

Specifications	Fiber optic instrument	
	Witrox 1	Witrox 4
Compatible oxygen sensor	Flow through, dipping probe & sensor spots	
Oxygen channels	1	4
Temperature sensor (included)	Pt1000 Class (B 1/3 DIN) +/- 0.15°C	
Temperature channels	1	
Power supply	5 V	
Power consumption	max. 2.5W	
Environmental conditions	Operating temperature = 0° to 50° C	
Power adapter	100-240V AC in; 5V DC out	
Communication interface	Bluetooth 2.0	
Protection class (with/without connections)	IP64 / IP30	
Certified	CE	
Dimensions [mm]	190 x 135 x 60	
Weight [g]	1130	1250
Windows version	XP, Vista, WIN7, WIN8	
Warm up time	5 min	
Oxygen unit	% oxygen saturation, % air saturation, kPa, Torr, mg/L, mmol or ml/L.	
Measurement range	0 – 100 % oxygen saturation 0 – 475 % air saturation 0 – 100 kPa 0 – 750 Torr 0 – 45 mg/L 0 – 1400 µmol 0 – 45 ml/L	
Limit of detection	0.03 % oxygen 0.15 % air saturation 15 ppb	
Resolution	± 0.01 % O2 at 0.21 % O2 ± 0.1 % O2 at 20.9 % O2 ± 0.1 hPa at 2 hPa ± 1 hPa at 207 hPa ± 0.14 µmol at 2.83 µmol ± 1.4 µmol at 283.1 µmol ± 0.0475 % air saturation at 1 % air saturation ± 0.475 % air saturation at 100 % air saturation	
Accuracy	± 0.4 % O2 at 20.9 % O2 ± 0.05 % O2 at 0.2 % O2 ± 2 % air saturation at 100 % air saturation ± 0.25 % air saturation at 1 % air saturation	
Drift at 0 % oxygen (sampling interval 1 min)	< 0.03 % O2 within 30 days < 0.15 % air saturation within 30 days	
Temperature measuring range	0 – 50 °C	
Response time (T90)	< 6 sec. (gas) < 40 sec. (liquid)	
Precision	± 0.5 % air saturation ± 0.105 % O2 ± 1.05 hPa ± 1.5 µmol ± 0.105 % O2 ± 0.05 mg/L	
<b>Sensor properties</b>	<b>MINI</b>	
Compatibility	Aqueous solutions, ethanol, methanol	
No cross-sensitivity with	pH 1 – 14 CO2, H2S, SO2 Ionic species	
Cross-sensitivity to	Organic solvents, such as acetone, toluene, chloroform or methylene chloride Chlorine gas	
Sterilization procedures	Ethylene oxide (EtO) Steam sterilization Gamma irradiation	
Cleaning procedures	3 % H2O2 Cleaning in place (CIP, 5 % NaOH, 90 °C, 194 °F) Acidic agents (HCl, H2SO4), max. 4 – 5 %	
Calibration	Two-point calibration in oxygen-free environment (nitrogen, sodium sulfite) and air-saturated environment	
Storage Stability (dark room, 20 °C +/- 5 °C)	2 years	