



Waverider SG

Datawell - Oceanographic Instruments

Second generation non-directional wave height measuring buoy

The second generation Waverider SG (WR-SG) is a real-time non-directional wave height measuring buoy. Wave height is measured with a resolution of 1 cm using the well-proven Datawell stabilized platform sensor. The stabilized platform ensures that the buoy accurately tracks the vertical component of the orbital wave motion. In the WR-SG, the platform mounting of the sensor has been reinforced, significantly increasing the robustness of the buoy.

The WR-SG is the successor to the Waverider FI. Whereas the Waverider FI used analog techniques to process the wave data, the Waverider SG digitizes the wave signal at an early stage. Combined with the same processing hardware as the directional DWR-MkIII and DWR-G buoys, many features and options are now standard which were not possible on the previous model:

- Standard integrated **datalogger**. Flash cards up to 2 GByte store all measured data.
- Standard **GPS position** monitoring. Position monitoring allows for drift alarm possibility and easy retrieval of a buoy adrift.
- A **LED flashlight** mounted at the top of the antenna. The high mounted flashing light increases visibility significantly.
- A **water temperature sensor** in the mooring eye providing sea surface temperature

The buoy can be equipped with the Datawell HF link. This link suffices for ranges up to 50 Km. If larger transmitting ranges are desired, the HF link can be combined or replaced with Iridium satellite communication.

To acquire, store and analyze the received data, Datawell offers the W@ves21 and SeaSaw21 software

package, which fully supports the WR-SG. See our brochures for more information.

The WR-SG is available in either a 0.7 m hull diameter (WR-SG7) or in a 0.9 m hull diameter (WR-SG9). An attractive yellow hull coating is available as an option.

Optional features:

- **HF link:** 25.5 MHz-35.5 MHz
- **Iridium:** global, two-way satellite link
- **Iridium SBD:** global, two-way satellite link
- **Power switch:** on/off
- **Hull painting:** yellow (no anti-fouling)
- **Radar reflectors** to increase visibility in busy waters



0.7 m (Hull painting is optional, not standard)



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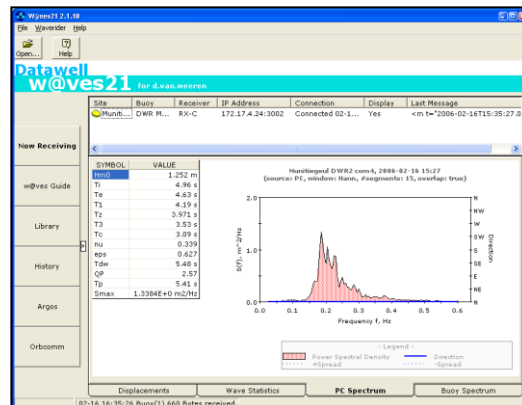
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Specifications

Heave	Range	-20 m - +20 m
	Resolution	1 cm
	Scale accuracy (gain error)	< 0.5% of measured value after calibration < 1.0% of measured value after 3 years
	Period time	1 s - 30 s
Standard features	Datalogger	Compact Flash Module, size 1Gb
	LED Flashlight	4 LEDs, colour yellow (590 nm), pattern 5 flashes every 20 s standard length 35 cm
	GPS position	New position every 30 min, precision 10 m
	Water temperature	Range -5 °C - +46 °C, resolution 0.05 °C, accuracy 0.2 °C
Options	HF Datawell HF link	Frequency range 25.5 - 35.5 MHz (35.5 - 45 MHz on request) Transmission range 50 Km over sea, user replaceable. For use with Datawell RX-C or RX-D receivers.
	Iridium	Satellite communication
	Power switch	Data files are closed and secured
	Hull painting	Brantho Korruux "3 in 1" paint system (no anti-fouling)
	Radar reflectors	Two reflectors mounted on hatchcover (retrofitable)
	Hull diameter	0.7 m and 0.9 m (excluding fender)
General	Material	Stainless steel AISI316 or Cunifer10
	Weight	Approx. 95 Kg (150 Kg)
	Batteries	0.7 m diam. operational life 1.3 year, 1 section of 13 batteries 0.9 m diam. operational life 2.6 years, 2 sections of 13 batteries type Datacell RC25G (250 Wh green)
	Processing	32 bits
	Temperature range	Operating -5 °C - +35 °C Storage -5 °C - +40 °C (+ 55 °C short term, weeks only)
	Receiver	RX-C, RX-D or Warec (older Warecs may need modification)



The Datawell stabilized platform sensor



W@ves21