OBS-*BUOY* 7 WATT TECHNICAL SPECIFICATIONS

SPECS	
BUOY DIMENSIONS	500 mm diameter x 350 mm height
WEIGHT	14 kg
FLOAT VOLUME	34 litres
MOORING EYE INNER DIAMETER	28 mm
PRIMARY POWER SOURCE	Solar powered, 7 Watt
CONNECTIVITY	GSM (4G with 2G fallback) and Satellite (Iridium)
CELLULAR DATA LOAD	~8 kB per message (Bulk parameters) / ~14 kB per message (bulk parameters and spectra)
SATCOM DATALOAD	6 credits per message
NAVIGATION LIGHT	Flash pattern - 4 flash at 2-second intervals, with a 12-second interval after the 4th flash. The total duration of the flash pattern is 20 seconds
REAL-TIME DATA INTERVAL	30 minutes – 24 hours (User selectable)
BATTERY	1 x 18650 lithium-ion battery
NOMINAL VOLTAGE	3.7V

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 are sent
WAVE SPECTRUM	Fully directional (Maximum Entropy Method)
DIAGNOSTIC PARAMETERS	Battery, solar panel voltage, internal temperature and atmospheric pressure, signal

DATA STORAGE	
CLOUD STORAGE	Free access to the **Obscape Data Portal** for real-time and historical data, **OBS**-*BUOY* 7WATT 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
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])	✓	✓	✓
Swell Wave Height (Hsw [m])	✓	✓	✓
Swell Wave Period (Tsw [s])	✓	✓	✓
Swell Wave Direction (Dirsw [deg N])	✓	✓	✓
Variance Density Specturm (Puu [m2/Hz])	Only in real-time spectrum mode		✓
Directional Coefficients (a1, b1, a2, b2 [-])			✓
GPS Coordinates (Lat, Lon)	✓	✓	✓
Estimated Wind Speed	✓	✓	✓
Estimated Wind Direction	✓	✓	✓
Buoy Displacement (3D Timeseries)	*	✗	✓

*Only in real-time displacement mode

DATA ACCESS

SEAMLESSLY CONNECT FIELD DATA & OFFICE OPERATIONS

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

WWW.OBSCAPE.COM
Kluyverweg 1, 2629HS Delft, The Netherlands I info@obscape.com