

# RSS-2-300 WL Flow Meter

HIGH-PRECISION NON-CONTACT OPEN CHANNEL FLOW VELOCITY & LEVEL METER

## Highlights

- Contactless, above the water, flow measurement
- Surface flow velocity measured with radar sensor
- Wide velocity measurement range from 0,02 m/s to 15 m/s
- Compact, low-power design
- Wide input voltage range, suitable for solar applications
- Supports variety of communication interfaces
- IP68-rated enclosure (for outdoor applications and harsh environments)
- Automatic mounting angle compensation (cosine correction)
- Configurable direction of the flow measurement
- PC application for radar setup and live flow monitoring
- Simple integration with existing telemetry systems
- Easy pole, wall or enclosure mounting
- Compatible with Geolux SmartObserver datalogger and GeoluxHydroview cloud-based software for real-time remote monitoring



## Product Description

The Geolux RSS-2-300 WL flow velocity and level meter uses radar technology to provide precise, contactless measurement of surface flow velocity, and to measure the distance from the sensor to the water level. Contactless radar technology enables quick and simple sensor installation above the water surface, and requires minimum maintenance.

The integrated discharge calculation module uses the two measurements together with a pre-configured river channel geometry profile to calculate the total water discharge in real-time. The discharge calculation module is included in the price of RSS-2-300 WL instrument.

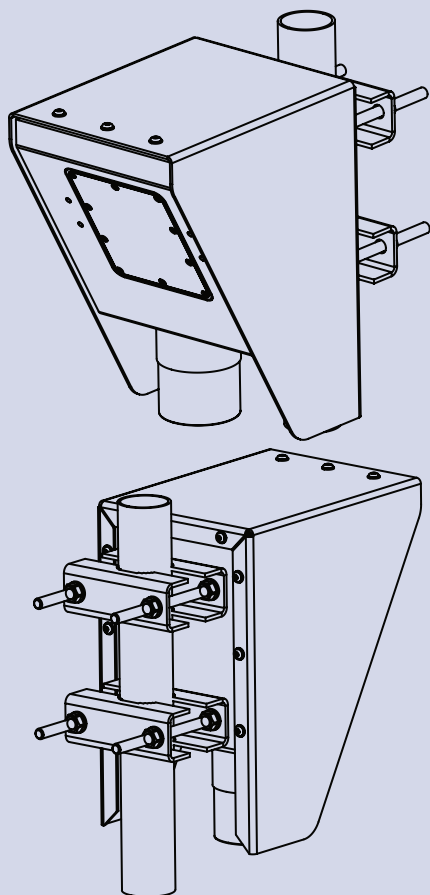
RSS-2-300 WL flow meter is used to monitor flow velocity and water level in open channels such as rivers, irrigation channels or sewer systems, and for monitoring and controlling hydropower plants and wastewater treatment plants. The flow meter is also suitable for various mass flow metering applications in mining processing

plants, industrial installations, and, due to operation without moving parts and robust mechanical design, is ideal for measurement of flammable fluids and harsh chemical applications. The surface velocity radar operates in the K-band (at 24.125 GHz), and provides 20 flow speed readings per second over serial (RS-232, RS-485) and CAN interfaces. The level radar sensor operates in the W-band, between 77 GHz and 81 GHz.

A variety of supported communication interfaces and protocols enable easy integration with existing telemetry equipment and SCADA systems. The integrated tilt sensor measures inclination angle of the sensor and the flow velocity measurement is automatically cosine-corrected according to the measured mounting tilt angle.

Geolux RSS-2-300 WL instrument is certified according to both European and American standards, and is being used worldwide.

## Detailed Specifications



<b>Detection Distance</b>	15 m / 30 m
<b>Speed Range</b>	0,02 m/s to 15 m/s
<b>Speed Resolution</b>	0,001 m/s
<b>Level Resolution</b>	0,5 mm
<b>Level Accuracy</b>	+/-3 mm
<b>Sampling Frequency</b>	1 sps / 10 sps optional
<b>IP Rating</b>	IP68
<b>Serial Interface</b>	1 x serial RS-485 half-duplex 1 x serial RS-232 (two wire interface)
<b>Serial Baud Rate</b>	1200 bps to 115200 bps
<b>Serial Protocols</b>	ASCII-S, GLX-NMEA, Modbus
<b>Digital Outputs</b>	1x open collector, max 50 V 200 mA (supports pulse and alarm mode)
<b>Analog Output</b>	(optional) 4-20mA, programmable velocity, level or flow
<b>Connector</b>	M12 circular 12-pin
<b>Power Input</b>	9 to 27 VDC
<b>Power Consumption</b>	< 6,5 W (typical 5,2 W)
<b>Maximal Current</b>	< 750 mA
<b>Temperature Range</b>	-40°C to +85°C (without heating or coolers)
<b>Enclosure Dimensions</b>	150 mm x 200 mm x 250 mm

FCC & CE **APPROVED**

MADE IN **EU**

Geolux is a company based in the European Union that develops and manufactures radar sensors for use in traffic, security and hydrology applications.

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