

## Ozone Analyzers and Monitors

### Compatibility Chart

	Function	Range/ppm	Outputs	Price
<a href="#">A-21ZX</a>	Hand-held portable	0-10	LCD digital	\$680
<a href="#">A-22</a>	Portable or Fixed	0-20	LCD digital 0-2 V 4-20 mA USB	\$1,100
<a href="#">C-21</a>	Portable or Fixed for VOCs	0-150 VOCs	LED bargraph Audio alarm 0-2 V and relay	\$290
<a href="#">C-30ZX</a>	Fixed monitor with relay and alarm	0-.14	LED bargraph Audio alarm 0-2 V and relay	\$480
<a href="#">DO3</a>	Hand-held for dissolved ozone	0-2 dissolved	LCD digital Audio, LED and vibration alarms	CALL
<a href="#">DOM-1</a>	On-line for dissolved ozone	0-2 dissolved	LCD digital 4-20 mA	\$1,900
<a href="#">EZ-1X</a>	Hand-held portable	0-.14	LED bargraph	\$290
<a href="#">EZ-10W</a>	Hand-held for dissolved ozone	0-.7 dissolved	LED bargraph	\$480
<a href="#">OG-3</a>	Calibration checker	0.1	Ozone outflow port	\$465
<a href="#">OS-1X</a>	Control generators by set-point	.03-.1	Relay contacts	\$370
<a href="#">OS-4</a>	Fixed monitor and controller. Digital.	0-10	LCD digital 0-2 V and relay 4-20 mA and RS-232	\$770
<a href="#">PO3</a>	Hand-held portable	0.02-2.00	LCD digital 8 hour TWA Audio, LED and vibration alarms	CALL
<a href="#">UV-100</a>	UV absorption analyzer and controller	0-900+	LCD digital RS-232 and USB 0-2 V and 4-20 mA Digital data logger	\$3,250

### Accessories

	Description	Price
<a href="#">RAP-2</a>	Remote Alarm Panel and Digital Read-Out	\$500
<a href="#">DL-3</a>	A custom modified data logger for the <a href="#">C-30ZX</a> or the <a href="#">C-21</a>	\$440
<a href="#">EE-2</a>	An environmental enclosure, pre-drilled for the C, EZ, and OS series of instruments	\$220
CUV-1-B	Carrying case for the UV-100	\$780
ZOF-1	Zero ozone filter (scrubber) for the UV-100	\$28

## UV Ozone Analyzer

Model UV-100



The model UV-100 ozone analyzer is for general purpose measurement of ozone in air. Its range is .01-900 ppm (v) with 2% accuracy, and it includes a built-in data logger. The UV-100 weighs only 2.1 kg (4.7 lb), it is powered by an AC adapter or 12 V external battery, and is equally versatile for the laboratory or for process monitoring. The outputs are digital display, 0-2.5 VDC and 4-20 mA. The instrument features LEDs to indicate calibration is due, the sample line filter should be replaced, and that the sampling area is above the danger limit of .1 ppm.

### Specifications:

- **UV Source:** 254 nm mercury lamp
- **Range:** .01-900 ppm v/v in 3 ranges: 0-1.00 ppm, 0-10.0 ppm, 0-900.0 ppm
- **Outputs:** Digital display, 0-2.5 V, 4-20 mA, data logging
- **Accuracy:** 2%
- **Sampling time:** 10 seconds
- **LED Indicators:** On-off, Recalibrate, Change Filter, >.1 ppm at sample area
- **Size:** 95 x 210 x 216 mm (3.75 x 8.25 x 8.50 in)
- **Weight:** 2.1 kg (4.7 lb)
- **Power requirement:** 12 VDC at 400 mA.
- **Warranty:** One year

## Dissolved Ozone Monitor

On-line, 0-2 ppm, Low Cost, Rugged Model DOM-1



Using proprietary technology, our instrument strips the ozone from the water stream and reads it as the concentration of ozone released into a measuring chamber. This has advantages over conventional methods for measuring dissolved ozone.

