



Process &

**Environmental
Analysis Solutions**

WWW.MKSINSTITUTE.COM

AIRGARD[®] *Plus* CWA/TIC

AMBIENT AIR ANALYZER FOR CONTINUOUS CHEMICAL WARFARE AGENT (CWA) AND TOXIC INDUSTRIAL CHEMICAL (TIC) MONITORING

RAPID RESPONSE • VERY LOW FALSE ALARMS • HIGH RELIABILITY • SELF CONTAINED

The MKS AIRGARD *Plus* ambient air analyzer is an ultra-sensitive, Fourier Transform Infrared Spectroscopy (FTIR) based gas analyzer coupled with a highly reliable electrochemical sensor designed to rapidly detect toxic gases. The analyzer is capable of detecting parts per billion (ppb) levels of most CWAs and TICs below toxic, Immediately Dangerous to Life or Health (IDLH) levels within 20 seconds. This low level detection and fast response ensure sufficient time for an appropriate response such as shutting down air handling systems, 'shelter in place' or evacuation of the effected area. The AIRGARD analyzer has been thoroughly tested by the Departments of Defense and Homeland Security for its sensitivity, specificity, response time, and immunity to false positive alarms caused by the sensing of and alarming to everyday, benign, non-toxic solvents and industrial chemicals. This immunity to false alarms prevents unwarranted evacuation of buildings, associated interruptions of business, and emergency notifications when no threat materials are present in the building airflow.

Features & Benefits

- Single-digit ppb detection limits – ability to discriminate and alarm to a broad range of threat substances. The AIRGARD *Plus* analyzer has been tested against all ARFCAM listed threat gases, mixtures of threat agents and common interfering materials with no false positive alarms.
- Rapid response – typical time to alarm and identify threat agents < 20 seconds
- Automated, stand-alone operation – self-contained analyzer with embedded computer and sampling pump
- Continuous (24/7) air monitoring
- Ethernet connectivity and monitoring for remote troubleshooting
- Reliability – rugged design with minimum downtime
- Low maintenance – only occasional filter changes required
- High selectivity with ability to adapt to evolving threats – large “background” library file (375+ gases) with custom gas additions available
- Electrochemical cell sensor included for monitoring of chlorine, fluorine and hydrogen sulfide

Applications

- Building air handling monitoring
- Enclosed public area air monitoring (arenas, subways, airport terminals, large office buildings, etc.)
- Air sampling and threat warning around CWA and TIC manufacturing and storage facilities (CFATS)



AIRGARD® Plus Analyzer Operation

In the typical, non-alarming mode, the panel mounted "Gas Alarm" LED is green, indicating the sampled air is safe from toxic gases. If a toxic gas is detected within the concentration and probability limits set in the operational setup file, the "Gas Alarm" LED will change from green to flashing red. In addition to the visual, panel mounted status indicator, the AIRGARD Plus analyzer can communicate via Ethernet link to a sensor platform system to alert or alarm a command and control facility within the subject building. The AIRGARD Plus analyzer will remain in this mode until a trained user acknowledges the alarm and initiates the necessary safety actions. In addition, if any of the sensor parameters (flow, temperature and pressure) are determined to be out of their optimal range, the "System Alarm" LED will turn yellow or possibly red (depending on the severity of the fault) and will communicate this information remotely via the Ethernet TCP/IP interface using an XML-based remote monitoring

and control protocol. This interface uses state-of-the-art encryption technology to ensure a secure and robust connection between the remote AIRGARD Plus analyzer and a central receiving computer.

The AIRGARD Plus air analyzer is a totally self-contained monitoring device, having a sampling pump, FTIR spectrometer, electrochemical cell sensor, controlling electronics and computer enclosed in a package measuring 25.3" x 27" x 7.5" which can be easily wall mounted. All AIRGARD air analyzers are individually tested for optimum signal-to-noise which ensures that consistent, reliable air monitoring will be provided in multiple deployments. In addition, the AIRGARD air analyzer self calibrates after installation, constantly self checking system health and assures readiness should a specified and applicable threat substance be introduced into the sampled air flow.

Specifications

Packaging

Dimensions	25.3" (W) x 27" (H) x 7.5" (L) [64.3 x 68.6 x 19.1 (cm)]
Weight	78 lbs. [35 kg]
Installation	Wall mount (bracket included)
Power Requirements	120 VAC, 50/60 Hz, 3A, 240 VAC available
Operating Temperature	10 to 40°C
Operating Humidity	20 - 65 %

User Interface

Communication	TCP/IP (Ethernet); 1 USB port
---------------	-------------------------------

Compliance

CE

Laser Safety

Class 1 laser product contains a Class 3R laser with continuous wave output at 850 nm

Ordering Information

Please contact your MKS Sales office for price and availability information.



MKS Instruments, Inc. Global Headquarters

2 Tech Drive, Suite 201
Andover, MA 01810
Tel: 978.645.5500
Tel: 800.227.8766 (in USA)
Web: www.mksinst.com

MKS Instruments, Inc. Process & Environmental Analysis Solutions

651 Lowell Street
Methuen, MA 01844
Tel: 978.645.5500