

Ozone Monitors *Series 320 & 520*

User Guide



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Foreword

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Statements of Compliance

1. The Aeroqual Series 300 and 500 Ozone Monitors and Remote Adaptor Kits comply with EN 50082-1:1997
2. The Aeroqual Series 300 and 500 Ozone Monitors and Remote Adaptor Kits comply with EN 50081-1:1992
3. The Aeroqual Series 300 and 500 Ozone Monitors and Remote Adaptor Kits comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) these devices may not cause harmful interference, and (2) these devices must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



Warranty

See Series 520 / 320 manual for details

WARNING

- **Do not** expose the monitor to excessive levels of ozone.
- **Do not** place the sensor head in an ozone stream – the monitor is designed to measure ambient levels of ozone and uses ‘active sampling’ to achieve this.
- **Do not** switch the monitor on before reading the User Guide.

For Your Safety

Read these simple guidelines. Ignoring these guidelines may be hazardous.

- **USE SENSIBLY**
Use only as per this user guide.
- **USE AEROQUAL APPROVED SERVICE**
Only approved service personnel must work on this product.
- **ACCESSORIES**
Use only approved accessories. Do not connect incompatible products.
- **CONNECTING TO OTHER DEVICES**
When connecting to any other device, read the appropriate user guide for detailed safety instructions. Do not connect incompatible products.
- **HAZARDOUS ENVIRONMENTS**
Do not use the Ozone Monitor in or near volatile fuel or chemicals.
- **HEALTH AND SAFETY IN THE WORKPLACE**
The Aeroqual 300 & 500 Series Monitors and Sensor Heads are used to monitor Ozone concentration. Aeroqual does not guarantee user safety. In hazardous environments, an appropriate Health and Safety plan should be in place.

Care and Maintenance

Your Ozone Monitor is a product of superior design and quality and should be treated with care.

- This unit is designed for use at temperatures between -5°C and +50°C (23°F and 120°F). Sudden changes in temperature will cause condensation that may damage the electronic componentry.
- Do not attempt to open. Non-expert handling of the device may cause damage.
- Do not use harsh chemicals, cleaning solvents or strong detergents for cleaning. Wipe with a soft cloth slightly dampened with a mild soap-and-water solution.

Cleaning of Inlet and Outlet Nozzles

- Ozone is readily destroyed by contact with organic particles such as dust. In dusty environments the nozzle stainless steel mesh should be removed and cleaned regularly with clean water. Once dry, the mesh should be restored to its original position.

Ozone Monitor Components

Series 320 and Series 520 Ozone Monitor

The following components are supplied with the Ozone Monitor:

- Series 300 or Series 500 monitor base
- Ozone sensor head (industrial type)
- 12 VDC 800 mA AC/DC adaptor
- Data logging software on CD (Series 520 only)
- Serial cable (Series 520 only)
- User guides Series 320/520 and Series 300/500
- Battery pack – 9.6 V Ni-MH

Please check that all these components have been supplied and contact your dealer or Aeroqual on email at: sales@aeroqual.com if any of the components are missing.

About Your Monitor

The Aeroqual **Series 320 and 520 Ozone Monitors** are designed for fixed or secure monitoring, and are supplied in an FRP enclosure.

The inlet nozzles are specifically designed to eliminate dust and reduce water ingress without destruction of part per billion ozone concentrations or measurement variations due to outgas contamination from the enclosure.

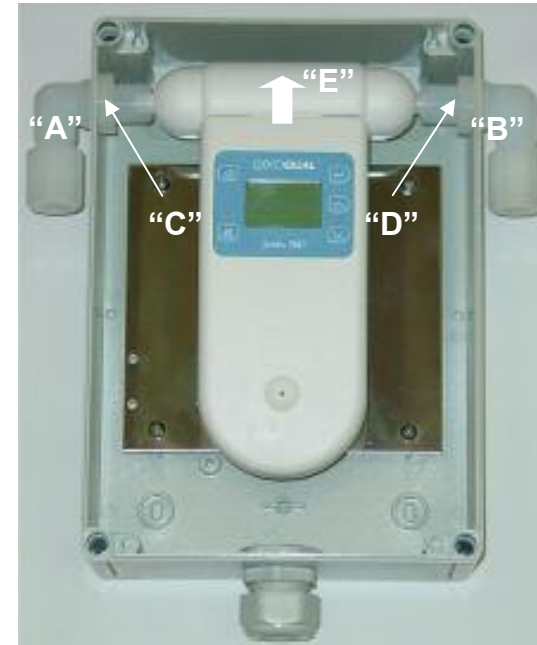
The sensor heads are specifically calibrated to take account of the longer flow path. Sensor heads fitted to this product must be the Industrial type that are capable of operating with the longer flow path.