### Typical applications:

- Bottled water plants
- Food treatment systems
- Equipment sterilizing systems
- Wastewater treatment monitoring
- Factory pure water process and control

### Features:

- Specific to ozone
- Insensitive to most interfering chemicals such as salt and chlorine
- Low cost and easily replaceable parts
- User can easily calibrate the instrument to any in-house standard
- Set-point relay for alarm or system control
- 4-20 mA output to PLC or other remote readouts and controllers

### Requirements:

- Water feed at > 14 psi (1 bar)

- .15 liters/minute (3 gallons/hour) flow to drain or reclaim
- 12 VDC 800 mA power supply

**Specifications:**

- **Accuracy:** better than 20%. 10% typical
- **Readout:** 0-2 ppm in .01 ppm increments
- **Lowest reading:** .03 ppm

### Rugged and Versatile Ozone Sensor

Battery operated, Hand-held, Rugged Model A-22

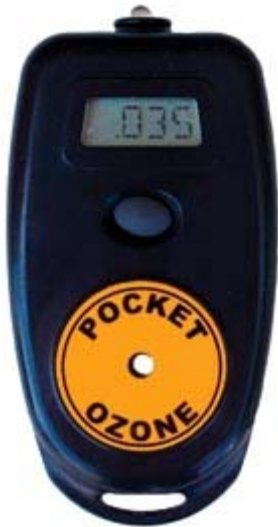


A general purpose sensor and monitor. Designed for rugged indoor field use, factories, pilot plants, process facilities, and sensor and monitoring uses of all kinds. Uses the same precalibrated sensor modules as our OS-4 permanent monitor and controller. All digital technology.

- **Autoranging .030-1.999 ppm and 2.0-20.00 ppm.**
- **10% accuracy. T and RH compensated.**
- **12 hour (est) battery life. 8 hour charge. 4 hour fast charge available.**
- **Plug-in precalibrated sensor modules.**
- **Internal data logger with instant readout of high, low and average of data.**
- **Data port for external data logger such as our DL-3.**
- **USB, 4-20 mA, 0-2 VDC outputs for loggers, computers and PLC.**
- **Tilt stand and wall hanging hook.**
- **Back light for LCD display.**
- **Improved HMOS heated metal oxide sensor.**
- **Size 108 W x 222 L x 64 D mm .71 kg.  
4¼ W x 8¾ L x 2½ D in 1lb 10 oz.**
- **Power source: Internal rechargeable batteries or 12-24 VDC, 500 mA, from external adapter/charger.**

## Low Cost Ozone Sensor For Air

Model PO3



### Features:

- 0.02 - 2.00 ppm
- 20% accuracy
- Less than one minute response time
- 8 hour TWA. Data logger optional
- Audio, LED and vibration alarms
- Also available for CO and H<sub>2</sub>S

### Specifications:

- 66 X 35 X 14 mm (2.4" X 1.4" X .65") 28 grams(<1 oz.)
- Up to 3 months battery life. Standard watch battery.
- Proprietary nanocell micropower sensor technology

## Low Cost Ozone Sensor For Water

Model DO3



### Features:

- 0.00 - 5.00 ppm
- 20% accuracy
- 1 minute response time
- No test chemicals or disposables
- Hand-held and easy to use

### Specifications:

- 66 X 35 X 14 mm (2.4" X 1.4" X .65") 28 grams(<1 oz.)
- Up to 3 months battery life. Standard watch battery.
- Proprietary nanocell micropower sensor technology

## Pocket Ozone Detector

Model A-21ZX



The Model A-21ZX portable ozone sensor provides a reliable and inexpensive way of checking generators, valves, piping and general environments for ozone leaks and for estimating ozone levels. It can be used as a permanent monitor indoors when concentrations average below .1 ppm. It may be used outdoors for ozone studies in moderate temperature conditions.

