OTT-RLS
NON-CONTACT WATER LEVEL SENSOR FOR LONG TERM SURFACE WATER MEASUREMENTS

Non-contact water level sensor for long term surface water measurements

The OTT-RLS is a non-contact radar level sensor with pulse radar technology.
The OTT-RLS offers a large measurement range with a small blanking distance and narrow beam width and it easily connects to most dataloggers. The RLS has extremely low power consumption & is ideal for remote or solar powered sites.

- Application - Surface water
- Parameters measured - Water level/distance to water
- Measurement technology - Non-contact pulse radar
- Product Highlights - Measures water level or depth to water from a bridge, pier or mounting arm
- Measurement range - 0.4 ... 35m
- Accuracy - 0.8 ... 2 m: ± 10 mm; 2 ... 30 m: ± 3 mm; 30 ... 35 m: ± 10 mm
- Internal data logger - No
- Interface - SDI-12, RS-485 (using SDI-12), or 4 ... 20 mA

Advantages

- No drift over time
- High Performance-Measurements are unaffected by air temperature, humidity, flood events, floating debris, or contaminated water; reduces the likelihood of missing data and reduces data post processing
- Low Maintenance-Flat antenna design eliminates nesting areas for insects and periodic maintenance requirement
- Flexible Integration/Easy Setup–Connects to most data loggers via standard communication interfaces, SDI-12 or 4 ... 20 mA; no need for additional PC software
- Simple Installation-Light weight compact design facilitates easy mounting on bridges, extension mounting bracket or inside a small protective housing
- Low Profile Design-Unobtrusive appearance is ideal for urban installation sites or sites prone to vandalism
- Low Power Consumption-Ideal for remote or solar powered sites; requires only 12 mA when active.

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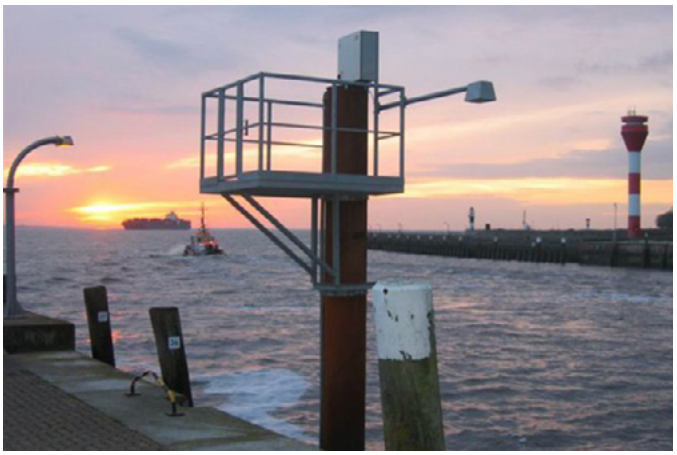
Example for Use

For surface water level measurement of:
- Streams and rivers
- Tidal zones
- Reservoirs and lakes

Ideal for monitoring:
- Surface waters prone to flooding
- Sediment or debris laden streams and rivers
- Migrating channels.



Technical Specifications

Water Level Measurements	
Measuring range: distance to water surface	0.4 ... 35 m
Resolution SDI-12 output	0.001 m
Accuracy (SDI-12)	0.4 ... 2.0 m: ±10 mm; 2.0 ... 30 m: ±3 mm; 30 ... 35 m: ±10 mm
Average temp. coefficient (-20 ... +40°C)	0.01 % full scale/10K
Accuracy (4 ... 20 mA)	±0.1 % full scale
Average temperature coefficient	10 ppm full scale/°C (at 20°C)
Measuring time	20 s
Beam angle of antenna (width of beam)	12 °
Electrical Data	
Power supply	5.4 ... 28 V DC, typ. 12/24 V DC
Power consumption in active mode (at 12V)	<15 mA
Power consumption in rest mode (at 12 V)	<0.05 mA
Interfaces	4 ... 20 mA, SDI-12, RS-485 (SDI-12 Protocol)
Material	
Housing	ASA (UV-stabilized ABS)
Radom (front plate)	TFM PTFE
Mounting bracket **Lateral axis**	1.4301 (V2A) ±90 °
Longitudinal axis	±15 °
Dimensions and Weight	
Weight (incl. mounting bracket) **Operating temperature:**	approx. 2.1 kg -40 ... +60°C
Storage temperature	-40 ... +85°C
Relative humidity	0 ... 100 %
Type of Protection	
With horizontal mounting	IP67 (submersion depth max. 1 m; submersion duration max. 48 h)
EMV limits and radio approvals	
EMV for low power radio devices	ETSI EN 301 489-3
Low-voltage device safety	EN 60950-1
Radio approval for low power radio devices* Short Range Device (SRD)	
Europe	ETSI EN 300 440
USA	FCC 47 CFR Part 15
Canada	RSS 210 Issue 7