



# VRS20 Radar Level Sensor

The VRS-20 is a pulsed k-band radar level sensor developed by Valeport to work seamlessly with Valeport's TideMaster and TideStations.

VRS-20 can be operated in a standalone mode, with optional telemetry systems or interfaced directly to a third party data logger or PC.

Versatile and simple to install, the VRS-20 addresses a number of the issues traditionally associated with level measurement.

## DATA SHEET

### Product Details



TIDE GAUGES



DATALOG  
X2 SOFTWARE

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## Sensors

Non-contact technology removes the installation, corrosion & fouling issues of submerged sensors, while simplifying datum control.

Accuracy and performance are unaffected by changes in water density and atmospheric conditions

## Specification

**Minimum Range** 0.8 m

**Maximum Range** 20 m

**Beam Angle**  $\pm 6^\circ$

**Frequency** 25 GHz

**Accuracy**  $\pm 10$  mm

**Precision** 1 mm

**Footprint** Radius at different ranges:

Range (m)	Radius (m)
2	0.21
5	0.53
10	1.05
20	2.10

## Sampling

The VRS-20 offers averaged data output options for water level / tide measurements only. Wave measurement sampling is not available.

**Raw Sampling Rate** 8Hz

**Averaging period** Selectable (10 to 360 seconds)

**Output Parameters** Mean Range

Mean Height

Std. Deviation

## Electrical

**Range** 9-28 V DC

**Power** 35mA @ 12V DC

## Communications

RS232/485 and SDI12 fitted as standard with communications method defined by pin selection.

**RS232** Up to 200m cable, direct to serial port

**RS485** Up to 1000m cable, addressable half duplex

**SDI 12** Up to 100m cable.

## Housing & Mounting

- Fully sealed, injection moulded housing rated to IP67 (NEMA 6) with PTFE window
- Integral stainless steel mounting bracket with tool free, 2 axis adjustment
- Integrated spirit bubbles for easy levelling

**Length** 255mm

**Width** 130mm

**Height** 130mm (75mm without mount)

**Weight** ~2 kg

## Ordering

**0745001** VRS-20 Radar Level Sensor Supplied with:

- Mounting bracket
- 5m cable with junction box
- Software, Manual and transit carton

**0745003** TideMaster configured

## Shipping

**Cardboard Carton** 37 x 28 x 20cm ~ 4kg

## Type Approval

The VRS20 radar sensor is fully compliant with:

- ETSI EN 302 729-2 V1.1.2(2011-05) Electromagnetic compatibility and Radio spectrum Matters (ERM) Short Range Devices (SRD); Level Probing Radar (LPR) equipment operating in the frequency ranges:
  - 6 GHz to 8,5 GHz, 24,05 GHz to 26,5 GHz, 57 GHz to 64 GHz and 75 GHz to 85 GHz.

Please contact Valeport to discuss your requirements in more detail