### Features:

- Small size and high sensitivity
- Ease of calibration and service
- *Instant On*
- Very simple operation

### Specifications:

- **Range:** 0-10 ppm; sensitivity as low as .02 ppm
- **Display:** digital readout in .01 ppm increments
- **Measurement principle:** HMOS (heated metal oxide semiconductor) sensor
- **Size:** 50 x 100 x 25 mm (2 x 4 x 1 in)
- **Weight:** 170 grams (6 oz)
- **Power requirements:** 12 VDC unregulated; AC adapters available worldwide
- **Battery:** Rechargeable batteries last more than 8 hours

## Color-bar Ozone Monitor

Model C-30ZX



The C-30ZX Ozone Monitor provides a reliable and inexpensive way of continuous monitoring for low levels of OZONE gas for water treatment plants, pulp bleaching mills, photocopier and laser printer centers, fumigation projects, indoor air quality systems, and wherever ozone exposure is possible. The C-30ZX has a very fast and continuous response, constantly monitoring your work environment.

### Benefits:

- Constantly monitors your work environment; shows the ozone concentration by a multicolor graphical display, and alarms when there is a health hazard
- No installation typically required; easily understood by non-technical personnel
- Virtually no maintenance

### Features:

- LED readout changes color as ozone level increases
- Audio alarm and output for data logger
- Connections for external equipment control
- For general monitoring and ozone control

- Many accessories available such as data loggers, calibrators, and protective enclosures with heaters and 4-20 mA outputs

**Specifications:**

- **Range:** .02-.14ppm of ozone (LED scale); .02-.30 ppm via external data readout
- **Bargraph Display:** Normally green; yellow at .05 ppm (caution); red at .1 ppm (danger)
- **Response time:** Within tenths of seconds of ozone reaching the sensor
- **Measurement principle:** HMOS (heated metal oxide semiconductor) sensor
- **Size:** 85 x 35 x 60 mm (3.25 x 1.375 x 2.375 in)
- **Weight:** 140 gr (5 oz)
- **Power requirements:** 12 VDC at 300 mA. AC adapters available worldwide.
- **Outputs:** LED bargraph, audio alarm, 0-3 V analog output such as for data loggers, and external alarm relay contacts; alarm actuation and relay contact closure at .1 ppm (standard) and is programmable.

**Model EZ-1X**

The Ecozone™ - Simple, Inexpensive Ozone Monitor



For monitoring ozone levels near small ozone generators. Ideal for light commercial applications such as bars and restaurants, hotels, photocopy centers, water bottlers, fumigation, research projects, light manufacturing, swimming pools, residential and wherever ozone exposure is possible. For permanent on-site use and for portable work by field engineers and installers.

The EZ-1 has a fast and continuous response. It is rugged and versatile. There are no touchy controls

**Features:**

- Constantly monitors your work environment. Ozone concentration shown by a multicolored graphical display from green (safe) to yellow (caution) to red (danger).
- No installation required. Easily understood by non-technical personnel.
- Field work and *walk around* analyses possible via power from internal rechargeable batteries.
- Compatible with other Eco Sensors VOC and ozone sensing, monitoring, and control products.
- Lowest cost.

**Specifications:**

- **Range:** .02-.14 ppm of ozone
- **Bargraph Display:** Normally green. Yellow at .05 ppm (caution). Red at .1 ppm (danger).
- **Response time:** Within 10s of seconds of the ozone reaching the sensor.
- **Measurement Principle:** HMOS (heated metal oxide semiconductor) sensor.
- **Size:** 85 x 35 x 60 mm (3.25 x 1.375 x 2.375 in).
- **Weight:** 154 gr (6 oz).
- **Power Requirements:** 12-24 VDC at 300 mA. AC adapters available worldwide.
- **Battery:** Self-contained NiMH. Approximately 8 hour capacity. Recharged by AC adapter overnight.

