



**CO**

X-Series CO Alarms



## Battery Powered Carbon Monoxide Alarms

XC70, XC100, XC100D

# Carbon Monoxide (CO) in Residential Accommodation

## The dangers of Carbon Monoxide

Carbon Monoxide (CO), not to be confused with Carbon Dioxide (CO<sub>2</sub>), is an invisible, odourless and tasteless gas that is toxic to humans and animals. It is often referred to as the “Silent Killer” because none of our senses can alert us to its presence; we can’t smell it, taste it or see it. The initial symptoms, tiredness and headaches, are similar to those of influenza, which can make it difficult to diagnose. When deadly levels of Carbon Monoxide are present in a home, the occupants will become unconscious and do not wake again. In the UK alone, thousands of people are treated in hospital for CO poisoning and there are many deaths every year.

The longer CO gas is breathed in and the higher its concentration, the worse the symptoms become including loss of balance, loss of vision and memory and eventually unconsciousness. This can happen within just a few minutes or hours, depending on the amount of CO in the air. CO alarms give a full alarm, before the first symptoms occur: The higher the CO concentration, the quicker the device will give an alarm.

Some alarms offer optional pre-alarm features, which can be used to identify faulty appliances which leak more and more CO over time, but do not yet trigger a full alarm or cause any symptoms.



## How is Carbon Monoxide produced and who is at risk?

CO is produced by the incomplete burning of Carbon based fuels such as gas, coal, oil and wood. CO can be produced by any device that is not burning correctly or a device that has a blocked flue, meaning that all faulty cooking appliances, heating appliances, petrol generators and vehicle engines can pose a potential threat. Any person or animal sharing an environment with a faulty appliance is at risk.

## How to avoid the risks?

Ensure fossil fuel burning appliances are serviced regularly and install a CO alarm alongside each one in a property.

See guidance on installation on page 6



**Odorless**



**Invisible**



**Toxic Gas**



**Tasteless**

# 87%

of **CO POISONING**  
incidents occur in the **HOME**







## Regulations

In England and Wales, a CO alarm is only mandatory if a solid fuel burning appliance, e.g. wood or coal, is installed.



In Scotland and Northern Ireland from October 2013, a CO alarm became mandatory when any type of fuel burning appliance is installed or replaced in a new or existing home. A CO alarm is also mandatory if a "flue in void" situation is present, where the flue cannot be adequately inspected.



## Honeywell's expertise

Honeywell has been a pioneer of residential CO safety for over 20 years, innovating the first residential CO alarm, and bringing to market subsequent models that set the standard for residential CO safety. Today Honeywell is one of the leading global manufacturers of CO alarms.

Honeywell's X-Series battery powered CO alarms offer unrivalled detection capability, loud sounder output, tamper-proof housing, long-life sensing, maintenance free operation and simple installation.

All models can also be wireless network enabled and independently certified to EN50291-1:2010 and EN50291-2:2010.



CO

# X-Series CO Alarm Range

Honeywell offers three variants of the X-Series battery powered CO alarms, each of which varies in user interface options and lifetime:

## XC70 User Interface

7 YR

7 year life & warranty

- Alarm
- Power
- Fault
- Ventilate (pre-alarm)



## XC100 User Interface

ALARM

10 YR

Unique message

10 year life & warranty

- Power
  - Fault
  - Ventilate
- ALARM EVACUATE**  
CALL 0800 111 999



## XC100D User Interface

ALARM

105 PPM

10 YR

Unique message

CO level display

10 year life & warranty

- Power
  - Fault
  - Ventilate
- ALARM EVACUATE**  
CALL 0800 111 999



# X-Series CO Alarm Advantages

The X-Series CO alarms have been optimised for use by professionals dealing with residential CO protection. They have been designed to meet the needs of professional landlords and high demanding private individuals.

For increased protection, all X-Series devices can be interconnected wirelessly to form an alarm system.



