

Powers installations on the seabed and provides real-time data communication to shore

Specifications

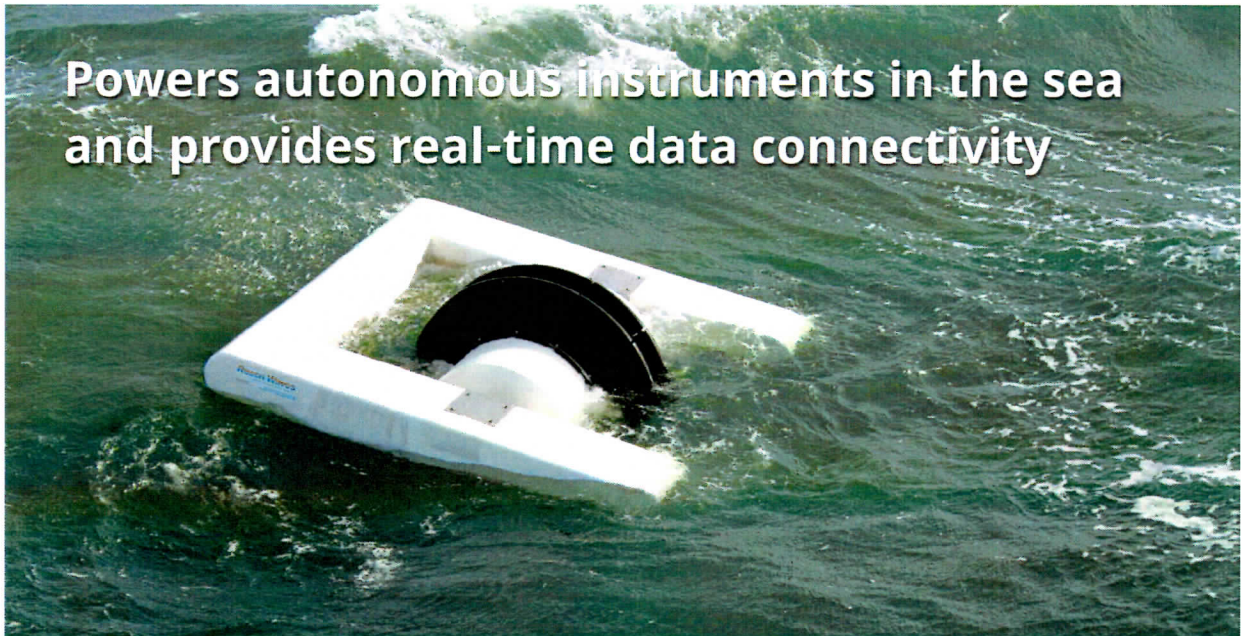
Buoy

Generator power	300W continuous, 600W peak.
Outer dimensions: L x W x H (cm)	170 x 170 x 100
Dry weight	250 to 350 kg
Pay load	40 kg

Operational conditions

Average wave height	Min. 1m, starts to produce power in ½m waves. <i>See power curve for more detail.</i>
Water depth	Min. 10m and max. 200m
Anchoring	Screw anchor or block





RESEN WAVES are the first company in the World to provide continuous power and real time data connectivity to autonomous instruments and machinery in the oceans, as a plug and play solution.

It is now possible to access instruments in real-time through smart phones or a web application, no matter where the instruments are located in the big oceans. Electric power is no more a limitation.

Until now instruments and machinery in the sea are powered by batteries, PV or diesel generators, which require regular ship operation to replace batteries or supply of fuel and maintain diesel generators, which is costly and not always possible due to bad weather. Economizing power is normally done by cutting back on data transmission, which limits the applications of the instruments.

All these draw backs are effectively solved by installing a Resen Waves power buoy in the sea where the power and data connectivity is required.

The buoy powers a battery pack on the seabed, through the mooring line. And the battery pack feeds power to the various instruments and machinery in the sea. Instrument data is logged from the buoy, through a fiber optic Ethernet connection in the mooring line, and the data is transmitted from the buoy to shore per satellite, 3G or 4G transmission.

