

Small Realtime Sensors

Temperature, pressure, dissolved O₂, turbidity

The new |rt 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 |rt feature is available on all RBRsolo and RBRduet products. For example:

RBRsoloT rt	temperature, up to 2 Hz continuous sampling
RBRsoloD rt	depth, up to 2 Hz continuous sampling
RBRsoloDO rt	dissolved oxygen, up to 2 Hz continuous sampling
RBRsoloTu rt	turbidity, up to 2 Hz continuous sampling
RBRduetT.D rt	temperature and depth, up to 2 Hz continuous sampling

The |rt 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.

The included Ruskin software will plot and log the data automatically. Capturing and parsing the data using other hardware is straight forward.



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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)

RBRsoloT|rt 265mm, (OSP) 132g/~3g,
 (Ti) 292g/~163g
 RBRsoloD|rt 235mm, (OSP) 132g/~3g,
 (Ti) 292g/~163g
 RBRsoloDO|rt 272mm, (OSP) 138g/~3g,
 (Ti) 298g/~163g
 RBRsoloTu|rt 350mm, (OSP) 208g/~31g,
 (Ti) 368g/~191g
 RBRduetT.D|rt 295mm, (OSP) 152g/~3g,
 (Ti) 352g/~203g

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

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

Dissolved Oxygen (OxyGuard®)

Range: 0 to 600%
 Accuracy: ±2% O₂ saturation
 (5°C to 25°C)
 Resolution: 1% of saturation
 Response Time: ~10s, 90% step change @ 20°C
 Depth Rating: (OSP) 1700m

Turbidity (Seapoint)

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

PAR

Depth rating: 560m
 Sample capacity ~13M readings
 (2Hz or slower)

Male Pin Face View

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

