

SAMI²

Sunburst Sensors' next generation of $p\text{CO}_2$ and pH sensors are now available. With improved reliability, durability and user-friendliness, the SAMI² supports up to three additional sensors and can be deployed up to a year at depths down to 500 m.

General specifications:

- Sensor type: reagent based colorimetry
- Thermistor: accuracy 0.1°C , precision $\pm 0.01^\circ$
- Weight in air / seawater: 7.6 kg / 1.1 kg
- Operating range: $-2^\circ - 40^\circ\text{C}$, 0-500 m depth
- Dimensions: 58 cm x 15 cm diameter
- User friendly client software
- Optional mooring cage
- Shipboard configurations also available

SAMI²-CO₂

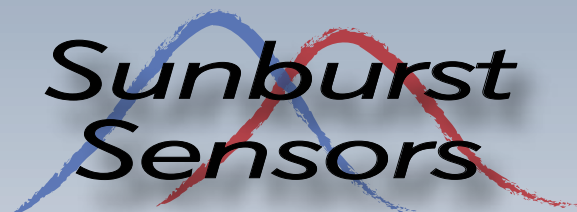
- Measures: partial pressure of CO₂ in water ($p\text{CO}_2$)
- $p\text{CO}_2$ range: 150 – 700 ppm (other ranges avail.)
- Duration: ~9000 measurements
- Response time: ~5 minutes
- Precision: < 1 ppm
- Accuracy: ± 3 ppm based on lab calibration*
- Long-term drift: < 1 ppm over 6 months

*Based on NIST-traceable calibrated NDIR

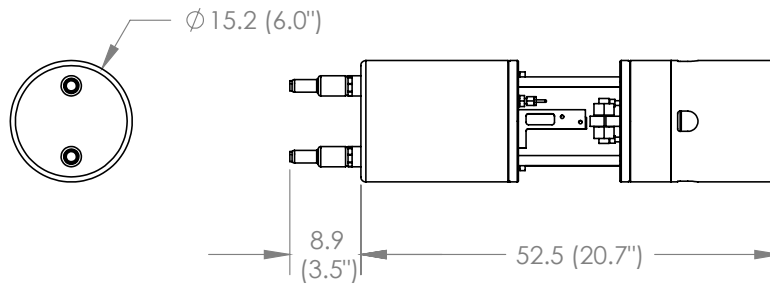
SAMI²-pH

- Measures: seawater pH_T (pH - total hydrogen ion scale)
- pH range: 7-9
- Salinity range: 30 - 36
- Duration: ~4300 measurements - self powered
- Response time: ~3 minutes
- Precision: < 0.001 pH units
- Accuracy: ± 0.003 pH units based on CRM* intercomparison
- Long-term drift: < 0.001 pH units over 6 months

*Certified pH reference material from Andrew Dickson (UCSD)

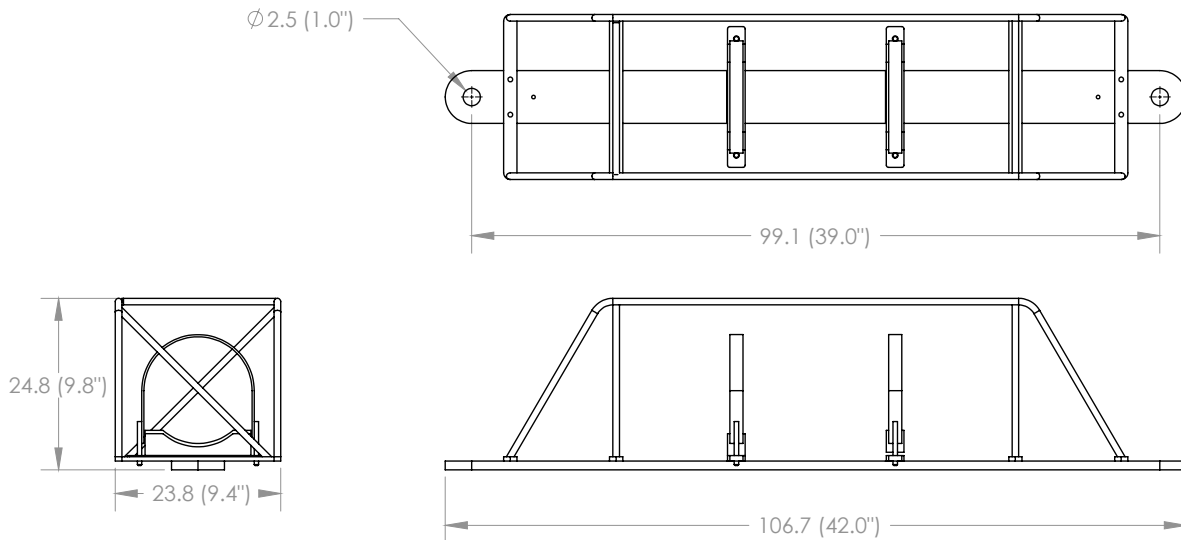


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SAMI² - Outline dimensions

Depth rating	500 m
Weight - air/(seawater)	7.6/(1.1) kg
Memory	8 MB
Communications	RS-232
External Power	6-13.5V
Max current draw	400 mA for ~1 s
External Instruments	3@ 0-5V or 2@ 0-5V & 1 RS-232
Deployment life - CO₂	> 1 yr at hourly sampling
Deployment life - pH	~ 6 mos at hourly sampling



SAMI² mooring cage - Single instrument

Material	316 stainless steel, delrin cradle
Weight - single instrument	13 kg
Weight - double instrument	17 kg
Strongback cross section	1.3 x 7.6 cm,
Cage bar cross section	~ 1 cm diameter
Zinc anodes	2