



Radar Pro™ Level Sensor Installation and Operation Manual RPRO-2000

Radar Pro™ Level Sensor

See Water's Radar Pro™ Level Sensor is a high-precision ultra-low-power millimeter-wave radar level sensor developed and designed for high measurement accuracy, high sensitivity, easy integration, and superior interaction performance.

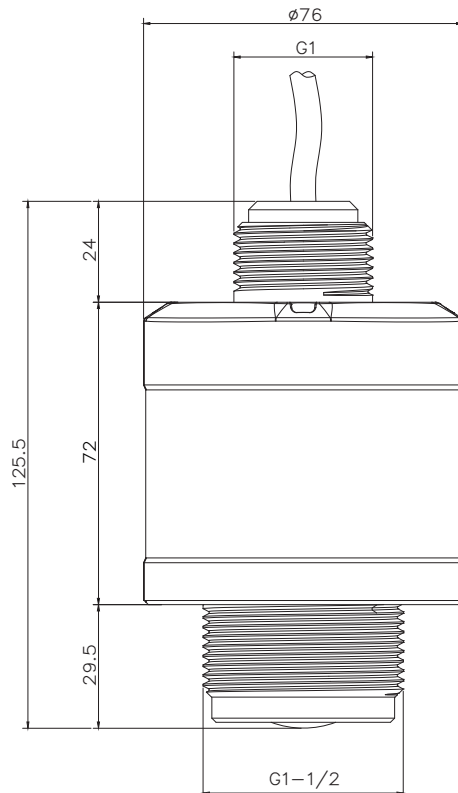
The Radar Pro™ uses non-contact technology, eliminating the need for physical contact with the measured substance, preventing contamination and minimizing maintenance requirements. This sensor can be used in various industries and applications, including liquids, distance, and harsh environments—such as chemical, oil and gas, wastewater treatment, and food processing.

Model	Range: ft(m)	Cable Length: ft(m)
RPRO-2000	32ft (10m)	50ft (15m)

Features:

- High precision ±2mm
- No-contact measurement
- Resistant to condensation, rain, and corrosion
- Operation is unaffected by temperature, pressure or vacuum; provides accurate readings under all environmental conditions
- High sensitivity, lightweight, easy integration
- Two-year limited warranty

Dimensions:



Electrical Properties:

- **Power Requirement:** 12-30 VDC
- **Output Signal:** 4-20 mA DC, two wire
- **Scanning Frequency:** 76-81 GHz
- **Electrical Connection:** Wire pigtail
- **Accuracy:** ±2 mm

Mechanical Properties:

- **Working Pressure:** -1~3 bar
- **Material:** Polycarbonate & Fiberglass
- **Wetted Materials:** PVDF
- **Protection Class:** IP67

Operating Condition:

- **Operating Temperature:** -40 - 85°C (-104 - 185°F)

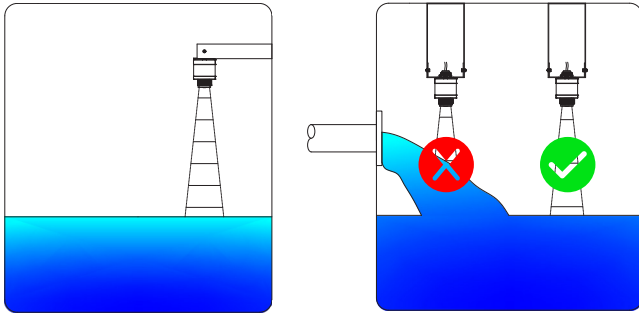


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Installation:

Radar Sensor:

The Radar Pro™ should be installed over the top of the tank. The vertical fixed method is best for highest accuracy. The measure reference surface is the bottom line of the sensor. The highest solid level cannot enter the blind area. The level measurement should avoid the feeding hole; aim toward the smoother level surface. It is better to use a sun/rain shade when mounting in an application that is exposed to weather elements. When mounting, sensor should be kept a distance from the wall surface because of the beam. When measuring the object level, the feeding hole should be avoided to prevent interference with the ultrasound echo.

