

TEMPERATURE & DISSOLVED OXYGEN SENSOR



RBRcoda T.ODO |slow
RBRcoda T.ODO
RBRcoda T.ODO |fast

The RBRcoda T.ODO is an optode with exceptional performance. With a standard accuracy of 8 $\mu\text{mol/l}$ but a power consumption of only 36 mJ/sample, it is without a peer in optical oxygen measurement tools. Rated to 6000m depths and trivial to integrate, it is one solution for all deployments. Available as |slow (30s τ), standard (8s τ), and |fast (1s τ) variants. The |slow version has a protective layer over the foil to allow it to be cleared of biofouling for long-term moored applications.

Specifications

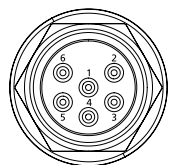
Physical

Connector:	MCBH-6MP
Depth rating:	6000m
Size:	$\varnothing 28\text{mm} \times 116\text{mm}$
Weight in air:	~170g

Power

Supply voltage:	7 – 15V (12V nominal)
Sampling current:	10mA for 300ms (36mJ/sample)
fast sampling current:	9.5mA for 700ms (80mJ/sample)
Quiescent current:	<10 μA

Male Pin Face View



- ▶ Pin 1 - Ground
- ▶ Pin 2 - Power
- ▶ Pin 3 - Serial data from sensor
- ▶ Pin 4 - Serial data to sensor
- ▶ Pin 5 - No connect
- ▶ Pin 6 - No connect

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Oxygen

Calibrated range:	0-500 μM concentration
Calibrated range:	0 – 120% saturation
Calibrated range:	1.5 $^{\circ}\text{C}$ to 25 $^{\circ}\text{C}$ temperature
Accuracy:	Maximum of $\pm 8\mu\text{M}$ or $\pm 5\%$
Resolution:	<1 μM (saturation 0.4%)
Time constant:	~1s fast, ~8s standard, ~30s slow
Sampling rates:	24hr to 1Hz

Temperature

Range:	1.5 $^{\circ}\text{C}$ to 25 $^{\circ}\text{C}$
Accuracy:	$\pm 0.002^{\circ}\text{C}$
Resolution:	<0.00005 $^{\circ}\text{C}$
Time constant:	<1s
Typical stability:	0.002 $^{\circ}\text{C}/\text{year}$

Interface

- RS-232 polled or autonomous streaming

Output Values

- Temperature ($^{\circ}\text{C}$)
- Dissolved O_2 concentration ($\mu\text{mol/L}$)
- Dissolved O_2 concentration (salinity compensated ($\mu\text{mol/L}$))
- Dissolved O_2 saturation (%)
- Dissolved O_2 phase ($^{\circ}$)