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AP4C-V

Chemical Detection System

BRAP4CV01EN

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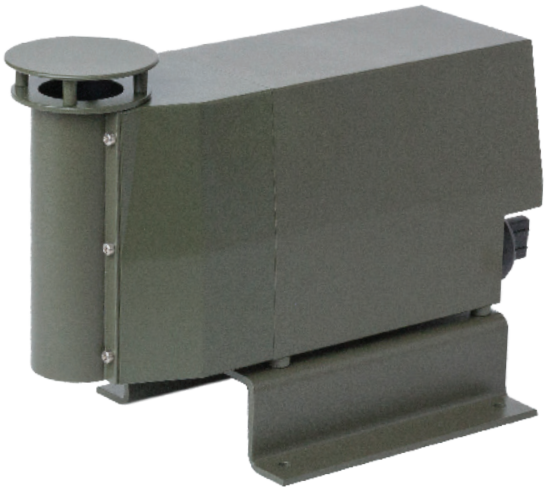
AP4C-V Chemical Detection

Chemical detection for mobile platforms



The AP4C-V is a solution for vehicle or fixed site that provides continuous detection of chemical threats. The detector uses two refillable hydrogen cylinders which provide 24 hours of operating time and can be easily changed out for continuous operation. It can detect a broad range of conventional and unconventional threats such as chemical warfare agents, toxic industrial chemicals, homemade terrorist mixtures, and non-traditional agents (e.g. Novichok) at concentrations as low as 2 ppb. There is no need to switch between libraries and select presets as the sensor is designed to monitor all threats simultaneously.

Robust technology and detection while in movement

Unlike other systems, the flame spectrometry technology used by the AP4C-V is not affected by humidity and challenging weather condition. Designed to withstand the harsh environment of military operation, the AP4C-V runs continuously and does not require filters or special mounting protection. The dynamic intake system allows it to perform detection while the platform is moving at speed up to 96 kmh / 60 mph.

Easy integration

Alarm and sampling is fully automatic and requires no action from the user. The AP4C-V can easily be installed as a stand-alone system with its own visualization and control module, integrated to the onboard vehicle combat system via a simple communication protocol, or connected to a computer.

Quick response time and recovery

The high sample rate of the sensor results in rapid alarm. The average detection time is 2 seconds. Furthermore, the AP4C-V quickly recovers after a positive contamination and is able to detect several threats simultaneously and independently on 4 detection channels. Therefore, the operator can quickly initiate protective measures in order to respond to a CBRN event.

Combat proven

The AP4C-V is a combat proven system which has been tested and is in use with several organizations around the world.

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AP4C-V Chemical Detection

Main features

- **Designed for mobile platforms:** able to perform detection at speed up to 96kmh / 60 mph with fast sample rate, limits vulnerability.
- **Broad range of detection:** able to detect chemical warfare and binary agents, non-traditional agents such as Novichok, homemade agents, and toxic industrial materials that could be diverted for terrorist use (eg. Ammonia, Arsine, acids, etc.)
- **24 hours of continuous use:** can be run 24/7 with a continuous supply of power and refillable hydrogen cylinders.
- **Designed for vehicle and fixed site monitoring.**
- **Minimal footprint and easy integration:** standalone system or integration to end-user system.
- **Fast detection time:** 2 seconds response time on average.
- **Quick clear out time.**
- **Minimal maintenance requirement**: no filter required.
- **Detector can be mounted outside**: hardened enclosure and design means no need to install a special chamber or waterproof enclosure.
- **Unaffected by humidity and heat.**
- **High sample rate:** once every two seconds (0.5Hz).
- **Internal memory recording** logging up to 530 hours of detection and status data (loop recording).
- **Open archtitecture** via simple communication protcol allows easy integration of the detector to the end-user system.

