



VRS 20 - Radar Level Sensor



The VRS-20 is a pulsed k-band radar level sensor developed by Valeport to work seamlessly with the Valeport TideMaster, operate standalone with optional integrated GPRS telemetry to internet, or interface 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.

Sensor

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:	±6°	
Frequency:	25 GHz	
Accuracy:	±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

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.

Sampling

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

Raw Sampling Rate:	8 Hz
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.
- Optional integrated GPRS telemetry module

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 molded 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: <ul style="list-style-type: none"> • Mounting bracket • 5m cable with junction box • Software, Manual and transit carton
0745002	VRS-20 Radar Level Sensor with: Integrated GPRS telemetry <ul style="list-style-type: none"> • Mounting bracket • 5m cable with junction box • Software, Manual and transit carton

Shipping

Cardboard Carton:	37 x 28 x 20cm, ~ 4kg
-------------------	--------------------------

Please contact Valeport to discuss your requirements in more detail