



GDA 2 Gas Detector Array 2

Portable detector for hazardous gases and chemical agents

The new **Portable Gas Detector Array** is specifically designed to detect and monitor most common hazardous gases including chemical warfare agents (CWA).

The main detector, an ion-mobility spectrometer (IMS) readily detects ammonia, inorganic sour gases, small chlorinated molecules as well as other electropositive and electronegative compounds. The IMS is also used in the CWA detection mode.

The IMS functions as part of an array that includes a photoionization detector (PID), an electrochemical cell and two metal oxide sensors. With the additional detectors the GDA is able to evaluate other toxic compounds, including benzene, phosgene, vinyl chloride and chlorobenzene.

The **GDA 2's** gas flow system and internal dilution system is ideal for fire and rescue workers operating in harsh environments.

Important features:

- **Detects all the main hazardous gases**
- **Unique combination of different detectors (IMS, PID, EC, MOS)**
- **Portable instrument with integrated display, optical and visual alarms**



- **Detection in seconds**
- **Powered with rechargeable batteries**
- **Works with computer or in stand-alone mode**
- **Specifically designed for First Responders: Police, Fire Departments and EMS workers**
- **Substance identification possible using pattern recognition methods**
- **Offers a Safe/Unsafe default read out for inexperienced or infrequent operators**

AIRSENSE

A N A L Y T I C S

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Technical Data GDA 2

Hazardous compounds / (GDA-Mode) List with tolerable concentrations*

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

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

Chemical Warfare Agents (IMS- Mode)

Nerves	Skin	Blood
GA (Tabun)	HD (S-Lost)	AC
GB (Sarin)	HN (N-Lost)	
GD (Soman)	L (Lewisit)	
GF		
VX		

Modes of Operation: GDA mode for hazardous compounds, IMS mode for chemical warfare agents

Detectors: ion mobility spectrometer (Ni63 ion source, positive and negative mode), photo ionization detector (10.2 eV), electrochemical cell, 2 metal oxide sensors

Sampling System: internal pumps, internal sample dilution system

Measurement Time: typical some seconds to less than 1 min

Identification: different pattern recognition methods available

Display: graphical display integrated, serial port – RS-232

Power: 30W, powered by rechargeable battery and/or power supply

Weight: 4.2 kg (8.4 lbm) (without batteries)

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

Options: Infrared heater for thermal desorption and analysis of surfaces

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