next generation detection

OwlSens-T3 - Advanced Chemical Detector

Portable and Fixed Site Chemical Detection



OwlSens-T3 is the first of its kind next generation broadband Chemical Detector. Capable of detecting more hazardous chemicals at ultra-trace levels than any other single detector, OwlSens-T3's key features include:

- **SENSITIVITY** – detection limits sub-parts-per-million by volume
- **SELECTIVITY** – exceptional ability to resolve similar compounds
- **RAPID RESPONSE** – < 30 second detection and identification. Alarm / hazard concentration update rate of 1 Hz
- **REPROGRAMMABILITY**– Dynamic software updates
- **VERSATILITY** – capability against a vast majority of gaseous/volatile chemical hazards listed in NIOSH 2010-168C as well as conventional Chemical Warfare Agents and New Generation Threats.
- **DUAL CABABILITY** – Airborne Aerosol Chemical Hazard detection can be enabled. System can automatically provide **Continuous** & **Simultaneous** Vapor and Aerosol chemical threat detection.



Example Deployments

- Battlefield
- Shipboard
- Site Monitoring
- Decontaimation
- Site Evaluation
- Reconnaissance

Broadband Detection

- Nerve (G & V class)
- Blister (HD, HNx, L)
- Emerging Threats
- Blood (CK, AC)
- Chocking (CL, CG)
- Toxic Industrial Chemicals

Contact Owlstone

Our technical team is exceptionally well prepared to assist with your chemical detection requirements, whether commonplace or specific to your facility.

US Office

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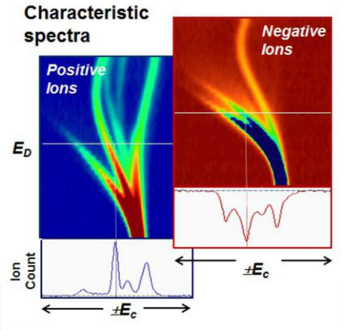
UK Office

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Min. Alarm Conc's.

Nerve Agents: GA, GB, GD, GF & VX

Blister Agents: HD, HN3 & L

Blood Agents

Chocking Agents

TICs – $COCl_2$, HCN, ClCN, Cl_2, $PICl_3$

Many Additional TICs available. Database easily expanded for evolving requirements

Rapid Thermal Modulation Ion Spectrometry

OwlSens-T3 utilizes highly advanced Rapid Thermal Modulation Ion Spectrometry (RTMIS) detection technology. This new method of accurately detecting and identifying chemicals is enabled by Owlstone's ability to drive a Field Asymmetric Ion Mobility Spectrometer (FAIMS) at Ultra-High electric fields.

Under these conditions Ion Temperatures may be modulated from ambient to in excess of 1000°C, on micro-second timescales. This extreme thermal modulation enables a controlled manipulation of the ion chemistry within the ion separator. Chemical separation and identification are derived from the unique kinetic and thermodynamic behavior of ions assessed over a broad effective temperature range.

RTMIS offers rapid and sensitive identification of CWAs and TICs, with sub-30s alarm response times and minimum alarm concentrations at (or below) 0.1mg/m^3 for Nerve Agents. The technique produces multi-dimensional datasets, allowing analysis of a broad set of physical parameters, resulting in more accurate, low-false-alarm rate, detection.

Delivering Next Generation Chemical Detection Capability to the 21st Century Warfighter

Rapid airborne threat detection is a critical requirement in all army, navy and air force operations. In addition to detecting conventional Chemical Warfare Agents (CWAs) OwlSens-T3 provides capability against a wide range of high threat Toxic Industrial Chemicals (TICs) at concentrations well below NIOSH's IDLH specifications and can be New Generation Threat enabled.

Talk to us today to discuss your specific detection requirements.

TECHNICAL SPECIFICATION

Technology	Rapid Thermal Modulation Ion Spectrometry
Ionization Source	Patent-pending non-radioactive source
Dimensions	11.5 × 7.8 × 7" = 29.2 × 19.8 × 17.7 cm
Weight	11 lbs = 5 kg
Mounting	Flat surface or Wall mount
Housing	Rust-resistant stainless steel
Ambient Temperature	-30 to 40°C
Operating Humidity	0 to 95% RH (non-condensing)
Scrubber life	> 300h continuous use (even in highest RH climates)
Power Requirements	3A, 240V AC (50-60Hz) / 48V DC
Comms interfaces	TCP/IP (Ethernet & WiFi)
Dry contacts relay	13 A, 240V AC (50-60Hz) / 48V DC
Electrical compliance	EN61010/UL61010, EN61326 + EN61000
Dyanmic Range	Min. Alarm Conc. to at least 200X (saturation)
Quantitative Resolution	Min. Alarm Conc. to satuation in 5 bar repsonse levels
Response Time	< 30 seconds
Clear Down Time	< 60 seconds

CONTACT OWLSTONE

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