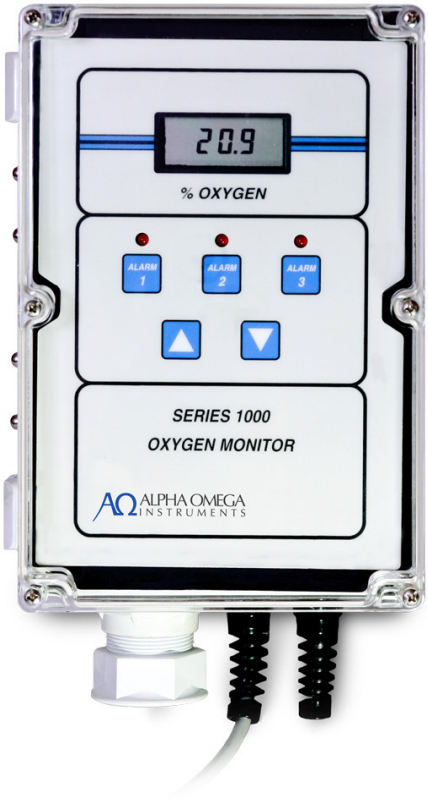
ALPHA OMEGA INSTRUMENTS

SERIES 1000

Oxygen Monitor



FEATURES	BENEFITS
Full three-year sensor warranty	Ensures trouble-free and cost-effective operation when compared to sensors having 6-12 month warranties
Exceptional speed of response	Detects oxygen alarm events in seconds
Extended life oxygen sensor	Eliminates frequent sensor replacement and annoying false low oxygen alarms. Won't fail due to heat fatigue like certain high temperature current limited zirconium oxide sensors.
Economically priced	Saves hundreds of dollars per point
WATCHMAN CIRCUIT™	Alerts users of major status changes in the Series 1000 Oxygen Deficiency Monitor and the environment
CO_2 resistant sensor	Eliminates sample conditioning and premature sensor failures, while minimizing routine maintenance
Extended life sensor with an expected life of five years	Be aware of high temperature current limited zirconium oxide sensors that can prematurely fail due to heat fatigue.
Open sensor diffuser	No dependence on a sample pump or aspirator

Product Description

The Series 1000 Oxygen Deficiency Monitor is a popular choice of government labs, universities, and industrial facilities to help ensure the quality of breathing air. The Series 1000 Oxygen Deficiency Monitor's primary use is for applications when the possibility exists that breathing air oxygen could be displaced by stored or piped inert gases such as nitrogen, helium, argon, carbon dioxide, etc. resulting in a hazardous condition.

The Series 1000 Oxygen Deficiency Monitor is a microprocessor-controlled instrument with a range of 0-30%. It is powered from 110/230VAC, 50-60Hz, or 18-32VDC. Battery backup is optional. Oxygen values are displayed on an easy-to-read, 10.2 mm (0.4") high, 4-1/2 digit liquid crystal display (LCD). The Series 1000 Oxygen Deficiency Monitor can be equipped with an optional remote sensor enclosure. The oxygen sensor is mounted in a resilient, polycarbonate electronics enclosure. An optional remote sensor enclosure is available for mounting up to several thousand feet from the monitor. In its standard configuration, the electronics enclosure is rated NEMA 1 (IP 30).

The eloquence of the Series 1000 Oxygen Deficiency Monitor is its ease of use. The electronics and optional remote sensor enclosures are equipped with mounting holes molded into each of the four corners for quick and easy installation. The front panel of the Series 1000 Oxygen Deficiency Monitor contains five switches that provide access to the instrument's settings. The Series 1000 Oxygen Deficiency Monitor is equipped with three oxygen alarm relays and one status alarm relay.

All four relays are Form C (SPDT) types rated at 10 amps at 110/220VAC and 30VDC.The relays are user configurable for fail-safe operation. In addition to the four alarm contacts, the Series 1000 Oxygen Deficiency Monitor has a built-in audible alarm and three red LEDs for visual indication of an oxygen alarm condition. The audible alarm may be manually canceled at any time. If the audible alarm is canceled and the alarm event continues, indications of this condition will still be available through the front panel LEDs and the relay contact(s).

The Series 1000 Oxygen Deficiency Monitor comes equipped with two standard analog outputs: 4-20mADC and 0-2VDC for use with recorders, dataloggers, etc. For enhanced communications, the Series 1000 Oxygen Deficiency Monitor can also be configured with optional RS-232C or RS-485 serial communications. For multiple point installations, the RS-485 format provides the capability to send digital signals over greater distances and to control each monitor using the same communications channel.

The sensor in the Series 1000 Oxygen Deficiency Monitor has an open diffuser design and does not require a sample pump or aspiration system. Since the extended life sensor is sealed, it does not require an initial charge of electrolyte, or a periodic "topping off" due to evaporation, as do other types of oxygen sensors. Users do not have to handle caustic electrolyte (a hazardous substance).

Specifications

PERFORMANCE

Measurement Range:	0-30% Oxygen
Accuracy:	±1% of full scale
Response Time:	90% of full scale response in less than 12 seconds
Sensor Type:	Extended Life Ambient Temperature Electrochemical Type
Temperature & Pressure Compensation:	Standard
Operating Temperature:	5° to 38°C (40° to 100°F).
Product Warranty:	Three years-includes both sensor and electronics.

ELECTRICAL

Display:	10.2 mm (0.4") high, 4-1/2 digit liquid crystal display. Resolution 0.1%
Input Power:	110/230VAC, 50-60Hz or 18-32VDC. Battery backup is optional
Standard Outputs:	4-20mADC and 0-2VDC
Optional Outputs:	RS-232C or RS-485
Oxygen Alarm Relays:	Three (3) SPDT Form C contacts rated 10 A @30VDC/110/220VAC. Alarm clearing is user selectable for either manual or automatic.
Audible Alarm:	Internal buzzer.
Audible Alarm Cancel:	Front panel.
Instrument Status Alarm Relay:	1 SPDT Form C rated identical to above.

CONSTRUCTION

Electronics Control Unit:	Light gray polycarbonate with a hinged clear front cover. Rated NEMA 1 (IP 30).
Electronics Control Unit Dimension:	9.44 in. (239.8 mm) length 6.29 in. (159.8 mm) width 3.54 in. (89.9 mm) height

Note: All dimensions are without optional equipment

Sensor Mounting:	Either in the electronics enclosure or remotely
Sensor Inputs:	One
Optional Remote Sensor Enclosure:	Light gray polycarbonate rated NEMA 1 (IP 30).
Remote Sensor Enclosure Dimensions:	4.72 in.(119.9 mm) length 3.14 in.(79.8 mm) width 3.34 in. (84.8 mm) height

Note: All dimensions are without optional equipment

Weight (Control Unit):	4.08 kg. (9 lbs.)
(Remote Sensor):	<0.45 kg (<1 lb.)

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40 Albion Road, Suite 100, Lincoln, RI 02865
Tel: 401.333.8580, 800.262.5977 Fax: 401.333.5550
Email: salescontact@aoi-corp.com Web: aoi-corp.com