

AquaMetrix AM-ODO-TX Luminescent Dissolved Oxygen Sensor With Dual 4-20mA Output and Modbus Communication



Description

The AM-ODO-TX is one of the most compact, durable, and user-friendly dissolved oxygen (DO) sensors on the market. It utilizes fluorescence quenching technology and is part of the AquaMetrix Smart Sensor Series. Probes in this series are direct-output digital sensors, delivering the precision of a controller and the accuracy of our core probes.

The AM-ODO-TX communicates via RS485 or Modbus protocols and outputs two (2) digital-based analog (4–20 mA) signals. These can be configured as any two of three options: percent saturation, concentration, or temperature. The sensor connects seamlessly to the AquaMetrix AM-2300 controller, AM-2252 controller*, or directly to a PLC.

*Note: only one output can be connected when using the AM-2252.

Optical DO technology offers several advantages: it is inherently self-referencing, requires no warm-up period, does not depend on constant flow for stable readings, and is less affected by fouling. The AM-ODO-TX provides reliable readings within 90 seconds of going from

dry to wet conditions. Its accuracy is further supported by a factory-programmed 90-point calibration stored on a memory chip embedded in the membrane cap.

The sensor membrane typically lasts one to two years and is inexpensive to replace. An intuitive Visual Lifecycle Indication (VLI) system alerts the user when replacement is needed, ensuring reliable operation. New membrane caps come pre-calibrated, allowing quick and simple maintenance—just install the new cap and the sensor is ready to use. When required, intermittent calibration can be performed easily on a controller or directly on the probe.

This sensor has been extensively tested, and its core technology contributed to the development of the EPA-approved method now used as a standard across the industry.

Simply put, the AM-ODO-TX, like all AquaMetrix Sensors, works when our customers need it to!

Features

- Dual 4-20mA Output
- RS485 or Modbus Communication
- Output choice of:
 - Saturation (%sat)
 - Concentration mg/l (ppm)
 - Temperature (°C or F)
- No Electrolyte
- Sample Flow Not Required
- Very Rugged
- Visual Lifecycle Indication (VLI)
- Replaceable Membrane
- Saltwater Compensation
- Not affected by CO₂ or H₂S

Applications

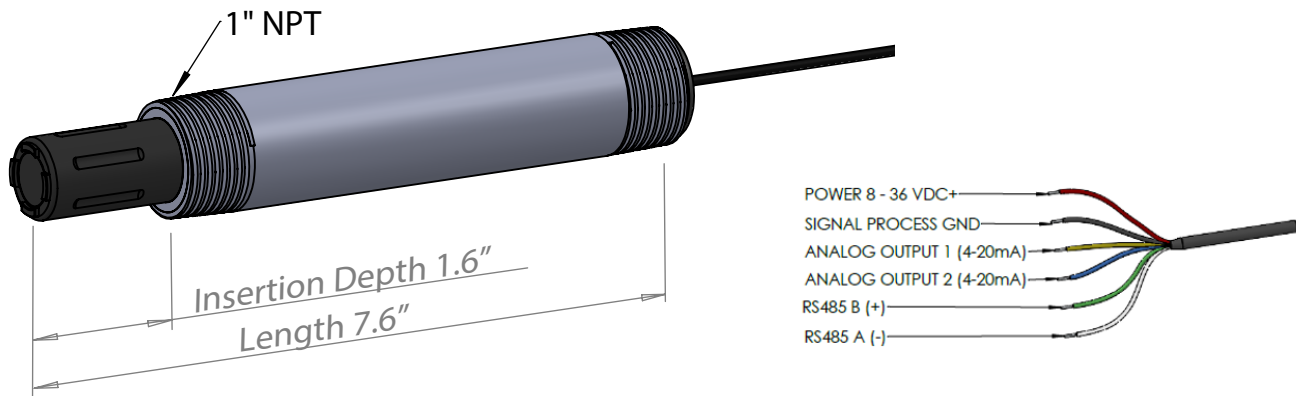
- Aquaculture
- Fish Farms
- Industrial Wastewater
- Wastewater Treatment
- Sewage
- Boilers
- Horticulture

AM-ODO-TX Optical Dissolved Oxygen Sensor

Technical Data

Standard Measuring Range	0 to 20ppm (up to 60) 0 to 200%sat (up to 600%)	Storage Temperature	-40 to 65 °C
Accuracy at 25 °C		Salinity and Pressure Compensation	Fixed or real-time capable
DO (0-20 mg/L)	±0.1 mg/L	Wetted Materials	cPVC Body, Cycloy® (PC/ABS), Ryton® (PPS), PC/PMMA PVC*, Santoprene® 101-55* *when fully submerged
(20-60 mg/L).	±2 %		
Temperature	± 0.1 °C		
Resolution		Power input	8 to 36 VDC
DO	10 ppb (0.01 ppm)	Power consumption	0.6W Max @12VDC 0.024W Idle @ 12VDC
Temp	0.01 °C	Output	Dual 4-20 mA (current sourcing) Modbus/RS485 (All Models)
Response Time	T90 < 45 seconds T95 < 60 seconds	Mounting	1" MNPT on both ends
Operation Temperature	-5 to 50 °C	Ingress Protection	IP68
Depth	210 m (689 ft) @ 25°C		
Maximum Pressure	150 psi from 0° to 50°C		

Dimensions



Related Products

ANALYZERS

AM-2300	Multi-Input Controller
AM-2252	Dual-Input Controller* Only one 4-20mA input is supported

ACCESSORIES

AM-ODO-TX-CAP	Replacement Membrane Cap
AM-ODO-TX-CAL	Calibration/Storage cap
AM-ODO-MPR	Metal Protector
AM-JB2	Junction Box
AM-HTA-R5	Ball Valve assembly for Hot-Tap insertion
AM-ARM-5	Submersion mounting kit
AM-TEE-R5	2" CPVC Tee with quick disconnect adapter
AM-CFT-R5	Compression Fitting for 1-1/2" NPT
AM-CBL	Extension cable

Ordering Information

STANDARD

AM-ODO-TX-015	Optical Dissolved Oxygen Sensor with direct 4-20 mA output for ppm and %sat. 15ft cable
AM-ODO-TX-XXX	Optical Dissolved Oxygen Sensor with direct 4-20 mA output for ppm and %sat. Custom Cable length

CUSTOMIZED COMMUNICATION (ADD-ON)

AM-ODO-TX-Cust	Optical Dissolved Oxygen Sensor with customized direct 4-20 mA outputs (See form for customizations)
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