

Model 1100 Percent Oxygen Analyzer



Compact Oxygen Analyzer for high purity process control applications



DESCRIPTION

The MSA Model 1100 Percent Oxygen Analyzer, powered by Neutronics Technology, is a compact analyzer for oxygen gas measurement and process control applications. Designed for a measurement range of zero to 100% oxygen, the unit features a reliable electrochemical sensor that can be mounted remotely at the sampling point to ensure a fast response time. A flow-through mounting head allows the sensor to be horizontally or vertically mounted directly into the sampled process gas stream.

Features

0 to 100% measurement range

Remote mounted electrochemical sensor

Auto-range or fixed range O₂ measurement

Two adjustable alarms with configurable relay outputs

Fast single-gas or two-gas calibration

The Model 1100 is shipped ready to install and operate with the complete configuration already programmed and tested by the factory. Setup parameters may be changed by the user by accessing the setup menu by pressing the buttons on the keypad. All parameters may be changed by using the RS-232 service port interface.

The user has a choice of options for communicating between the Model 1100 analyzer and the operating system controller. Two analog outputs are available: 4-20 mA and 0-1, 0-5, or 0-10 VDC. The RS-232 digital interface gives the user access to all settings including the option to restore the analyzer to its “out-of-box” or factory delivered settings. The easy to read 7-segment large alphanumeric display shows the oxygen concentration and guides the user through system setup, calibration, and maintenance procedures. Alarms with configurable relay outputs initiate active modes and light indicator LEDs based on user defined settings. The alarm status clears automatically when the measured oxygen concentration is within the set threshold value.

Description	Part Number
1100BE-N1, 90-264 VAC (3-pin connector)	C7-01-1100-03-0
1100BEL-N1, 90-264 VAC (locking right angle connector)	C7-01-1100-03-1
1100BE-N1S, 90-264 VAC (terminal block connector)	C7-01-1100-03-3
1124BE-N1, 24 VDC (3-pin connector)	C7-01-1124-02-0
1124BEL-N1, 24 VDC (locking right angle connector)	C7-01-1124-02-1
1124BEL-N1, 24 VDC (locking right angle connector)	C7-01-1124-02-3*
1124BE-N1S, 24 VDC (terminal block connector)	C7-01-1124-02-2
CAG-250E sensor	C1-16-1000-01-0
Interface cable, 2m, locking connector	C6-02-1000-44-2
Interface cable, 2m, locking connector, alternate sensor	C6-02-1000-50-2



MORE INFORMATION:

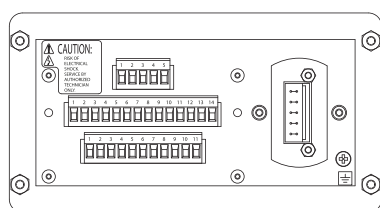
Scan the QR code to learn more about the Model 1100 Percent Oxygen Analyzer and other MSA products.

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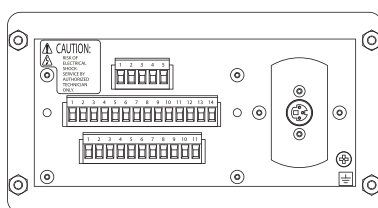


To provide the most accurate and highest resolution outputs at all times, the Model 1100 can be configured to automatically switch the measurement range based on the concentration of oxygen in the process. Remote system control devices require a continuous indication of the analyzer's selected range for accurate scaling. The Model 1100 analyzer features a 0-10 VDC auto-range identification output. Used in conjunction with the analog voltage and analog current outputs when auto-ranging is used, the auto-range ID provides an indication of the analog outputs' selected full-scale.

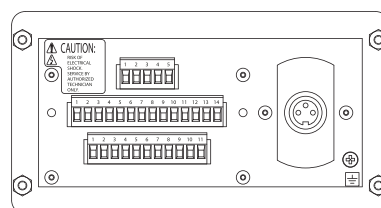
To maintain the highest accuracy and performance, the model 1100 requires single-point calibration with ambient level oxygen (20.9%) at system commissioning and at regular monthly intervals. This simple calibration procedure requires the user to apply the gas to the sensor and then adjust the reading on the analyzer control panel. The model 1100 does the rest. During the initial factory set-up, two-gas calibration using 20.9% oxygen and 1 to 4% oxygen is used to properly configure the analyzer and ensure full range accuracy.



Terminal block connector



Mini-DIN 3 pin connector



Locking right angle connector

Specifications	Description
Type	Percent oxygen analyzer
Operating range	0-1%, 0-10%, 0-25%, 0-50%, 0-100%, auto-ranging or fixed
Sensor	Electrochemical, CAG-250E*
Accuracy	± 2.0% of range @ STP or ± 0.3% absolute
Response time	T90 < 20 seconds
Warm up time	None
Sensor expected life, % hours	>1,500,000% oxygen hours
Sensor expected operating life	> 2 years
Relative humidity (analyzer)	0 to 95%, non-condensing
Operating temperature	Sensor: 5 to 40° C (41 to 104° F), Analyzer: 0 to 65° C (32 to 149° F)
Sample pressure	1 to 3 psig nominal, 7 psig maximum
Display	7-segment, 0.75" alphanumeric LED, 4 characters LEDs for system status: run, fault, alarm-1, alarm-2

Specifications	Description
Power supply	90 to 264VAC or 24VDC
Analog current output	4 to 20mA, 12VDC, powered by the analyzer
Analog voltage output	0 to 1, 0 to 5, 0 to 10VDC
Relay outputs	Two alarm relays, field adjustable Form C (SPDT), One system fault relay, non-adjustable Form B (SPST)
Serial service port	RS-232
Control panel rating	Weatherproof NEMA 4, IP66
Rear electronics chassis rating	NEMA 1, IP20
Warranty	12 months from date of shipment
Enclosure dimensions (LxWxH)	7.00" (119mm) x 4.125" (105mm) x 3.75" (95mm)
Sensor mounting base	1.25" diameter x 1.00" OAH, FNPT inlet and outlet connections
Weight	2 lbs.

Specifications are subject to change without notice.

*Alternate sensors available upon request; service life may vary.

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice. MSA is a registered trademark of MSA Technology, LLC in the US, Europe, and other Countries. For all other trademarks visit <https://us.msasafety.com/Trademarks>.

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