

# Specifications, Oxigraf X2004

## 0.1 Measuring Range, Accuracy, Cross Sensitivity

	LN Low Noise Air Mixtures only Mode	XC Cross Corrected Any Foreign Gas Mode	Range
Measuring Range			5 ... 100 Vol.% O <sub>2</sub>
Resolution	0.01 Vol.%	0.01 Vol.%	5 ... 100 Vol.% O <sub>2</sub>
Noise (80 ms average)	± 0.1 %	± 0.3 %	5 ... 100 Vol.% O <sub>2</sub>
Linearity <sup>1</sup>	± 0.2 Vol.%	± 0.2 Vol.%	5 ... 100 Vol.% O <sub>2</sub>
Pressure-Dependence	± 0.2 Vol.%	± 0.2 Vol.%	25 ... 115 kPa, 5 ... 100 Vol.% O <sub>2</sub>
Drift (2 hrs.)	± 0.1 Vol.%	± 0.3 Vol.%	5 ... 100 Vol.% O <sub>2</sub>
Cross-Sensitivity (O <sub>2</sub> -balance)	±0.2 %	± 0.2 Vol.%	100 ppm NO <b>and</b> 70 Vol.% N <sub>2</sub>
	+5%	± 0.2 Vol.%	50 Vol.% Xe
	+5%	± 0.2 Vol.%	50 Vol.% He
	- 5%	± 0.2 Vol.%	50 Vol.% N <sub>2</sub> O
	- 5%	± 0.2 Vol.%	50 Vol.% N <sub>2</sub> O <b>and</b>
	-0.2%	± 0.2 Vol.%	5 Vol.% CO <sub>2</sub> <b>and</b>
	NA	± 0.2 Vol.%	4 Vol.% Halothane <sup>2</sup> <b>or</b>
	NA	± 0.2 Vol.%	5 Vol.% Enflurane <sup>2</sup> /Isoflurane/Sevoflurane <sup>2</sup> <b>or</b>
NA	± 0.2 Vol.%	15 Vol.% Desflurane <sup>2</sup>	

## 0.2 Response-Times T90 (10% to 90%)

Flow at inlet (ml/min)	T90 (ms)
200	130
150	150
50	300

<sup>1</sup> 1-point calibration with 20,9 Vol% O<sub>2</sub> (ambient air)

<sup>2</sup> At least one of these quaternary mixtures must be tested. The corresponding anesthesia agent shall be defined by Oxigraf

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## 0.3 Power Supply Requirements

	<b>+ 5 V Input</b>	<b>+ 12 V Input</b>
Output Voltage (V)	+ 5.0 ± 0.25	+ 11.4 ... + 15.8
Min. Load Current (mA)	0	25
Max. Load Current (mA)	2500	750
Typical Load Current (mA)	200	200
Ripple Noise (mV)	50	100

## 0.4 Operating/storage conditions

	<b>Measuring Gas</b>	<b>Ambient Operating Conditions</b>	<b>Ambient Storage / Transport Conditions</b>
Temperature (°C)	+ 45	0 ... + 50	- 40 ... + 70
Relative Humidity (%)	5 ... 95	5 ... 95	5 ... 95
Pressure (kPa)	25 ... 115	57 ... 110	11,5 ... 110

Initialization time at a start temperature of 20°C:

- ❖ 40 sec to operation
- ❖ 3 min to meet ISO spec.<sup>3</sup>
- ❖ 5 min. to meet accuracy spec.

Calibration: Calibration-interval 2 hrs (1-point calibration with 20,9 Vol% O<sub>2</sub>).

Operating laser diode median lifetime > 100,000 hrs.

Limited warranty: 1 year repair/replace at factory

Electronic sampling (rate/period): 108.7 Hz / 9.2 ms  
(to prevent any interference with pneumatic noise at 50 Hz)

Interface: RS 232 serial, 9600 baud

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<sup>3</sup> Iso spec.: Specification according to ISO 7767 / EN 12598