XC70



XC100



XC100D

## X-Series high reliability

- Own proven long-life sensor technology
- Third party certified by BSI to EN50291-1:2010 and EN50291-2:2010
- Sealed housing to protect from adverse environmental conditions
- Alarm memory
- Event logger
- Optional pre-alarm
- Low level monitoring mode
- End-of-life signal

## Low total cost of ownership

- 10 year (XC100, XC100D) or 7 year (XC70) life and warranty
- Maintenance free – no parts to change

## Tamper-proof

- Sealed-in battery
- Self-locking to mounting plate – remove only with a tool (screwdriver)
- Activation and deactivation triggered by mounting plate

## Appealing design

- Low profile discrete design
- Integrates well into residential environment

## Easy to install

- Free standing, wall or ceiling mount
- Switches on when slid onto mounting plate

## Complete solution

- X-Series alarms can be interconnected wirelessly using the wireless plug-in module XW100
- Honeywell's X-Series will comprise of a complete solution range of compatible Fire and CO alarms

## Designed for residential environments

- Small, compact design
- Integrates well into residential environments

## Easy to operate and use by the end-user

- Alarm and Fault hush
- Large button – can be pressed using a long handle (eg, broom)
- Prominent alarm action message (XC100, XC100D)
- LCD display (XC100D)
- Extra loud sounder output
- Reduced sound-level test

## Applications

X-Series delivers enhanced safety and exceptional ease of use in domestic premises, apartments, leisure accommodation, boats and caravans (static/mobile) or environments where generators are used.



Homes



Apartments



Leisure accommodation and guest houses



Boats



Generators



# Fast installation

## Installation

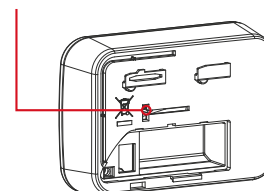
No wiring required. For a fixed wall or ceiling installation, fix the mounting plate first using plugs and screws. Then slide the alarm onto it, which automatically activates the alarm.

## Mounting options

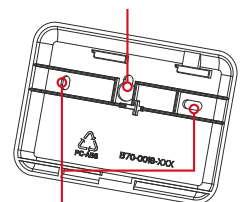
- Free standing
- Wall with screws or nail
- Ceiling with screws

Alternatively – for even quicker installation – slide the alarm onto the mounting plate to activate it and hang it onto the wall using the supplied nail, or place it free standing on a high shelf.

Discreet ON/OFF switch, activates when mounted to wall bracket

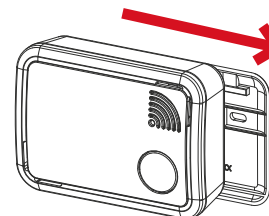


Hanger keyhole for non-permanent wall mounting

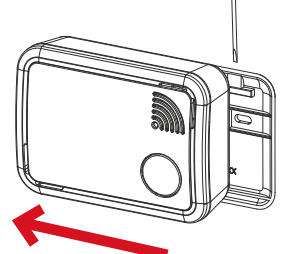


Wall mount screw holes

Activation



Removal



## Dedicated local support

Honeywell provides a UK based Customer Support Centre, which is available Monday to Thursday from 08:30 to 17:00 and Friday from 08:30 to 15:30. Our team is happy to answer any queries on our products.

Telephone: 01202 645 577

# Specifications

## XC70

### Separate indicators for each unit status

- Alarm
- Power
- Fault
- Ventilate (pre-alarm)

Loud sounder output

### Big, easy to press button

- Fault hush
- Alarm hush
- Reduced sound level test



## XC100

### Separate indicators for each unit status

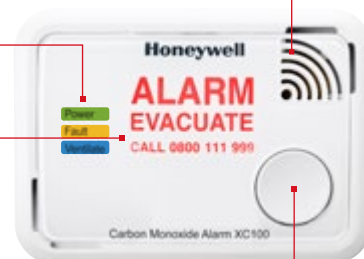
- Alarm
- Power
- Fault
- Ventilate (pre-alarm)

Loud sounder output

### Prominent alarm message\*

### Big, easy to press button

- Fault hush
- Alarm hush
- Reduced sound level test



## XC100D

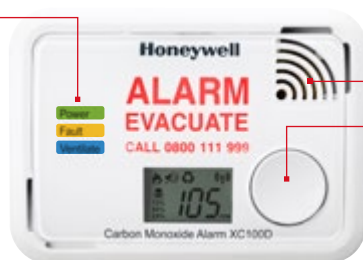
### Separate indicators for each unit status

- Alarm
- Power
- Fault
- Ventilate (pre-alarm)

Loud sounder output

### Big, easy to press button

- Fault hush
- Alarm hush
- Reduced sound level test



Alarm or Fault silenced

Remote fire alarm

Full CO alarm

CO pre-alarm levels

Replace unit

Remote alarm triggered by another unit

CO concentration in PPM Number of units in a wireless network (during configuration with XW100 wireless module)



