

MODEL PURE N2



Neutronics
Gas Analysis Solutions

Portable Trace Oxygen Analyzer



Lightweight. Reliable. Fast.

- ppm to 100% measurement range
- rapid-response Neutronics zirconia oxide sensor
- suitable for a wide range of operating gas temperatures
- less than 10 seconds from air to ppm levels
- portable design with built-in high purity sample pump
- 5 year sensor life with no regular service required

Description

The Model Pure N2 is a portable analyzer designed to accurately measure oxygen in the range of 100% to 0.1 ppm. Featuring the Neutronics rapid response zirconia oxide sensor with its extremely fast response and high accuracy, the Model Pure N2 can be exposed to air and within seconds read ppm oxygen in a variety of background gases, including Nitrogen, Argon, and Helium.

Portable Design

The Model Pure N2 is a completely self-contained instrument that is unaffected by position or motion. The unit includes a built-in high purity sample pump to extract the gas from a process sampling point. Sample gas is directed through the internal tubing to a pressure release bypass valve that controls the system back pressure and a slipstream flow allowing for a faster response time. A fixed orifice is used to reduce the pressure and flow of the sample gas as it flows to the sensor.

Rapid Response zirconia Oxide Sensor

The robust design of the Neutronics zirconia oxide sensor gives this analyzer the ability to rapidly measure oxygen through large step changes in concentration and the ability to accurately measure ppm concentrations of oxygen within seconds after exposure to air. When heated to an elevated temperature, the rapid-response zirconia oxide sensor produces a predictable electrical output in response to changes in the partial pressure of oxygen. The sensor is a solid-state device that utilizes yttria-stabilized zirconia (YSZ), a zirconium-oxide based ceramic.

Precise Sensor Temperature Control

Critical to reliable performance and rapid response, the Model Pure N2 includes a precision controlled sensor heater assembly designed to maintain the temperature of the sensor at 650° C by continuously modulating the VAC electrical power input. To meet strict heat loss requirements, the sensor heater housing utilizes high temperature microporous insulation, a low density material with an extremely low thermal conductivity.

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Long Sensor Life

The expected service life for the Neutronics zirconia oxide sensor is greater than 5 years. The sensor has an unlimited shelf life and will not dry out or freeze.

Two Adjustable Alarms

The analyzer has the flexibility to set the alarms for high/low, high/higher, or low/lower as required. The user has the option to change the alarm values and to turn the alarms on or off. Relay contacts are located on the back panel.

Communication Options

The user has a choice of options for communicating between the Mini-ICS analyzer and the operating system controller. Two analog outputs are available: 4-20mA and 0-1VDC. The RS-232 digital interface gives the user access to all settings and allows for the host controller to monitor oxygen concentration, temperature, sensor voltage and other parameters.

Auto or Fixed Range Measurement

The Model Pure N2 range values are set to auto-range to a maximum of 1% or 9,999ppm. To configure analog outputs beyond 1%, the auto-range setting can be turned off so that the user can set the maximum reading in ppm.



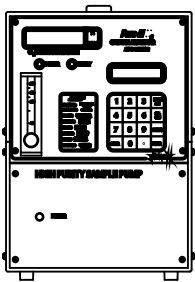
MODEL Pure N2

Process Oxygen Analyzer

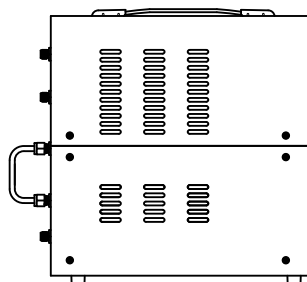
Specifications

Type	Portable trace analyzer
Operating range	0.1ppm to 100% oxygen, fixed or auto-range (auto-ranging between 0.001ppm to 99.9%)
Sensor type	Neutronics rapid response zirconia oxide
Expected sensor service life	>5 years
Accuracy	1- 100 ppm \pm 5% of reading 1- 999 ppm \pm 2% of reading 115 VAC \pm 20% of reading
Response time	T90 < 5 seconds at 1 liter/min sample flow rate 95% of step change in 5 seconds
Sample pressure	10mm Hg vacuum to 250mm Hg positive pressure
System flow rate	0.5 to 1.5 liters/minute
Warm up time	20 minutes
Relative humidity	0 to 95%, non-condensing
Operating temperature	32 to 122° F (0 to 50° C)
Ambient temperature	32 to 122° F (0 to 50° C)
Power supply	115/230 VAC, 50/60 Hz (power cord included)
Display	3-digit LED digital display of oxygen concentration, dot matrix display of diagnostics
Signal interface	RS-232 serial port 0-1V \pm 0.5% analog output 4-20mA analog output
Relay outputs	Two available, 5A, 220V rated
Warranty	12 months from date of shipment
Dimensions	13.55" (344mm) length x 9.00" (229mm) width x 14.75" (375mm) height
Ratings	Faceplate: NEMA 4 (IP66)
Sampling system MOC	316 SS fittings and tubing
High purity pump MOC	316 SS head, Teflon diaphragm, Viton seals
Weight	12 lbs. (5.4 Kg)

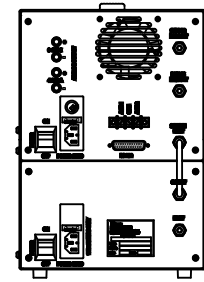
Specifications are subject to change without notice.



Front View



Side View



Rear View

Order Information

Part

C7-01-1000-16-0

C5-06-4900-13-0

Part Number

Pure N2

Operations manual



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