

# Small Realtime Sensors

## Temperature, pressure, dissolved oxygen, turbidity, PAR

The new RBRcoda variants for the RBRsolo and RBRduet products are realtime streaming sensors. When a cable is attached, engineering values are streamed out the serial connection at the specified sampling speed.

### Features

- Light and compact
- High accuracy
- Very low power consumption
- RS-232 output



The realtime feature is available on all RBRsolo and RBRduet products. For example:

RBRcoda T	temperature, up to 2 Hz continuous sampling
RBRcoda D	depth, up to 2 Hz continuous sampling
RBRcoda D  tide	tides, up to 16Hz continuous or burst sampling
RBRcoda DO	dissolved oxygen (Oxyguard®), up to 16 Hz continuous sampling
RBRcoda Tu	turbidity, up to 2 Hz continuous sampling
RBRcoda PAR	PAR recorder (Li-Cor® 192) for depths up to 560m (cosine)
RBRcoda T.D	temperature and depth, up to 2 Hz continuous sampling

Realtime variants are ideal for streaming high accuracy measurements into another system. Whether for borehole monitoring or ROV, stream gauging or harbour water levels - these instruments are trivial to install and operate. The units are completely sealed and are available in OSP or Titanium housings to accommodate shallow or deep deployment. Attach an MCIL connector with serial and power lines and the data will stream.



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## Specifications

### Physical

External power: Requires 6 – 18V DC ~3mA  
 Communication: RS232  
 Storage: No onboard memory  
 Data: Polled or autonomous streaming  
 Baud rate: 1200 to 115k  
 Connector: MCBH-6MP  
 Clock Accuracy: ±60 seconds/year  
 Diameter: 25.4mm

### Length, Weight (air/water)

RBRcoda T 265mm, (OSP) 132g/~3g,  
 (Ti) 292g/~163g  
 RBRcoda D 235mm, (OSP)132g/~3g,  
 (Ti) 292g/~163g  
 RBRcoda DO 272mm, (OSP) 138g/~3g,  
 (Ti) 298g/~163g  
 RBRcoda Tu 350mm, (OSP) 208g/~31g,  
 (Ti) 368g/~191g  
 RBRcoda PAR 265mm, (OSP) 460g/~31g,  
 (Ti) 630g/~201g  
 RBRcoda T.D 295mm, (OSP) 152g/~3g,  
 (Ti) 352g/~203g

### Temperature

Range: -5°C to 35°C  
 Accuracy: ±0.002°C  
 Resolution: <0.00005°C  
 Time constant: ~1s (standard) ~0.1s (optional)  
 Drift: 0.002°C/year  
 Depth rating: (OSP) 1700m, (Ti) 10,000m

### Depth

Range: (OSP) 20 / 50 / 100 / 200 / 500 /  
 1000 dbar; (Ti) 1000 / 2000 / 4000  
 / 6000 / 10,000 dbar  
 Accuracy: ±0.05% full scale  
 Resolution: <0.001% full scale  
 Time constant: <10ms  
 Drift: ~0.1%/year

### tide

Sampling rate: 24hr to 1s and 2, 4, 8 or 16Hz  
 Duration: 1s to 24h  
 Interval: 1s to 24h

### Dissolved Oxygen (Oxyguard®)

Range: 0 to 600%  
 Accuracy: ±2% O2 saturation (5°C to 25°C)  
 Resolution: 1% of saturation  
 Depth rating: 1700m

### Turbidity (Seapoint)

Excitation: 880nm  
 Linearity: ±2% 0 – 1250NTU  
 Temperature: -2°C to 50°C  
 Depth rating: (OSP) 1700m, (Ti) 6000m

### PAR

Range: 400nm to 700nm  
 Depth rating: 560m

### Male Pin Face View

Pin 1 - Ground  
 Pin 2 - Power 6V - 18V  
 Pin 3 - Serial Data to Sensor  
 Pin 4 - Serial Data from Sensor

