Oxygen Meter | MO-200

Measure 5 to 100 % gaseous oxygen in soild, growth media, air, or in-line tubing.

Rugged Housing

Sensors are housed in a polypropylene body and electronics are fully potted, ideal for long-term deployment in porous media.

Internal Temperature Sensor

Oxygen sensors have an internal thermistor or type-K thermocouple that allows for temperature monitoring and correction of signal for temperature effects.

Heated Detector

The protective membrane in front of the oxygen sensor can be heated to prevent water from condensing on the membrane and blocking the diffusion path.

Simple Calibration

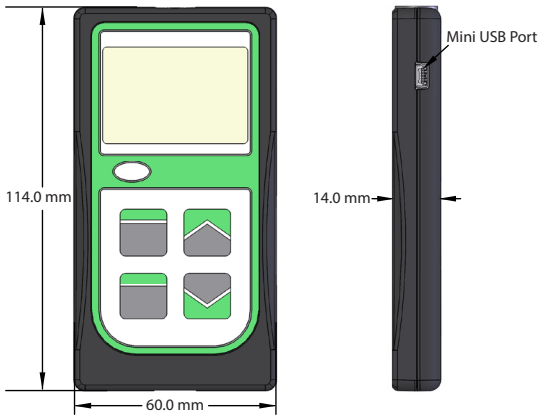
Sensors output a voltage that is linearly proportional to absolute amount of oxygen. Calibration is accomplished by measuring the voltage under ambient conditions (atmosphere is 20.95 % O_2) and deriving a linear calibration factor (slope).

Output Options

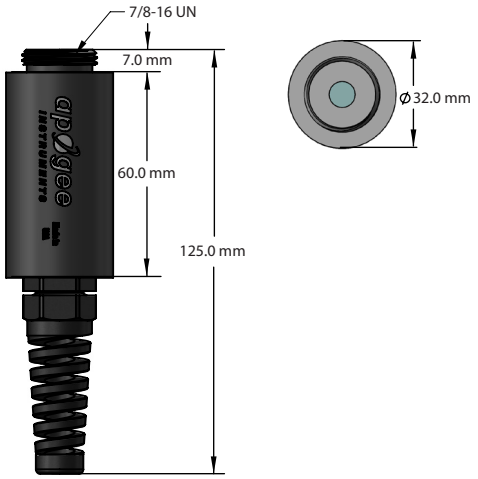
Analog version is an un-amplified voltage output. Sensor is also available attached to a hand-held meter with digital readout.

Dimensions

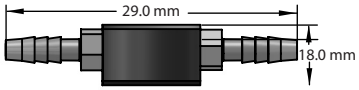
Meter



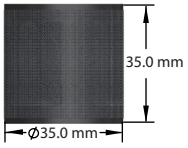
Oxygen Sensor

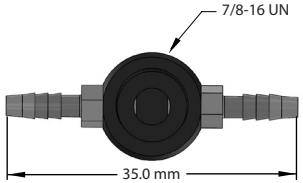


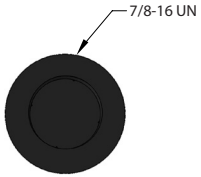
Flow Through Head



Diffusion Head







MO-200

Measurement Range	5 to 100 % O_2
Measurement Repeatability	±0.1 % at 20.9 % O_2
Non-linearity	less than 1 %
Oxygen Consumption Rate	2.2 µmol O_2 per day at 20.9 % O_2 and 23 C (galvanic cell sensors consume O_2 in a chemical reaction with the elctrolyte, which produces an electrical current)
Response Time	14 s (time required to read 90% of saturated response)
Operating Environment	0 to 50 C; less than 90 % non-condensing relative humdidity up to 30 C; less than 70 % non-condensing relative humidity from 30 to 50 C; 60 to 140 kPa
Meter Dimensions	126 mm length, 70 mm width, 24 mm height
Sensor Dimensions	32 mm diameter; 68 mm length
Diffusion Head (Accessory)	35 mm diameter; 35 mm length; 125 mesh screen
Flow Through Head (Accessory)	32 mm diameter; 91 mm length; 0.25 in barbed nylon connectors
Mass	210 g
Cable	2 m of two conductor, shielded, twisted-pair wire; additional cable available; santoprene rubber jacket (high water resistance, high UV stability, flexibility in cold conditions)
Influence from Various Gases	Sensors are unaffected by CO, CO_2, NO, NO_2, H_2S, H_2, and CH_4. There is a small effect (approximately 1 %) from NH_3, HCl, and C_6H_6 (benzene). Sensors are sensitive to SO_2 (signal responds to SO_2 in a similar fashion to O_2). Sensors can be damaged by O_3.
Warranty	4 years against defects in materials and workmanship