

IRU Sensor Programming Guide



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IRU-###3 Connected to X-420

Part No: IRU-###3

(Example: IRU-2423, IRU-3433)

The IRU series provides a non-contact method of detecting level, presence/absence detection, volume, proximity and distance. With built in technology to compensate for unpredictable variables such as humidity, temperature and agitators the IRU is the right sensor for your application.

Specification:

- Supply Voltage: 12-28 VDC
- Current Draw: 75mA
- Range:
- IRU-5413-C20-B81, 4-79 inch, 1 in NPT Mounting
- IRU-2423-C20-B81, 1-25 Feet, 2 Inch NPT Mounting
- IRU-3433-C20-B81, 1.25-50 feet, 3 Inch NPT Mounting
- See IRU manual for full specifications

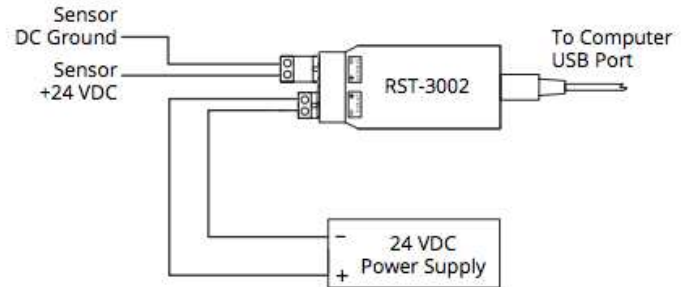
Connection:

- Red: 12-28 VDC
- Black: Ground
- White: 4-20mA



IRU Setup Wiring:

Wire up the IRU to the RST-3002 module. Load the software it came with.



IRU Setup:

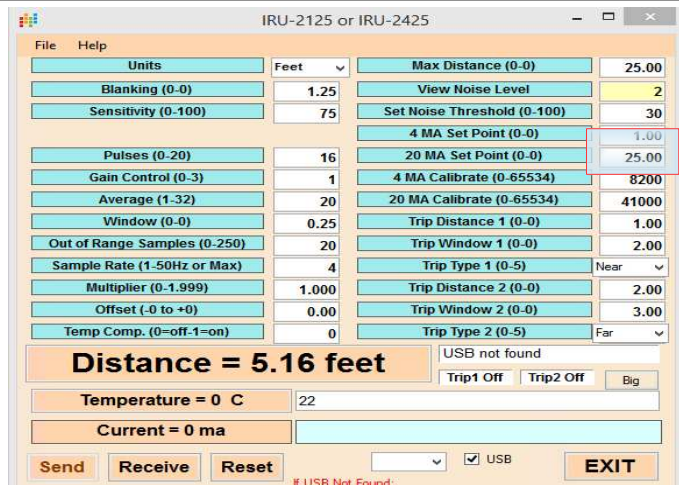
4 mA Set Point sets the distance at which the output is 4 mA. This distance is measured from the face of the sensor.

20 mA Set Point sets the distance at which the output is 20 mA. This distance is measured from the of the sensor.

Tank Level: Set 4mA to the distance to the bottom of the tank. Set 20mA to distance to the top of the tank.

Distance from Sensor: Set 4 mA at zero and 20mA to the maximum distance to detect.

Other setting maybe set based on application. See IRU manual for details.



X-420 Setup:

Under the I/O Setup/Analog Inputs set the following:

Set Mode to Analog 4-20mA

Click Edit and set the following:

Decimal Place, Units, Slope and Offset.

Tank Level:

The slope is the $4\text{mA} - 20\text{mA} / 16$.

The offset is $\text{slope} * -4$.

Distance From Sensor:

The slope is the $20\text{mA} - 4\text{mA} / 16$.

The offset is $\text{slope} * -4$.

Tank Level Example: 20 foot tank

$4\text{mA} = 20\text{ ft}$ (bottom of tank), $20\text{mA} = 0\text{ ft}$ (face of sensor)

Slope = $1.25 \quad (20 - 0 / 16)$

Offset = $-5 \quad (1.25 * -4)$

Distance From Sensor:

$4\text{mA} = 0\text{ in}$ (face of sensor), $20\text{mA} = 300\text{ in}$ (Max Distance)

Slope = $18.75 \quad (300 - 0 / 16)$

Offset = $-75 \quad (18.75 * -4)$

See X-420 Manual for setting up the X-420

www.controlbyweb.com/x420/specs.html

X-420 Edit Analog Input

Edit Analog Input

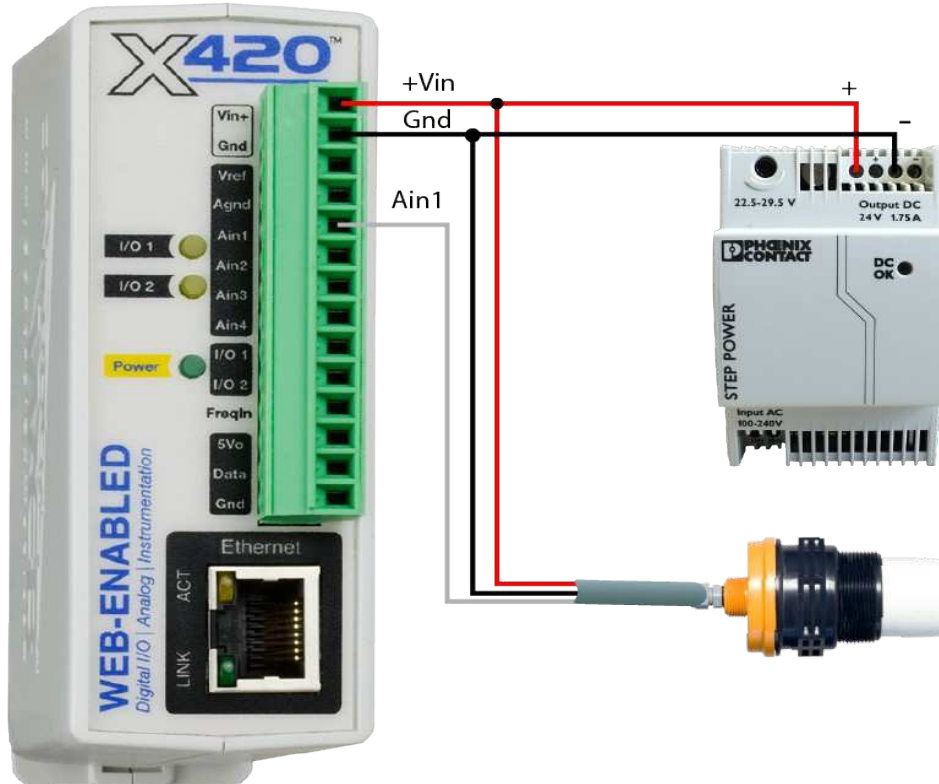
Input Name:

Decimal Places:

Units:

Slope:

Offset:



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