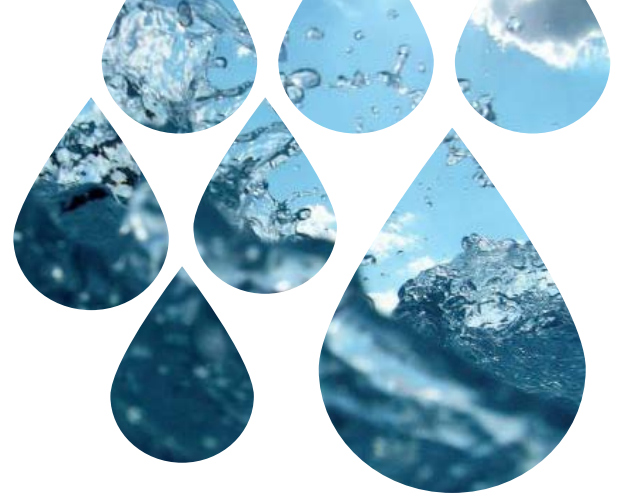


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Dissolved Oxygen Transmitter



Model Q45D

Dissolved Oxygen Monitoring applications requiring a simple 2-wire transmitter or battery-operated instrument are easily satisfied using ATI's model Q45D transmitter. Adaptable to either Optical or Galvanic D.O. sensors, this unit is ideal for installations where only analog signals are needed and low power operation is preferred. For applications requiring AC operation, relay outputs, automatic sensor cleaning, or digital communication, refer to ATI's model Q46D brochure.

ATI's optical element is designed to last a minimum of 2-years in normal operation, but will more often provide a life of 3-5 years, unless mechanical damage occurs. Optical sensors do not require flow across the sensing element so accurate measurements can be made more accurately in systems with low flows. Unlike some optical sensors, this sensor is not degraded by exposure to sunlight.

The Galvanic Dissolved Oxygen sensor uses a rugged 5 mil Teflon membrane to resist mechanical abrasions and tears. The membrane serves as a barrier to allow molecular oxygen to diffuse into the reaction cell where it is reduced, producing a small current which is proportional to oxygen concentration.

Applications

Aeration Systems
Wastewater Effluent
Water Distribution

Fish Farming
Rivers & Streams

Features

- Loop-powered or battery-operated
- External 5-17 VDC version for solar power applications
- Adapts to Optical or Galvanic sensors
- Submersion or flowcell sensor options
- Simple air-calibration
- Large, easy-to-read LCD display
- Display D.O. in ppm, mg/l, or % saturation
- Clear menu-driven user interface
- NEMA 4X (IP-66) enclosure
- Wall or pipe mounting bracket
- Built-in PID controller

Sensor Options



Optical Sensor



Galvanic Sensor

Q45D SPECIFICATIONS

ELECTRONIC MONITOR

Display Range	0-40.00 ppm or 0-40.00 mg/l 0-200.0 Percent saturation
Accuracy	Greater of 0.3% of value or 0.02 ppm
Repeatability	0.02 ppm
Sensitivity	0.01 ppm
Linearity	0.1%
Temperature Drift	0.1%/°C
Sensor Type	Optical or Galvanic membraned
Temperature Input	Pt100 RTD in sensor for temperature compensation
Power	2-Wire unit: 17-30 VDC, 25 mA maximum Battery unit: Two AA Alkaline batteries External DC: 5-17 VDC, 10 mA maximum
Analog Outputs	2-Wire unit: Single 4-20 mA DC, 450 ohms maximum Battery unit: Two 0-2.5 VDC, 50K ohms minimum External DC: Two 0-2.5 VDC, 50K ohms minimum
Output Isolation	600 V Galvanic isolation
Enclosure	NEMA 4X (IP-66) Polycarbonate, V-0 flammability
Mounting Options	Wall or pipe mounting bracket supplied
Conduit Entries	Two PG-9 cord grips, 0.16-0.31" diameter cable
Ambient Temperature	Operating: -40° to + 60°C Storage: -40° to + 70°C
Ambient Humidity	0-95%, Non-condensing
Size	4.4"H x 4.4"W x 3.5"D (111 x 111 x 90 mm)
Weight	2-Wire or External DC unit: 1 lb (0.45 Kg) Battery unit: 2 lbs (0.9 Kg)
Certifications	CE marked to BS EN 61326-1:2006 Standard UL and CSA General Purpose

ORDERING INFORMATION

Q45D-A-B-C D.O. Transmitter

Suffix A - Power

- 1 - 24 VDC, 2-wire (single output only)
- 4 - Battery operated with two 0-2.5 VDC outputs
- 5 - External 5-17 VDC with two 0-2.5 VDC outputs

Suffix B - Sensor Style

- 1 - Submersible membraned sensor with 15' cable
- 2 - Submersible membraned sensor with 30' cable
- 3 - Auto-Clean membraned sensor with air nozzle and 30' cable
- 4 - Auto-Clean membraned sensor with air nozzle and 60' cable
- 5 - Flow type membraned sensor with 25' interface cable (select flowcell from options list)
- 6 - Optical D.O. sensor, 30' (9 m.) cable
- 7 - Optical D.O. sensor with flowcell

Suffix C - Membrane Type

- 1 - 5 mil (standard)
- 2 - 2 mil
- 3 - Not applicable (for optical sensor)

ACCESSORIES

- 00-0628** Submersion mounting bracket kit for Galvanic sensor
- 07-0100** Universal junction box, NEMA 4X
- 31-0001** 5-c sensor interconnect cable, max. 1000 feet
- 31-0038** 7-c sensor interconnect cable, max. 300 feet
- 00-0624** Mounting bracket kit for Optical sensor
- 45-0043** Pipe adapter for optical
- 47-0005** 2" U-bolt, 304SS
- 00-0625** 1-1/2" flow tee assembly
- 00-0043** Constant-head flowcell
- 00-1522** Sealed flowcell

NOTES:

- 1 - All systems are supplied with one package of membranes, one 120 cc bottle of electrolyte, and one spare parts kit containing 3 each of all o-rings and special screws.
- 2 - Pipe mount requires two 2" U-bolts (47-0005).

SEE Q46D DATASHEET FOR SENSOR SPECIFICATIONS.



Battery Powered Version with Handle



Visit Us on the Web: www.analyticaltechnology.com

B / Q45D / R-1 (5/2014)

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