\*Patent pending

## TECHNICAL SPECIFICATION

### RELIABILITY

Detection principle	Electrochemical Cell Ecosure (XC70) Ecosure X® (XC100, XC100D)
Third party approvals	EN50291-1:2010 Domestic EN50291-2:2010 Recreational BSI Kite marked
Other compliances	RoHS REACH
Self-test function	Every 60 minutes
Lifetime/Warranty	XC70: 7 years; XC100, XC100D: 10 years

### OPERATING ENVIRONMENT

Temperature	-10°C - +45°C
Humidity	25-95% RH (non-condensing) - suitable also for typical bathroom conditions
IP rating	IP44

### ELECTRICAL AND INTERCONNECTION

Power supply	Long-life Lithium Battery, 3V, Sealed-in
Wireless interconnection	With optional plug-in module XW100
Alarm Scan	Compatible with X-Series Alarm Scan App, available on Google Play and Apple iTunes store

## USER INTERFACE

Visual indicator	Power: Green LED Alarm: XC70 Red LED; XC100, XC100D: Big message Fault: Yellow LED Ventilate: Blue LED
Audible	>90 dB @ 1 m
Button	Test with reduced sound level. Alarm hush, Fault hush (12h)

### ALARM LEVELS

PPM	Full alarm	Pre-alarm	Low level monitoring mode
≥ 43	~75 minutes	~19 minutes	Immediately
≥ 100	~25 minutes	~6 minutes	
≥ 300	~90 seconds	~23 seconds	

### PRODUCT

Size	100 x 72 x 36 mm
Weight	135 g

### PACKAGING

Type	Carton box with euro hole
Dimensions	107 x 78 x 50 mm
Scope of supply	CO alarm. Mounting kit: Nail, Instruction manual

# CO Alarms - Where to Install?

## Where to install?

When considering installation, be aware that Carbon Monoxide has the same density as air and therefore, distributes equally around a room. However, as CO is formed by a combustion process, the gas is likely to be hotter than the surrounding air and will be forced up towards the ceiling.

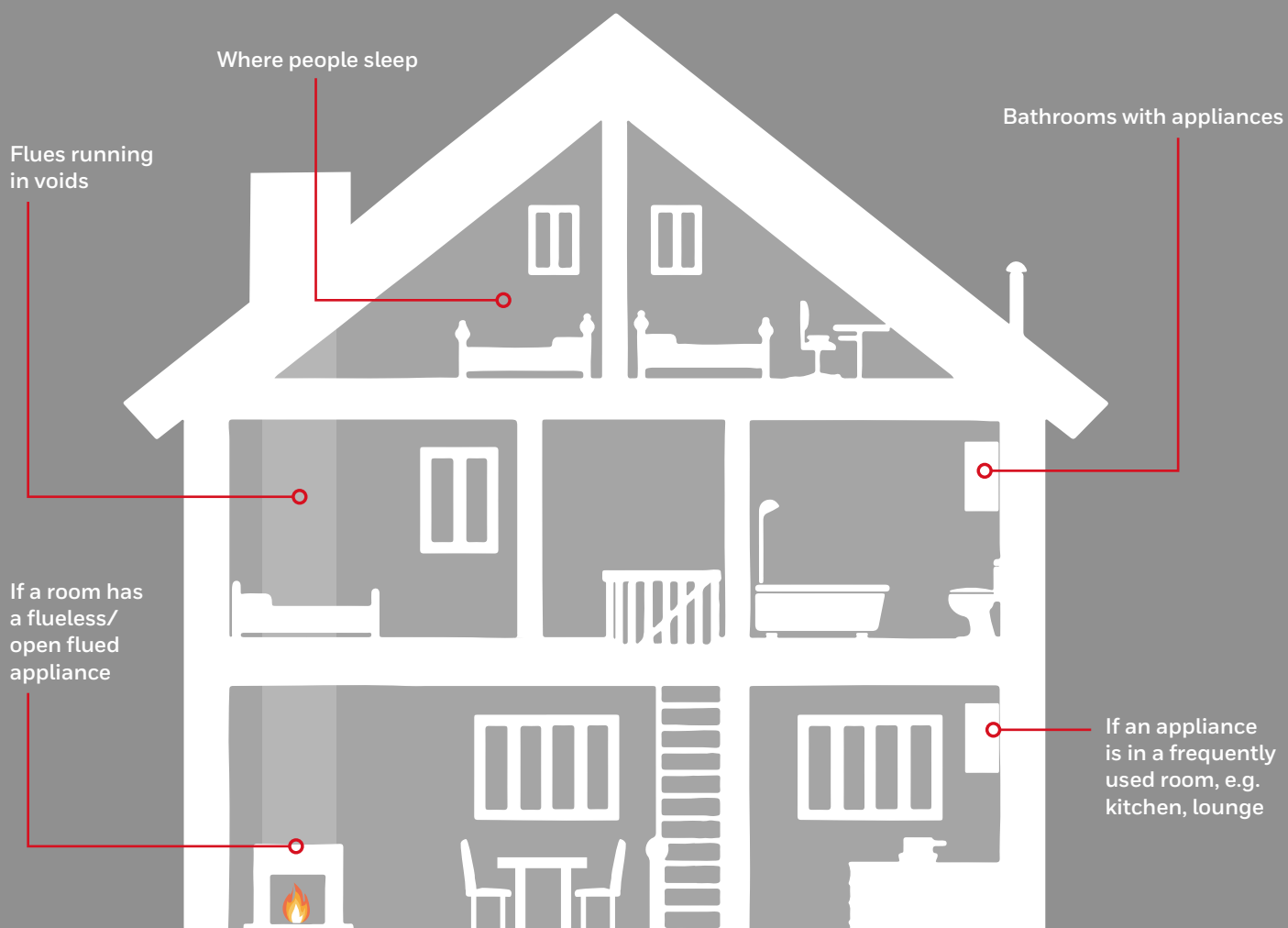
Detailed recommendations can be found in EN50292, a guide on selection, installation, use and maintenance for residential Carbon Monoxide alarms.

