

# **MODEL 3100**

## **DATA SHEET**

### **PORTABLE DISSOLVED OXYGEN**

**Optical Sensor—No Membranes—No Constant Calibration—Data Logging**

The Insite Instrumentation Group Model 3100 portable dissolved oxygen analyzer is a unique system that combines advanced electronics with a solid-state, optical sensor. It is a multi-range analyzer designed for the measurement of dissolved oxygen in all aqueous solutions. The microprocessor-based electronics of the analyzer provide a high degree of flexibility and ease of use. Data logging and the ability to download the data directly to a computer are standard features.



#### **FEATURES**

- **Fluorescence sensor technology**
- **No membranes, fill solutions, or cartridges**
- **Sensor does not have to remain moist**
  - **Data logging**
- **Serial interface to computer spreadsheet**
- **Calibration is factory programmed**
  - **Large, backlit graphical display**
    - **Waterproof**
  - **Rechargeable batteries**
    - **Real time clock**

#### **Benefits**

- **Increased accuracy**
- **Easy to use**

A very specific energy wavelength is transmitted to a ruthenium compound immobilized in a sol-gel matrix. The ruthenium will absorb this energy, changing the outer electron's energy level. The electron will then collapse back to its original energy state, emitting the energy as a photon with a different specific wavelength. This is called fluorescing. If the intensity of the transmitted wavelength is tightly controlled, the amount of fluorescing is both predictable and repeatable. If oxygen molecules are present the amount of fluorescing is reduced, referred to as fluorescence quenching. By measuring the amount of quenching it is possible to determine the amount of oxygen present.

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# MODEL 3100 SPECIFICATIONS

Measuring Range	0 to 25 ppm
Accuracy	1% of reading or .02 ppm, whichever is greater
Sensitivity / Resolution	.01 ppm below 4.00, .1 ppm above 4.0
Stability	.01 ppm
Repeatability	.01 ppm
Sensor Drift	Less than 1% per year
Temperature Range	0 to 60 degrees C
Response Time	95% in less than 60 seconds
Sensor Check	Automatic self diagnostics
Output	RS-232 serial
Memory Backup	Yes
Display	LCD graphic display with UV protection Contrast adjustment via keypad On demand backlighting
Sensor Cable Length	20 feet
Ambient Temperature	minus 20 degrees C to 70 degrees C
Ambient Humidity	0 to 100 percent
Enclosure Rating	NEMA 4X
Wetted Materials	Epoxy, polyurethane, and PVC
Maximum Pressure	100 psi
Shipping Weight	approximately 4 pounds

## ORDERING INFORMATION

The Model 3100 portable D.O. system includes analyzer, sensor, battery charger.  
Optional Download Kit—Includes Cable to connect 3100 to PC and automatic  
download software.

Delivery  
Terms

Ship within 4 weeks from date of order  
Net 30 days, FOB Slidell, LA

### CONTACT ;

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**OR YOUR LOCAL REPRESENTATIVE;**

