Threat Detection & The Prevention of Gas Attacks on your ATM
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Gas attacks on UK ATMs have increased - FACT

Cennox have responded to the growing number of UK based incidents with a security solution to counter the threat of Gas Attacks at the ATM through:

> Detection
> Prevention
> Installation
> On-site maintenance
> Customer Support

Cennox - Responding to the latest threats

The increase in Gas Attacks.

Blowing the door off an ATM machine is not a new phenomenon. The practice of criminal gangs using explosive devices have been reported across the world for many years, some even here in the UK with spectacular video footage being circulated through various news channels.

The sudden increase in this specific type of Gas Attack, usually seen across Europe and now more frequently on UK estates, is a worrying development for banks and independent ATM deployers.

The act of destroying the ATM for criminal reward is not the major concern for many organisations. The potential harm to staff, customers and the innocent passerby, partnered with the huge cost of reconstruction work to make the buildings and surrounding areas safe, adds real weight to the dangers these attacks afflict.

Cennox Response to the growing threat.

As always, Cennox remain at the forefront of ATM Security, through sound R&D and the partnerships with our customers, we repeatedly deliver solutions to counter the threats you face.

This document introduces you to the Threat Detection & Prevention of Gas Attacks Device that we are proud to bring to market through our exclusive partnership with 3SI Security.
Threat Detection & The Prevention of Gas Attacks on your ATM

How does the Detection System work?

The Gas Detection System is a second generation product which includes an advanced monitoring and alarm mechanism, all totally hidden from view. The key elements of the product are:

The Detection Unit

A multi-sensor unit is included to detect the presence of gas, these two independent sensors work in unison but independently. A microprocessor built within the device, interprets and measures the change in environment and takes the appropriate decision as when it should discharge the contents of the neutralising gas, these are based on the pre-set parameters.

The system is programmable to meet the variety of applications and needs.

The Valve Unit

This is the control unit that opens and closes the valves in response to the threat. This is positioned on the bottle(s) and will open and close dependent on the instructions coming from the sensors.

The Bottles of Neutralising Fluid

The contents of each bottle is a neutralising liquid, this immediately turns to gas the moment it is released and reacts chemically with the hydro-carbon gasses. After the numerous tests conducted on the product, the results of when a continuous gas mixture (acetylene / oxygen) is pumped into an ATM safe at a flow rate of 30 litres per minute, the response of the neutralising gas meets and masks the potency for a sustained period. The pre-testing has been able to determine that one bottle is able to maintain this counter protection level for around 5 minutes. Cennox are able to increase this duration through the supply and installation of additional bottles. Four bottles will maintain the flow over a 20 minute period during which time the audible alarm/siren will already be sounding.

The Back-up Battery

The product includes an additional back-up battery, guaranteeing 4 hours of operation should the main power supply have been cut.

The Alarm System

On detection of the gas, an alarm is triggered, alerting police of the attack in progress. The option of an audible siren (125Db) can also provided.

It is also possible to connect to a 3rd party alerting system (wired)

Storage of the Bottles

The bottles are ideally stored within the ATM Safe. If this is not possible, these can be stored externally or housed within a purpose built secure cabinet. (not included in the standard pricing module)

What is the threat?

Recent incidents demonstrate the methods the criminals are adopting to create the optimum environment for an explosion. This typically involves inserting a tube through the cash dispenser and flooding the ATM with a combustible gas, a process taking anything from 30 seconds to 2 minutes to achieve.

Once flooded, a trigger device is then activated to ignite the gas, ranging from mobile phones and tasers. The resulting damage inflicted on the machine varies, but the damage to the surrounding building is sufficient to allow a car to ram the location and for the gangs to gain access and pilfer the remaining bundles of notes, before leaving the scene in a waiting fast car.

Video footage freely available on various social media sites, display examples of how this is achieved and how dangerous it potentially is for anyone caught nearby.

Notice the Gas Pipes leading from the ATM

Violent Explosion

ATM in Hampshire, UK, March 2013

images from youtube.com
Technical Specifications

Dimensions

Gas Detection Unit: 130 x 100 x 30mm
Valve Unit: 110 x 60 x 27mm
Bottle with Fluid: 115 x 440mm (without valve)
115 x 530mm (with valve)
(Diameters)

Battery

The system is connected to the mains (with 12VDC wall plug adapter) or to the 12VDC power supply from the ATM. The battery provides 4 hours of operation if disconnected.

Maintenance

Gas Sensor Calibration (or replacement): Annually
Control Weight Bottle: Annually
Annual Maintenance: estimated 1 hour on site
Back-up Battery Replacement: Every 3 years (additional 1 hour on site)
Bottle Replacement: Every 3 years (additional 1 hour on site)

Environmental Conditions

In Operation

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<thead>
<tr>
<th>Description</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
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<td>-10°C</td>
<td>+55°C</td>
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<tr>
<td>Humidity</td>
<td>10%</td>
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During Storage

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EMC

The Device will be tested according to the following standards:
EMC Testing: EN61000-6-3 and EN 61000-613
ESD Testing: IEC 801-1-3 test A-11

Installation & Maintenance

Your Gas Detection Device will be installed and maintained by Cennox’s experienced and trained Field Services Team. With nationwide coverage, your customers, staff and buildings are in good hands.
The Gas Detection & Prevention service is supplied in partnership with 3SI Security. Cennox are proud to be the exclusive UK Partners of 3SI.