

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 APG's new QuickMode for power-saving, on-demand measurements, and optional GDT surge protection. All MNU IS sensors are fully programmable via RS-485 Modbus communications, and with APG Modbus software and an RS-485-to-USB converter.

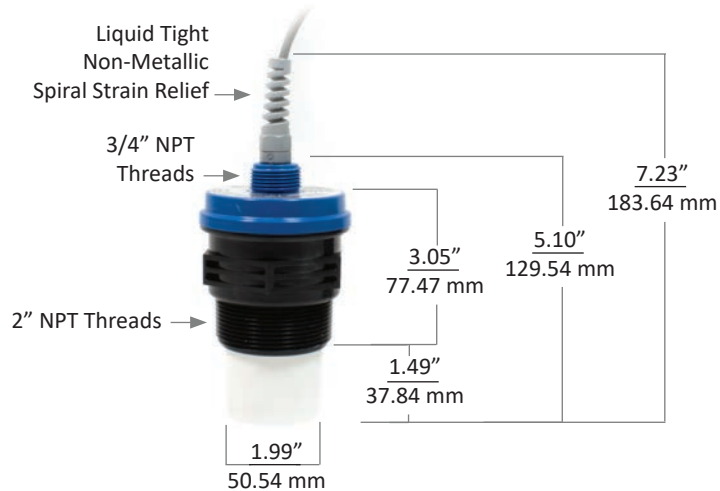
Features

- Range: 1 ft - 25 ft
- Self-Contained Sensor
- 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



Performance

- Frequency/Operating Range:
69 kHz: 1 - 25 ft (0.30 - 7.62 m)
- Beam Pattern: 9° off axis
- Internal Temperature Compensation
- Accuracy: $\pm 0.25\%$ 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)
- 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:
15 - 30 mA @ 24 VDC, Typical 20 mA
30 - 75 mA @ 8 VDC, Typical 40 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-C6C	1 - 25 ft. range, 69 kHz, 2" NPT, 6 ft cable, ATEX Cable Gland
MNU-IS-6425-C6A	1 - 25 ft. range, 69 kHz, GDT Surge Protection, 2" NPT, 6 ft cable, Cable Gland with Spiral Strain Relief
MNU-IS-6425-C6C	1 - 25 ft. range, 69 kHz, GDT Surge Protection, 2"NPT, 6 ft cable, ATEX Cable Gland

MNU IS Accessories

Please order separately, by part number.

Description	Part Number
Programming Module	
RST-6001	125734
Barrier	
RS-485 Communications Barrier (2-wire)	200186
24 VDC Barrier (2-wire)	200187

Model Configuration Options



Model Number: MNU - IS - _____ - _____
 A B C D E F G

A. Range, Frequency

- 2** 1 - 25 ft. (305 - 7620 mm); 69 kHz Transducer†
- 6**[▲] 1 - 25 ft. (305 - 7620 mm); 69 kHz Transducer

B. Lid Interface Threads

- 4**[▲] 3/4 in. MNPT

C. Housing

- 2**[▲] 2 in. MNPT, Valox PBT

D. Output

- 4**[▲] RS-485 Modbus RTU, Intrinsically Safe
 - 5** RS-485 Modbus RTU, Intrinsically Safe w/ Gas Discharge Tube Surge Protection
- Note: [▲] Indicates this option is standard.

† Option 2 (1 - 25 ft. / 69 kHz Transducer) has alternate temperature range of -20° - 50°C.

E. Cable

- C**[▲] Shielded Cable with Flying Leads

F. Electrical Cable Length

- ___ Specify Length (6 ft. standard length + 5 ft. increments)

G. Seal

- A**[▲] Cable Gland with Spiral Strain Relief
- B** Cable Gland
- C** Cable Gland (Atex)