Different sensor heads are used depending upon whether high or low ozone concentrations are to be measured. The low and high (industrial) sensor heads are interchangeable on the same base unit.

The following information details the operation and features of the monitors:

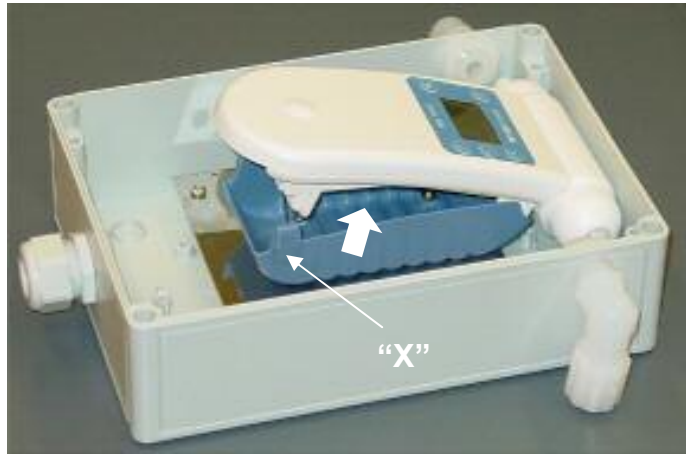
1. The **High Concentration Ozone Sensor Head** is designed to measure ozone concentrations from 0.00 to 20.00 ppm and is accurate to within 10% between 0.2ppm and 2.00ppm and 15% between 2.00ppm and 20ppm. The T90 response time (i.e. the time to reach 90% of the actual ozone concentration) of the high concentration sensor head is 35 seconds. ***While the sensor will read higher concentrations, exposure of this sensor head to ozone concentrations higher than 20.00 ppm may adversely affect the calibration.***
2. The **Low Concentration Ozone Sensor Head** is designed to measure ozone concentrations from 0.000 to 0.500 ppm with an accuracy of +/-0.010 ppm from 0 to 0.100 ppm and 10% from 0.100 to 0.500 ppm and has a resolution of 0.001 ppm. The T90 response time (i.e. the time to reach 90% of the actual ozone concentration) of the low concentration sensor head is 95 seconds. ***While the sensor will read higher concentrations, exposure of this sensor head to ozone concentrations higher than 0.500 ppm may adversely affect the calibration.***

Removing and Replacing the Sensor Head



- Undo the four lid screws, remove lid and view the interior of the enclosure as shown above.
- Unscrew and remove the inlet & outlet nozzles "A" & "B" as well as the threaded lock nuts "C" & "D".
- Remove the sensor head "E" by moving it in the direction of the broad arrow above.
- Replace the sensor head "E".
- Re-insert nozzle "A" using lock-nut "C" & re-insert nozzle "B" using lock-nut D, ensuring a tight fit against the sensor head "E".
- Replace lid and tighten four lid screws.

Removing the Monitor from the Enclosure



- Depress the blue plastic clips on either side of the monitor unit as shown above and then lift the monitor in the direction of the broad arrow.
- This will expose the rechargeable battery and also allow the mounting screws holding the blue battery cover to be accessed.
- Reverse the process to relocate the monitor unit back onto the battery cover.

S320/S520 Enclosure Specification

Dimensions

Height (including cable gland)	283 mm
Width	180 mm
Depth	90 mm

Materials

Fibre-glass reinforced polycarbonate base.
Polycarbonate Lid.

Mounting

Screw fixture

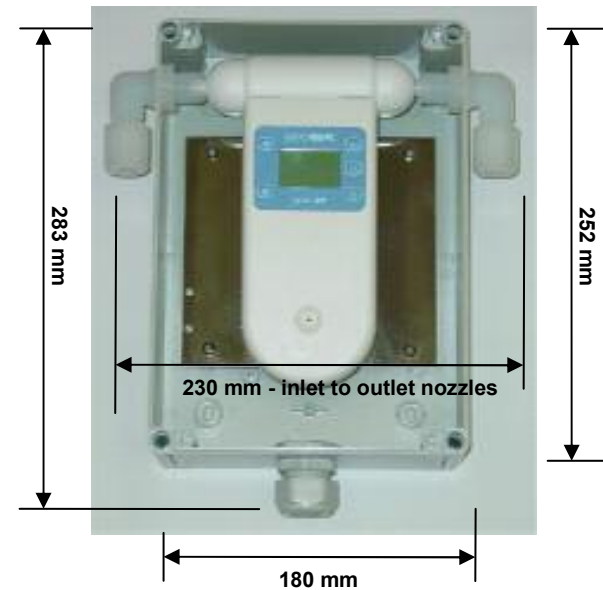
Operating temperature

-35 °C to 120 °C

Dimensions



Height = 90 mm



283 mm

252 mm

230 mm - inlet to outlet nozzles

180 mm