

Model 3100 Percent Oxygen Analyzer



Trace Oxygen Analyzer and Remote Sensing Module (RSM)



DESCRIPTION

The MSA Model 3100, powered by Neutronics Technology, is a compact analyzer that features the rapid response zirconium oxide sensor and a measurement range of 0.1 ppm to 100% oxygen. With its extremely fast response time and high accuracy, the Model 3100 delivers reliable performance for a wide variety of oxygen gas measurement and critical process control applications.

Features

PPM to 100% measurement range

Rapid-response Neutronics zirconium oxide sensor

5 year sensor life

T90 < 5 seconds

Less than 10 seconds from air to ppm levels

The Model 3100 provides a simple solution for a wide range of applications with fast and reliable measurement of oxygen concentrations from 0.1 ppm up to 100%. The Model 3100 does not require any major periodic servicing. Calibration of the sensor should be performed only as needed. Validation of the display to a known gas source should be performed on a regular basis.

The analyzer is not position or motion sensitive. An optional ventilation port may be included on the RSM for dust and temperature control. The Model 3100 is shipped ready to install and operate. Each unit is configured and tested prior to shipment. Configuration parameters may be changed by the user through the setup menu on the keypad or by using the RS-232 service port interface.

The user has a choice of options for communicating between the Model 3100 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 factory delivered settings.

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.

The Model 3100 can be configured to automatically change the measurement range based on the concentration of oxygen in the process. The analyzer features a 0-10 VDC auto-range identification output.

Description	Part Number
3-SPM-N1-SS, RSM (with Pump)	C7-01-1000-50-1
3-SPM-N1-SS, RSM (with Pump, 1/4" VCR Fittings)	C7-01-1000-50-3
3-LP-N1-SS, RSM (Positive Pressure), (110 VAC)	C7-01-1000-52-0
3-LP-N1-SS, RSM (Positive Pressure), (220 VAC)	C7-01-1000-52-2
3-SPM-N1-SS-XPM3, RSM (with pump, 110 VAC)	C7-01-1000-85-0
Model 3100-N1 analyzer module	C7-01-3100-00-0



MORE INFORMATION:

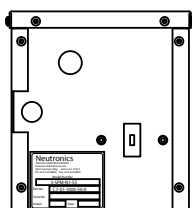
Scan the QR code to learn more about the Model 3100 Percent Oxygen Analyzer and other MSA products.

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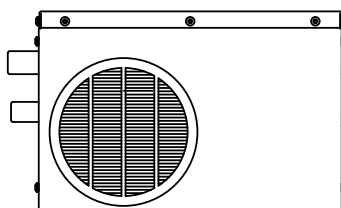


Specifications	Description
Type	Trace oxygen analyzer
Operating range	0-10 ppm, 0-100 ppm, 0-1,000 ppm, 0-10,000 ppm, 0-10%, 0-100%, auto
Sensor	Neutronics rapid-response zirconium oxide, ZR-100
Accuracy	± 2.0% of range @ CTP or ± 0.5 ppm, whichever is greater
Response time	T90 < 5 seconds for order of magnitude change; < 10 seconds from air to ppm
Warm up time	10 minutes to operation; 60 minutes to thermal equilibrium
Sensor expected service life	5-7 years
Relative humidity (analyzer)	0 to 95%, non-condensing
Operating temperature	0° to 40° C (32° to 104° F)
Sample pressure (pump drive)	12inHg vacuum to 7 psig
Sample pressure (positive pressure drive)	6 to 60 psig
Materials of construction	316 Stainless Steel wetted parts
Display	7-segment, 0.75" alphanumeric LED, 4 characters, LEDs for system status: run, fault, alarm-1, alarm-2
Power supply	90 - 264 VAC or 24 VDC
Analog current output	4 - 20 mA, 12 VDC, powered by the analyzer
Analog voltage output	0-1, 0-5, 0-10 VDC
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
Analyzer dimensions (LxWxH)	7.00" (119mm) x 4.125" (105mm) x 3.75" (95mm)
RSM dimensions (LxWxH)	9.22" (234mm) x 5.40" (137mm) x 6.12" (155mm)
Weight	2 lbs. (analyzer); 8.5 lbs. (RSM)

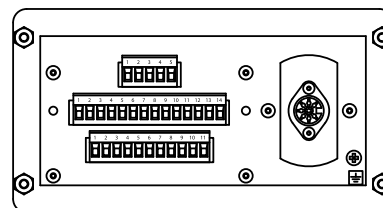
Specifications are subject to change without notice.



RSM left end



RSM side view



Oxygen Analyzer

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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