DEMAND AND MAY NOT BE USED IN ANY WAY DIRECTLY OR INDIPECTLY DETRIMENTAL TO THE COMPANY.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS:

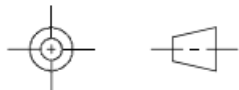
TOLERANCE ON ANGLE:  $\pm 1^\circ$

2 PLACES:  $\pm .01$  "

3 PLACES:  $\pm .005$  "

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2009

## THIRD ANGLE PROJECTION



APPROVALS	DATE
DRWN KNR	12-8-03
CHKD Travis B	12-10-03
APVD K. REID	REID 12-10-03

Hazardous Installation Drawing For LPU-2127, LPU-4127, LPU-2428 & LPU-4428

SIZE B	CAGE CODE 52797	PART NO 125xxx-xxxX	DOCUMENT NO 9002745	REV D2
SCALE NONE	DO NOT SCALE DRAWING		SHEET 1 OF 1	

## CUSTOMER SUPPORT

AUTOMATION PRODUCTS GROUP, INC.  
1025 West 1700 North Logan, Utah USA  
888.525.7300

Automation Products Group, Inc.  
1025 W 1700 N Logan, UT 84321

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Part # 122950-0008

Doc #9004172 Rev B



## Documents / Resources

	<p><a href="#">APG LPU-2127 Loop Powered Ultrasonic Level Sensor</a> [pdf] Installation Guide LPU-2127 Loop Powered Ultrasonic Level Sensor, LPU-2127, Loop Powered Ultrasonic Level S ensor, Powered Ultrasonic Level Sensor, Ultrasonic Level Sensor, Level Sensor</p>
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## References

- [User Manual](#)

## **Manuals+, Privacy Policy**

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