# **MNU Series**

Modbus/Tank Cloud Ultrasonic Sensor

## Datasheet



MNU series ultrasonic sensors are the ultimate marriage 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. When paired with a Tank Cloud web-enabled controller, all of the MNU's configuration options are available online.

### Features

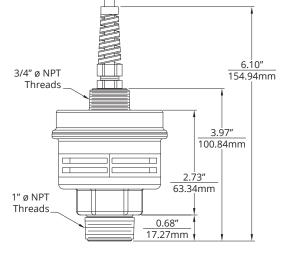
- Ranges from 4 in to 40 ft
- Self-Contained Sensor
- RS-485 Modbus RTU Interface
- Measure Distance, Level, or Volume
- Internal Temperature Compensation

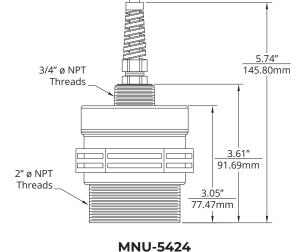


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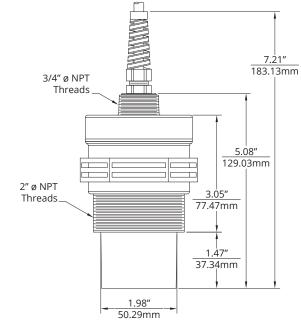


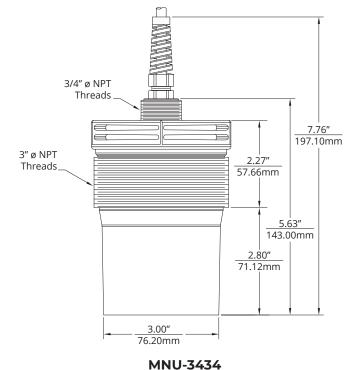
MNU-5414











### MNU DIMENSIONS

### **MODEL CONFIGURATION OPTIONS**

Part Number: MNU - \_\_\_\_\_ - \_\_\_\_ A B

### A. Model

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

### **COMMON MODEL CONFIGURATIONS**

Model Number	Model Description	
MNU-2424-C6	<b>1 - 25 ft range, 69 kHz</b> , 6 ft cable	
MNU-3434-C6	<b>1.5 - 40 ft range, 43 kHz</b> , 6 ft cable	
MNU-8424-C6	5 - 144 in range, 81 kHz, 6 ft cable	

### **MNU ACCESSORIES**

Please order separately, by part number.

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



### **SPECIFICATIONS**

#### Performance

Operating Range	0.3 - 6.6 ft. / 4 in 79 in. / 101mm - 2007mm (54x4) 0.42 - 12.0 ft. / 5 in 144 in. / 125mm - 3658mm (8424) 1.0 - 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 to 60°C (-30 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	
Materials of Construction		
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)	



# Tank Cloud

### **Put Your Tanks In The Cloud**

#### Remote Sensors

Connect to any 4-20mA signal or APG Modbus sensor for constant access to your data. Access up to 10 sensors on a single connection.

#### **2** Use the Internet Backbone

Connect the APG sensor or module to the Internet via landline, radio, cellular, or satellite.

#### 8 View Secure Data 24/7

Access sensor data online through our secure portal at levelandflow.com. If the Internet is accessible, so is your information.

#### 4 Stay Up-To-Date

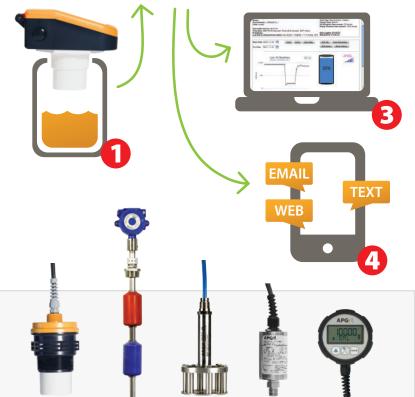
The Line-Up:

Program custom alarms - receive email and text (sms) message alerts on your computer, mobile phone, or tablet.









### **Online Data Portal**

The Tank Cloud data portal, located online at www.levelandflow.com, displays everything you need to know about your measurement.

Here you can:

- · View your current and past readings,
- Manage alarms,
- Configure your sensors,
- and Setup user permissions for others in your organization.

Measurements are sorted by location and grouped into sites. Simply select the site you would like to view, and then choose the sensor. Current readings are prominent in the center of the screen.

Contact us today at 888-525-7300 to set-up a demonstration of our sensors and online software. We are excited to show you how it can impact your business.





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