

# Open Ocean



**SLDMB**

## **SLDMB – Self-Locating Datum Marker Buoy**

- United States Coast Guard's (USCG) Research and Development Center designed this Davis-style Lagrangian drifter to support their Search and Rescue (SAR) operations
- Similar to a CODE (Coastal Dynamics Experiment) drifter developed by Dr. Russ Davis of SCRIPPS, but only 7/10 the size
- The buoy's hull and drogue are submerged, with four floats providing the buoyancy necessary to keep the Argos antenna above water
- GPS locations are provided every 30 minutes and 12 hours of previous positions are reported during each Argos satellite pass
- SLDMB is expected to greatly improve the USCG's Computer Assisted Search Planning (CASP) for SAR missions; thereby saving more lives and reducing mission costs
- Fully certified for air deployment from fixed wing and rotary wing aircraft



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<b>Buoy Dimensions:</b>	
<u>Buoy Prior To Deployment</u>	
Packaged Length:	1016 mm (40 inches)
Diameter:	203.2 mm (8.0 inches)
Weight:	10.8 kg (23.5 pounds)
<u>Deployed Surface Unit</u>	
Hull Diameter:	102 mm (4.0 inches)
Total Height:	1400 mm (55.1 inches)
Total Cross-section Width:	1090 mm 43 inches)
Drogue Vane:	50 mm (19.6 inches) X 70 mm (27.0 inches)
Length Of Exposed Mast:	400 mm (16.0 inches)
Float Size (each is ° of the cylinder):	133 mm (5.25 inches) diameter X 216 mm (8.5 inches) long
Weight In Air:	8.0 kg (17.5 pounds)
<b>Buoy Construction:</b>	
Hull:	Heavy gauge, marine-grade aluminum
Flotation:	Four, quarter-cylinder foam floats
Antenna:	Top-loaded, truncated, monopole argos antenna with active GPS element antenna above
<b>Operation:</b>	
Air Temperature:	-20° C to +35° C
Water Temperature:	-2° C to +35° C
Water Type:	Fresh or Salt
Significant Wave Height:	8.0 meters
Wind Speed (at 10m):	20 meters/sec (38.9 knots)
Wind Gusts:	30 meters/sec (58.4 knots)
Humidity:	100% (external)
Sunlight:	Direct Exposure
Operating Life:	30 days at 10° C
Power Supply:	10 Alkaline-manganese dioxide D-cells
<b>Survival:</b>	
Air Temperature:	-30° C to +35° C
Water Temperature:	-2° C to +35° C
Water Type:	Fresh or Salt
Significant Wave Height:	12.0 meters
Wind Speed (at 10m):	35 meters/sec (70 knots)
<b>Electronics:</b>	
Argos PTT:	METOCEAN Model MAT 906
<b>Sensors:</b>	
Sea Surface Temperature:	Sensor Scientific Thermistor Model WM 103
Battery Voltage:	Precision resistive divider
GPS Receiver:	Conexant Jupiter Model TU30-D140-231



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