

Stokes Drifter



The Stokes drifter is a revolutionary, compact drifting buoy that tracks currents at the ocean surface.

The Stokes Drifter is a compact drifting buoy that provides real-time surface current data. The small light-weight buoy is equipped with GPS positioning, a sea surface temperature sensor and Iridium satellite telemetry, which enables the buoy to transmit vital sensor and geo-positional location data in real-time. The buoy is geo-alarm capable and has bidirectional capabilities, allowing the end user to communicate with the drifter if it enters an area of particular interest.

The Stokes Drifter is a low-profile surface current tracking buoy. The applications for the drifter are endless due to its compact size, however, the buoy is ideal for purposes ranging from mapping large-scale ocean currents, spill monitoring, and environmental monitoring.

Oil spill response and recovery.

The Stokes Drifter is easy to use and deploy, making it ideal for oil spill response and recovery. By placing the activation magnet on the surface of the device, the buoy is activated and ready to be dropped into the water from a maximum height of 10 meters. Through surface

current tracking, the buoy is able to model the direction of oil spills and use Iridium satellite telemetry to provide accurate, real-time data.

Iridium also allows the drifter to have bi-directional capabilities. This is a critical ability as the end-user can communicate with the unit by sending it a command to change reporting intervals or request essential time-sensitive data when it enters a region of interest.

Track assets on the ocean surface.

The Stokes Drifter can act as a positional marker for assets by providing real-time location data through Iridium satellite telemetry. The drifter's GPS positioning feature means its location can be tracked anywhere in the world using MetOcean's secure data management platform, LiNC.

Monitor pollutants in the ocean.

The Stokes Drifter provides real-time tracking of biomaterials and plastics in open water (salt & fresh). Reducing the oceans of plastic starts with tracking it all down, and the drifter's surface current tracking capabilities are ideal for monitoring contaminants on the ocean's surface for effective cleanup.

Mechanical Specifications

Outer Diameter 24 cm

Height 4.1 cm

Weight 905 g

Power Consumption

Shelf Life 5-year shelf life (before battery replacement required)

Deployment Life Typical +4 months (1-hour sample interval and 2-hour reporting interval)

Battery 10 AA batteries (comes installed and replaceable)

Interfaces

Bluetooth BLE 5.0

Satellite Iridium SBD

GNSS +/- 1-100 meter accuracy.

Cold start time < 60s

Internal Sensors

Temperature Sensor 0.25°C Accuracy (-5°C to 40°C)

Environmental

Operating Temperature -18°C to +55°C

Storage Temperature -40°C to +50°C

Ingress IP68

Test Approvals IEC 60945 Section 8.5 (Thermal Shock), SAE J1455

Thermal Cycling, SAE J1455 Section 4.9.3 (Low Pressure), SAE J1455 Temperature Cycling

Regulatory Approvals

IC (ISED)

EC

FCC