



# RLS

## Non-Contact Radar Sensor

### Specifications

#### Measuring Range

2.6-115 ft. (0.8-35 m)

#### Accuracy

2.6-6.6 ft.: ±0.03 ft.

6.6-98.4 ft.: ±0.01 ft.

98.4-115 ft.: ±0.03 ft.

#### Resolution

0.01 ft. (0.001 m) SDI-12 Interface

#### Beam Width

12°

#### Beam Angle

±6°

#### Sensor Technology

Radar

#### Transmitting Frequency

24 GHz Pulse Radar

#### Output

SDI-12/4-20mA or RS-485/4-20mA

#### Power Requirements

9.6 to 28 Vdc

#### Power Consumption

Sleep: < 50 µA @ +12 V equal to < 0.6 mW

Active: 12 mA @ +12 V equal to < 140 mW

#### Environmental Conditions

Operating Temperature:

-40 to 140°F (-40 to 60°C)

Storage Temperature:

-40 to 185°F (-40 to 85°C)

Relative Humidity:

0-100% (non-condensing)

#### Dimensions

8.7 in. x 6.0 in. x 7.5 in.

(222 mm x 152 mm x 190 mm)

#### Weight

4.6 lbs. (2.1 kg)

#### Ingress Protection Rating

IP 67

# Accurately and efficiently measures surface water level.

Accuracy ±0.01 ft.



### Performance Features

- Quick response time: 20 seconds
- Measurements are unaffected by:
  - Air temperature
  - Wave action
  - Humidity
  - Flood events
  - Floating debris
  - Contaminated water
- Low power consumption during measurement and stand-by
- Low maintenance
- Compact housing with flat antenna design



**Simple installation with no need to enter the water.**



### Installation

- Versatile installation, easily mounted to a bridge, frame, pipeline, or extension arm
- Simple mounting on slanted surfaces
- Ideal for monitoring remote and hard to reach locations

### Measuring Principle

- Impulses are transmitted by the RLS's transmitting antenna, then reflected off the water's surface and received by the RLS's receiving antenna
- Approximately 16 individual measurements are conducted per second and averaged after 20 seconds to minimize influences of waves
- The time delay from transmission to receipt of the reflected impulse is used to calculate distance from the RLS to the water surface



**Environmental**  
*Be Right. The Environment is Worth it.*

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*The RLS was designed specifically for surface water non-contact level measurement.*