



picture from the fire brigade Hamburg

GDA-FR

Gas Detector Array - First Response

Portable detector for hazardous gases and chemicals



Chemical
defense



Radiological
Nuclear
defense



The portable **Gas Detector Array** is a battery operated analytical instrument specifically designed to measure and monitor most common gases. This instrument is used by Police Units, Fire Departments and many different operators from public security.

The GDA has been designed for the detection and identification of Toxic Industrial Compounds (TICs) and Chemical Warfare Agents (CWAs) – with optional expansion to the range of the most common explosives.

With its Hybrid Sensor Array it alerts to a wide range of hazardous gases. It offers high level safety without the need to select the “right” detector.

Alarms are released as soon as gases appear in dangerous concentrations – whether it is in ppb or ppm range. Compounds matching with the adaptable libraries are automatically displayed on the screen. The GDA is permanently ready-to-use. A specialized gas-flow control allows for faster deployment while the unit retains its sensitivity and reliability.

The GDA set allows

- High security through a wide coverage of a variety of gases and chemicals at a low concentration level
- Security and surveillance at public or high-level events
- Risk monitoring of workers in chemical industries

Advantages

- Increased selectivity
- Portable instrument with integrated display, visual and audible alarm
- High level of safety through broad detection range of hazardous gases
- Detection and identification in seconds
- Works with computer or in standalone mode
- Substance identification possible using methods of pattern recognition
- Provides reliable results with easy operation
- Data logger and offline data analysis

Weight
5.2 kg / 4.2 kg
without
batteries

Dimension
L395 W112 H210
mm

30W
powered by battery
or through RS-232

Gamma
detection
Wireless
Connectivity
GPS



GDA-FR

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Hazardous compounds / GDA-Mode
List with tolerable concentrations*

Substance	Concentration limit* [ppm]	Sensor type
Acetic acid	20	IMS
Acetone	500	IMS, PID
Acroleine	0.2	
Acrylonitrile	20	MS
Ammonia	50	IMS, EC
Benzene	20	PID, SC
Carbon dioxide	10000	-
Carbon disulfide	10	IMS
Carbon monoxide	100	
Chlorine	1	IMS, EC
Chlorobenzene	100	PID
Chlorocycane	0.3	IMS
Hydrazine	1	IMS
Ethanol	3000	IMS, PID
Formaldehyde	1	
Hexane, n-	200	PID
Hydrogen chloride	5	IMS, EC
Hydrogen cyanide	5	IMS, EC
Hydrogen fluoride	5	(IMS), EC
Hydrogen sulfide	10	IMS, EC
Methanol	500	IMS
Nitrogen dioxide	1	IMS
Phosgene	0.1	EC
Phosphine	0.5	EC
Styrene	40	IMS, PID
Sulfur dioxide	1	IMS, EC
Tetrachloroethylene	100	IMS
Toluene	100	PID
Toluene diisocyanate	0.02	IMS
Trichloroethane, 1,1,1,-	300	IMS
Trichloroethane, 1,1,2,-	25	IMS
Trichloroethylene	100	IMS, PID
Vinyl chloride	100	PID, EC
...		

* Selection of chemical compounds (comparable to ERPG), tolerable concentration values for firefighter working 4 hours without breathing apparatus

Chemical Warfare Agents (IMS-Mode)

Nerves

GA (Tabun)
GB (Sarin)
GD (Soman)
GF (Cyclosarin)
VX

Blister

HD (S-Lost)
HN (N-Lost)
L (Lewisite)

Blood

AC
(Hydrogen Cyanide)

Technical Data

Sensor technology:

- unique combination of different detectors
- Ion Mobility Spectrometer (Ni63 ion source, positive and negative mode)
- Photo Ionization Detector (10.6 eV)
- Electrochemical Cell
- 2 Metal Oxide Sensors

Sampling System:

- internal pumps
- internal sample dilution system

Measurement Time:

- a few seconds to less than 1 minute

Identification:

- different pattern recognition methods available

Display:

- graphical display integrated

Power:

- 30W, powered by rechargeable battery and/or power supply (serial port – RS-232)

Weight:

- 4.5kg / 4.2 kg (8.4 lb) (without batteries)

Dimensions:

- ca. 395 x 112 x 210 mm (ca. 15.7 x 4.5 x 8.4 in)

Operating system:

- Windows XP, Vista, Windows 7

Software:

- WinMuster GDA

Options:

- Wireless
- GPS
- Gamma detection
- Explosive