

CROSS SMART SENSOR

DO7: Fluorescence Dissolved Oxygen

Digital Smart Optical

Introducing the NEW Rugged Dissolved Oxygen Sensor exclusively for the meter DO7. The DO7 sensor utilizes lifetime-based optical fluorescence sensor technology to provide an extremely stable, precise and low maintenance dissolved oxygen sensor. Unlike traditional DO sensors, DO7 does not require membranes, stirring, and cleaning and allows deployment for many months without need for re-calibration!

Conform to the following EU Directives & Standards:



Low Voltage Directive 2014/35/EU Electromagnetic Compatibility Directive 2014/30/EU

RoHS 2 Directive 2011/65/EU

EN 61010-1:2010; EN 61326-1:2013



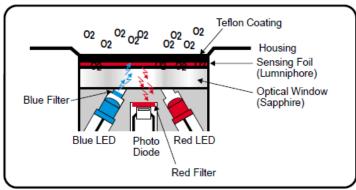
FEATURES & BENEFITS:

- High precision and accuracy. Measure absolute oxygen concentrations without field calibrations
- Integrates directly into the DO7 with Smart Sensor technology - "Plug & Play"
- No membrane, stirring/flow, or cleaning required
- Ultra-rugged construction 316L, Titanium options
- Sapphire sensor window extremely scratch resistant
- All of the optics and electronics are solid-state with no moving parts
- Optical sensor is not damaged by ambient light, unlike other luminescent DO technologies
- Fully compatible with PC software Delta-Phase View[™] for easy setup and data logging
- Low sensitivity to fouling
- Fast response time



SPECIFICATIONS

Optical DO Technology



Lumniphore in initial state

Absorbing photon

Lumniphore in excited state

O2 is present

Lumniphore emits red light when in an excited state

O2 is present

Colliding with O2 molecule

Energy is transferred to O2 molecule (Quenching)

as dynamic red light with

ncentration.

Lumniphore returns to initial state

Sensor measurements are based on selected substances that can act as dynamic fluorescence quenchers. For example, for oxygen, if a ruthenium-complex is illuminated with a blue LED it is excited and emits back a red luminescent light with an intensity, or lifetime, which directly depends on the oxygen concentration. Lifetime based measurements are superior for both long-term (no drift) and fast response applications.

| D07 | |
|------------------------|--|
| Range | 0.00~20.00ppm, 0.00~20.00mg/L, 0~200% Air Saturation |
| Typical response limit | >25mg/L |
| Accuracy | ±0.1mg/L, ±0.1ppm, ±1% |
| Respond Time | T90<16 seconds, oxygen increasing |
| Technology | Fluorophor impregnated membrane optical sensor, dynamic luminescence quenching technique |
| Calibration | 1 or 2 point, typical calibration duration 12 months |
| Operate Temp. | 32~122°F (0~50°C) |
| Store Temp. | 14~140°F (-10~60°C) |
| Protection | Immersible, >IP68 |
| Pressure | 5bar |
| Sensor Material | 316L, Titanium optional |
| Digital Interface | Modbus RTU |
| Power | 24VDC (18-36VDC) |
| Dimension | Dia. 1.42", & 8.27" length (Ø 36 mm x 210 mm) |
| Weight | 2.2 lbs. (1 kg) with SS housing and 33ft cable |

ORDER CODE

