

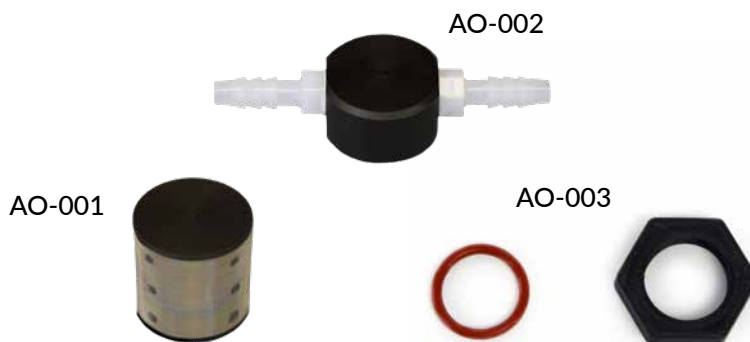


MO-200



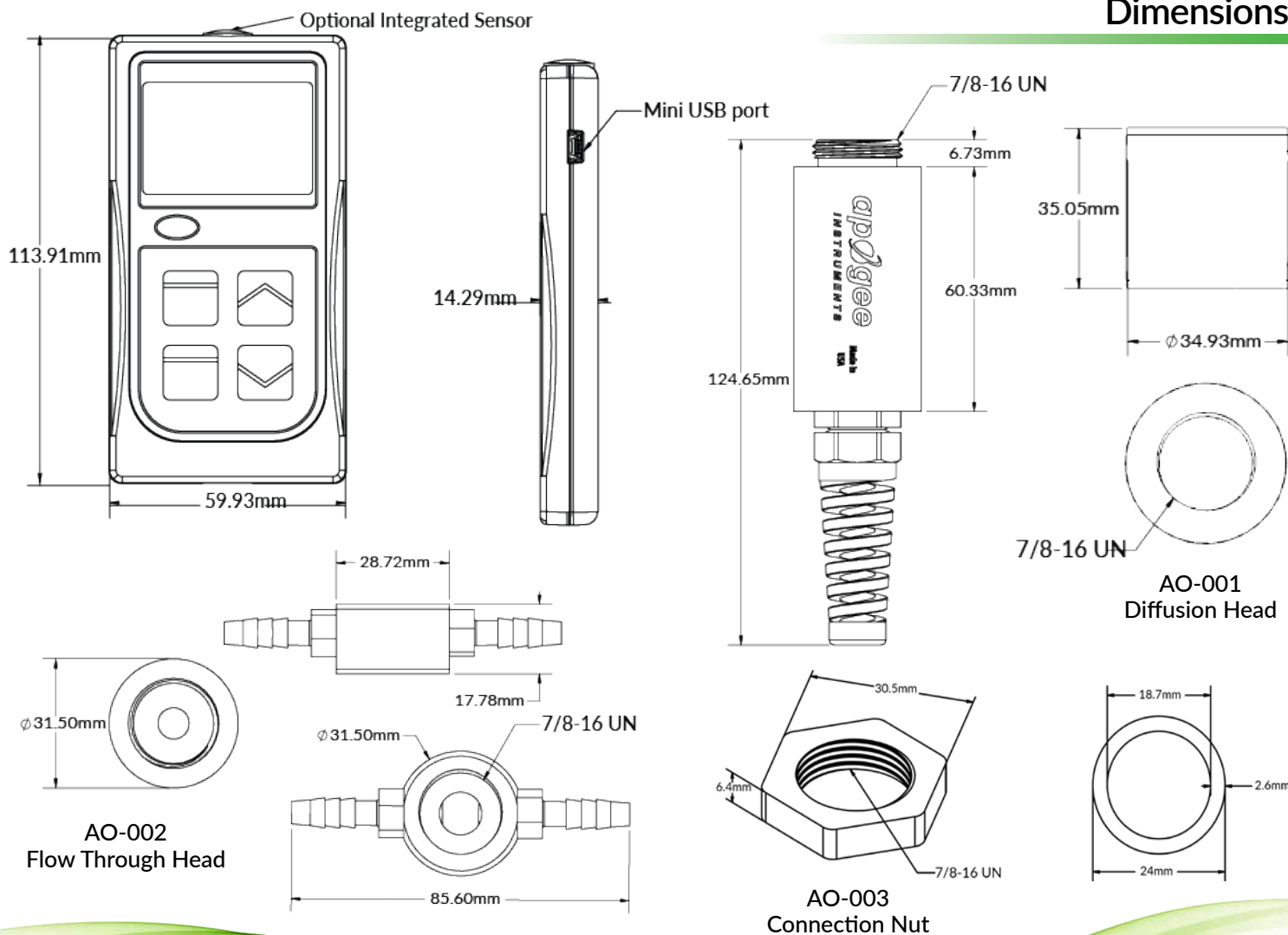
Rugged Housing

Housed in a polypropylene body and electronics are fully potted, ideal for long-term deployment in porous media, including acidic environments (mine tailings). Two head options are available: a diffusion head that creates a small air pocket for measurement in porous media and a flow-through head with two adapters for tubing that allows measurement of gas flowing in lines.



Product Specifications

MO-200	
Measurement Range	0 to 100 % O ₂
Measurement Repeatability	± 0.1 % at 20.9 % O ₂
Non-linearity	Less than 1 %
Oxygen Consumption Rate	0.1 μmol O ₂ per day at 20.95 % O ₂ and 23 C (galvanic cell sensors consume O ₂ in a chemical reaction with the electrolyte, 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 humidity 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; TPR 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 ₂ S, H ₂ , and CH ₄ . There is a small effect (approximately 1 %) from NH ₃ , HCl, and C ₆ H 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



Features

TYPICAL APPLICATIONS

- Measurement of O₂ in laboratory experiments or of O₂ gradients in soil/underground
- Monitoring gaseous O₂ in indoor environments for climate control, in compost piles, and in mine tailings
- Monitoring redox potential in soils
- Determination of respiration rates through measurement of O₂ consumption in sealed chambers

OUTPUT OPTIONS

- Analog V DC
- SDI-12
- or hand-held meter

HEATED DETECTOR

The gas permeable membrane inlet can be heated to prevent water vapor from condensing and blocking the diffusion path. When sensors are used in soil or compost.

UNIQUE DESIGN

Sensors have an internal thermistor fully sealed for temperature monitoring. Sensors are housed in a polypropylene body for long-term use underground. Two head options include a diffusion head for field use and a flow-through head for laboratory use.

SIMPLE CALIBRATION

Voltage output is linearly proportional to absolute amount of oxygen. Calibration is accomplished by measuring the voltage under ambient conditions (atmosphere is 20.95 % O₂) and deriving a linear calibration factor. A zero offset can be obtained with N₂ gas (recommended for measurements below 10 % O₂).