OSIL
Environmental Instruments and Systems

SVS-603 Wave Sensor

The SVS-603 Wave Height Sensor is a highly accurate MEMS-based sensor that reports heading, wave height, wave period and wave direction via RS232 or logs to its on-board data logger. The SVS-603 represents a new generation in accuracy and completeness for wave sensing electronics whose features include:

- Very low power consumption; fits the smallest power budget
- Very small footprint; sold packaged or as bare PCB
- MEMS sensors account for 3-D motion, rotation and compass heading in all dimensions to cover nine degrees of freedom
- Sophisticated onboard electronics provide near-real-time wave statistics
- On-board temperature compensation for highest accuracy
- On-board data logger capable of logging as much as twenty years of wave data, depending on desired outputs.
- Easy configuration to match your exact sensing rate and output requirements
- Readily interfaced with transmitter using NMEA or other configurable data output
- Sampling rates up to 8Hz

Wave Data Available From the Sensor

- Significant wave height in meters (H_s)
- Wave period in seconds
- Wave direction in degrees from North
- First-5 Fourier wave coefficients
- Maximum wave height (H_{max})
- Wave period at H_{max}
- Wave energy
- Spectrum (raw or processed)
- Heading in degrees
- Custom outputs as required

Other outputs or data manipulations available via firmware updates or through calculations on the available data stream.

FOR FURTHER INFORMATION PLEASE CONTACT:

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Output Formats	Hex code defined output parameters
	NMEA
	First-5 Fourier coefficients
	Wave energy spectrum
Accuracy Metrics:	
HS ±0.5cm	0.2 - 20m* Resolution 0.001m
Period <1%	1.5 - 20** sec. Resolution 0.001sec
Wave Direction ±4°	Range 0-360° Resolution 0.001°
Orientation Sensor	
Accelerometer	±16g; Resolution 0.001m^2/sec
Gyroscope	±200°/sec Resolution 0.001º/sec
Magnetometer	±1300µT (x and y axis); ±2500µT (z-axis) Resolution ~0.3µT
Available Ports and Slots:	RS232 Adjustable baud rate (2.4-115.2 kbps)
	USB Micro-B
	Micro-SD
Dimensions:	53.5mm length
	68mm width
	23mm height (w/connector)
Weight:	Bare board: 0.8oz/23g
	In enclosure: 6oz/170g
Power Requirements:	150mW@12V
	136mW@5V
	5-30VDC
Operating Temperature:	Operating: -30C to 80C
	Storage: -40C to 85C

* Based on platform size and response
** Longer waves may be detected depending on wave conditions
*** Dependent on orbital buoy motion

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