RBR
MEASURE THE BLUE PLANET

SMALL REALTIME SENSORS

LOW POWER, HIGH PERFORMANCE

The RBR*coda*³ small smart sensors are a family of cabled instruments with high accuracy, low power consumption, and ability to endure harsh conditions. The realtime streaming sensors are easy to integrate into any RBR multi-parameter instrument, or connect directly via RS-232.

FEATURES

High accuracy	Low power consumption	Long deployments	Compact and lightweight	RS-232 output	Depths up to 6000m

The following configurations are available:

▶ RBR*coda*³ T	temperature, up to 2Hz continuous sampling
▶ RBR*coda*³ D	pressure, up to 2Hz continuous sampling
▶ RBR*coda*³ D|tide16	tides, up to 16Hz continuous or burst sampling
▶ RBR*coda*³ T.D	temperature and depth, up to 2Hz continuous sampling
▶ RBR*coda*³ DO (Oxyguard®)	galvanic dissolved oxygen, up to 16Hz continuous sampling
▶ RBR*coda*³ T.ODO	temperature and optical dissolved oxygen
▶ RBR*coda*³ PAR (LI-COR®)	photosynthetically active radiation (LI-192 cosine, LI-193 spherical)
▶ RBR*coda*³ PAR	photosynthetically active radiation (cosine)
▶ RBR*coda*³ rad	narrow-band radiation, optical wavelengths from 413nm to 560nm

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The RBR*coda³* realtime sensors are easy to install and operate. They are a perfect choice for many oceanographic and limnology applications, such as borehole monitoring, remotely operated underwater vehicles, stream gauging, or harbour water levels. These completely sealed units are available in plastic or titanium housings to accommodate shallow or deep deployments. Attach an MCIL connector with serial and power lines, and the data will stream.

Specifications

Physical

Connector	MCBH-6-MP
External power	6-18V (7-15V T.ODO), 12V nominal, 3mA
Communications	RS-232
Dimensions*	Ø25-30mm, length 160-300mm
Weight*	<200g in air, <70g in water (plastic)
	<400g in air, <250g in water (Ti)

* Model dependent.

Temperature

Range*	-5°C to 35°C
Initial accuracy	±0.002°C
Resolution	<0.00005°C
Typical stability	±0.002°C/year
Time constant	<0.1s |fast, <1s standard, <15s |slow
Max depth rating	1700m (plastic), 6000m (Ti)

* A wider temperature range is available upon request. Contact RBR for more information.

Pressure

Range*	20 / 50 / 100 / 200 / 500 / 1000m (plastic)
	1000 / 2000 / 4000 / 6000dbar (Ti)
Initial accuracy	±0.05% full scale
Resolution	<0.001% full scale
Typical stability	±0.05% full scale / year
Time constant	<10ms

Interface

RS-232 polled or autonomous streaming, or analog voltage output

MCBH-6-MP connector pinout
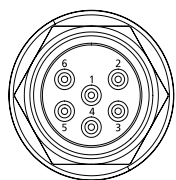
- ▶ Pin 1 - Ground
- ▶ Pin 2 - Power
- ▶ Pin 3 - Serial data from sensor
- ▶ Pin 4 - Serial data to sensor
- ▶ Pin 5 - N/C
- ▶ Pin 6 - N/C

Galvanic dissolved oxygen (Oxyguard®)

Range	0 to 600%
Initial accuracy	±2% oxygen saturation
Resolution	1% of saturation
Response time	~10s, 90% step change at 20°C
Depth rating	1700m

Optical dissolved oxygen

Calibrated range	0-500µM concentration
	0-120% saturation
	1.5°C to 30°C temperature
Initial accuracy	Maximum of ±8µM or ±5%
Resolution	<1µM (saturation 0.4%)
Time constant	<1s |fast
	<8s standard
	<30s |slow
Depth rating	6000m

PAR (LI-COR®)

Wavelength range	400nm to 700nm
Depth rating	560m (cosine), 350m (spherical)

PAR

Wavelength range	400nm to 700nm
Depth rating	1000m (plastic), 2000m (Ti)

Narrow-band radiometer

Centre wavelengths	413 / 445 / 475 / 488 / 508 / 532 / 560nm
Full scale range	0-400µW/cm²/nm (minimum)
Depth rating	1000m (plastic), 2000m (Ti)

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