Ideally, an alarm should be fitted in every room containing a fuel-burning appliance. It is strongly recommended to also fit alarms in bedrooms and in rooms where you spend a lot of time.

For premises such as bedsits, caravans or boats where the accommodation is a single living space incorporating the sleeping area, the alarm should be positioned as far from the cooking appliances as possible but near to where the person sleeps.



## Installation Guidance





# How we add value

## CO Alarms



### Alarm levels

EN50291 defines the CO level, at which the device must and must not go into alarm. The higher the CO concentration, the quicker the device will give an alarm. This is based on the fact that the poisoning impact of CO is determined by CO concentration and exposure time.

50 ppm: Alarm between 60 and 90 minutes

100 ppm: Alarm between 10 and 40 minutes

300 ppm: Alarm within 3 minutes



### Pre-alarm

Dangerous CO levels may be caused by faulty appliances, which start to leak more and more CO over time. If activated, the pre-alarm will give an early warning of such situations even if the alarm levels are not being reached. If pre-alarms occur frequently it is recommended to call a technician for further investigations. The pre-alarm will start giving indications once 25% of the alarm level (time and concentration) has been reached. For example, if 43ppm CO is present, the pre-alarm will start after 15-23 minutes.



### Low level monitoring mode

The low level monitoring mode allows you to temporarily use the unit as a measuring device for very low levels of CO which are outside of the EN standard required alarm levels. Once this function is activated, the units will instantly flash the blue ventilate light if the CO level rises above 10ppm. Units with a display will also show the currently present CO level.



### Sensor technology

The sensor plays an important role in ensuring proper CO detection. Honeywell is using its own Electrochemical Cells: Ecosure® (7 years life and warranty) Ecosure X® (10 years life and warranty). More than 10 years of experience and tight quality controls give us confidence that the cells work for the lifetime of the alarm.



### Self-test

Honeywell's CO alarms perform an automatic self-test for the electronics every 60 minutes.



### Alarm memory (end user)

CO does not leave any trace that can be detected by humans and you might have a malfunctioning appliance, which makes the alarm go off whilst you are out. The Memory function will keep the Red Light flashing (LCD version will also show the PPM levels) until the button is pressed or 7 days have passed.



### Event logger (professionals)

Honeywell's CO alarms record a history of events, which can be downloaded by professionals. This provides a more in-depth analysis of CO events such as detailed information on the CO concentration of the last 7 days and weekly maximums for the whole operating life. Dates of alarm events are recorded.



### End-of-life

CO alarms do not last forever and should be exchanged after their end-of-life date. The lifetime is mainly determined by the CO sensor. The EN standard for CO alarms therefore requires all CO alarms to have an end-of-life signal, which is implemented on all Honeywell CO alarms.

## X-Series Alarms



### Sealed housing

Honeywell's X-Series alarms all have rubber sealed housings. This protects the electronics from adverse environmental conditions such as humidity and improves reliability and lifetime. We have been using this technology successfully for many years in our commercial smoke alarms which endure particularly harsh environmental conditions.



