



## 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:  $\pm 10$  mm; 2 ... 30 m:  $\pm 3$  mm; 30 ... 35 m:  $\pm 10$  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

# Technical Data

OTT RLS - Radar Level Sensor

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                                  | 0.4 ... 35 m   |
| Resolution SDI-12 output                         | 0.001 m  |
| Accuracy (SDI-12)                                | 0.4 ... 2.0 m: $\pm 10$ mm;<br>2.0 ... 30 m: $\pm 3$ mm;<br>30 ... 35 m: $\pm 10$ mm |
| Average temperature coefficient (-20 ... +40 °C) | 0.01 % full scale/10 K   |
| Accuracy (4 ... 20 mA)                           | $\pm 0.1$ % 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        | $\pm 90$ °              |
| Longitudinal axis   | $\pm 15$ °              |

| 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 |
| Low-voltage device safety       | EN 60950-1        |

## 2-3

We reserve the right to make technical changes and improvements without notice. V-20/01/2025  
OTT Hydromet GmbH, Germany

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## 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    |

### 3-3

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