

Proposal to Landlords

May 2014

Carbon Monoxide Detection, Testing, Monitoring and Compliance

An End-to-End Solution for Landlords

Introduction

Carbon monoxide is an invisible odourless gas that is highly toxic and can cause severe injury and death. In the UK 50 fatalities each year are attributed to carbon monoxide poisoning and the installation of detectors to alert building occupants is now standard practice. For landlords, equipping homes with battery powered carbon monoxide detectors only partially addresses their responsibilities and significant exposure relating to testing, monitoring and compliance remains.

Smart Compliance has developed an innovative and patent protected end-to-end solution to:

1. Fully address all of a landlords' responsibilities,
2. Improve safety and reduce occupant injury and fatalities, and
3. Reduce landlord costs relating to false alarms and forced entry

The Legislation, Duty of Care and Good Practice

The underlying principal of Health & Safety is that any commercial premises should provide a safe and healthy environment for any occupant or visitor. The provision of carbon monoxide detection equipment is now a reasonable requirement under a standard code of good practice and is also the subject of specific legislation.

Northern Ireland has become the first country in the UK to require carbon monoxide alarms to be fitted in all homes with appliances that burn fuels. A detector must be installed in any home in the country when a combustion appliance is put in or replaced. The rules in Northern Ireland are not restricted to new homes and apply to solid fuel, gas and oil burning appliances.

- Since 1st October 2013, Scottish landlords must install a carbon monoxide detector whenever
 - a) Any new gas appliance is installed
 - b) Any gas appliance is moved
 - c) Any fuel appliance flue passes through bedrooms
- In Scotland, England and Wales the current mandatory standard dictates that when a solid fuel appliance is installed, a carbon monoxide detector must also be installed.

- In Scotland, new standards for non-domestic residential properties dictate that where there is a fuel burning source in any part of the building, then a carbon monoxide detector, with the ability to communicate with the front desk or building manager must be installed. This legislation applies to a wide range of buildings including hospitals, care homes, nursing homes and employee accommodation.
- In addition, Civil Law imposes a duty on organisations to take all reasonable measures to ensure the safety and wellbeing of all those affected by their activities.

The Smart Compliance solution has been specifically addressed to provide landlords with full compliance to this legislation.

Smart Compliance Solution

The Smart Compliance solution comprises an advanced carbon monoxide detection unit which can communicate via SMS to both individuals and to a central monitoring centre where a response can be initiated and records maintained. Smart Compliance can directly address the four specific challenges faced by property owners and managers.

1) Carbon monoxide detection

The dangers of carbon monoxide have long been recognised and the installation of detectors to alert occupants has become standard practice. The Smart Compliance solution includes a new carbon monoxide detector that will alert occupants both via audible and visual signals. Many commercial devices are also currently available to provide this basic functionality.

In addition, the Smart Compliance detector can alert residents through an SMS (text) message sent to their phone. This is helpful should they be out-with the premises at the time or if they have impaired hearing.

2) Detector testing

Traditional carbon monoxide detectors contain sensors that can be unreliable and rely on batteries that can become spent. Manufacturers strongly advise that units are manually tested each week or month, a procedure that confirms only that the battery is viable and the audible signal functioning.

The Smart Compliance detector unit automatically tests both the battery and the sensor every week and sends a verification SMS message to a central monitoring service. This directly addresses a landlord's duty of care responsibilities with respect to ensuring installed carbon monoxide detection devices remain functional and are providing appropriate protection to occupants.

3) Monitoring

Each smart Compliance detector automatically sends a weekly SMS message to a secure central monitoring service to confirm that it is operational and that both the battery and sensor are functioning appropriately. Each device will also alert the monitoring service should a fault be detected and appropriate action can be taken.

In the event that a carbon monoxide emission is detected the unit will automatically inform the monitoring service and an emergency response can be initiated. This is particularly important where a building is unoccupied and a neighbour may be at risk or where the occupants are elderly or have low mobility.

4) Compliance

The Smart Compliance solution includes logging of all testing in a secure central database and can evidence that a landlord has complied with their legal and duty of care responsibilities.