### Alarm hush

There may be an alarm occurrence where you want to mute the extremely loud alarm sounder, for example, when you have the situation under control. Pressing the Alarm Hush button on the unit will mute the sounder for a couple of minutes. The alarm light will continue to flash as long as the unit detects a threat.



### Fault hush

A typical fault occurs when the alarm warns of an almost depleted battery. The alarm will start to bleep once per minute accompanied by a flashing fault light. The Fault Hush allows you to mute the sounder for 12 hours, giving you time to address the fault. This period can be extended several times.



### Reduced sound level test

Alarms should be tested regularly to ensure they are working properly. After pressing the Test button, the alarm will start the self-test procedure, flashing all lights and sounding the alarm. We have reduced the sound level for this test function considerably from the full alarm level of 85 dB to protect your hearing. By keeping the button pressed, the full alarm level will sound.



### Tamper-proof

Professional landlords want to ensure that installed alarms cannot be deactivated by their tenants. Our X-Series alarms all have sealed batteries which cannot be removed by the end user. Also, once installed, a tool (screwdriver) is required to switch the unit off.



### Maintenance free operation

All Honeywell X-Series alarms have lifetime batteries – there is no additional cost for replacement parts or labour to fit them. The only maintenance required is occasional cleaning of the product.



### Interlink

Interlink provides the ability to connect several alarms to an alarm system. If one of the units goes into alarm, all other units will sound as well. This considerably improves safety, especially in larger properties. All X-Series alarms can be upgraded to connect wirelessly.



### X-Series Alarm Scan app

The Honeywell X-Series Alarm Scan App allows wireless instant transfer of logged Alarm and Fault events, as well as the general device status from all enabled X-Series Alarms to iOS or Android smart devices. The app works with all X-Series devices marked with the Alarm Scan logo, including optionally installed wireless modules.

# Our Home Safety Product Range



## HF500 Hard-wired flammable gas alarm

The HF500 alarms are designed to deliver a complete solution for the detection of LPG (Liquefied Petroleum Gas) and Natural Gas/Methane. Optimised for use by professionals dealing with flammable leak detection, HF500 is ideally suited for use in private or social housing as well as other forms of residential care.



## e<sup>2</sup>sense Battery flammable gas alarm

e<sup>2</sup>sense is the most convenient way to detect Natural Gas, Propane, Butane, LPG and LNG. It is compact and light on the pocket in more ways than one.



## SF340 Series hard-wired carbon monoxide alarm

The SF340 Series is a range of reliable, hard-wired Carbon Monoxide alarms with battery back-up. They are designed for use in all domestic and light commercial environments.



## X-Series Alarm Scan app

The X-Series Alarm Scan App is designed for professional landlords, gas engineers, plumbers and other service providers responsible for ensuring the safety of tenants or carrying out initial installations of X-Series alarms. It helps with annual maintenance checks or boiler servicing and provides an easy way to confirm incident reports. Installers or landlords can demonstrate compliance or offer an added-value service that can help build their reputation as a professional and reliable service provider.

The app allows anyone who owns an X-Series device\* in their home to see more in-depth information about the state of the alarm and keep safety concerns under control.

Available on Google Play<sup>®</sup> and iTunes<sup>®</sup>.



Alarm Scan

\*Compatible with X-Series devices marked with the Alarm Scan App logo.

## Dedicated local support

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Tel: (01202) 645 577



## X-Series battery powered smoke and heat range

The Honeywell range of smoke and heat alarms has been engineered for ultimate performance and reliability. Featuring a ten year lifespan and warranty, low profile design and easy installation, they are ideal for professionals dealing with residential fire detection.



## X-Series wireless module

All Honeywell X-Series alarms can be wirelessly interconnected using the XW100 plug-in module. This means that if one X-Series Carbon Monoxide, smoke or heat alarm triggers an alarm, all interconnected units will give an audible alarm as well. This is especially useful, when living in a large or multi-story dwelling where the alarm may be triggered in another part of the building.

### Please Note:

While every effort has been made to ensure accuracy in this publication, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards, and guidelines. This publication is not intended to form the basis of a contract.

### Professional Home Safety

www.homesafety.honeywell.com  
www.honeywellanalytics.com.

### ORDER INFORMATION

Part no	Barcode	Batch Size	Minimum Order Quantity	Language
XC70-EN-A	5 027526 401673	50	100	English
XC100-EN-A	5 027526 401680	50	100	English
XC100D-EN-A	5 027526 401697	50	100	English

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