Oakton® Waterproof pH/DO 450 Meter

Eliminate maintenance time and costs

NEW

- Rugged, waterproof and dustproof with an IP67 rating for use in any environment
- No costly, tiresome membranes or solutions
- More accurate readings with barometric pressure and salinity correction
- Download and analyze data easily with USB and RS-232 output for up to 500 data sets
- Take it with you—500 hours battery life or optional universal power adapter

Get faster response, long-term stability, and minimal maintenance with optical measurement technology. Automatic temperature compensation (ATC), barometric pressure compensation, and salinity correction. Get more readings simultaneously with pH, mV, % saturation, or mg/L (ppm) shown on large, backlit LCD.

Additional features include ready (stability) indicator, smart averaging, hold function, calibration alarm, and battery-life indicator.

Meter only: batteries.

Meter kit adds: pH probe (35808-71), RDO probe (35640-51), sensor cap, calibration solutions, and hard carrying case.

OAKTON® ISO9001:2008 CERTIFIED SUPPLIER

Description		Meter only	Meter kit
Model		PD 450	
Catalog number		GH-35632-32	GH-35632-80
Precalibrated cat. no.		GH-35632-34	GH-35632-81
Range/ Resolution	pH	–2.00 to 16.00/0.01	
	mV	±2000 mV (Resolution 0.1 ±999.9 mV; 1 mV beyond)	
	Dissolved oxygen	0 to 20 ppm; 0 to 200%	
	Temperature	–17.0 to 230.0°F (–10.0 to 110.0°C)	
Accuracy	pH	±0.01	
	mV	±0.2 (>199.9 mV); ±2 mV (beyond)	
	Dissolved oxygen	±2%	
	Temperature	±0.5°C	
Barometric pressure correction		Manual	
Salinity correction		Manual; 0 to 45	
Temperature compensation		Automatic or manual from –10 to 110°C	
Output		USB or RS-232	
Data logging		Stores up to 500 data sets	
Power		Two AA batteries (included); or optional universal power adapter	
Price			
Precalibrated price			

GH-35808-71 **"All-in-One" pH electrode** with built-in ATC. Single-junction; epoxy body; BNC connector

GH-35618-05 **ATC probe.** Use with any standard pH electrode for temperature compensation

GH-35640-51 **Replacement RDO sensor cap**

GH-35640-53 **Replacement RDO probe,** 10-ft (3-m) cable

GH-35640-55 **RDO probe,** 20-ft (6-m) cable

GH-35640-57 **RDO probe,** 50-ft (15-m) cable

GH-35418-83 **Optional adapter,** 110/220 VAC

GH-35630-53 **Data cable** for USB connectivity

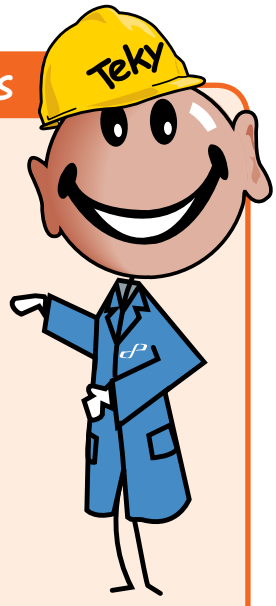
GH-35420-01 **Data cable** for RS-232 connectivity

GH-09376-01 **Replacement batteries,** AA. Pack of 4

GH-17106-20 **NIST-traceable calibration** with data for pH meter

GH-17106-04 **NIST-traceable calibration** with data for DO meter

Teky's Tips



Dissolved Oxygen Technologies: Which Works Best for You?

Dissolved oxygen is a critical measurement for wastewater treatment. An operator must ensure proper aeration for the aerobic bacteria in the tank to break down organic suspended solids. Three technologies for measuring dissolved oxygen are employed in the market today: Polarographic, Galvanic, and Optical.

How Optical Dissolved Oxygen Works

The optical detection of dissolved oxygen is based on the principle that dissolved oxygen quenches the luminescence associated with the chemical dyes in the sensor. The probe measures dissolved oxygen by emitting a blue light that causes the sensing element to luminesce (glow red). The luminescence is inversely proportional to the level of dissolved oxygen present (based on Stern-Volmer relationship). When no oxygen is present, the luminescence signal is at its maximum; and as oxygen is introduced, the luminescence decreases.

Three ways of measuring optical dissolved oxygen are the magnitude domain, time domain, and phase domain. Magnitude measures the peak height of luminescence. Accuracy degrades over time as the sensor degrades due to photo-bleaching; frequent calibration is required for this method. The time domain measures the decay rate of luminescence. Signal-to-noise ratio can limit the sensor range in this method. The phase domain (phase detector) measures the phase difference based on the entire signal and reference wave forms across a population of pulses. This method delivers the highest accuracy over the widest operating range and is commonly applied.

Optical meters provide the convenience of no membrane replacement, no electrolyte replacement, no incoming flow required, and no hydrogen sulfide interference. The meters also offer a short response time, minimal drift, and minimal maintenance. Exposure to alcohols and other organics must be limited to avoid damage to the sensor.

All three technologies offer viable methods for detecting dissolved oxygen. However, the convenience and accuracy of optical dissolved oxygen is winning over operators.