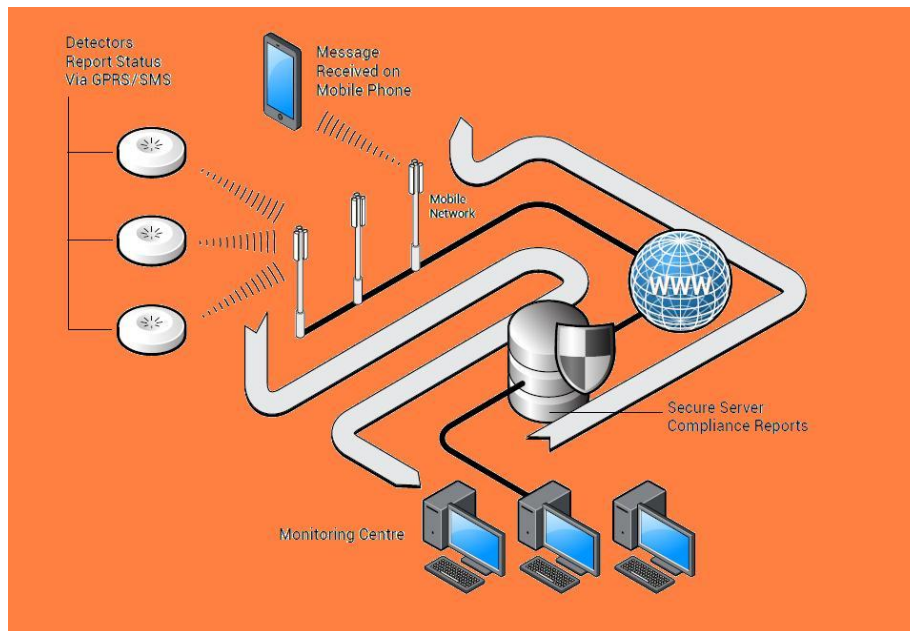
Smart Compliance Technology

The Smart Compliance solution comprises a carbon monoxide detection unit containing an inbuilt SIM card with which it can send SMS messages to a secure central monitoring centre. Where required, SMS messages can also be sent to a mobile phone. In the event of a carbon monoxide release, the unit will issue audible and visual alerts and will send an alert message to the monitoring centre from where the emergency services can be rapidly notified. The unit will also self-test it's carbon monoxide sensor and battery every week then send a confirmatory message to the secure central monitoring centre

A database maintains evidence of all communications and provides evidence that carbon monoxide detection capability is active and that all legislative, duty of care and good practice obligations have been fulfilled.

The solution is patent protected and has been developed locally by Smart Compliance, a Scottish company.

Smart Compliance carbon monoxide detectors are battery powered and can be installed in existing and new buildings without disruption.



Pricing Structure

Pricing for the Smart Compliance solution is in two parts, an initial cost for the device and an ongoing service cost for the communications and monitoring. This structure is summarised in the following table.

	Detector	Testing, Monitoring and compliance	TOTAL
Year 1	£45	£26	£71
Year 2		£26	£26
Year 3		£26	£26
Year 4		£26	£26
Year 5		£26	£26
TOTAL	£45	£130	£175

The total cost per property over 5 years is £175, equivalent to only 67p per week. This covers all detection, testing, monitoring, and compliance and will result in key safety, cost and carbon foot print savings alongside compliance with new legislation.

By way of comparison, the annual fuel bill of £1,200 for a typical Scottish residential property is equivalent to £23 per week. The cost of replacing a gas boiler is £1,500 per property, equivalent to £2.88 per week (assuming a 10 year replacement lifecycle).

Proposed Roll-out

Introduction of the Smart Compliance Solution would directly address the four key requirements of landlords in complying with their legal, duty of care and good practice obligations. In addition, there would be significant benefits relating to improved safety, cost reduction and carbon savings.

An introductory (pilot) phase could be undertaken as a precursor to a wider programme aimed at delivering these benefits across a much wider number of properties. The pilot phase would allow landlords to fully demonstrate the benefits to a wide range of stakeholders and would be a key step in addressing compliance requirements. A larger deployment could readily be delivered by Smart Compliance.

Key Features

The key features of the Smart Compliance solution are summarised in the table below.

Summary of Key Features	Traditional Carbon Monoxide Detectors	The Smart Compliance Solution
Carbon Monoxide Detection		
<ul style="list-style-type: none"> Audible and visual alarm SMS text alert 	<p>Yes</p> <p>No</p>	<p>Yes</p> <p>Yes</p>
Testing		
<ul style="list-style-type: none"> Weekly/monthly battery & alarm test Weekly/monthly testing of sensor 	<p>Typically not undertaken</p> <p>Not undertaken</p>	<p>Yes - Automatic</p> <p>Yes- Automatic</p>
Monitoring		
<ul style="list-style-type: none"> Emergency services alerted Recording of low level exposure 	<p>No</p> <p>No</p>	<p>Yes</p> <p>Yes</p>
Compliance		
<ul style="list-style-type: none"> Evidence of detector testing 	<p>No</p>	<p>Yes</p>
Other		
<ul style="list-style-type: none"> Annual battery change required BSI accreditation Landlord notified of tampering Real time data for maintenance 	<p>Yes</p> <p>Yes</p> <p>No</p> <p>No</p>	<p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>

Benefits

The key benefits to landlords of the Smart Compliance solution are summarised in the table below.

Smart Compliance Solution: Summary of key benefits

Safety	<ul style="list-style-type: none"> • Emergency services response times reduced considerably through prompt notification from the monitoring centre. • Additionally, carbon monoxide occurring in unoccupied buildings can be identified before neighbours are exposed. • Direct reduction in injuries and deaths resulting from carbon monoxide poisoning. • Installed carbon monoxide detectors are known to be fully functional providing peace of mind • Monitoring of intermediate level carbon monoxide exposure can facilitate diagnosis of health issues.
Compliance	<ul style="list-style-type: none"> • Evidence that requirements are met with respect to <ul style="list-style-type: none"> ○ New legislation, ○ Duty of care and ○ Good practice.
Cost savings	<ul style="list-style-type: none"> • Reduced call outs to false alarms <ul style="list-style-type: none"> ○ Including staff, gas engineers, service providers and admin. ○ Additional savings if the emergency services are considered. • Reduced requirement for forced entry to service boilers. • Potentially reduced cost of insurance. • Reduced healthcare and fatality costs • No need for precautionary detector replacement
Reduced Carbon Footprint	<ul style="list-style-type: none"> • Reduced false alarm call outs • Reduced reactive maintenance • Reduced forced entry • Increased life span for detectors