

# OXYGEN DETECTION

## OXY-IS SERIES

**AIR: Model ~ OXY-IS-D (DIFFUSION) & OXY-IS-DF (FLOW THROUGH)**

**WATER: OXY-IS-DSUB (DIFFUSION SUBMERSIBLE) & OXY-IS-DFW (FLOW THROUGH)**

### FEATURES:

- INTRINSIC SAFETY APPROVAL (IS)
- MSHA L & G (USA) CLASSIFIED FOR USE IN METHANE AREAS
- DIFFUSION STYLE – **OXY-IS-D**
  - WALL MOUNT
- FLOW THROUGH STYLE – **OXY-IS-DF**
  - WALL OR PIPE MOUNT OR BENCH TOP
- DIFFUSION STYLE SUBMERSIBLE – **OXY-IS-DSUB**
- FLOW THROUGH STYLE WATER – **OXY-IS-DFW**
- USES NORMAL WIRING AND OPEN CONDUIT
- LONG-LIFE, CONTINUOUS MONITORING
- OPTIONAL CALIBRATION KIT
- NATURAL ZERO REFERENCE
- NO PUMP REQUIRED – **OXY-IS-D, OXY-IS-DSUB**
- QUIET PUMP
  - 30 lpm (other flow rates available) **OXY-IS-DF**
- EASY INTEGRATION INTO ANY AIR OR WATER MONITORING SYSTEM
- TRANSMISSION DISTANCE UP TO 5 MILES OVER 18 AWG CABLE
- COMPUTER INTERFACE
- LOCAL DIGITAL DISPLAY
- IMMUNE TO MOISTURE, NON-CORRODING
- ELECTRONICS LEAK PROOF



**OXY-IS-D**

### APPLICATION:

PROTECTION FROM OXYGEN DEFICIENCY OR EXCESS

- PROCESS FOR AMBIENT **OXYGEN IN AIR**: DIFFUSION (**OXY-IS-D**) OR FLOW THROUGH (**OXY-IS-DF**)
- PROCESS FOR AMBIENT **OXYGEN IN WATER**: DIFFUSION (**OXY-IS-DSUB**) OR FLOW THROUGH OXYGEN (**OXY-IS-DFW**)
- USE IN FACTORIES, BUILDINGS, MINES, SHIPS, TANKS, LABS, TUNNELS, VAULTS, HOSPITALS, NPP



**TECHNICAL ASSOCIATES**  
**OVERHOFF TECHNOLOGY**

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Divisions of



US NUCLEAR CORP

**OTCQB UCLE**

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### SPECIFICATIONS:

<b>Physical</b>	Size	6.5W x 8H x 5.5D inches (165W x 203H x 140D mm).
	Sensor Weight	3.5 pounds (1.6 Kg).
	Construction	Tough, thermosetting plastic. Hinged door and secure access.
	Hardware	Stainless steel for long life.
	Circuit module	Encapsulated (water/dust proof).
<b>Electrical</b>	Input voltage	9.5-30 VDC (110/220VAC optional).
	Output current	4-20 ma
	Current driver	Auto-compensation, for combined load/line resistance to 500 ohms.
	Grounding	Not required.
	Fuse	Solid state, auto-reset.
<b>Oxygen Sensor</b>	Cell type	Galvanic fuel cell, replaceable.
	Cell construction	All plastic, with organic diffusion membrane, non-corrosive.
	Expected cell life	18 months under normal conditions
	Drift	Less than 0.5% per month when stabilized in location
<b><u>Air or Gas</u></b>	Access to atmosphere	Diffusion, no pump required – <b>OXY-IS-D</b>
	Air Flow Through	Flow Through – Quiet Green Turtle Pump – <b>OXY-IS-DF</b>
	Range	30 lpm (other flow rates available)
	Sensitivity	0-25%, 0-50% dual scale is standard. Others available
		0.5% O <sub>2</sub> in air (by volume). Diffusion, no pump required – <b>OXY-IS-D</b>



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<b>Water</b>	Access to water	Water pump is provided – <b>OXY-IS-DFW</b>
<b>Measures Dissolved Oxygen</b>	Water Flow Through	User selectable
	Range	0-20 ppm
	Submersible Sensor	No pump required – <b>OXY-IS-DSUB</b>
	Handheld	
	Non-Fouling sensor	Submersible to 60 ft (18m) depth
	Range	0-20 ppm Ideal for aeration lagoons, sewers,
<b>Operation</b>	Start-up time	Stable reading within 15 sec.
	Analog signal	4-20 mA, linear.
	Calibration	Recommended monthly (span only). True zero is absence of O <sub>2</sub>
	Transmission distance	To 5-miles (8km) over 18 AWG cable.
	Accuracy	0.5% within 10C of cal temp, 1% over operating temp range
	Linearity	0.5%
	Hysteresis	None observed.
		.
<b>Environmental Effects</b>	Temperature	Operating: 0 to 40C (32 to 104F).
	Humidity	0-100%.
	Altitude/pressure	Re-calibrate if altitude changes more than 1000 ft.

