



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 that 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 flash light** mounted at the top of the antenna. The high mounted flashing light increases visibility significantly.

The buoy comes standard 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 Argos or Orbcmm satellite communication. For near-shore applications, an easy to use GSM communication option is available. 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.

Using batteries as its primary power source, service intervals up to 2.6 years are realized. If larger service intervals are required, an innovative hybrid power system is available that uses a solar panel to increase the service interval. See our brochure Hybrid Power System for more information. All our brochures can be downloaded from our web site www.datawell.nl.

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.



0.7 m (Hull painting is optional, not standard)



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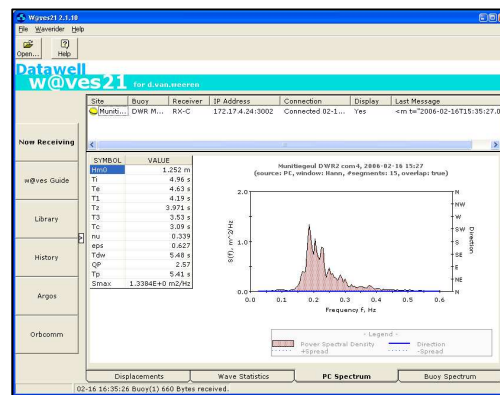
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Specifications

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	HF transmitter	frequency range 25.5 - 35.5 MHz (35.5 - 45 MHz on request) transmission range 50 Km
	Datalogger	Compact Flash Module, size 512 Mb
	Flashlight antenna	4 LEDs, colour yellow (590 nm), pattern 5 flashes every 20 s standard length 195 cm
	GPS position	new position every 30 min, precision 10 m
Options	Argos	satellite communication
	GSM	cellular phone communication
	Water temperature	range -5 °C - +46 °C, resolution 0.05 °C, accuracy 0.2 °C
	Solar power system	solar panel combined with Boostcaps
	Hull painting	Brantho KorruX "3 in 1" paint system (no anti-fouling)
General	Hull diameter	0.7 m (0.9 m) (excluding fender)
	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