



General Specifications of the O₂D₁

Specifications, performance standards and limits are derived from actual units tested, characterized or calculated.

Specifications are subject to change without notice.

Allowable respiration rates:	Adaptive: up to 43 bpm. And down to ~ 5 bpm.
Apnea time-out envelope:	Adaptive: ~40 sec Pa. 0-12 K ft., ~30 sec. Pa. 13-18 K ft., 20 Sec. at and above Pa. 18 K ft. Apnea alarm does not respond if in any of the 'D' modes and while below that pressure altitude threshold.
Operating inlet pressures:	1 bar (15 psig.) DYNAMIC (flowing) through cannula and 1.5 meters (5 ft.) of 4 mm. inlet tubing 2 bar (30 psig.) STATIC (non-flowing) 2.2 bar (35 psig) MAX.

Operating & storage temperatures, altitudes, vibration @ humidity, (assumes nominal operating voltage):

Temp range @ ~10% RH:	-40° to +60° C. (Storage for complete unit less battery)
Temp range @ ~25% RH:	0° to +60° C. (Operating with std. valve)
Temp range @ ~100% RH NC:	+5° to +60° C. (Operating with std. valve) Unit not water-proof, keep dry from spray & rain.
Altitudes @ up to ~100% RH:	-100 to +30 K ft. Pressure Altitude range @ +5° to +60° C. (Operating with std. valve)
Vibration:	Random vibration 5 to 500 Hz, 15 minutes per axis @ 2.5 g. (rms) sin wave.

Physical characteristics (EDS-O₂D₁ unit only):

Width @ widest point:	3.11" (79 mm)
Height, including connectors:	5.23" (130 mm.)
Height, enclosure only:	4.62" (117 mm)
Thickness, front to rear:	0.95" (24.15 mm)
Weight:	8.2 Oz. (0.233 kg.) with batteries

Operating Voltage & Current @ 25° C. @ ~25% RH. (measured in the 'N' mode setting @ 15 RESP/ typical.):

Battery types:	2 ea. Standard 1.5 volt alkaline type 'AA' or equivalent. Use only alkaline type.
Battery Life:	100 to 150 Hrs. @ ~25° C. @ ~25% R.H. Measured from mean, assuming fresh alkaline batteries operating under normal operating conditions. No metallic connection is made in the off position. Make sure alkaline batteries are used and removed during long-term storage.
Reverse battery protection:	Diode shunt (1 amp peak max. no internal fuse or over voltage protection is provided) No external power capability is provided.
Low-battery cut-out:	< 2.0 VDC ± 40 mv. (Red LED on steady unit in non-responsive state 'dead')
Min. start-up (very low batt):	~2.25 VDC @ 2.25 ma. idle (100 ma. peak, 3.25 ma. Avg.) (Red LED winking 1/sec.)
Low batt signal:	~2.4 VDC @ 2.25 ma. idle (100 ma. peak, 3.25 ma. Avg.) (Red LED winking 2/sec.)
Nom.:	~2.75 VDC @ 2.25 ma. idle (100 ma. peak, 3.25 ma. Avg.)
Max.:	~3.5 VDC @ 4.30 ma. idle (100 ma. peak, 3.25 ma. Avg.)

Notes:

The low battery cut-out feature provides a known state of action if the batteries are depleted to the point of inadequate power to operate the unit to any of the declared specifications. In addition, this feature was found to be prudent because, while many of the specifications may stay intact, false triggering of the valve may confuse the operator of a problem other than low batteries. The minimum 'start-up' voltage is where the unit will initiate the built-in test and commence operations. However, it should be noted that, during this operation, if the batteries are then measured to be too low the lock-up feature may then shortly ensue. This should help the operator in determining if the unit is bad or if the batteries are too low. A unit that has low batteries that cause 'lock-up' will most likely initially start-up if left off for some time. Alkaline type batteries have so-called self-rejuvenating properties that may cause the user to stall battery replacement. Obviously, dead batteries will yield no action.