

WET Labs introduces the new CYCLE-PO<sub>4</sub> in-situ dissolved phosphate analyzer.

Designed for unattended long term moored operations, the CYCLE-PO<sub>4</sub> is the first of WET Lab's line of single-analyte chemical sensors. The CYCLE line combines precision micro-fluidics with state-of-the-art optics to provide unparalleled precision and accuracy in operational in-situ monitoring of nutrients.

Designed for long-term use, the CYCLE-PO<sub>4</sub> features:

- Reagent cartridges
- On-board spike calibration
- Calibration scheduling
- Nanomolar resolution
- Easy-to-use software
- Titanium optical cell
- Over 1000 samples
- Deployments more than three months
- Smart sampling minimizes power consumption
- Calibrated output



## Specifications

| Mechanical        |                       | Analytical   |
|-------------------|-----------------------|--|
| Height (w/handle) | 56 cm                 | Detection limit, three standard deviations of 18 MOhm water<br>≤ 75 nM   |
| Width             | 18 cm                 | ≤ 0.0023 mg P/L PO <sub>4</sub> -P   |
| Weight in air     | 6.8 kg (w/reagents)   | ≤ 0.0071 mg/L PO <sub>4</sub>  |
| Depth             | 200 m                 |  |
| Optical           |                       | Quantification limit, ten standard deviations of 18 MOhm water<br>≤ 250 nM   |
| LED wavelength    | 870 nm                | ≤ 0.0077 mg P/L PO <sub>4</sub> -P   |
| Pathlength        | 5 cm                  | ≤ 0.024 mg/L PO <sub>4</sub>   |
| Linearity         | ≥ 95% R <sup>2</sup>  | Standard deviation of standard solution of 2.6 μM<br>≤ 50 nM   |
| Electrical        |                       | ≤ 0.0015 mg P/L PO <sub>4</sub> -P   |
| Input             | 9.5–18 VDC            | ≤ 0.047 mg/L PO <sub>4</sub>   |
| Current draw      | 2.0 A max; 125 mA avg | Range, nominal*  |
| Serial output     | RS-232                | 0–10 μM  |
| Connector         | MCBH-6-MP             | 0–0.31 mg P/L PO <sub>4</sub> -P   |
| Sample rate       | 2 per hour (max)      | 0–0.95 mg/L PO <sub>4</sub>  |
| Data memory       | 1 GB                  | *Higher range is possible but is outside specifications<br>(0–40 μM, 0–1.2 mg P/L PO <sub>4</sub> -P, 0–3.7 mg/L PO <sub>4</sub> ) |

Specifications are subject to change without notice.

Units:

M = moles per liter.

mg P/L and PO<sub>4</sub>-P refer to mg of atoms phosphorus per liter measured in the form of reactive phosphate.