## Model EZ-10W

The Ecozone™ - Low-Cost Dissolved Ozone Meter



For checking residual dissolved ozone levels in bottled water, swimming pools, spas, water treatment systems, aquariums, food washing and canning, wineries, agriculture, cooling towers, research projects, and much more.

Equally useful in the Plant, lab or field.

Uses 50 ml samples. The sensor does not contact the water. There are no interferences from Chlorine or Salinity

### Features:

- No fouling of the sensor. No special probe installation. No sensor-water contact.
- Easily understood by non-technical personnel. No confusing chemistries or restrictions.
- Easy to check calibration by standard kits and by Eco Sensors ozone sources.
- Can use AC power via low voltage adapter or can use internal rechargeable batteries.
- Lowest cost. No consumables.

### Specifications:

- **Ranges:** .02-.14 ppm (mg/l), .1-.7 ppm (mg/l)
- **Accuracy:** Within 20% at higher end of ranges when operated near room temperature.
- **Response time:** About 10 seconds to 90% reading. Full reading at 1 minute. Reading time is independent of the half-life of the ozone in the water sample.
- **Measurement Principle:** HMOS (heated metal oxide semiconductor) in headspace.
- **Inteferences:** None from salt or typical levels of chlorine. Only likely inteferences are from strong VOCs.
- **Size:** 85 x 35 x 60 mm (3.25 x 1.375 x 2.375 in).
- **Weight:** 154 gr (6 oz).
- **Power Requirements:** 12-24 VDC at 300 mA. AC adapters available worldwide.
- **Battery:** Self-contained NiMH. Approximately 8 hour capacity. Recharged by AC adapter overnight.

## Ozone Source Calibrator

Model OG-3



The OG-3 ozone source calibrator is for calibration verification and simple approximate calibration of Eco Sensors ozone instruments.

It is available in either of two outputs: .1 ppm or 1 ppm. The OG-3 is powered by an AC adapter supplying 12 VDC.

The OG-3 uses a precision quartz UV lamp ozone generator. Its output is adjusted in our laboratory by comparison with a NIST traceable standard.

### Specifications:

- **Ozone Source:** UV lamp
- **Output Ozone Concentration:** .1ppm (standard) or 1ppm (upon request)
- **Accuracy:** 10%
- **Warm-up time:** 30 minutes
- **Temperature of use:** Indoor room temperature
- **Size:** 36 x 95 x 160 mm (1.41 x 3.75 x 6.30 in)
- **Weight:** 255 gr (9 oz)
- **Power requirement:** 12 VDC at 300 mA
- **Warranty:** One year

## Ozone Switch

Model OS-3



- Acts like a thermostat to control ozone generators and alarms based on an adjustable ozone concentration set-points.
- Ozone ppm readout via digital meter.
- Simple and inexpensive.



## Ozone Switch

Model OS-4



Acts like a thermostat to control ozone generators and alarms based on an adjustable ozone concentration set-points. Ozone ppm readout via digital meter. Simple and inexpensive.

### FEATURES

- Easy to install. Minimal adjustments.
- Sensor is in a replaceable precalibrated module.
- Separated by a 42-inch. cable, the instrument is not in the high ozone area.
- Operates from 12-24 volts DC or from AC adapters available worldwide.
- Programmable turn-on and turn-off set-points.
- Indication when .1 ppm safety standard exceeded.

## Remote Alarm Panel RAP-2

Remote Alarm Panel and Digital Read-Out



The RAP-2 Remote Alarm Panel is for alarming when signals from ozone and VOC monitors reach preset limits or set points. The alarms are a red strobe light and a loud audible alarm (90 dB at 3 meters). There is also a digital readout in PPM of ozone. The RAP-2 also outputs its input signal in 4.20 mA form for building automation systems and other applications requiring long signal paths. The RAP-2 is powered by 14-30 VAC or DC. This remote alarm panel is usually used with the C-30Z, C-30ZX, EE-1, EE-2, OS-3 and OS-4. It can be used with some other instruments by special order.

