Thank You

Thanks for purchasing a MNU ultrasonic Modbus 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, don't hesitate to call us at 888-525-7300.

> ✏ NOTE: Scan the QR code to the right to see the full user manual on your tablet or smartphone. Or visit www.apgsensors.com/support to find it on our website.

MNU Ultrasonic Modbus Sensor Installation Guide

APG®

Table of Contents

❶ Description

MNU ultrasonic sensors are rugged units, with a PC/PBT housing, 1"-3" NPT threads for mounting, and a NEMA 6P rating (protects against ingress of dripping, sprayed, and submersing water). All MNU sensors are fully programmable via RST-485 Modbus communications with APG Modbus software and an APG RST-6001 unit.

❷ 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 MNU will look something like this:

> ⌛ SAMPLE: MNU-3434-M

The model number correlates with all the configurable options and tells you exactly what you have. Compare the model number to the options on the datasheet to identify your exact configuration. You can also call us with the model, part, or the serial number and we can help you.

The label also includes the pinout, as does this installation guide.

❸ Warranty

This product is covered by APG's warranty to be free from defects in material and workmanship under normal use and service of the product for 24 months. For a full explanation of our Warranty, please visit https://www.apgsensors.com/about-us/terms-conditions. Contact Technical Support to receive a Return Material Authorization before shipping your product back.

Scan the QR code below to read the full explanation of our Warranty on your tablet or smartphone.

❺ Dimensions

MNU-2424 & MNU-8424
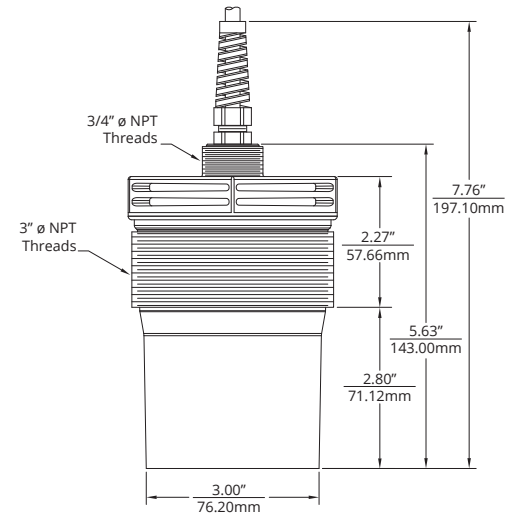
MNU-3434

MNU-5414

MNU-5424

❹ Mounting Instructions

Mounting your MNU ultrasonic sensor is easy if you follow a few simple steps:

- Never over-tighten the sensor.
- Always screw in your sensor by hand to avoid cross-threading. Thread failure can be a problem if you damage threads by over-tightening them or by crossing threads.
- Mount your MNU sensor so that it has a clear, perpendicular sound path to the surface being monitored. Your sensor should be mounted away from tank or vessel walls and inlets. (See Figure 4.1)
- The sound path should be free from obstructions and as open as possible for the 9° off axis beam pattern.
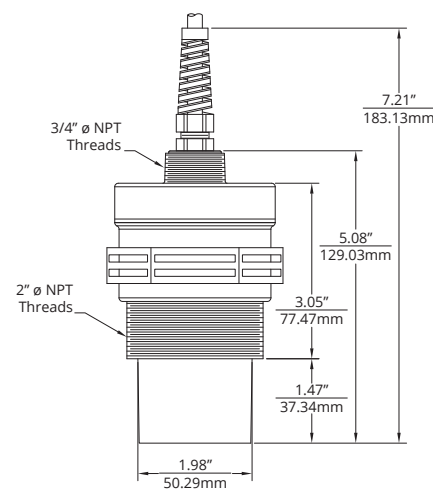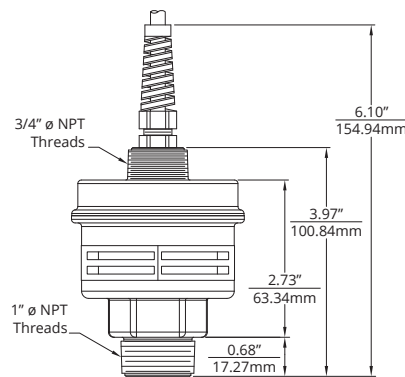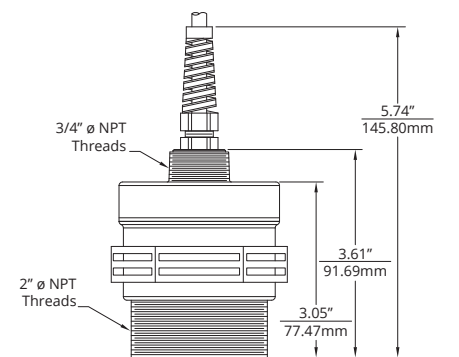- If you are using a stand pipe, please see our guide to stand pipes on our website: http://www.apgsensors.com/about-us/blog/how-to-install-a-stand-pipe.

