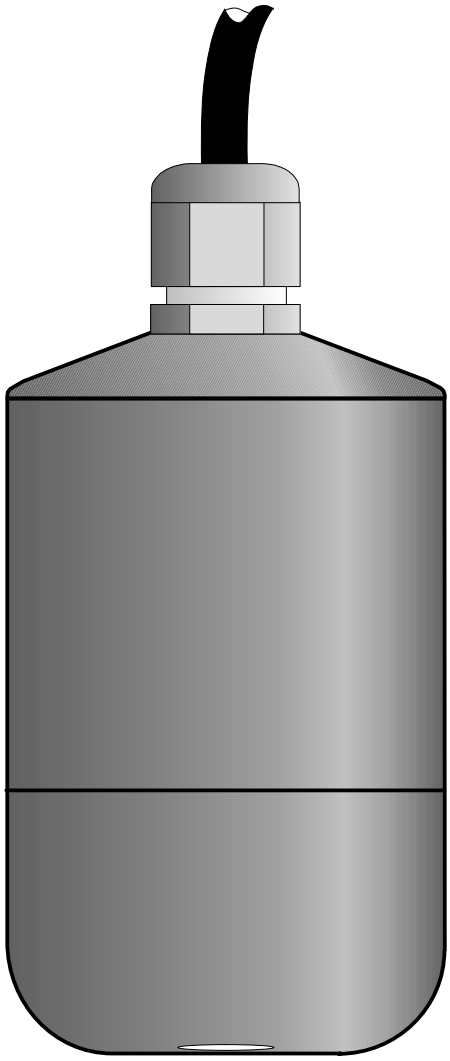
OxyGuard Model 420

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 supply of between 12 and 35 volt, 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 = 5 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:	Min. 12 VDC (max. 50 Ω loop). Max. 35 VDC (max. 1200 Ω loop).
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:	500 millisecond.
Response Time:	90% of end value within 1 minute.
Supplied With:	Spare cap fitted with membrane, 50 ml electrolyte, spare anode and O-ring, junction box with cable connectors and cable glands.

Ordering Information

Choose the Model 420 that suits your use from the following, which shows the oxygen levels that the particular model can be adjusted to measure. If you cannot find the one you need please consult OxyGuard - other ranges can be supplied. Please state the desired range when ordering.

Type 1 - Aquaculture and similar dissolved oxygen uses.
Detection limit 0.1 mg/l (1% sat):
D031P: 0-5 to 0-20 mg/l (ppm) D031S: 0-50 to 0-200% sat.
D031PH: 0-10 to 0-40 mg/l (ppm) D031SH: 0-100 to 0-400% sat.

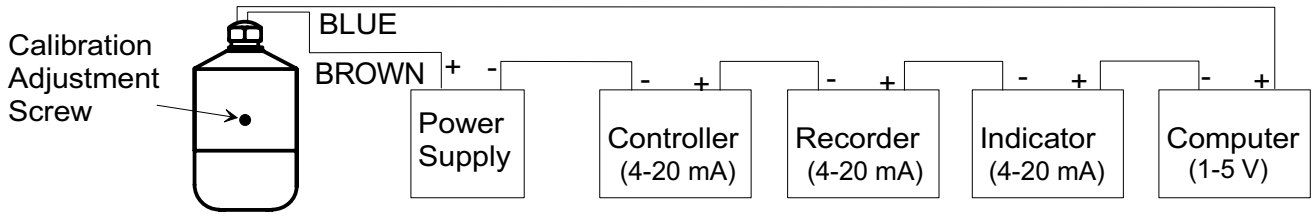
Type 2 - Waste water treatment or oxygen in air/gas.
Detection limit approx. 0.03 mg/l (0.3% sat) or 0.1% volume O_2.
D032P: 0-5 to 0-20 mg/l (ppm) D032S: 0-50 to 0-200% sat. or 0-10 to 0-50% vol. O_2
D032O: 0-50 to 0-200% sat. and 0-10 to 0-50% volume O_2 where traces of oil may be found.

Type 0 - Oxygen gas or oxygen super-saturated water.
Detection limit approx 0.2% volume O_2 or 0.1 mg/l (1% sat).
D030P: 0-40 to 0-200 mg/l (ppm) D030S: 0-400 to 2000% sat. or 0-100% vol. O_2

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

Data subject to change without notice



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