

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

- **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 ... 35 m
- **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

The OTT RLS is a non-contact radar level sensor with pulse radar technology. The OTT RLS

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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 and is ideal for remote or solar powered sites.

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 temperature coefficient (-20 ... +40 °C)	0.01 % full scale/10 K
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 12 V)	<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	1.4301 (V2A)
Lateral axis	±90 °
Longitudinal axis	±15 °

Dimensions and weight	
Dimensions L x W x H	
Weight (incl. mounting bracket)	approx. 2.1 kg
Operating temperature:	-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

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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

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