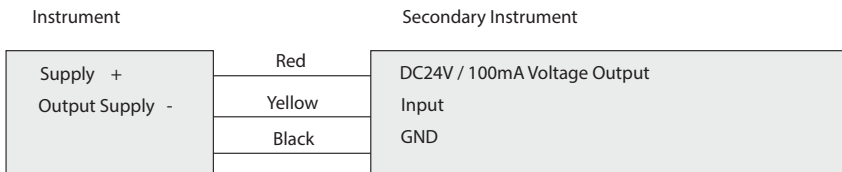


Inflowing medium: Do not mount the sensor in or above the filling stream. Make sure to detect the medium surface, not the inflowing liquid.

It is possible to achieve both horizontal and vertical mounting orientations by rotating the sensor holder to the appropriate angle. The sensor holder can also be adjusted to compensate for out of plumb conditions allowing the sensor to be perpendicular to the medium.

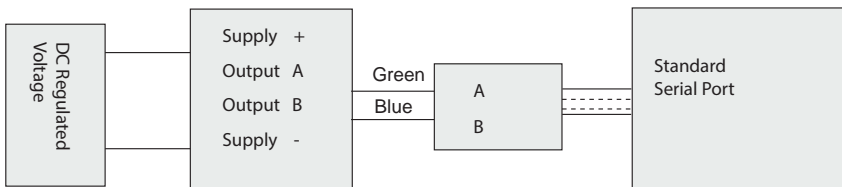
Wiring Connection:

1. Wiring diagram of current (voltage) output connect with secondary unit.



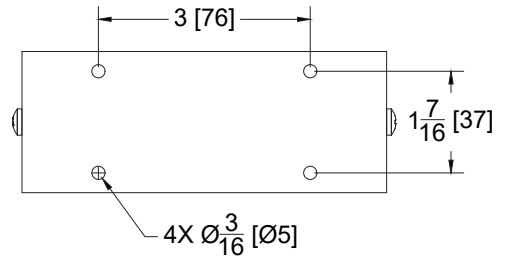
2. Wiring diagram of serial output connecting with PC

External power / instrument / 485-232 / PC

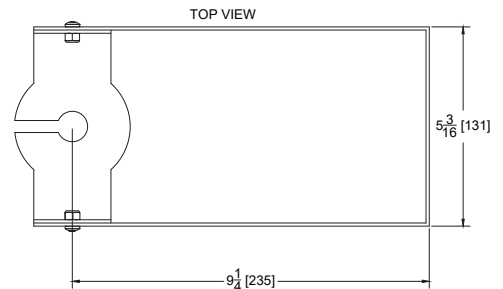


Mounting Bracket:

Using the bracket as a template, place a level across the top and hold it in the desired location. Mark the four 3/16" holes. Use a drill bit suitable for the intended substrate and screw diameter and drill out the four holes (A 10-32 x 1 1/2" stainless steel screw is recommended). The mounting holes can be bored to 1/4" to accept a larger screw (A minimum of 1" penetration into the substrate is recommended). The tolerances of the drill bit used should meet the requirements of ANSI Standard B212.15. Position the bracket, insert the screw through the mounting hole of the bracket and tighten the screw until it is fully embedded.



Slide the cord of the sensor through the slot in the mounting bracket and use the included nut to secure the sensor to the mount.



Warranty:

See Water, Inc. warrants that products of its manufacture are free from defects in material and workmanship for a period of 2 years from the date of purchase. This date shall be determined by the date on the invoice and the serial number on the product.

Replacement of the product is at the discretion of See Water, Inc. This warranty is valid when the product is installed in compliance with the manufacturer's installation instructions. The manufacturer's obligation under this warranty shall be limited to the repair or replacement of any parts found by the manufacturer to be defective.

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