

IRU-9400 Series

Mid-Range Indoor Ultrasonic Level Sensor

Datasheet



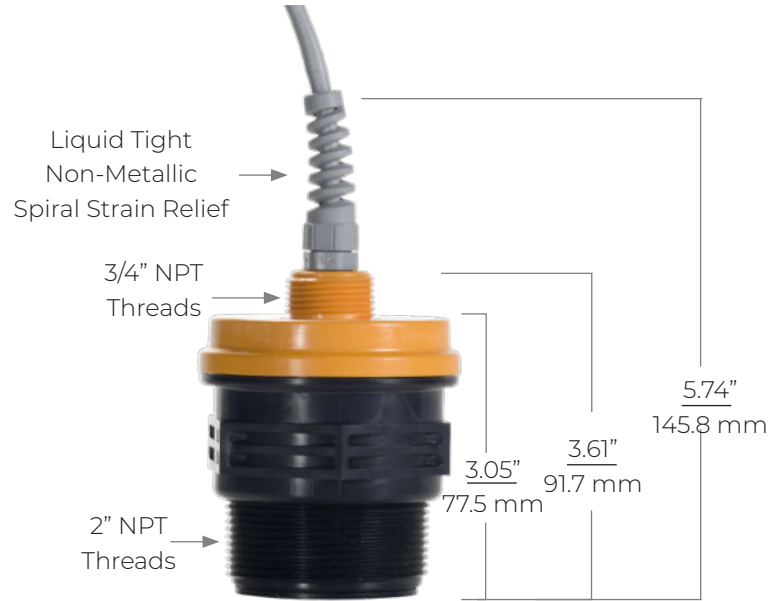
The IRU-9400 series has a versatile range--from 6 inches to 35 feet--and a sensitive electrostatic transducer for detecting difficult targets. This sensor is great for non-reflective and/or soft surfaces. With built-in technology to compensate for temperature changes, the IRU-9400 is well-suited for non-traditional ultrasonic applications and is recommended for indoor or controlled-humidity environment uses only.†

Features

- Range: 0.5 - 35 ft. (0.15 - 10.7 m) for liquids and solids
- AutoSense Software for hassle-free setup
- Works on liquids, solids, and bulk solids
- Internal temperature compensation
- Excitation input for datalogging
- NEMA 12 Enclosure rating: protected from falling/circulating particles and dripping or light splashing water

†Note: Please contact factory for information regarding potential outdoor applications.

IRU-9400 SPECIFICATIONS



Performance

- Operating Range:
 - 0.50 - 35 ft. (0.15 - 10.67 m) for liquid and solid targets
 - 0.50 - 17.5 ft. (0.15 - 5.33 m) for bulk solids
- Beam Pattern: 9° off axis
- Internal Temperature Compensation
- Frequency: 50 kHz
- Accuracy: $\pm 0.25\%$ of detected range
- Resolution: 0.1 in. (2.5 mm)
- Response Time: Programmable (73 ms minimum @ 35 ft.)

Connectivity

- Output:
 - 4-20 mA
 - 4-20 mA with (2) NPN outputs
 - 0-2.5 V/0-5 V (selectable via software)
 - RS-232 option (with voltage output only)
- Excitation Input For Datalogging
 - With voltage output only

Environmental

- Enclosure Protection: NEMA 12
- Operating/Compensated Temperature Range:
 - 20° to 140°F (-30° to 60°C)

Electrical

- Total Current Draw: 75 mA @ 24 VDC
- Operational Supply Voltage: 12-28 VDC
- Excitation Supply Voltage: 5 VDC minimum
- Programming Supply Voltage
 - RST-3002: 15-28 VDC
 - RS-232: 15-28 VDC
- Wiring Connection:
 - 3, 5, or 8-conductor shielded cable
 - 4, 5, or 8-pin micro connector

Programming

- Interface with RST-3002 Programmer (purchase separately - not needed for "S" option)
 - Interfaces with 32- and 64-bit operating systems
- User selected units of measure

Physical

- PC/PET upper housing
- Transducer Type:
 - Electrostatic, with open face & 304 SS grill

Certification

- CSA General Purpose

COMMON MODEL CONFIGURATIONS

Model Number	Model Description
IRU-9425-C6	0.5 - 35 ft range, 50 kHz, 2" MNPT, 4-20 mA Output, 6 ft cable
IRU-9425-M	0.5 - 35 ft range, 50 kHz, 2" MNPT, 4-20 mA Output, Micro connector
IRU-9429-C6	0.5 - 35 ft range, 50 kHz, 2" MNPT, 0-2.5 V / 0-5 V Output, 6 ft cable
IRU-9429-M	0.5 - 35 ft range, 50 kHz, 2" MNPT, 0-2.5 V / 0-5 V Output, Micro connector

MODEL CONFIGURATION OPTIONS

Model Number: IRU - 942 -
 A **B**

A. Output

- 3** 4-20 mA
- 5** 4-20 mA with 2 NPN outputs
- 9** 0-2.5V / 0-5V
- 9S** 0-2.5V / 0-5V with RS-232†

B. Cable/Micro Connector

- CL** Cable (Specify L=length in feet)
 Standard 6 feet of cable
- M** Micro connector

†Note: This option not CSA certified

IRU-9400 ACCESSORIES

Please order separately, by part number.

Description	Part Number
Over Molded Extension Cables with Foil Shield	
4 Conductor	
Straight, 2 m	135407-0002
Right Angle, 2 m	135407-1002
Straight, 5 m	135407-0005
Right Angle, 5 m	135407-1005
5 Conductor	
Straight, 2 m	135415-0002
Right Angle, 2 m	135415-1002
Straight, 5 m	135415-0005
Right Angle, 5 m	135415-1005
8 Conductor	
Straight, 2 m	135423-0002
Straight, 10 m	135423-0010
Programming Module	
RST-3002 (USB - 32 and 64 bit compatible)	125389-1000



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