



# MNU SERIES

## Modbus Ultrasonic Sensor

MNU series ultrasonic sensors are the perfect blend of versatility and control. With a variety of sensing ranges and NPT mounting options, an MNU ultrasonic sensor can be used almost anywhere. And since MNUs are built on Modbus RTU protocol (RS-485), each sensor is highly configurable to meet your needs.

### FEATURES

- Ranges from 4 in. to 40 ft.
- Self-Contained Sensor
- RS-485 Modbus RTU Interface
- Measure Distance, Level, or Volume
- Internal Temperature Compensation
- Remote Monitoring Access with Settler and Explorer

# MNU SPECIFICATIONS

## PERFORMANCE

- **Operating Range:**  
0.3 ft.–6.6 ft./4 in.–79 in./101mm–2007mm (54x4)  
0.42 ft.–12.0 ft./5 in.–144 in./125mm–3658mm (8424)  
1.0 ft.–25.0 ft./12 in.–300 in./305mm–7620mm (2424)  
1.5 ft.–40 ft./18 in.–480 in./458mm–12192mm (3434)
- **Digital Output:** Modbus, via RS-485
- **Beam Pattern:** 9° off axis
- **Transducer Frequency:**  
43 kHz (3434)/69 kHz (2424)/  
81 kHz (8424)/143 kHz (54x4)
- **Response Time:** Programmable, 10 ms minimum (100 Hz)

## ACCURACY

- **Accuracy:** ±0.25% of detected range
- **Resolution:** 0.1 inch (2.54 mm)

## ENVIRONMENTAL

- **Operating Temperature:** -34°C to 60°C (-30°F to 140°F)
- **Internal Temperature Compensation:** Yes
- **NEMA Rating:** 6P

## ELECTRICAL

- **Operational Supply Voltage (at sensor):** 8–24 VDC
- **Current Draw:**  
35 mA max @ 12 VDC  
20 mA max @ 24 VDC
- **Connection:** 2 Twisted Pair, or 4-pin Micro Connector

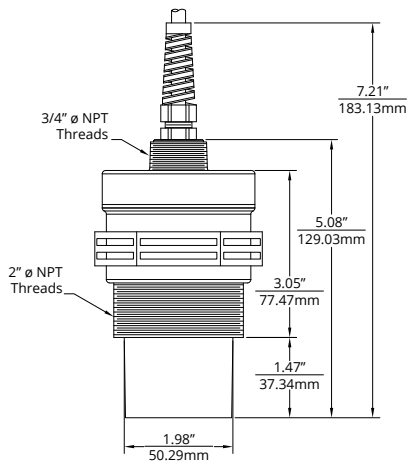
## PHYSICAL

- **Transducer Housing:** PBT/Polycarbonate blend
- **Transducer Type:**  
Ceramic, PVDF faced (2424, 54x4, 8424)  
Ceramic, PBT/Polycarbonate faced (3434)

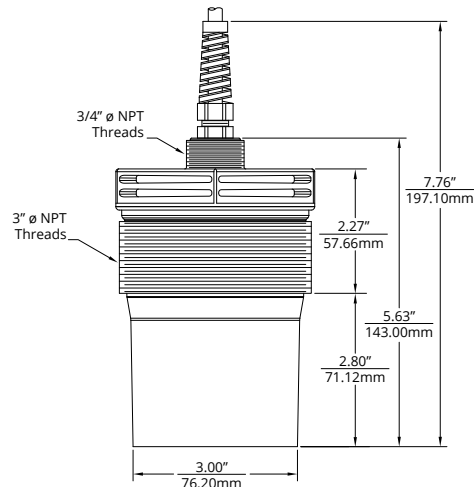
## MOUNTING

- **MNU-2424:** 2" Ø NPT (front), 3/4" Ø NPT (rear)
- **MNU-3434:** 3" Ø NPT (front), 3/4" Ø NPT (rear)
- **MNU-5414:** 1" Ø NPT (front), 3/4" Ø NPT (rear)
- **MNU-5424:** 2" Ø NPT (front), 3/4" Ø NPT (rear)
- **MNU-8424:** 2" Ø NPT (front), 3/4" Ø NPT (rear)

