

AIRGARD® CWA/TIC

Ambient Air Analyzer for Continuous Chemical Warfare Agent (CWA) and Toxic Industrial Chemical (TIC) Monitoring



The MKS AIRGARD® ambient air analyzer is an ultra-sensitive, Fourier Transform Infrared Spectroscopy (FTIR) based gas analyzer 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 affected area. The

AIRGARD analyzer has been thoroughly tested by the Department of Defense 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.

Product Features

- ppb detection limits – ability to discriminate and alarm to a broad range of threat substances. The AIRGARD 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



Key Benefits

- 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 — Chemical Facility Anti-Terrorist Standards (CFATS)

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 indication, the AIRGARD 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 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 analyzer and a central receiving computer.

The AIRGARD air analyzer is a totally self-contained monitoring device, having a sampling pump, FTIR spectrometer, controlling electronics and computer enclosed in a package measuring 18.5" x 24" 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. The AIRGARD analyzer self calibrates after installation, constantly self checking the system health. This ensures readiness should a specified and applicable threat substance be introduced into the sampled air flow.

Specifications	
Dimensions	18.4" (W) x 25.4" (H) x 7.5" (L) [46.7 x 64.5 x 19.1 (cm)]
Weight	75 lbs. [34.1 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	Up to 65%
Communication	TCP/IP (Ethernet); 1 USB port; XML Standard Protocol
Compliance	CE
Laser Safety	Class 1 laser product contains a Class 3R laser with continuous wave output at 850 nm

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