

The New SM-1 Specifications and Kinetics



Common Sensing, Inc. specializes in the measurement of Total Dissolved Gas Pressure (TDGP). TDGP is the sum of the partial pressures of each of the dissolved gases in water including water vapor and can be expressed either as a percentage of barometric pressure or as an absolute pressure. Any water system can become supersaturated with dissolved gases resulting in stress and possible mortality to fish and aquatic life. The measurement of TDGP is one of the most informative measurements because measuring dissolved oxygen alone leaves open the potential hazard of undetected supersaturation, whereas a TDGP level considerably **lower** than barometric pressure **signals a lack of oxygen**.

The **SM1** is an inexpensive portable saturation monitor designed specifically for the aquaculturist. The monitor displays **% Saturation** - TDGP divided by barometric pressure - using a new smaller probe. Rapid trending (0.1% resolution) is made possible by **SM-1's** quick and simple calibration. Any length of probe cable may be used allowing flexibility for portable and/or permanent installations.

**SPECIFICATIONS:
MODEL SM-1**

PRESSURE SENSOR PARAMETERS:

Barometric pressure from 0 to
800 mmHg

TDGP from 0 to 1350 mmHg

DISPLAY PANEL:

.70 inch high 3-1/2-digit LCD display easily readable from 10 Meters

PANEL CONTROLS:

Power Off/On switch and
Calibration adjust

PROBE:

9 1/2" long X 1 3/4" OD PVC probe housing with provisions to replace membrane cartridge and sensor. Disassembly and component replacement can be completed in just minutes. Probes are interchangeable.

CABLE:

Available in lengths to 100 meters with either standard laboratory cable or high strength oceanographic quality polyurethane-jacketed #22AGW Teflon insulated wire fitted with waterproof connectors.

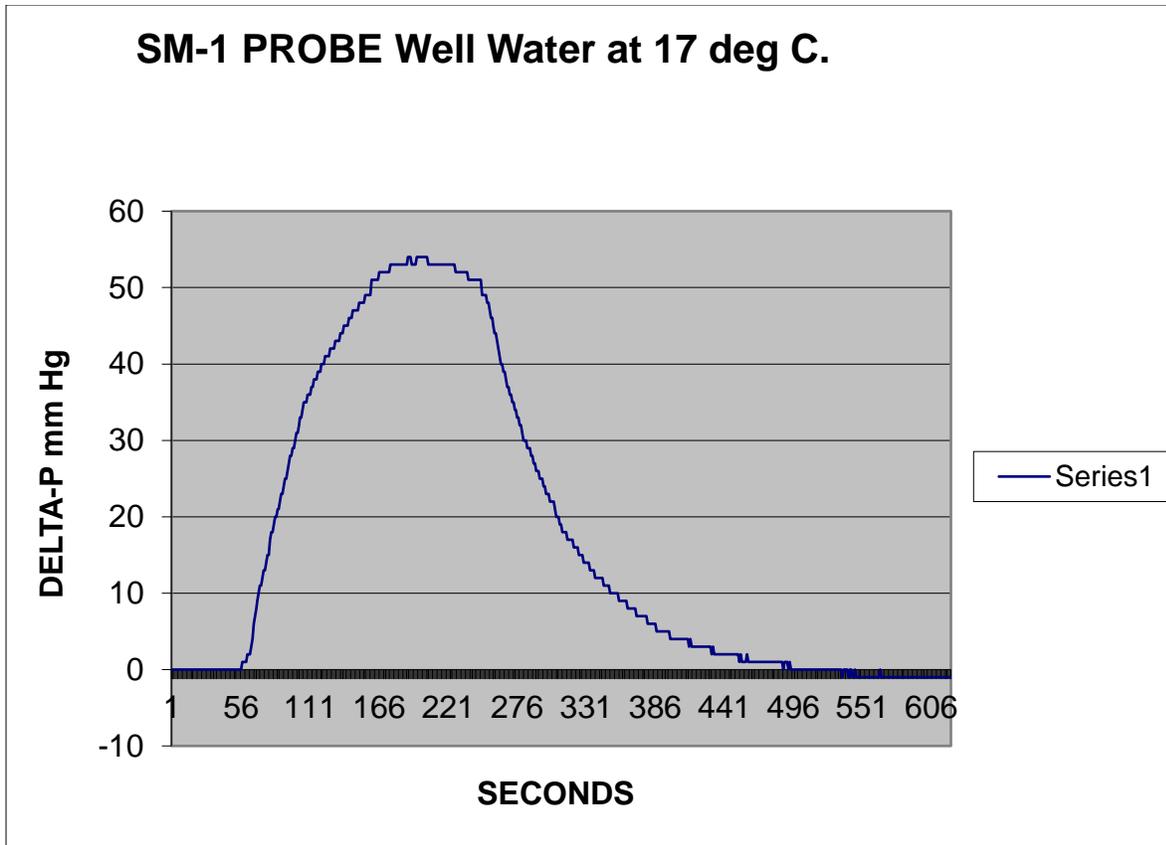
POWER:

9-volt battery (meter draws 10mA current)

OPTIONS:

External AC power pack
Scaled Analog Signal jack for datalogging
(Recommend Onset Model)

PRICE: \$850.00*



Saturation Kinetics for SM-1 Probe

All gasses diffuse at slightly different rates, proportional to their gradient in partial pressure across the silicon rubber membrane, the temperature of the water and an inherent constant, their diffusion coefficient. When saturation is complete – top of above curve – it means that the total flux of all gases into the lumen of the silastic tubing equals the flux of gases out of the tubing, with no net change in pressure and a reliable level of TDGP can be recorded.

* Prices can change without notice