

OA-1 Ozone Alarm

Installation and Operation Manual



Cautions, Warnings and Hazards for working with ozone.

Refer to the manual of the ozone generating system first, to assure proper location of all ozone equipment.

Ozone is a powerful oxidizing agent. Observe strict operating procedures when using ozone equipment.

Ensure that the ozone system is in a well-ventilated area. The OA-1 Ozone Alarm must be used indoors mounted 5-6 ft. from the floor.

Note: If the operator has asthma, he/she must not enter an ozonated airspace. Ozone can induce an asthma attack.

Carefully review and familiarize yourself with the following important safety information statements concerning the use of ozone.

WARNING

Ozone is an extremely aggressive and powerful oxidizer. The Occupational Safety and Health Administration (OSHA) 8-hour exposure limit is 0.10-PPM. The OSHA 15-minute exposure limit for ozone is 0.3 PPM. Above 0.3 PPM, there is the risk of damage to respiratory tissues.

WARNING

People who have no sense of smell should not operate this equipment.

WARNING

Never attempt to verify ozone production by directly breathing or smelling the ozone outlet or an ozone-tubing outlet.

WARNING

Make sure all tubing connections between the ozone generator and the injection point are secure and in good working condition. Failure to do so could result in the discharge of undesired ozone into an occupied space.

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Introduction

The OA-1 ozone alarm is a fixed mount device with an audible alarm and visual strobe light designed specifically for use in human safety applications.

This device features a user-settable alarm point with an auxiliary relay to control external devices such as fans, ozone generators, etc. The relay and alarm trigger together at the user-selected ozone set-point.

A large display is available to indicate both current ozone levels, and a trend of ozone levels over the last 12 hours of operation via a colorful graph.

Features

- Red strobe light will alert of ozone levels above set-point
- Audible siren will alert of ozone levels above set-point
- Volume can be adjusted simply by turning the cover of the siren
- User-settable alarm set-point
- Auxiliary relay (10-amp) can be used for external control, relay triggers simultaneously with the alarm set-point
- Optional display indicates current ozone level and trend of ozone levels over the last 12 hours Built-in fan will actively draw sample air past the ozone sensor
- Three separate ranges available
 - 0-0.1 ppm
 - 0-1.0 ppm
 - 0-10.0 ppm
- 4-20 mA output linear with ozone output
- Field Replaceable Sensor (never remove the unit from service for calibration)

Specifications

Range: Three ranges available

- 0-0.1 ppm
- 0-1.0 ppm
- 0-10.0 ppm

Resolution: Range dependent

- 0.1 ppm range = 0.01 ppm resolution
- 1.0 ppm range = 0.01 ppm resolution
- 10.0 ppm range = 0.1 ppm resolution

Graphic Display: Indicates the current ozone level and past 12 hour trend graph

Response time: Within 8 seconds

Measurement principle: HMOS (heated metal oxide semiconductor) sensor

Size: 11" long x 4.5" deep x 8" wide

Weight: 1 lb

Power requirements: 12 VDC at 300 mA. AC adapters available worldwide.

Relay Outputs: 10 amp relay

Analog output: 4-20 mA output linear with ozone level

Calibration: Replace your sensor annually

Installation

Mount the OA-1 Ozone Alarm in a clean, dust free environment that is non condensing. Recommended mounting height is 5-6 ft.

Ambient Temperature should be between 50 and 86 deg. F.

Ambient Humidity should be in the range of 25 to 75% RH

Remote connections

The OA-1 has a 12-24VDC power adapter included. This may be removed in order to power the device from your control system.

There are 4 remote connection terminals inside the OA-1:

