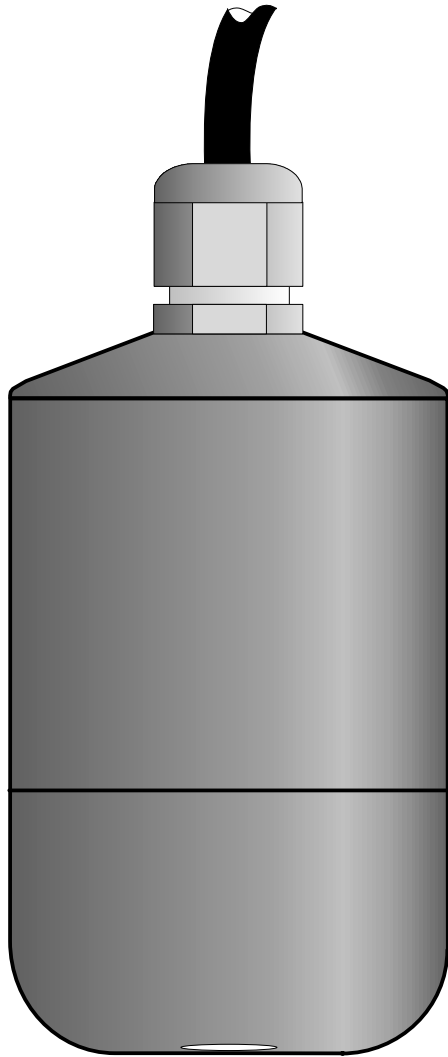


OxyGuard Model 420

Dissolved Oxygen Probe with Built-in Transmitter



The Model 420 is a membrane covered galvanic oxygen probe with built-in two-wire 4-20 mA transmitter. The probe is connected to a DC supply and draws a current of between 4 and 20 mA corresponding to the oxygen concentration.

There are only two wires to connect, and there is no limit to cable length. The output signal is galvanically isolated from the built-in electronics and the process fluid. Interference between the Model 420 and other equipment can never occur!

The OxyGuard Model 420 can therefore be connected directly to a wide range of equipment that can accept a 4-20 mA input, such as alarms, indicators, controllers, recorders, PLC's, PC systems with A/D input etc.

The Model 420 can also be used to measure gaseous oxygen concentration.

Technical Advantages

- * Extremely high stability - zero adjustment is never needed, calibration seldom.
- * No regular maintenance needs. The robust membrane, 50 μ thick, is easily cleaned, but if damaged can be replaced by anyone - at negligible cost.
- * Correct measurements with flow as low as 1 cm/s.
- * Based on a chemical principle superior to that of traditional DO probes.
- * Galvanic type - True zero.
- * Built-in temperature compensation.
- * No practical limit to cable length - extension can be made with any type of cable.
- * Wide range of armatures and fixtures - e.g. the AirAlarm for worker safety in areas where fluctuating oxygen levels could occur in the air, a Flow Cell for measuring gases etc.
Ask for details.
- * Wide range of accessories - e.g. the EasyCal calibrator, OxyClean compressed air cleaner etc.

Technical Information

Specifications

Dimensions:	Diameter = 58 mm, length = 88 mm. Standard cable length = 7 m.
Weight:	Approx. 600 g incl. cable.
Measurement Principle:	Galvanic cell, self polarizing, self temperature compensating.
Operating Conditions:	0 to 50°C
Flow Requirements, water:	Minimum flow dependent on DO and temperature, typically 1 cm/sec.
Loop Power Supply:	Depends on loop impedance. 24V DC recommended. Minimum supply with 50 ohm loop impedance 12 VDC Abs. max. supply voltage 35 V DC. This permits loop impedance 1200 Ω.
Input/Output Isolation:	1000 V RMS input/output.
Range:	Please see ordering information. Contact OxyGuard for other ranges.
Accuracy:	Error less than +/- 2% of actual value when measuring temperature is the same as calibrating temperature (barometric pressure unchanged) and calibrated with the EasyCal. Zero Drift less than 0.1 ppm (mg/l) per month.
Warm-up Time:	Typ. 1 second. Depends on actual conditions of use.
Supplied With:	The Model 420 is usually operated continuously. 50 ml electrolyte, spare membranes and O-rings, cleaning pad.

Ordering Information

There are Model 420 types for mg/l measurements, for % saturation and % volume measurements and for measuring pure oxygen.

The following uses and measuring ranges are the most common:

Waste water treatment etc.:

D033M; 4-20 mA = 0-10 mg/l.

Aquaculture, the environment and similar:

D033M; 4-20 mA = 0-20 mg/l or 0-40 mg/l.

D033SV; 4-20 mA = 0-100%, 0-200% or 0-400% saturation.

For measuring the air and oxygen in gas:

D033SV; 4-20 mA = 0-25% volume oxygen.

For measuring pure oxygen:

D032V; 4-20 mA = 0-100% oxygen.

All of these can be ordered with an M18 threaded part at the top for screwing into a flange: add the suffix **M18** for this option.

Connection Example

