



# DO5052

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## DATA SHEET



**This manual provides the technical data for the DO5052 dissolved oxygen monitor and controller, developed by Aquaculture Innovations Limited.**

## Device Overview

The DO5052 is a dissolved oxygen monitor and controller designed to measure and manage oxygen levels in tanks, ponds, lakes, and fish transportation systems.

The system can automatically control connected aeration equipment when dissolved oxygen levels fall below user-defined thresholds, helping reduce energy consumption while maintaining healthy oxygen conditions for aquatic life.

The system can also be used to control bottled oxygen (O<sub>2</sub>) supply in both static and transportation tanks.

### **The display provides real-time readings of:**

- Dissolved Oxygen (mg/L)
- Oxygen Saturation (%)
- Water Temperature (°C)

### **The unit features:**

- User-adjustable low oxygen trigger levels
- Simple 1-point calibration
- Integral socket for direct aerator connection

## Optical Probe

The DO5052 optical probe is supplied with:

- 8 metres of cable as standard

Cable length can be:

- Extended using connectors
- Supplied as a single continuous cable from the factory

The optical dissolved oxygen sensor uses luminescent dissolved oxygen (LDO) technology.

The sensor measures dissolved oxygen concentration by detecting the quenching effect oxygen has on luminescence within the sensor cap



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### Advantages Over Conventional Probes

- Minimal calibration required
- No sensor drift
- Fast response time
- Reduced installation and maintenance requirements
- Resistant to abrasion and photobleaching
- Minimal loss of performance over time
- Replaceable sensor cap design

## Specifications

### Indicators

- Graphic LCD display

### Power Supply

- 110/230 VAC or 12/24 VDC (factory set)

### Ambient Temperature

- -10°C to +40°C

### Power Switch Rating\*1

- 13A @ 240V

### Oxygen Control Valve Option

- Degreased valve
- 3 mm orifice
- 12 VDC, 5 W

### Sensor Type

- Luminescent dissolved oxygen sensor
- Replaceable sensor cap

### DO<sub>2</sub> Measurement Range

- 0–40 mg/L
- Resolution: 0.1 mg/L

### DO<sub>2</sub> Accuracy

- ±1% of reading ±0.2 mg/L

### Temperature Measurement

- Internal RTD sensor
- -10°C to +40°C
- Resolution: 1°C

### Waterproof Rating

- IP55

## Functionality and Benefits

- Saves energy by operating aeration only when required
- Maintains stable dissolved oxygen levels
- Circulates water during periods of supersaturation
- High-definition backlit LCD display
- Maintenance-free optical probe design
- Automatic temperature compensation
- Simple adjustment of minimum and maximum DO<sub>2</sub> thresholds
- Timed output override function
- 16A industrial IEC 60309 (CEE-form) socket for aerator connection

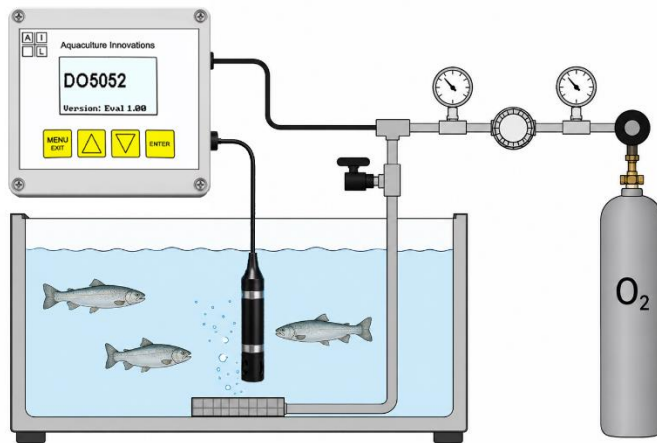
## Applications

The DO5052 is suitable for:

- Aeration control systems



- Fish transportation systems



- Static holding tanks
- Ponds and lakes
- Aquaculture systems
- And more

## System Options

Optional system configurations include:

- Dual 16A sockets for operating two aerators
  - Three-phase contactor (400/440 VAC, 16A)
  - Extended probe cable lengths up to 100 metres
  - SMS messaging system for low oxygen alarms and remote activation
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## Notes

\*1 – Single-phase control supplied as standard.

Three-phase control available as an optional extra.



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