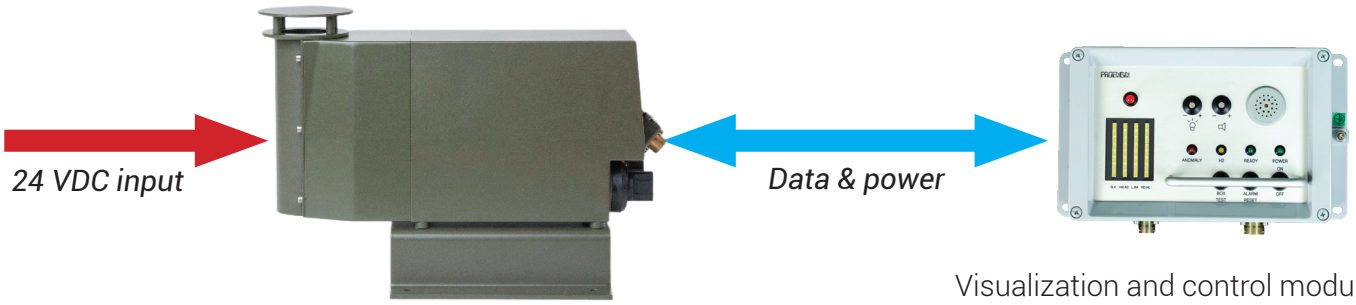
Specifications*

- **Technology:** flame spectrometry.
- **Chemical detection range:** Chemical Warfare agents (CWA), Toxic Industrial Materials (TICs & TIMS), Non-Traditional agents (NTAs), binaries (chemical products mixed together to form a chemical warfare agent). Detection trigger levels as low as 2 ppb (0.002 ppm).
- **Power supply:** 24 VDC (nominal) or 115-230 VAC (with regulator).
- **Power consumption:** 72 W at peak power upon startup, 30 W at 21°C / 70°F, 60 W at -31°C / -25°F and 50°C / 122°F
- **Operating temperature:** -25°F to 122°F / -32°C to +50°C.
- **Weight:** 4kg / 9 lbs for the AP4C-V main detector
- **Communication standard**: RS-485.

*Specifications are subject to change

AP4C-V Chemical Detection

Mounting option #1: Standalone interface

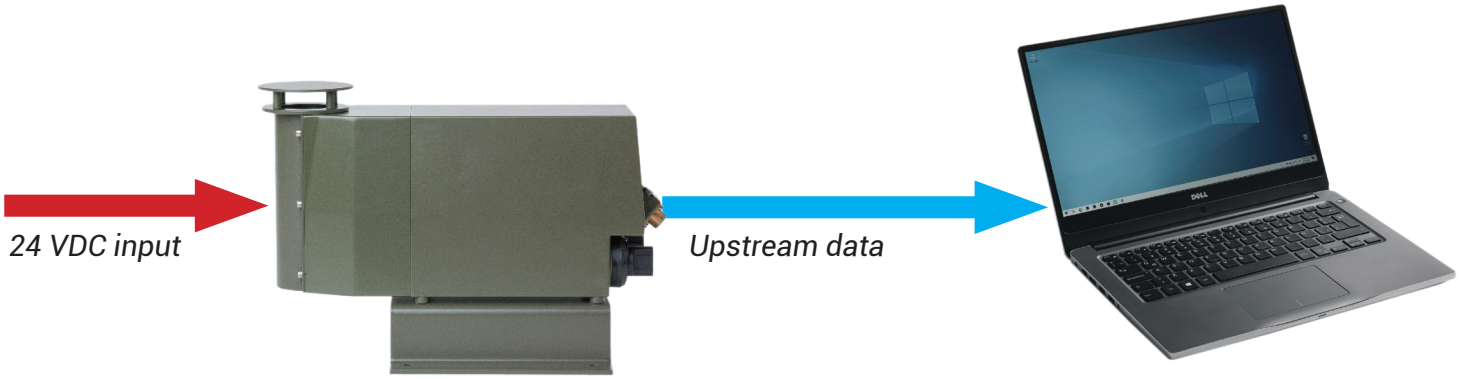


AP4C-V detector

Visualization and control module (VCM)

Other solutions are available

Mounting option #2: Integration to the onboard tactical system



AP4C-V detector

Command post computer
or onboard combat system

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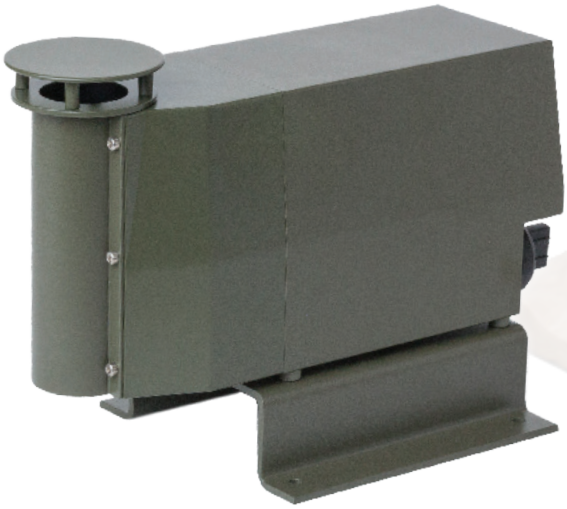
Size and weight

13.4 inches
(343 mm)

8.78 inches
(223 mm)



6.7 inches
(170 mm)

AP4C-V detector

9 lbs (4 kg)

Optional visualization and control module

11 lbs (5 kg)

11 inches
(280mm)

6.4 inches
(163mm)

5.8 inches
(148mm)

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