Wave Monitoring

Pressure Wave Gauge

SEAMLESS WAVE INSIGHTS

Pressure sensors are extensively used in wave measurement applications. Obscape's **Pressure Wave Gauge** combines real-time data transmission with solar power capabilities, providing a reliable and efficient solution for continuous wave monitoring. By placing the pressure sensor below the water surface and the data logger above, the system enables seamless real-time wave data collection in settings such as harbor basins, offshore platforms, or shore-based piers and jetties. Whether you aim to enhance navigational safety or analyze the impact of waves on coastal morphology, the **Pressure Wave Gauge** is designed to meet your requirements.

KEY FEATURES

01 **Industry-Grade Pressure Sensor:** Built for durability and accuracy in demanding environments

02 **Pressure Accuracy:** 0.05% accuracy

03 **Reliable Connectivity:** Data transfer via 4G networks ensures seamless access

04 **Compact & Robust Design:** Durable, weatherproof housing built for tough conditions

05 **Easy Deployment:** Lightweight and multiple mounting options for flexible setup

06 **Integrated Data Portal:** User-friendly portal for efficient data management and analysis

PURCHASE INCLUDES

- Free access to the **Obscape Data Portal**
- Mounting brackets
- SD card - can also be run in offline mode

Optional:
1) Satcom upgrade for continuous connectivity beyond cellular range
2) Cellular global SIM - Includes €100 of data credit

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PRESSURE WAVE GAUGE TECHNICAL SPECIFICATIONS

SPECS	
HOUSING SIZE	195 mm height x 87 mm width x 87 mm depth
WEIGHT	2 kg
PRIMARY POWER SOURCE	Solar-powered, 3 Watt
CONNECTIVITY	Cellular (4G with 2G fallback)
CELLULAR DATA LOAD	~8 kB per message
REAL-TIME DATA INTERVAL	30 minutes – 24 hours (User selectable)
BATTERY TYPE	1 x 18650 Lithium-ion battery
NOMINAL VOLTAGE	3.7 V

PARAMETERS	
SAMPLE INTERVAL	10 - 60 minutes (User selectable)
VERTICAL REFERENCE	Specified by user
TELEMETRY DATA QUEUE	In the event of temporary connection outages, a data queue ensures data is sent
INTERNAL SAMPLING FREQUENCY	5 Hz
FILTERED FREQUENCY RANGE	0.05 - 1 Hz (1 - 20 seconds)
BURST LENGTH	24 minutes (7168 samples at 5 Hz)
DIAGNOSTIC PARAMETERS	Battery voltage, internal temperature & atmospheric pressure, signal strength

SENSOR	
SENSOR	Aquaread LeveLine Mini
SENSOR ACCURACY	0.05% FS - 10m (@15° C)
CALIBRATED ACCURACY	0.01% FS
CABLE OPTIONS	10 - 100 m vented or non-vented (Atmospheric pressure correction may be achieved by built-in barometer of the data logger)

DATA STORAGE	
CLOUD STORAGE	Free access to the **Obscape Data Portal** for real-time and historical data, sensor configuration, alerts
ON-BOARD SD CARD	Data stored to the on-board SD card as a backup - or for cases where data connection is absent

DATA OUTPUTS

	CELL	*SATCOM	SD CARD
Water level	✓	✓	✓
Significant Wave Height (Hm0 [m])	✓	✓	✓
Maximum Wave Height (Hmax [m])	✓	✓	✓
Peak Wave Period (Tp [s])	✓	✓	✓
Mean Wave Period Tm0,1[s]	✓	✓	✓
Mean Wave Period Tm0,2[s]	✓	✗	✓
Mean Wave Period Tm-1,0[s]	✓	✗	✓
Mean Wave Period (Tavg[s])	✓	✗	✓
Maximum Wave Period (Tmax [s])	✓	✗	✓
Swell Wave Height (Hsw [m])	✓	✓	✓
Swell Wave Period (Tsw [s])	✓	✓	✓
Variance Density Spectrum (Puu [m2/Hz])	Only in real-time spectrum mode		✓
GPS Coordinates (Lat, Lon)	✓	✓	✓

*Optional Upgrade

Direcitonal coefficients are not included

Satellite subscription services and credits available on request

DATA ACCESS

SEAMLESSLY CONNECT FIELD DATA & OFFICE OPERATIONS

01 **Real-time data:** Wave and water level data

02 **Download:** CSV file, graphs, PDF report

03 **Forwarding:** JSON API or HTTP post

04 **Notifications:** Offline, low battery, parameter threshold exceedance

OPTIONAL SATCOM UPGRADE

SATCOM SPECS	
ANTENNA SIZE	Height 74.2mm / Diameter 66.5mm
NETWORK	Iridium
DATA LOAD	1 satellite credit per message
MONTHLY COST	Line rental and SATCOM credits

Image may vary from actual product