IRU-2000 Series

Mid-Range Object-Detection Ultrasonic Level Sensor
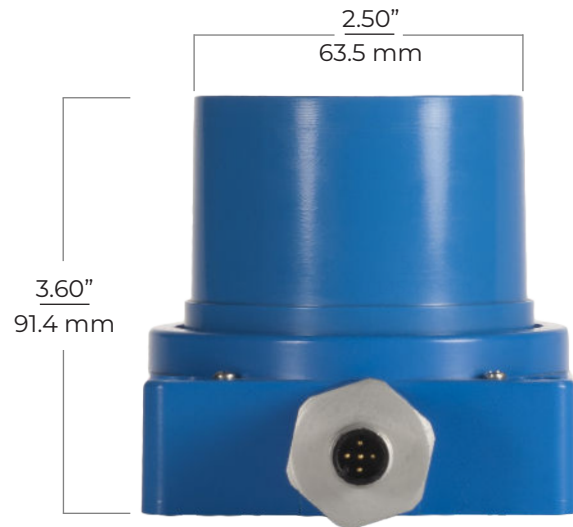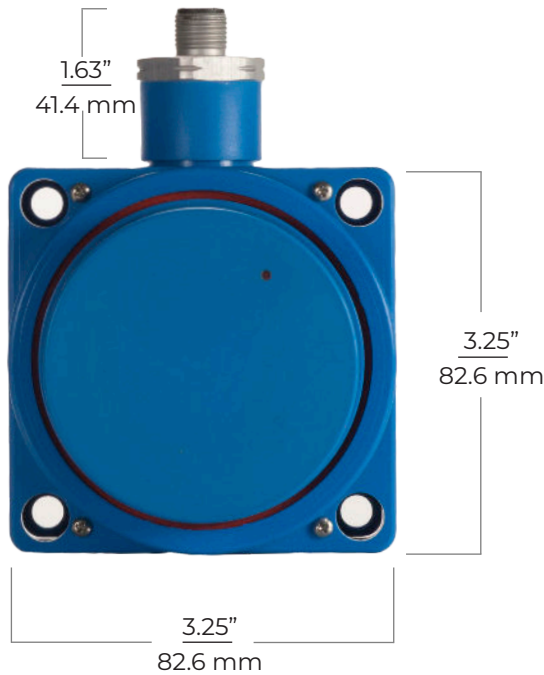
Datasheet

The IRU-2000 Series is designed for applications outside of tank environments. IRU-2000 Series ultrasonic sensors are ideal for presence/absence detection, proximity detection or measurement, object profiling, and more. They are favorites in the car wash industry and popular for barge draft monitoring. With a NEMA 4X enclosure rating, clock-syncing options, and surface-mount design, IRU-2000s have the flexiblity to provide precision measurements in a wide variety of applications and unpredictable environments.

Features

- Range: 1 - 25 ft. (0.3 - 7.6 m) for liquid and solid targets
- AutoSense Software for hassle-free setup
- Internal temperature compensation
- Works on solids, liquids, and bulk solids
- Programmable filtering

- CSA General Use
- NEMA 4X Enclosure Rating: protected from wind-blown dust, splashing or hose-directed water, and corrosion and the external formation of ice

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IRU-2000 SPECIFICATIONS

Performance
- Operating Range
    - 1 - 25 ft. (0.3 - 7.6 m) for liquids & solid targets
    - 1 - 10 ft. (0.3 - 3.0 m) for bulk solids
- Beam Pattern: 9° off axis
- Internal Temperature Compensation
- Frequency: 69 kHz
- Accuracy: ±0.25% of detected range
- Resolution: 0.1 in. (2.5 mm)
- Response Time: Programmable (55 ms minimum @ 25 ft.)

Connectivity
- Output:
    - (1) Solid State Relay
    - Isolated 4-20 mA
    - RS-485 with (1) NPN trip point
    - 4-20 mA with (2) NPN trip points*

Environmental
- Enclosure Protection: NEMA 4X
- Operating/Compensated Temperature Range:
    - -20° to 140°F (-30 to 60°C)

*Note: Contact factory for other output options.

Electrical
- Total Current Draw: 80 mA @ 24 VDC
- Operational Supply Voltage: 12-28 VDC
- Programming Supply Voltage
    - RST-3002:   15-28 VDC
    - RS-485:   12-28 VDC
- Wiring Connection:
    - 6-conductor shielded cable
    - 5-pin micro connector
    - 6-pin terminal strip

Programming
- Interface with RST-3002 Programmer (purchase separately)
    - Interfaces with 32- and 64-bit operating systems
- User selected units of measure

Physical
- ABS with UV inhibitor upper housing
- ABS with UV inhibitor transducer housing
- Transducer Type: Ceramic, ABS-faced

Certification
- CSA:
    - Inputs: 12 - 28 VDC; Outputs: 4-20 mA, NPN General Purpose

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MODEL CONFIGURATION OPTIONS

Model Number: IRU - 200 _____ - _____
                          A   **(B)**

A. Output
☐ **2**   (1) solid state relay
☐ **3**   isolated 4-20 mA
☐ **4**   RS-485 with (1) NPN trip point**†**
☐ **5**   4-20 mA with (2) NPN trip points

B. Cable/Micro Connector (IRU-2004/2005 only)
☐ **CL**   Cable (specify L=length in feet; standard 6 ft.)
☐ **M**   5-pin micro connector

†Note: This option not CSA certified

COMMON MODEL CONFIGURATIONS

Model Number	Model Description
IRU-2002	1 - 25 ft range, 69 kHz, Surface mount, **1 Solid-state relay output, 6-pin terminal strip**
IRU-2003	1 - 25 ft range, 69 kHz, Surface mount, **Isolated 4-20 mA output, 6-pin terminal strip**
IRU-2004-C6	1 - 25 ft range, 69 kHz, Surface mount, **RS-485 with 1 NPN trip point, 6 ft cable**

IRU-2000 ACCESSORIES

Please order separately, by part number.

Description	Part Number
Micro Connector Over Molded Extension Cable	
Straight, 2 m	135415-0002
Right angle, 2 m	135415-1002
Straight, 5 m	135415-0005
Right angle, 5 m	135415-1005
Programming Module	
RST-3002 (USB - 32 and 64 bit compatible)	125389-1000

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