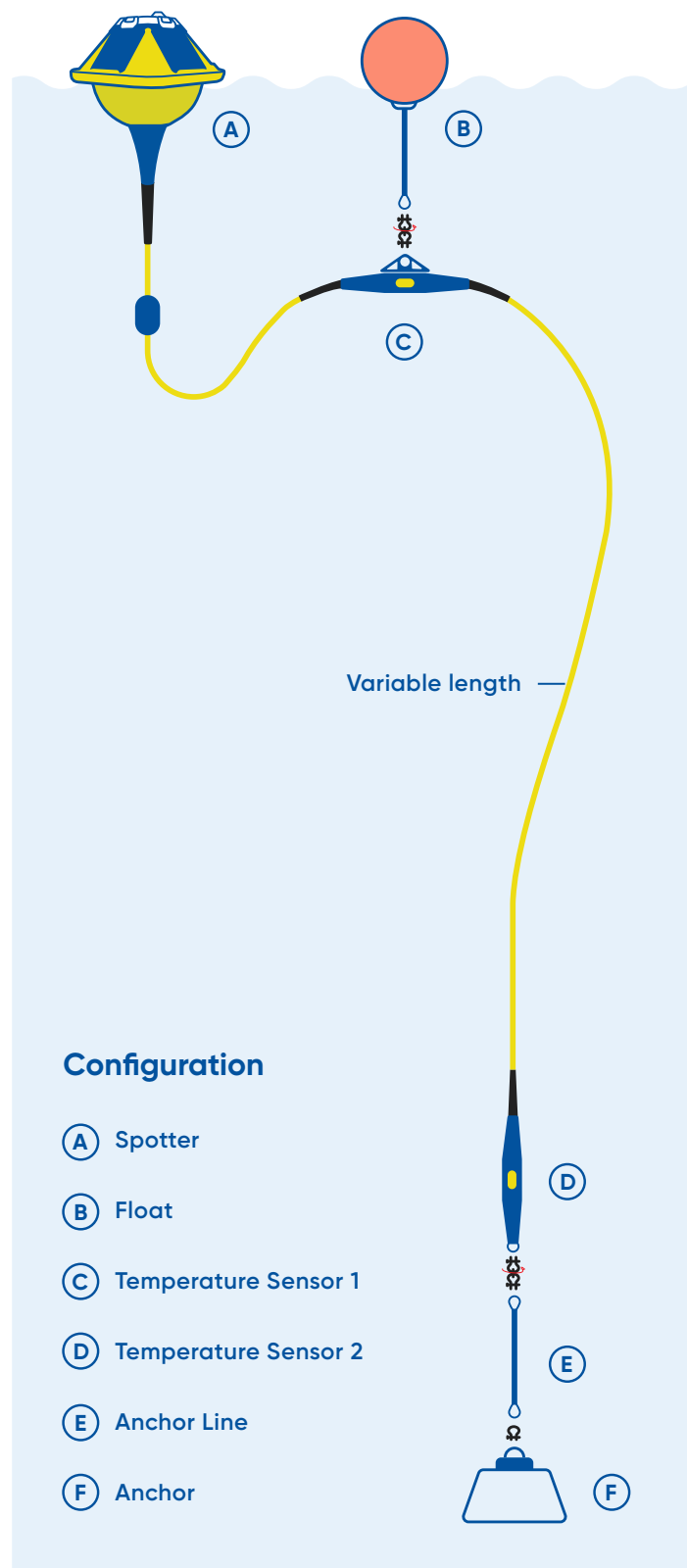


Smart Mooring

Temperature Sensor Specifications



Smart Mooring System

Sensor options	Fully modular and interchangeable number and placement of Sofar's temperature sensors. Also compatible with RBRcoda ³ sensors.
Real time data	Configurable sample rates and windows. Data is sent over Iridium Satellite to the Spotter dashboard and the Sofar API.
Operational depth	Up to 50m

Cable

Available lengths	5m, 10m, 15m, 25m, 35m, 50m
Jacketing	Thermoplastic polyurethane, high-visibility yellow, UV stabilized, cut and abrasion resistant.
Working load	2000N, kevlar reinforced
Diameter	10mm
Minimum bend radius	80mm
Conductors	2-conductor, 16awg (power + data)

Sensor Nodes

Placement	Sensor nodes can be placed in series at any smart mooring cable termination.
Communication	Sofar OP
Power provided	3.3V, 5V, and 12V
Nodes per mooring	Recommended max of 10

Temperature Sensor

Accuracy	+/- 0.1 °C
Resolution	0.02 °C
Range	-5 °C to 50 °C
Depth rating	50m

Spotter

Technical Specifications



Specs

External dimensions [w X h]	42cm x 31cm (16.4in x 12.2in)
Weight (without external ballast chain)	5.3kg /11.6lbs (7.4kg /16.3lbs with external ballast chain)
Connectivity	Iridium SBD (satellite)
Primary power source	Solar Powered, 5 x 2 Watt, 6 Volt solar panels
Battery	Lithium-ion, capacity 11,200 mAh, 3.7v (rechargeable)

Motion Sensing




Motion Data Format	x (easting), y (northing), z (vertical, positive up), latitude (deg), longitude (deg)
Wave frequency range	0.03-1 Hz (30s to 1s)
Wave direction resolution	0 - 360 degrees (full circle)
Sampling rate	2.5 Hz (Nyquist @ 1.25Hz)
Wave displacement accuracy	Approximately +/- 2cm accuracy depends on field of view, weather conditions, and GPS system status
Sea surface temperature (SST)	Not available with Smart Mooring units
Calibration	Not needed, ever

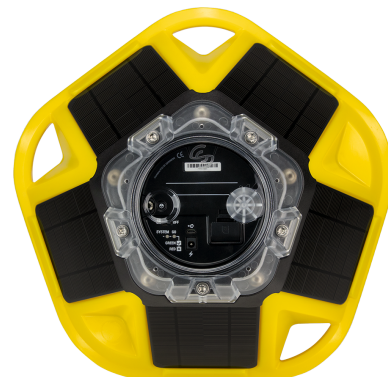
Data Storage

 On-board (SD card)	Records time series of 3D displacement data, ships with 16GB (256GB max capacity), FAT16 or FAT32 Format required
 Cloud storage (online dashboard)	Online account includes: Real-time and historical data outputs, Spotter configurations, alerts, maps and 2-way communication

Data Outputs

* Can derive from SD card data.

	 Standard mode	 Spectrum mode	 On device
Significant wave height	x	x	x*
Peak Period	x	x	x*
Mean period	x	x	x*
Peak direction	x	x	x*
Mean direction	x	x	x*
Peak directional spread	x	x	x*
Mean directional spread	x	x	x*
Variance density spectrum		x	x
Directional moments (a1, b1, a2, b2)		x	x
3D Displacement Time series @ 2.5 Hz (x,y,z)			x
Sea Surface Temperature	Not available with Smart Mooring units.		
Wind speed	x	x	
Wind direction	x	x	x*
Drift speed			x*
Drift direction			x*
Geographical coordinates (lat, lon)	x	x	x*



42cm
(16.4in)



31cm
(12.2in)

Additional specs

System monitoring	Battery power status
Advised mooring depth	Any depth
Visibility LED	1 flash every 2.5 sec, at least 1 mile visibility under normal conditions.
Firmware upgrade	Standard micro-USB (cable included)
Usability	Magnetic on/off switch, run/idle mode, user LED's and integrated grab handles.