

Intrinsically Safe Modbus Network Ultrasonic Sensor Series: MNU IS



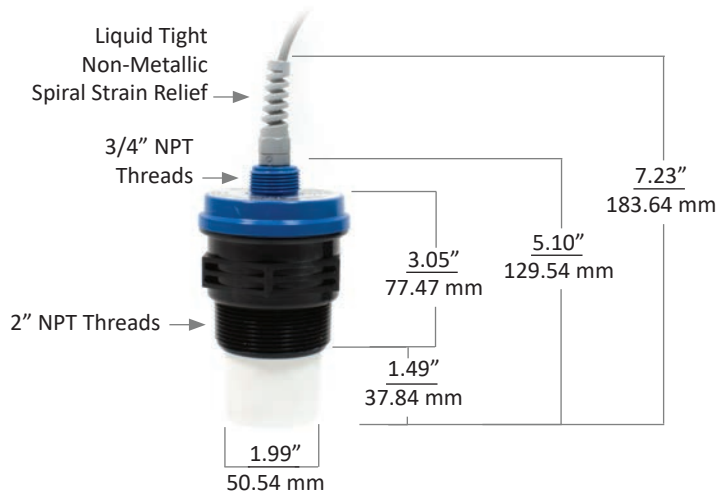
MNU IS ultrasonic sensors are rugged units, rated Intrinsically Safe for hazardous location installations. They feature the QuickMode for power-saving, on-demand measurements, and optional GDT surge protection. The MNU IS works with the ViaCell-100 and the ViaSat-100 to provide robust, accurate tank level monitoring for industrial applications.

Features

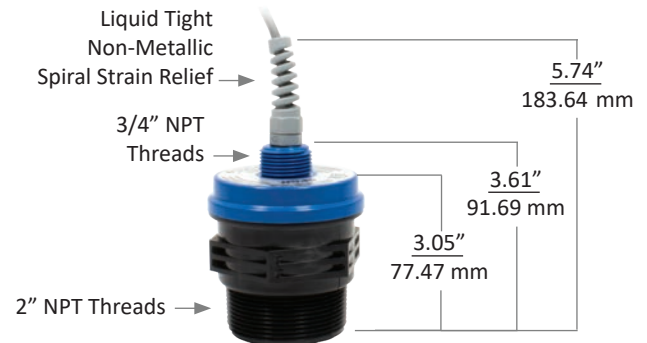
- Ranges: 1 ft - 25 ft, 5 in - 12 ft
- Self-Contained Sensor
- Multiple Housing Options
- RS-485 Modbus RTU Interface
- Measure Distance, Level, or Volume
- Internal Temperature Compensation
- cCSAus, ATEX, IECEx approved Intrinsically Safe
- 2" NPT and 3/4" NPT mounting options
- QuickMode ready-to-read in as little as 250 ms
- Optional Gas Discharge Tube surge protection

MNU IS Specifications

Housing Option 2



Housing Option 4



Performance

- Frequency/Operating Range:
 - 69 kHz: 1 - 25 ft (0.30 - 7.62 m)
 - 81 kHz: 5" - 12 ft (0.13 - 3.66 m)
- Beam Pattern: 9° off axis
- Internal Temperature Compensation
- Accuracy: ±0.25% of detected range
- Resolution: 0.1 in. (2.5 mm)
- Response Time: Programmable

Connectivity

- Output: Modbus RTU (RS-485)
- Online Access/Control: Via APG's Tank Cloud & RST-5003 or LOE controller

Environmental

- IP68 (3 meters submerged for 48 hours)
M12 connector only rated IP67
- Operating Temp:
 - Standard: -30° - 60°C (-22° - 140°F)
 - Alternate: -20° - 50°C (-4° - 122°F)

Programming

- Interface with RS-485 Modbus RTU
APG Modbus Windows-compatible software can be provided to adjust internal parameters.
- User selected Units of Measure, Response Rate, Volume Calculations, and more.

Electrical

- Supply Voltage: 8 - 24 VDC
- Operating Current Draw:
 - 18 - 26 mA @ 24 VDC, Typical 18 mA
 - 32 - 63 mA @ 8 VDC, Typical 37 mA
- Waiting Status Current Draw:
 - 13 mA @ 24 VDC
 - 17 mA @ 8 VDC
- Wiring Connection: 4-conductor shielded, twisted-pair cable
- Gas Discharge Tube Surge Protection: 150 V, 1 kA

Physical

- Upper Housing: PC/PBT blend
- Transducer Face: PVDF

Certification

- CSA/cCSAus Contract #237484
Intrinsically Safe
 - Class I, Div. 1, Groups C & D, T4
 - Class I, Zone 0, AEx ia IIB T4 Ga
 - Ex ia IIB T4 Ga
- ATEX
 - II 1G Ex ia IIB T4 Ga
- IECEx
 - Ex ia IIB T4 Ga
- CE

Common Model Configurations

Model Number	Model Description
MNU-IS-6424-C6A	1 - 25 ft. range, 69 kHz, 2" NPT, 6 ft cable , Cable Gland with Spiral Strain Relief
MNU-IS-6424-C6M	1 - 25 ft. range, 69 kHz, 2" NPT, M12 Micro Connector w/ mate, 6 ft cable
MNU-IS-6444-C6A	1 - 25 ft. range, 69 kHz, 2" NPT, Recessed Transducer, 6 ft cable , Cable Gland with Spiral Strain Relief
MNU-IS-8424-C6A	5 in. - 12 ft. range, 81 kHz, 2" NPT, 6 ft cable , Cable Gland with Spiral Strain Relief
MNU-IS-8444-C6M	5 in. - 12 ft. range, 81 kHz, 2" NPT, Recessed Transducer, M12 Micro Connector w/ mate, 6 ft cable