### Typical Applications:

- Swimming pools.
- Laundries using ozone.
- Large noisy factory environments.
- Casinos and other ozonated public areas.
- Agricultural storage areas.
- Farms.
- Food processing plants.

### Features:

- Rugged polycarbonate enclosure with hinged door.
- Accepts input of 0-2 VDC, 4-20 mA and relay closure.
- Loud pulsating audio alarm with silencing button.
- Very bright red strobe light.
- 4-20 mA signal and relay outputs.
- Alarm set-point adjustment.
- Uses easily available 14-30 VAC or DC power.
- Signals from instruments can be transmitted by inexpensive twisted pair.
- 125 x 175 x 77 mm (5 x 7 x 3 in).

## Color-bar, VOC Gas Detector

Model C-21 with Audio Alarm & Data Logger Output



Includes Audio Alarm, Battery operation and Provision for External Alarm and Data Logger

For paint shops, printers, dry cleaners, woodworkers, vehicle repair facilities, chemical production areas and wherever indoor air quality monitoring is required: the Model C-21 gas sensor helps you comply with the new VOC air quality regulations for hydrocarbon gases and solvent vapors.

### Benefits:

- Constantly monitors your work environment. Detects leaks and poor air quality before they are a health hazard. Alarms below [OSHA](#) TLV for most common solvent-based VOCs.
- No installation. Easily used and understood by non-technical personnel.
- Virtually no maintenance.

### Features:

- Highly sensitive to solvent vapors and other VOCs. Bright green-yellow-red display clearly shows hazard level of gas or vapor.
- Detects down to OSHA, [EPA](#), and other regulatory-mandated levels...typically at low ppm concentrations.
- Has built-in rechargeable battery for portable use in tracking leaks.
- Rugged construction with many safety features.

### Specifications:

- **Range:** Full scale = 50-100 ppm for most solvent based VOCs.
- **Bargraph display:** Green = normal. Yellow = caution. Red = danger.
- **Response time:** Within a few seconds of the VOC gas reaching the sensor.
- **Measurement principle:** HMOS (heated metal oxide semiconductor) sensor.
- **Size:** 85 x 35 x 60 mm (3.25 x 1.375 x 2.375 in)
- **Weight:** 140 gr (5 oz).
- **Power requirements:** 12 VDC at 300 mA. AC adapters available worldwide.
- **Battery:** Self-contained NiCad or NIMH. Approximately 2 hour capacity. Recharged by AC adapter overnight.

## Ozone Switch (OS-1X)



Acts like a thermostat to control ozone generators and alarms based on an adjustable ozone concentration set-point. Simple and inexpensive.

### Features:

- Contractor-friendly installation.
- Operates from easily available 12-24 VDC or from AC adapters available world-wide.
- *Dead band* to avoid system *chatter*.
- Set-point adjustable by the installer but not by the room occupants.
- Can be installed directly on HVAC air ducts.

### Typical Applications:

- Control of ozone purifiers
- Ozone overload protection for industrial processing and storage, and air treatment in public places
- Leakage alarm for water treatment plants, semiconductor manufacturing, and for bleaching, cleaning, and sterilization processes.

### Specifications:

- **Range and Accuracy:** .03-.1 ppm of ozone. Approximately 20% Accuracy.
- **Response time:** Within 10s of seconds of the ozone reaching the sensor.
- **Measurement Principle:** Advanced design HMOS (heated metal oxide semiconductor) sensor.
- **Size:** 76 x 64 x 42 mm (3 x 2.5 x 1.625 in).
- **Weight:** 5oz. (140 grams)
- **Power Requirements:** 12-24 VDC, 300 mA. AC adapters available.
- **Output control:** SPDT non-latching relay. Contacts rated at 5 amps, 250 VAC, or 1/8 HP inductive load.
- **Connections:** 5 Circuit totally enclosed terminal block for relay output and DC input. Also, 2.5 mm DC power jack for AC adapter.
- **Indicators:** Green LED: instrument *on*. Red LED: set-point exceeded and relay activated.
- **Case:** Flame-resistant ABS.
- Not recommended for outdoor use or in presence of output gases.