Applications

- Powers instruments and machinery
- Unmanned remote operations
- Offshore oil & gas
- Hydrographic
- Oceanographic
- AUV docking stations
- Whale monitoring

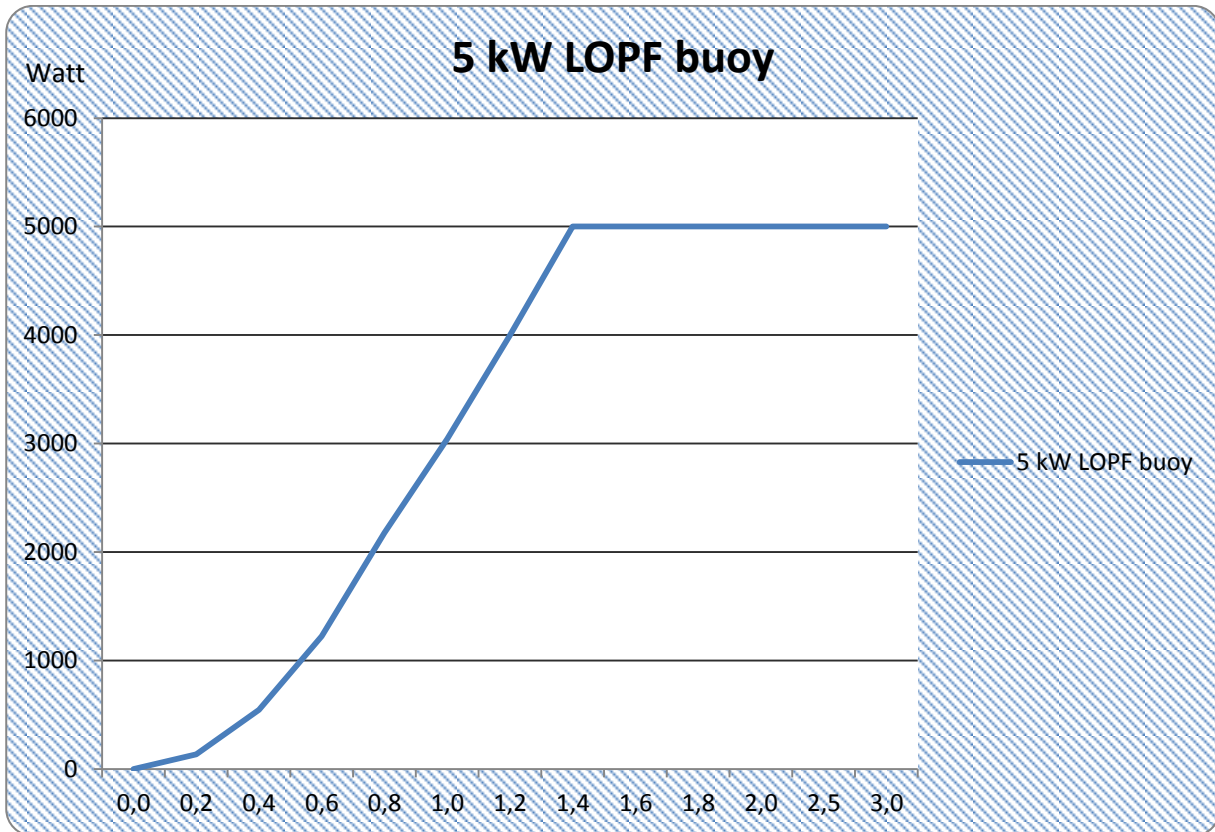
Features and benefits

- Low weight
- Easy installation
- Plug & Play
- 24/7 operation
- No exchange of batteries required

Options, power & data

- 24 and 48 V DC
- Iridium
- Imnarsat
- 3G or 4G
- Water depth + 200m

Power curve vs. wave height, for 5 kW wave energy LOPF buoys



The graph represents the power output in Watt´s versus Hs (m), significant wave height.

The power curve as a table:

Hs(m)	0	0,2	0,4	0,6	0,8	1,0	1,2	1,4	1,6
Watt	0	136	544	1.224	2.176	3.041	3.998	5.000	5.000
%	0	3	11	25	44	61	80	100	100