

The RBR*duet*³ T.ODO is an optode with high stability and low power consumption, with three time constant options available: 1s, 8s, and 30s. The | fast (1s time constant) variant is well suited for profiling applications. The | slow (30s time constant) version has a protective layer to facilitate automated cleaning by a wiper to keep it biofouling free during long-term moored deployments.

FEATURES













The following configurations are available:

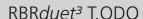
- ► RBRduet³ T.ODO
- ► RBRduet³ T.ODO|slow
- ► RBR*duet*³ T.ODO | fast

temperature and optical dissolved oxygen, 8s time constant temperature and optical dissolved oxygen, 30s time constant, used with wiper temperature and optical dissolved oxygen, 1s time constant

Deep variant:

► RBR*duet*³ T.ODO | deep

temperature and optical dissolved oxygen, depths up to 6000m





TEMPERATURE AND OPTICAL DISSOLVED OXYGEN

LOW POWER, HIGH STABILITY

The RBR*duet*³ T.ODO instrument has two channels: temperature and optical dissolved oxygen. Its large data storage capacity and reliable battery power facilitate long deployments with higher sampling rates. Downloads are quick with USB-C. A dedicated 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

Storage ~165 thousand samples*

Power An AA cell (alkaline or lithium iron)

Communication USB-C

Clock drift ±60 seconds per year

Depth rating 1000m (plastic), 6000m (Ti)

Diameter ~25mm (housing), ~30mm (at sensor)

Length ~310mm

Weight (air) 200g (plastic), 400g (Ti) Weight (water) 40g (plastic), 235g (Ti)

Output Values

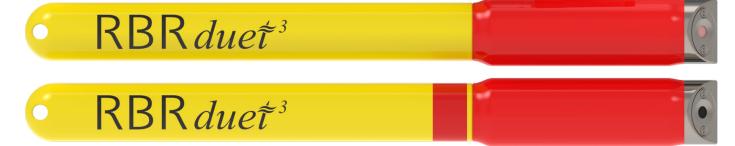
- Temperature (°C)
- Dissolved O₂ concentration (µmol/L)
- Dissolved O₂ concentration (salinity compensated, μmol/L)
- Dissolved O₂ saturation (%)
- Dissolved O₃ phase (°)

Temperature

Range -5°C to 35°C
Initial accuracy ±0.002°C
Resolution <0.00005°C
Typical stability ±0.002°C / year
Time constant <1s

Dissolved oxygen

Measurement range	0-1000µmol/L
Calibrated range	0-500µmol/L concentration 0 – 120% saturation 1.5°C to 30°C temperature
Initial accuracy	Max of $\pm 8\mu$ mol/L or $\pm 5\%$ fast Max of $\pm 2\mu$ mol/L or $\pm 1.5\%$ standard Max of $\pm 2\mu$ mol/L or $\pm 1.5\%$ slow
Resolution	<1µmol/L (saturation 0.4%) fast <0.5µmol/L (saturation 0.2%) standard <0.1µmol/L (saturation 0.04%) slow
Time constant	<1s fast, <8s standard, or <30s slow
Sampling rates	24hr to 1Hz



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^{*}A sample may include multiple readings.