



VRS-20



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 datalogger 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
35	3.68

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, 75 GHz to 85 GHz;

Sampling

Raw Sampling Rate:	8 Hz
Averaging period:	Selectable
Output Parameters:	Mean Range Mean Height Std. Deviation

Electrical

Range:	9-28 V DC
Power:	35mA @ 12v dc

Environmental

Temperature Range:	-20 to + 60 deg C
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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 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 with mounting bracket, 5m cable with junction box, software, manual and transit carton.
0745002	VRS-20 Radar Level Sensor with integrated GPRS telemetry. Mounting bracket, 5m cable and junction box, software, manual and transit carton.

Shipping

Cardboard Carton:	37 x 28 x 20cm, ~ 4Kg
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Datasheet Reference: VRS-20 version 2d, Feb 2013