**PA Approval**

I.S. MSHA Class G, Issue 67



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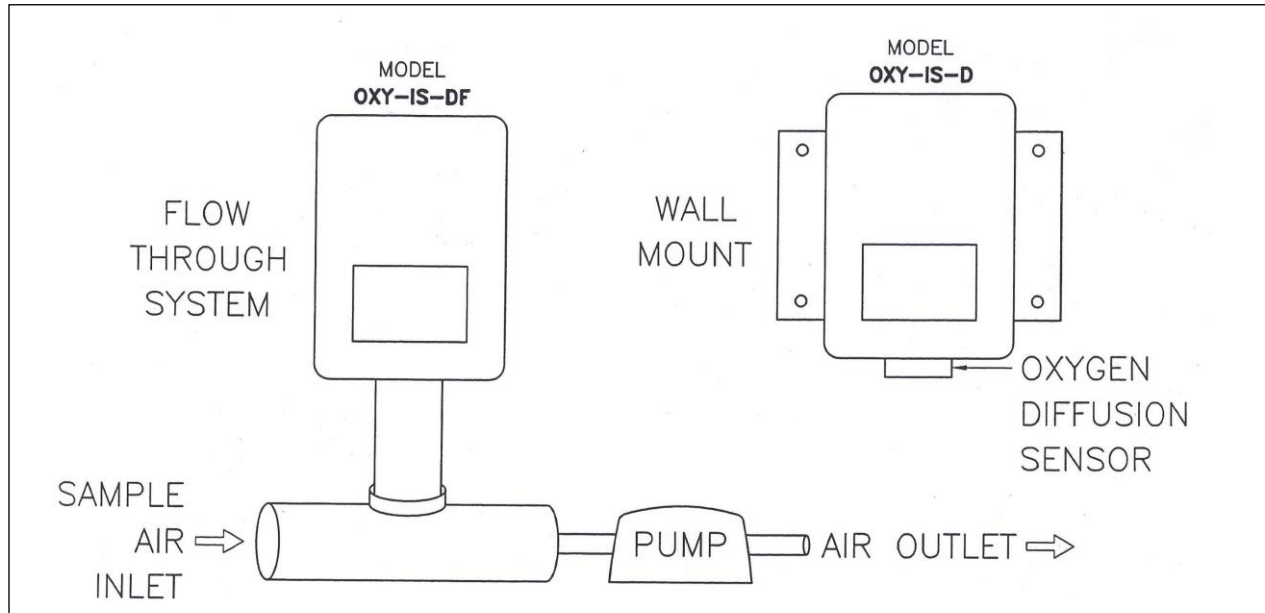
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### Special Features

Power indicator	Amber LED indicates current flow.
Front panel meter	3-1/2 digital LCD display.
Temp. compensation	Thermistor circuit.
Repair	Modular replacement w/connectors.
Test/cal jack	Standard 1/8" for external ammeter.
Cell dust cover	Supplied; removable for calibration
Calibration adapter	Plastic, for 1/8" (.3 mm) ID tubing
Calibration kit	Has two O <sub>2</sub> (17 liter) tanks, valves, flowmeter,
Flow meter	tubing in plastic tackle box.
	Electronic Mass Flow meter



**FLOW DIAGRAM FOR OXY-IS AIR SERIES**



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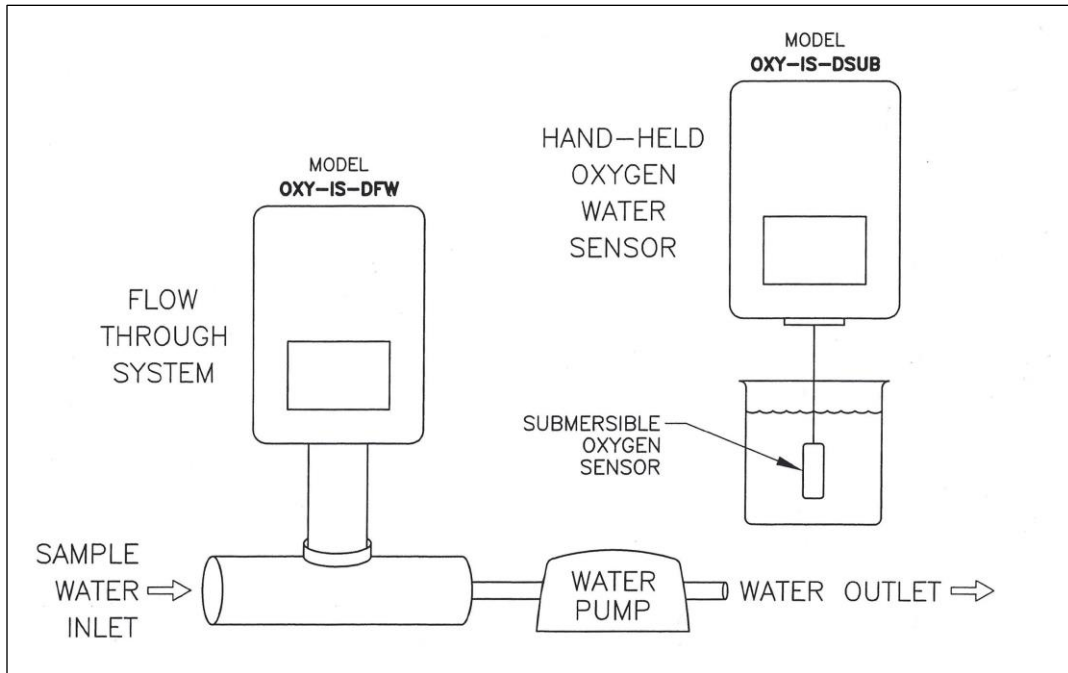
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**FLOW DIAGRAM FOR OXY-IS WATER SERIES**



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