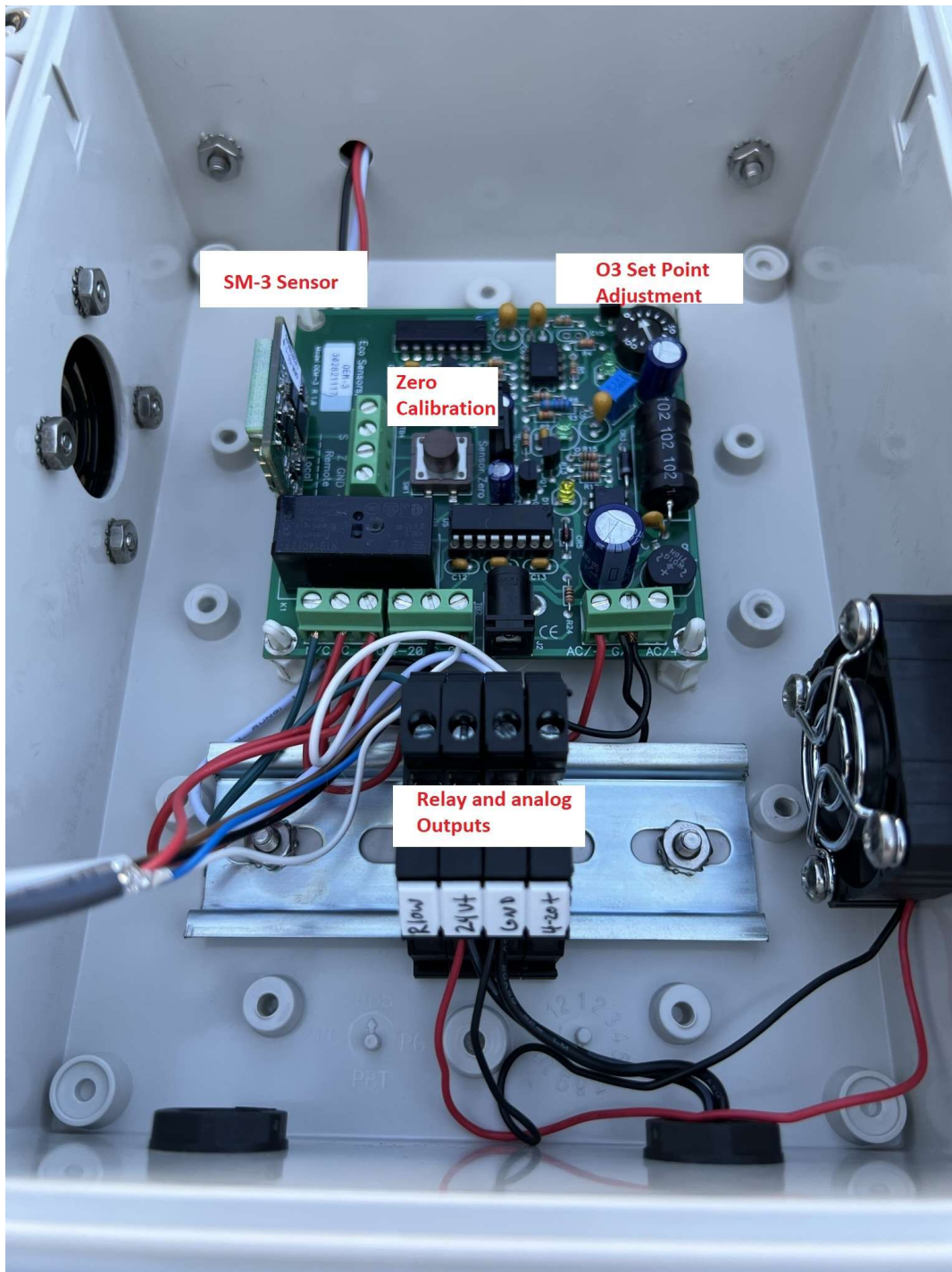
- RO3(+) - 4-20mA signal
- RO3(-) - Common for 12-24VDC supply power and all signals
- 24V(+) - 12-24VDC Supply power positive
- RLOW – 12-24VDC signal ON = LOW (safe) ozone level

