

Wave Height Gauge

Measure more, calibrate less.

RBR offers instruments to measure tides and waves by pressure or a direct capacitive sensor. For information on tide and wave measurements by pressure sensors see the Tide & Wave Recorders data sheet. The WG-55 is a capacitive wave height gauge that is reliable and linear, resulting in accurate measurement of wave heights and water levels.

Features

- Fewer re-calibrations
- Temperature stable electronics
- No probe proximity interference
- No energy discharge in water
- Fast response



The WG-55 combines temperature stable electronics and a high quality probe, that results in extremely small calibration slope changes over temperature - making frequent calibrations redundant. The WG-55 measures wave heights using purely digital techniques, with no energy discharge in water and no interference with the adjacent probes. The wave gauge may be used for monitoring waves in hydraulic models and ship tanks, measuring water level changes from sub-millimeter to meters and is ideally suited for measuring multidirectional waves and water surface geometry. For use in indoor and outdoor, and freshwater and salt water applications.

Once configured, defining the output range for each probe is as easy as pressing two buttons. Place the probe to the low immersion point and press the button, then position the probe to the high immersion point and press the button again.

Optionally, a 14 bit analogue to digital converter is available to digitise the output voltage readings for analysis.



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Specifications

Linearity:	0.15% of full scale
Accuracy:	0.15% of full scale
Air temperature coefficient:	0.03% of full scale/°C
Water temperature coefficient:	0.03% of full scale/°C
Operating temperature:	-10°C to 50°C
Time response:	5ms
Output signal:	-5Vdc to +5Vdc
Power supply:	8Vdc to 20Vdc
Power consumption:	21mA @ 10V



Design features of the WG-55 Gauge:

- Measures capacitance digitally with no energy discharge into the water
- Linear over the measurement range
- The output is updated every 5ms
- Low power consumption
- Filtered analogue signal output for data capture
- Highly responsive measure of depth changes from sub-millimeter to meters
- Linear and accurate over a wide range of water and ambient temperatures
- Can be used in both fresh water and salt water
- Rugged, die cast aluminum, weatherproof enclosure

Design features of the WG-55 Probe:

- No electrical interference with other probes or instrumentation
- Available in standard lengths of 30cm and 60cm
- Custom lengths from centimetres to metres are available on request
- A variety of different probes with different lengths can be used with the same WG-55 electronics

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