

DISSOLVED OXYGEN MONITOR

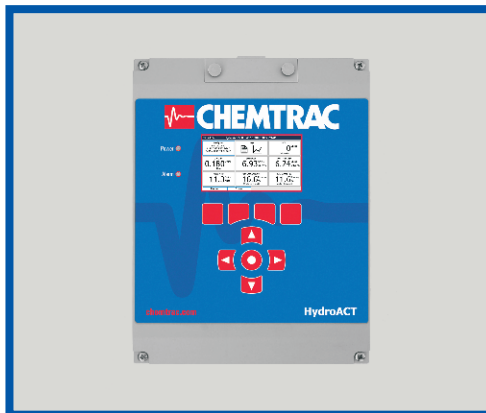
HydroACT

BENEFITS

- No reagents or moving parts
- Low purchase and ownership cost
- Stable and reliable - excellent process control
- No maintenance or calibration for up to 24 months

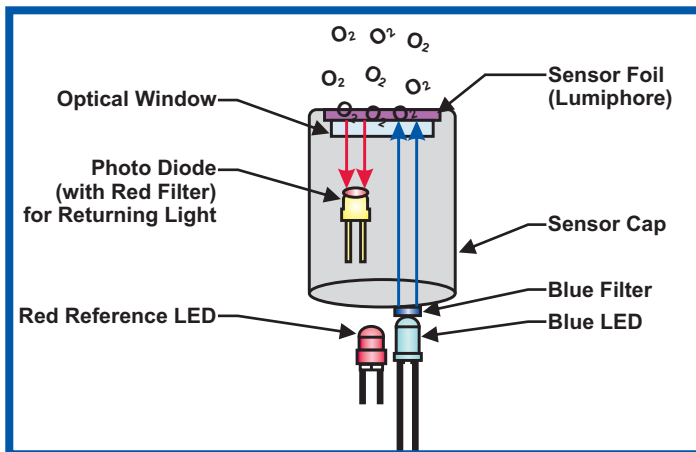
OPTIONS

- Automatic cleaning
- Automatic in-situ verification
- PID control



PRINCIPAL OF OPERATION

The sensing element (lumiphore) is activated, or excited when illuminated with a blue light. When activated, the lumiphore then emits red light in an intensity that is inversely proportional to the amount of oxygen present in the water. There is also a time delay between the peak emission of blue light and peak response of fluoresced red light. The amount of delay is inversely proportional to the amount of oxygen present. This time delay can be expressed as a phase shift between the wave patterns of incident blue light and the fluoresced red light. This is in turn reported by the electronics into a ppm or mg/l reading of Dissolved Oxygen. The advantages of this technology are that it is more stable than traditional electrochemical devices and far more resistant to abrasion. By using the state of the art sensor and electronics together the reliability, accuracy, and flexibility of the HydroACT Series with DO Probe is far superior to that of its competitors.



In addition to the state of the art optical sensor the HydroACT analyzer offers Modbus communications (TCP/IP, RS485), Relays and 4-20mA outputs. Despite all of the additional functionality that this unit has to offer, the purchase costs are less than or comparable to, its competitors. Added to the cost savings of a truly automatic sensor verification system, some will achieve a replacement payback of only a few months. Also available are Dual and Triple Validation options, and various PID control functions.

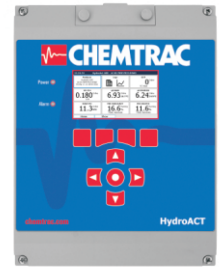
AUTOMATIC SENSOR VERIFICATION

The Chemtrac DO Probe is the first of its kind in the world to offer automatic in-situ sensor verification as an option. The HydroACT Series is able to reduce maintenance by automatically checking its sensor operation at user defined time intervals. Calibration on the In-Situ sensor is normally required only once per annum so with the automatic sensor verification option and the self clean option the sensor may not need to be inspected at all for a full year.

