

## SMALL PAR LOGGER

A yellow cylindrical RBR solo³ PAR sensor with a red base and a black cap. The text "RBR solo³" is written on the yellow part.

RBR<sub>solo<sup>3</sup></sub>

HIGH PERFORMANCE,  
LONG DEPLOYMENTS

The RBR<sup>solo<sup>3</sup></sup> PAR is a small single-channel instrument with a high-performance PAR (Photosynthetically Active Radiation) sensor. Measurements are uniformly sensitive across the target band and cosine-corrected. Low power consumption, large memory, and ability to endure harsh conditions make it a perfect instrument for many oceanographic and limnology applications.

### FEATURES



The following configurations are available:

- ▶ RBR<sup>solo<sup>3</sup></sup> PAR uniform sensitivity to light between 400 and 700 nm, depths up to 1000 m
- ▶ RBR<sup>solo<sup>3</sup></sup> PAR | deep uniform sensitivity to light between 400 and 700 nm, depths up to 2000 m



## SMALL PAR LOGGER

### HIGH PERFORMANCE, LONG DEPLOYMENTS

The RBRsolo<sup>3</sup> PAR compact instruments provide uniform measurements of light radiation from all angles in the half-space in front of the sensor. Large storage capacity and reliable battery power facilitate long deployments with higher sampling rates. Downloads are quick with USB-C. A dedicated desiccant holder makes it simple to replace desiccant before each deployment. The calibration coefficients are stored with the instrument, and only one software tool, Ruskin, is required to operate it. Datasets can be read directly in Matlab, or exported to Excel, OceanDataView®, or text files.

### Specifications

#### Physical

Power	Any AA cell
Communication	USB-C
Clock drift	±60 seconds/year
Diameter	~25mm
Length	~250mm
Depth rating	1000m (plastic) 2000m (Ti)
Weight (air)	140g (plastic), 320g (Ti)
Weight (water)	15g (plastic), 195g (Ti)

#### Photosynthetically active radiation

Optical wavelength	400 to 700 nm
Full scale range	5000µmol/m <sup>2</sup> /s (minimum)
Initial offset error <sup>1</sup>	0.0025% full scale or 0.125µmol/m <sup>2</sup> /s
Dynamic range	>5.5 decades (nominal)
Resolution	0.0002% full scale or 0.010µmol/m <sup>2</sup> /s
Out-of-band rejection	>25dB (typical)
Absolute calibration <sup>2</sup>	5%
Linearity	1%
Response time	<25ms
Temperature range	-5°C to 35°C
Gain temperature dependence	±0.15%/°C (maximum)
Cosine response error (water)	±5% at 0-60° ±10% at 61-82° ±1.5% at 45°
Azimuth error (water)	

<sup>1</sup> Dark offset is internally temperature-compensated.

<sup>2</sup> RBR calibrates radiometers with NIST traceable references.



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