Figure 4.1

❻ Wiring Information

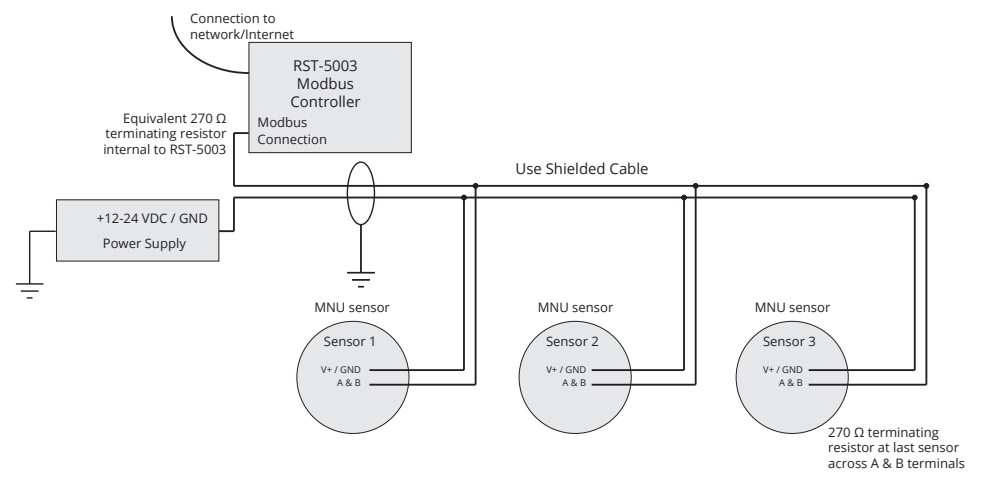|		Modbus		Power Supply	Modbus
Pigtail (2 Twisted Pairs)	Red	+ 24 VDC		Power Supply	12-24 VDC
	Black	DC Ground			
	Green	B (TX-)			
	White	A (TX+)			
	Shield	Case Gnd			
Micro Connector	1 Brown	+24 VDC			
	2 White	A (TX+)			
	3 Blue	DC Ground			
	4 Black	B (TX-)			

> ❶ IMPORTANT: Some modbus equipment uses reversed TX+/TX- pins. When making connections between APG equipment, ensure A to A and B to B connections. When connecting to other systems, if your MNU sensor will not communicate, reverse A & B connections at one end (Master OR Sensor, not both).
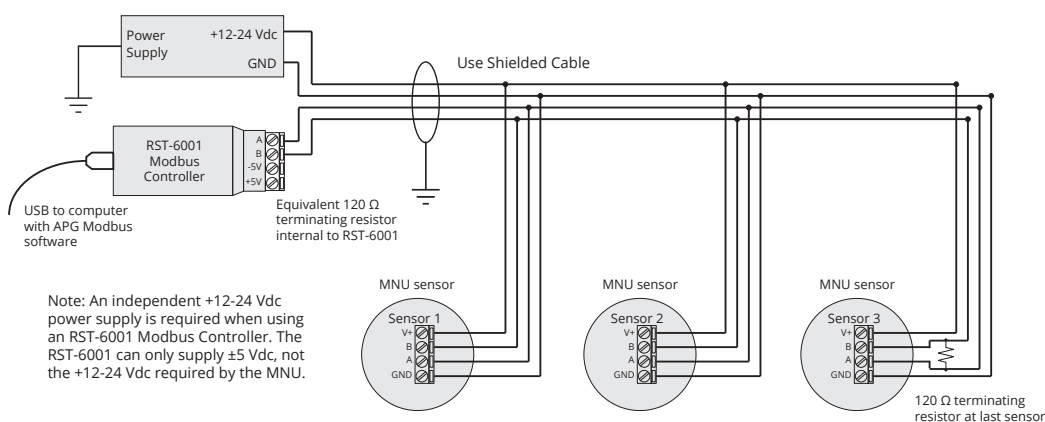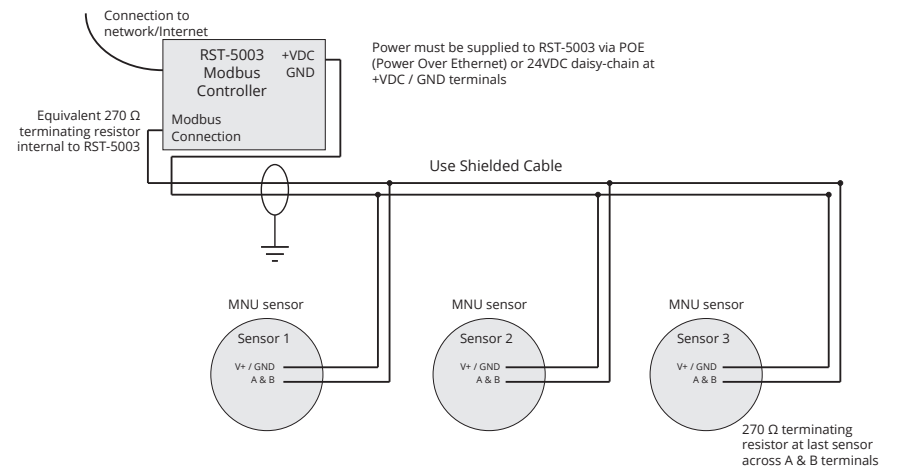

MNU Modbus System Wiring with RST-5003 and Power Supply

MNU Modbus System Wiring

MNU Modbus System Wiring with RST-5003 and Power Over Ethernet (POE) or VDC

MNU Modbus System Wiring with RST-6001

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❼ General Care

Your MNU ultrasonic sensor is very low maintenance and will need little care as long as it was installed correctly. However, in general, you should:

- Avoid applications for which the sensor was not designed, such as extreme temperatures, contact with incompatible corrosive chemicals and fumes, or other damaging environments.
- Inspect the threads whenever you remove the sensor from duty or change its location.

> ✎ NOTE: See your MNU User Manual for Modbus programming instructions and troubleshooting tips.

❽ Repair Information

If your MNU sensor needs repair, contact us via email, phone, or on-line chat on our website. We will issue you an RMA number with instructions.

- Phone: 888-525-7300
- Email: sales@apgsensors.com
- Online chat at www.apgsensors.com

❾ Removal Instructions

- Ensure that power to the sensor is off
- Disconnect cable to sensor.
- Remove the sensor and store it in a dry place, at a temperature between -30° F and 140° F.