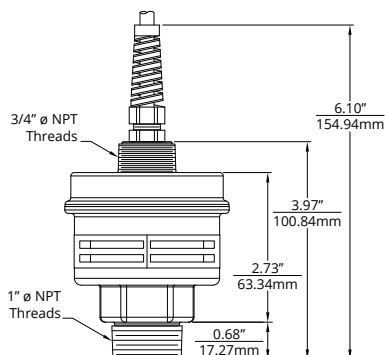
# MNU DIMENSIONS



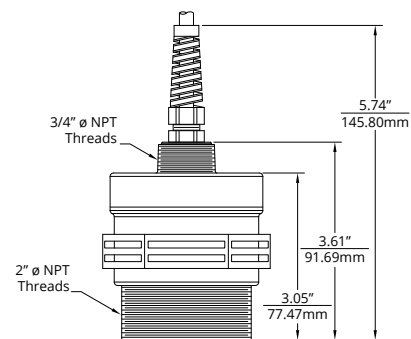
MNU-2424 & MNU-8424



MNU-3434



MNU-5414



MNU-5424

# COMMON MODEL CONFIGURATIONS

| Model Number | Model Description                         |
|--------------|---|
| MNU-2424-C6  | 1 ft.–25 ft. range, 69 kHz, 6 ft. cable   |
| MNU-3434-C6  | 1.5 ft.–40 ft. range, 43 kHz, 6 ft. cable |
| MNU-8424-C6  | 5 in.–144 in. range, 81 kHz, 6 ft. cable  |

## MNU ACCESSORIES

Please order separately, by part number.

| Description  | Part Number |
|--|-------------|
| <b>4 Conductor Over-molded Extension Cables with Foil Shield</b> |             |
| Straight, 2m   | 135407-0002 |
| Right angle, 2m  | 135407-1002 |
| Straight, 5m   | 135407-0005 |
| Right angle, 5m  | 135407-1005 |

## MODEL CONFIGURATION OPTIONS

**MODEL NUMBER:** MNU –      –       
                                  A        B

### A. Model

- 2424** 1 ft.–25 ft. (305mm–7620mm); 69 kHz; 2" NPT threads
- 3434** 1.5 ft.–40 ft. (458mm–12192mm); 43 kHz; 3" NPT threads
- 5414** 0.3 ft. –6.6 ft. (101mm–2007mm); 143 kHz; 1" NPT threads
- 5424** 0.3 ft. –6.6 ft. (101mm–2007mm); 143 kHz; 2" NPT threads
- 8424** 5 in. –144 in. (125mm–3658mm); 81 kHz; 2" NPT threads

### B. Cable/Micro Connector

- CL** Specify Length (6 ft. standard length + 5 ft. increments)
- M** Micro Connector (Mating connector cable sold separately)

# **SETTLER**

## Your Gateway to Smarter Monitoring

Settler, APG's next remote monitoring gateway, makes getting real-time level data easier than ever.

Settler seamlessly connects Modbus and 4-20 mA sensors—transmitting encrypted data securely to Explorer, APG's cloud-based interface. View tank and well levels anytime, anywhere, with reliable Ethernet connectivity and robust data security powered by MQTT with AES (Advanced Encryption Standard). Plus, with over-the-air (OTA) firmware updates, your system stays up to date without hassle.

**Designed for general-purpose environments, Settler is not intended for use in hazardous areas.**

Explorer makes monitoring simple. Access real-time readings, enable datalogging, and set up alarms so you're always informed of critical changes—right from your smartphone, tablet, or desktop.

Save time, reduce costs, and gain peace of mind with remote monitoring powered by Settler and Explorer. Contact us today to learn more or visit [apgsensors.com/settler-remote-monitoring-gateway/](https://apgsensors.com/settler-remote-monitoring-gateway/).

