

# FC-10 Oxygen Analyzer

Single channel oxygen measurement with barometric pressure compensation

The FC-10 oxygen analyzer is the instrument of choice for single channel oxygen measurements in applications such as respirometry, metallurgy and tissue culture. Oxygen resolution down to 1 part per million, low noise and low drift make it perfect for demanding applications.

Unlike zirconia-cell O<sub>2</sub> analyzers, the FC-10 oxygen analyzer runs at room temperature and requires only a minute of warm-up time. Low operating temperature makes it more reliable than oxygen analyzers that rely on heated sensors. Furthermore, the FC-10 does not interact with CO<sub>2</sub>, water vapor or volatile organic compounds. The long-life fuel cell sensor lasts approximately 18-36 months in normoxic service and can be replaced by the user in less than 5 minutes. Though designed primarily as a bench instrument, the FC-10 O<sub>2</sub> analyzer is rugged, light and power-thrifty enough to use in the field as well.



## FEATURES

Barometric pressure compensation eliminates errors caused by ambient pressure variation

Easy to use controls allow researchers to span, calibrate and change multiple settings at the instrument

Robust, low noise fuel cell technology

Range 0-100% O<sub>2</sub>; resolution 0.0001%

Intuitive Menu System

Internal 16-bit A/D conversion

Digital filtration



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## SPECIFICATIONS

<b>ACCURACY AND RESOLUTION</b>	At constant temperature, accuracy better than 0.1% of full scale, 1 – 100% oxygen, resolution 0.0001%O <sub>2</sub> ; Barometric pressure accuracy better than 0.05% of full scale, resolution 0.0001 kPa
<b>ANALOG OUTPUT</b>	Oxygen (5 ranges, 3 ranges zero-suppressed); Barometric pressure (3 ranges, 2 ranges zero-suppressed); Temperature (3 ranges, 2 ranges zero-suppressed); User-defined. 0-5V output with 16 bit resolution on all outputs
<b>CONCENTRATION RANGES</b>	Oxygen- 0 – 100% (best accuracy above 1%) or 0 – 105 kPa O <sub>2</sub> partial pressure; barometric pressure 30 – 110 kPa
<b>CONNECTIONS</b>	Nickel plated barb fittings for 1/8" (3 mm) i.d. flexible or semi-rigid tubing; other fittings available to special order
<b>DISPLAY</b>	Digital, 2 X 16 alphanumeric LCD
<b>NOISE AND DRIFT</b>	At constant temperature, flow rate and oxygen concentration – Noise < 0.002% peak-to-peak over 20 minutes (digital filtration 2 seconds); Drift < 0.01% over 24 hours
<b>POWER REQUIREMENTS</b>	12 – 24VDC (12 VDC nominal), < 100 mA. Universal adapter supplied
<b>READOUT</b>	Simultaneous display of oxygen (0.0001 % or 0.0001 kPa resolution) and barometric pressure (0.0001 kPa resolution)
<b>RESPONSE TIME</b>	< 7 seconds for 10-90% of a step change at 200 ml/minute
<b>SERIAL DATA OUTPUT</b>	RS232-8N1, baud rate adjustable from 9600-115200, polled or broadcast at user definable intervals from 0.2 – 600 seconds
<b>DIMENSIONS (W X D X H)</b>	12 x 12 x 4 in. (30.5 x 30.5 x 10.2 cm)
<b>WEIGHT</b>	5 lb (2.5 kg)
<b>TECHNOLOGY</b>	Fuel cell, up to 36 month life, user replaceable; temperature compensation internal to the fuel cell, optimized over 15-45 degrees C range

## ABOUT US

Sable Systems International designs and manufactures leading-edge gas, metabolic and behavioral measurement systems for calorimetry, respirometry, metabolic/behavioral phenotyping, and gas analysis. Our products enable the highest precision and resolution, optimum workflow and reliable performance – giving you utmost confidence in your results. Scientists the world over rely on Sable technology for their research needs in physiological, biomedical, environmental, and gas analysis applications.



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