

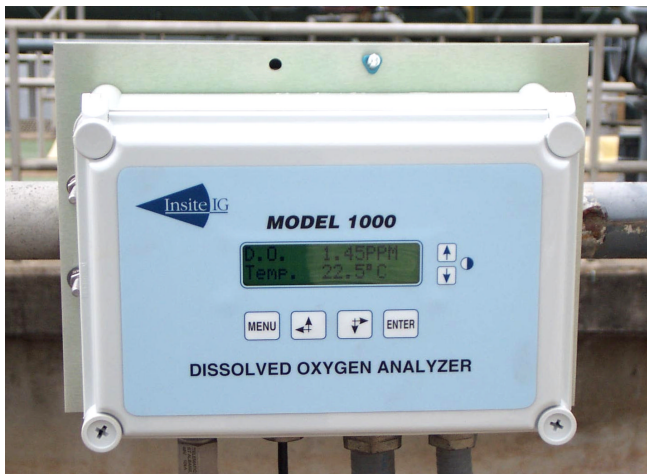
MODEL 1000

DATA SHEET

DISSOLVED OXYGEN ANALYZER

No Membranes—No Fill Solution—No Routine Calibration—No Routine Maintenance
NOT DAMAGED BY DIRECT OR INDIRECT EXPOSURE TO SUNLIGHT

The Insite Instrumentation Group Model 1000 dissolved oxygen analyzer is a unique system that combines advanced electronics with a solid-state, optical sensor. No other dissolved oxygen system can compare with the features and benefits of this revolutionary design. The sensor utilizes an optical technique that does not consume oxygen like all standard membrane sensors.



MODEL 1000 DO ANALYZER

FEATURE

Optical sensor technology

BENEFITS

Eliminates membranes and fill solutions
No requirement for weekly or monthly calibrations
No weekly or monthly sensor cleaning
Works in low flow / no flow applications
Extremely accurate in anoxic zones

FEATURE

Advanced microprocessor design

BENEFITS

Automatic error detection
Analyzer self test
Simple user interface
Simple start-up

FLUORESCENCE DISSOLVED OXYGEN —THEORY OF OPERATION

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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