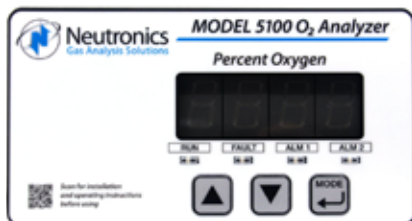


Model 7100 Trace Oxygen Analyzer

Small, stable and reliable, compact series / high purity



DESCRIPTION

The MSA Model 7100, powered by Neutronics Technology, is a compact analyzer designed for trace oxygen gas measurement. This analyzer features a rapid-response mini-zirconia sensor with a measurement range of 0 to 1000 ppm oxygen. Extremely fast response, high accuracy, and no requirement for periodic calibrations make this analyzer a low-maintenance solution that delivers reliable performance for critical process control applications. The compact series analyzers are easy to install. With a small footprint, the analyzers are designed to be flush mounted onto the surface of a control panel and integrated into a wide variety of equipment components.

Features

0 to 1000 ppm measurement range

Mini-zirconia oxide ZR-400 sensor

± 2.0% accuracy

Internal or remote sensor mounting with KF fitting option

T90 < 10 seconds

The reliable ZR-400 is a non-depleting limiting current type device based on a zirconia solid electrolyte sensor with a response time of 10 seconds. Accuracy is to within ±2.0% of the measurement range. Operating service life is 3 to 4 years, and it has an unlimited shelf life. It is not affected by position and can be exposed to high atmospheric pressures with no impact on performance. This robust sensor has low cross-sensitivity to other gases and is unaffected by dry atmospheres or extremely cold storage temperatures.

The Model 7100 is available in two configurations – with the sensor mounted inside the analyzer housing in a flow-through chamber or with the sensor mounted externally and connected with a sensor interface cable. For remote mounting, the sensor is installed in a Stainless Steel housing with either a threaded connection for installation in a flow-through head or with a KF adapter fitting for installation designed for KF flange mounting.

The Model 7100 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 7100 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.

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 7100 can be configured to automatically change the measurement range based on the concentration of oxygen in the process. System control devices require a continuous indication of the analyzer’s selected range for accurate scaling. The Model 7100 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



MORE INFORMATION:

Scan the QR code to learn more about the Model 7100 Trace Oxygen Analyzer and other MSA products.

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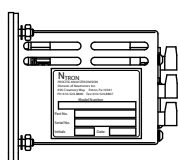


Description	Part Number
7100B-N1, 90-264 VAC, with internal sensor	C7-01-7100-05-0
7100BE-N1, 90-264 VAC, with remote mounted sensor	C7-01-7100-06-X
7100B-N1-CV, 90-264 VAC, with internal sensor and check valve	C7-01-7100-07-0
7124B-N1, 24 VDC, with internal sensor	C7-01-7124-05-0
7124BE-N1, 24 VDC, with remote mounted sensor	C7-01-7124-06-X

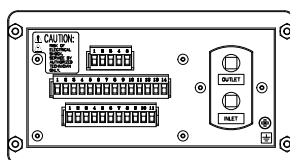
Specifications	Description
Type	Trace oxygen analyzer
Operating range	0-100 ppm, 0-1000 ppm, auto
Sensor	Mini-zirconia, ZR-400
Accuracy	± 2.0% of range @ calibrated temperature and pressure or ± 3 ppm
Response time	T90 < 10 seconds
Warm up time	60 seconds
Sensor expected service life	3 - 4 years
Relative humidity (analyzer)	0 - 95% non-condensing
Operating temperature	0° - 50° C (32° - 122° F)
Sample pressure	15inHg vacuum to 7 psig (0.5 to 1.5 bar)
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

Specifications	Description
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 (SPS)
Serial service port	RS-232
Control panel rating	Weatherproof NEMA 4, IP66
Rear electronics chassis rating	NEMA 1, IP20
Warranty	Analyzer: 12 months, sensor: 6 months
Analyzer dimensions (LxWxH)	7.00" (117.80mm) x 4.125" (104.78mm) x 3.75" (95.25mm)
External sensor dimensions	1.5" diameter x 3.25" long (NEMA 1, IP20)
Weight	3 lbs (1.4 kg)

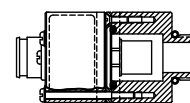
Specifications are subject to change without notice.



Analyzer side view



Internal sensor



Remote sensor

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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