



ENMET Corporation Oxygen Monitors—Accuracy Statement

ENMET Corporation markets a variety of instruments which contain an electrochemical oxygen sensor of either the “capillary diffusion barrier” type or the “polarographic” (partial pressure) type. The model numbers and their normal O₂ cell are tabulated below:

Model	Capillary Diffusion Barrier O ₂ Cell	Polarographic O ₂ Cell
Recon 1	X	
Recon 4	X	
Target	X	
AM-5175	X	
ISA-300RAL-OD	X	
ProAir-2200	X	
GSM-60	X	
ISA-60M		X
MedAir-2200	X	
Matrix		X
EX-5175	X	
SDS-97D	X	

Accuracy of the above devices is $\pm 0.1\%$ by volume oxygen at alarm point. For most devices that alarm point level is 19.5% by volume oxygen. The Lower Detectable Limit (LDL) for the above devices is generally .2% by volume oxygen. It should be noted that the capillary diffusion barrier oxygen cell is best used over the range of 5 to 30% by volume oxygen and is relatively immune to altitudes or weather fronts (i.e. changes in “partial pressure” of oxygen). The polarographic oxygen cell is, however, responsive to the partial pressure of oxygen in any sample, not the volume % oxygen being monitored, and as such will vary with elevation significantly above sea level or with major storm systems (i.e. “low pressure”). When re-set or “re-zeroed” for altitude or a low pressure weather system, the polarographic oxygen cell has the same $\pm 0.1\%$ by volume oxygen accuracy at alarm point.

Users of ENMET instruments containing either type of oxygen sensor should be aware of the following:

- $t_{90} \approx 15$ seconds (time to 90% of final value to an oxygen change of concentration)
- Acceptable humidity $\approx 0-99\%$ RH (non-condensing)
- Acceptable temperature $\approx -20^{\circ}\text{C}$ to $+50^{\circ}\text{C}$
- Digital display increments $\approx 0.1\%$ by volume oxygen