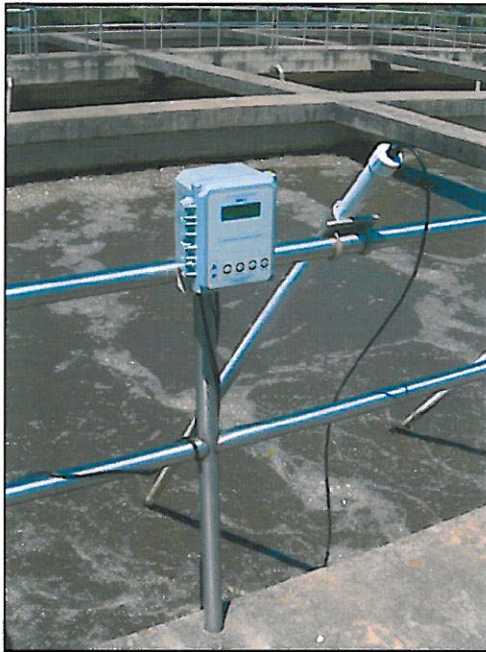


The 3rd Generation pH Sensor from the Same Mind that brought you the first 2.

BARBEN
Analyzer Technology, LLC

Precision Optical Dissolved Oxygen System Designed for use in Harshest Environments



Barben Analyzer Technology has introduced the new optical Precision Dissolved Oxygen system to provide you with unequalled performance in D.O. measurements. The patented Optical sensor was introduced in 1997 and was the first optical DO design for the Municipal Water and Wastewater industry.

Perfect to use in the following area's:

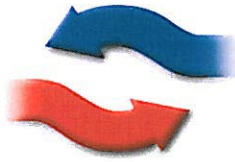
- Wastewater Treatment Facilities
- Water Treatment Facilities
- Water Monitoring
- Aquatic Tanks or Pools
- Fish Hatcheries

- No Membranes to Replace
- No Consumables
- No Electrolyte to Replace
- No Flow Necessary
- Optical Isolation provides Optimum Performance in Sunlight
- Not Damaged by Sunlight
- Electronics Completely Sealed
- Fast, Dependable Readings
- Multiple Measurement Ranges



***Do not be fooled by competing claims that attempt to confuse the terms
"luminescence" and "fluorescence".***

***Both refer to the identical optical behavior of certain metallic salts
when excited by light of the appropriate wave length.***



The 3rd Generation pH Sensor from the Same Mind that brought you the first 2.

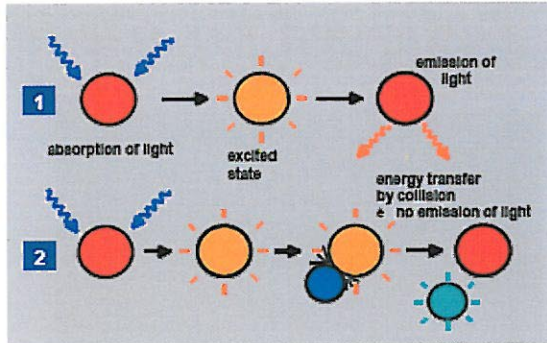
BARBEN
Analyzer Technology, LLC

How Dynamic Quenching of Luminescence Works

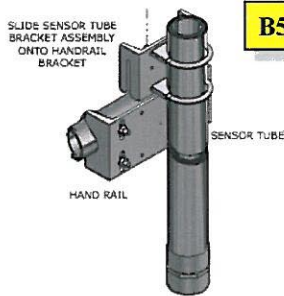
The principle of measurement is based on the effect of dynamic luminescence quenching by molecular oxygen. The following scheme explains the principle of dynamic luminescence quenching by oxygen.

Principle of dynamic quenching of luminescence by molecular oxygen

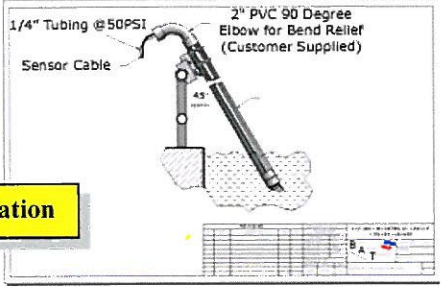
- (1) Luminescence process in the absence of oxygen
- (2) Deactivation of the luminescent indicator molecule by molecular oxygen



The collision between the luminophore in its excited state and the quencher (oxygen) results in radiationless deactivation and is called collisional or dynamic quenching. After collision, energy transfer takes place from the excited indicator molecule to oxygen which is transferred from its ground state (triplet state) to its excited singlet state. As a result, the indicator molecule does not emit luminescence and the measurable luminescence signal decreases. A relation exists between the oxygen concentration in the sample and the luminescence intensity as well as the luminescence lifetime.



B5008-0008 Rail Mount Kit



Typical installation

Specifications:	Part number PDO-1
Temperature Range:	-30 to +50 C
Sensor Temperature Range:	-30 to +204 C
Measurement Range:	0 mg/l to 10 mg/l
Response time t95:	>30 seconds
Accuracy:	+/- 1% of measurement range
Repeatability:	+/- 5% of Span
Stability:	.05 mg/l
Measurement Principle:	Fluorescence/Luminescence Quenching (Amplitude/ Lifetime)
Decay - dual referencing)	
Sensor Estimated Lifetime:	7 to 10 years
Outputs:	4 - 20 mA (Sensor and Temperature)
Enclosure:	NEMA 4X (UL listed)
Keypad:	UV Resistant

**Does your Optical DO sensor require the tip to be replaced once per year?
Can water get inside your sensor?
*Sensor warranted for 5 years!***