## Data Logger (DL-3)



The DL-3 is a custom modified data logger configured for Eco Sensors instruments and applications. It plugs into the accessory jack of the [C-302X](#) or the [C-21](#) to log data without further adjustments. It can download logged data into a PC or laptop by its RS-232 serial cable, or it can send data continuously to the PC for continuous display and analysis by the PC.

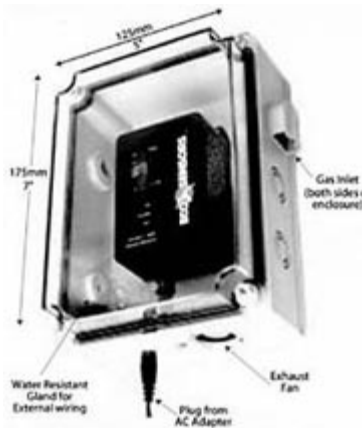
### Features:

- Automatic logging time and max gas concentration scaling (X and Y axis scaling).
- Stores over 8,000 readings.
- On-line, real time display of data when connected to a PC and an operating gas sensing instrument.
- Graph statistics appear on screen: Max, Min, Average, Date and Time.
- Zoom capability to for more detailed viewing of any part of the graph.
- Graphs can be labeled and pasted into other applications.
- Uses readily available 9 V alkaline battery. Records for up to one year.
- Simple operation and rugged construction.

### Specifications:

- **Data Output:** RS-232 via DB9 connector 1200 baud
- **Accuracy:** 1%
- **Operating temperature:** -20 deg to 70 deg C (-4 deg to 158 deg F)
- **Relative Humidity:** 5 - 95% non-condensing
- **Operating System Required:** Windows®
- **Controls:** One button to start and stop recording and to turn the data logger on and off
- **Size:** 73 x 59 x 41 mm (2.875 x 2.3125 x 1.625 in)
- **Weight:** 140 g (5 oz)

## Environmental Enclosure (EE-2)



The Environmental Enclosure (EE-2) is for dust and water protection in industrial and agricultural environments and in public places. This is a Euro-Style plastic enclosure 120 mm wide, 180 mm high, and 80 mm deep (5 in x 7 in x 3 in) with a clear polycarbonate gasketed front cover. There are screened air inlets on the sides and an exhaust fan on the bottom.

Everything in the enclosure is powered by 12-16 VDC or, as an option, 24 VAC or DC. Other options are a relay to control external equipment, a 4-20 mA signal loop output, and an enclosure interior heater. Wiring to external equipment is via a semi-sealing side gland.

### Typical Applications:

- Factory environments with dust, spray, and general need for extra protection.
- Farms to protect from dust and wash downs.
- Agricultural storage areas to protect from treatment chemicals, sprays, dust, insects, and to provide an enclosed environment for instrument heating, etc.

- Public areas such as office buildings, apartment complexes, and hotels to protect against tampering with the instrument yet keep it visible.
- Other: swimming pool maintenance sheds, water supply control areas, trash bin areas, in ships, attached to machinery, and mobile skid packages.

**Features:**

- Rugged construction made of tough polycarbonate.
- Clear polycarbonate gasketed cover with 4 mounting screws.
- Inside mounting board predrilled for Eco Sensors C, EZ, and OS series of instruments.
- Relay output option with 5 amp contacts.
- 4-20 mA output option.
- Interior space heater option.
- Designed so that any dust or liquid droplets that do enter the enclosure flow around the instrument while the gas sample diffuses to the instrument gas inlets.
- Bottom mounted exhaust fan to maintain air flow and remove accumulating dust, etc.
- Extra top and side knock-outs so that the customer can attach his own additional piping and wiring.
- Uses same 12 VDC output AC adapter that is supplied with the instrument.
- 24 VAC or DC power option such as for HVAC and OEM machinery systems.