Operation

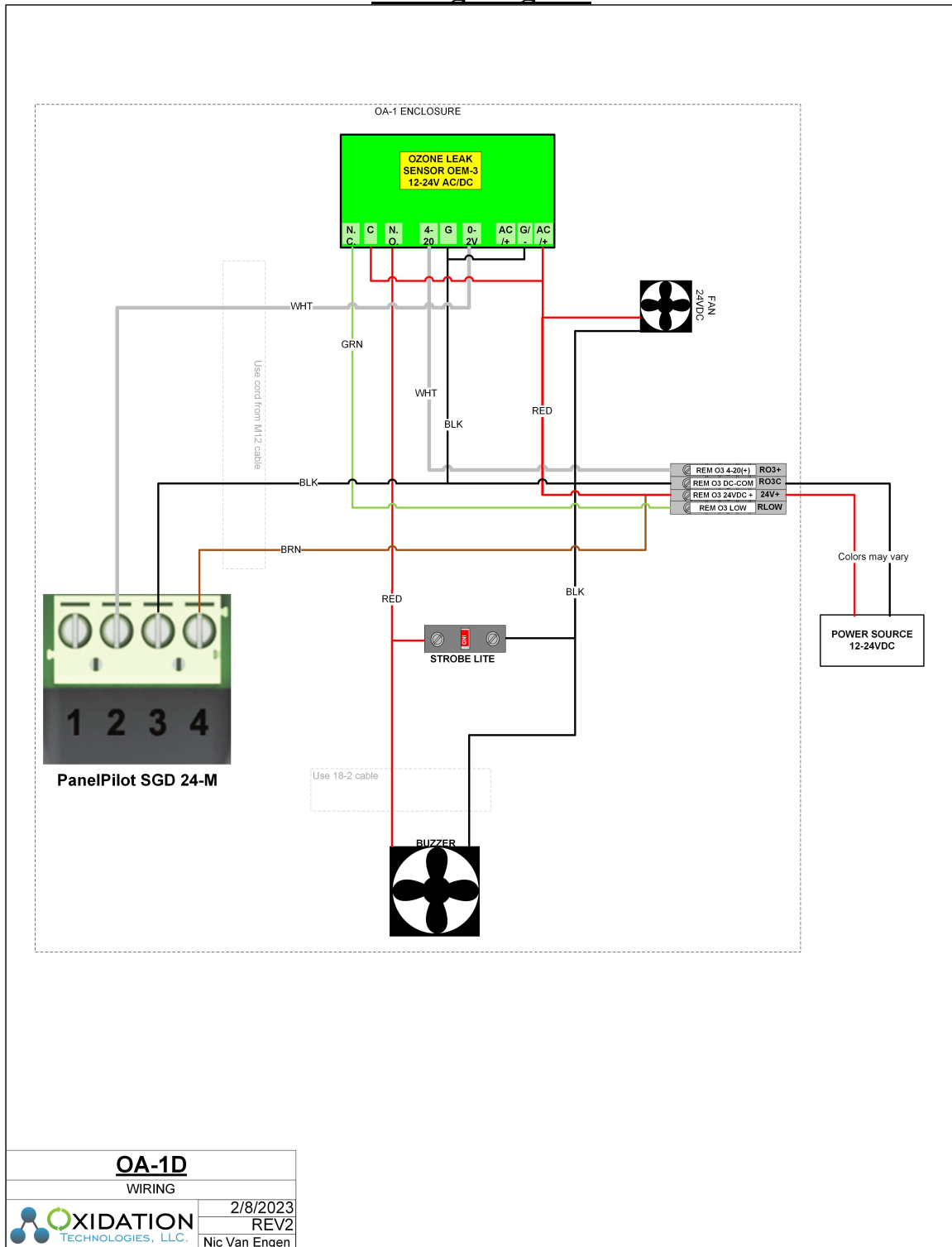
- Power on the OA-1
- The alarm will engage immediately upon powering it up - This is because the sensor needs to warm up. Initial warm up may take from 30 minutes to 1 hour - 12 hours for full warm up.
- After 30 minutes of warm up, press the brown button on the circuit board inside to perform a zero calibration, make sure this is done in an ozone free environment.
- After 12 hours of warm up, perform a zero calibration once more.
- Set ozone alarm set point – The dial in the upper right corner is 100% of sensor range.

Example - If sensor range is 1 ppm, and the alarm is to be set at .1 ppm, the dial will be set to 1.

Internal components



Wiring Diagram



System Maintenance

In the event of any of these components fail, please contact the manufacturer.

MONTHLY

- Perform a zero calibration
- Clean Alarm
- Bump test with ozone

ANNUALLY

SM-3	Ozone Leak Sensor	Replace
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Contact Info

By mail:

Oxidation Technologies, LLC

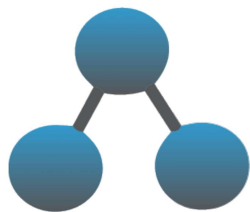
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