REAL-TIME WAVES, SIMPLIFIED

The **OBS**-*BUOY* 400 is a lightweight, easy-to-deploy wave measurement buoy. Effortless deployment: 1) simply power it on, 2) place it in the water, and 3) start logging data. Powered by replaceable alkaline batteries, it minimizes downtime and maintenance. Data are transmitted instantly to the **Obscape Data Portal** via low-cost cellular communication for easy access and analysis. The **OBS**-*BUOY* 400 provides a cost-effective and reliable solution for real-time wave measurement and sea surface data collection.

Image may vary from actual product

PURCHASE INCLUDES

- Free access to the **Obscape Data Portal**
- Global SIM card with €100 of data (Avg, 6-12 years data usage

Optional: Mooring
Incl. s/s chain, line, s/s in-line weights & floats
Excl. anchor.
Alternatively: Mooring can be constructed using the *Obscape Mooring Guideline*

KEY FEATURES

01 **Data:** Accurate, reliable bulk wave parameters, directional wave spectrum & sea surface temperature

02 **Reliable Connectivity:** Data transfer via 4G networks with 2G fallback

03 **Easy Deployment:** Lightweight, easy to handle and transport, quick start-up

05 **Global SIM Included:** Global SIM ensures seamless data transmission

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

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OBS-*BUOY* 400 TECHNICAL SPECIFICATIONS

SPECS	
BUOY DIAMETER	400 mm diameter x 225 mm height
WEIGHT	6,5 kg (without batteries)
FLOAT VOLUME	15.4 litres
PRIMARY POWER SOURCE	Replaceable battery
CONNECTIVITY	Cellular (4G with 2G fallback)
CELLULAR DATA LOAD	~8 kB per message (Bulk parameters) / ~14 kB per message (Bulk parameters & spectra)
REAL-TIME DATA INTERVAL	30 minutes – 24 hours (User selectable)
BATTERY TYPE	8 x alkaline
BATTERY LIFE	2 – 3 months

PARAMETERS	
SAMPLE FREQUENCY	6.25 Hz
FILTERED FREQUENCY RANGE	0.05 Hz – 1.00 Hz (20 sec – 1 sec)
BURST DURATION	30 minutes
TELEMETRY DATA QUEUE	In the event of temporary connection outages, a data queue ensures data is sent
DATA	Full directional wave spectrum and sea surface temperature
DIAGNOSTIC PARAMETERS	Battery voltage, internal temperature and atmospheric pressure, signal strength

DATA STORAGE	
CLOUD STORAGE	Free access to the Obscape Data Portal for real-time and historical data, **OBS**-*BUOY* 400 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	SD CARD
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])	✓	✓
Peak Wave Direction (Dirp [deg N])	✓	✓
Mean Wave Direction (Dirm [deg N])	✓	✓
Peak Directional Spreading (Sigp [deg])	✓	✓
Mean Directional Spreading (Sigm [deg])	✓	✓
Sea Surface Temperature	✓	✓
Swell Wave Height (Hsw [m])	✓	✓
Swell Wave Period (Tsw [s])	✓	✓
Swell Wave Direction (Dirsw [deg N])	✓	✓
Variance Density Specturm (Puu [m2/Hz])	*	✓
Directional Coefficients (a1, b1, a2, b2 [-])	*	✓
GPS Coordinates (Lat, Lon)	✓	✓
Estimated Wind Speed	✓	✓
Estimated Wind Direction	✓	✓
Buoy Displacement (3D Timeseries)	#	✓

*Only in real-time spectrum mode
#Only in real-time displacement mode

DATA ACCESS

SEAMLESSLY CONNECT FIELD DATA & OFFICE OPERATIONS

01 **Real-time data:** Bulk wave parameters, SST, diagnostic parameters

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

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

04 **Notifications:** GPS watch circle, wave height threshold

FACTORY ADVISORY

- Breaking waves reduce accuracy
- Small buoys can experience mooring line tension in strong currents > 1m/s - use Obscape's mooring design to reduce this disturbance
- Reduced accuracy and increased risk of mooring wear in depths < 4 m

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