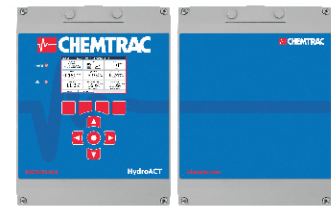
GENERAL SPECIFICATIONS

ANALYZER

	HA2	HA4	HA8
Power	100-240 VAC / 0.25 A or 12 VDC / 0.8 A (standard) or 24 VDC (optional)		
Display	4.3", 480x272, 8 bit, grayscale	4.3", 480x272, 24 bit, color	
Sensor Inputs	Up to 2	Up to 4	Up to 8
Sensor Options	TSS/NTU, Free Cl, Total Cl, Cl Dioxide, Chlorite, Ozone, pH with Temperature Ozone, ORP, SCM, UV254 organics, DO, Conductivity, Particle Counter		
External Input (optional)	4-20 mA, 4-20 mA loop-powered, +/- 2000 mV for pH / ORP / ISEs		
Analog Outputs (optional)	Up to 2	Up to 4	Up to 8
	Menu configurable outputs: 4-20 mA (Note: unused sensor inputs can be used as outputs)		
Relays (optional)	Up to 4	Up to 8	Up to 16
	SPST, electromechanical, 380 VAC, 6 A max		
Digital Inputs (optional)	Up to 4	Up to 8	Up to 16
Alarms & Thresholds	2 user-configurable alarms & thresholds with deadband and delay for each parameter and control output		
Control Loops (optional)	Up to 2	Up to 4	Up to 8
Control Types (optional)	High / Low Threshold	PID (with start delay and SP ramping options), feed forward (NTU/UV), flow pacing, high/low threshold, timer	
Communication (optional)	Modbus ASCII/RTU (RS485), Modbus TCP (Ethernet), PROFIBUS DP		
Data & Event Logging	1,000 event / status records stored in internal memory	1 million records stored internally storage expandable with MicroSD card	
Modem (optional)	None	GSM / GPRS / 3G intergrated modem	
Remote Access (optional)	None	Internet browser access, alerts and reports via email (requires ethernet or modem card)	
Enclosure	ABS flame retardant, NEMA 4X / IP65		
Dimensions & Weight	HA2 & HA4: 9 in (230 mm) x 12.2 in (309 mm) x 4.1 in (103 mm); 4.4 lbs (2 kg) HA8: 18 in (460 mm) x 12.2 in (309 mm) x 4.1 in (103 mm); 4.4 lbs (2 kg)		



HA2 / HA4



HA8

RDO® PRO-X PROBE DISSOLVED OXYGEN SENSOR

Type:	Lumiphore Optical Dissolved Oxygen
Measurand:	Dissolved Oxygen
Range:	0-50mg/l or 0-200% Saturation
Resolution:	0.01mg/l
Accuracy and Precision:	± 0.1mg/l from 0-8mg/l (1.25%) and ±0.2mg/l from 8-20mg/l
Stability:	Better than 1% per month (without calibration)
Temperature Range:	>0 up to 122°F
pH Range:	pH2 up to pH10
Salinity Range:	0-42ppt
Temperature Compensation:	Automatically by an integrated thermistor
Permissible Overpressure:	145 psi (10 bar)
Typical Response Limited:	>25mg/l
Response Time:	T ₉₀ <45s, T ₉₅ <60s at 77°F
Zero-point Adjustment:	Not necessary
Calibration:	Manual using water saturated air
Response Check:	Automatic with optional autoclean
Material of Construction:	PVC, silicone, polycarbonate, stainless steel
Dimensions:	Diameter 1.72" (43.7mm) OD, length 7.99" (203mm)
Maintenance intervals:	Lumiphore change 24 months after first reading
Interferences:	High levels of hypochlorite

DO Sensor fitted with an autoclean end cap



Titanium DO Sensor

