Honeywell Home

Carbon Monoxide (CO) in Residential Accommodation

The dangers of Carbon Monoxide

Carbon Monoxide (CO), not to be confused with Carbon Dioxide (CO_2), 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. High levels of Carbon Monoxide in the home can quickly render the occupants unconscious, leading to fatality within hours. In the UK alone, thousands of people are treated in hospital for CO poisoning 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.

ALARM

87%
of **CO POISONING** incidents occur in the **HOME**

Odourless   **Invisible**   **Toxic Gas**   **Tasteless**

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.

Ultra-thin CO Alarm
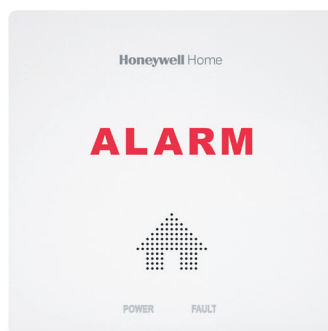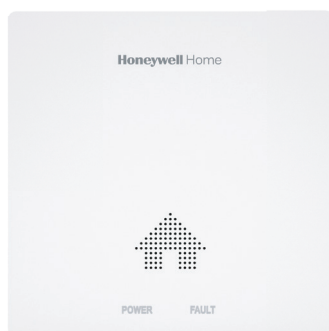# Designed to Protect Your Family

BS EN 50291-1:2018 Standard
BS EN 50291-2:2019 Standard

R100C-1

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.

How we add value

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

Red "ALARM" for the deaf or hearing-impaired

This CO alarm gives a warning signal in three different ways: sound, text and light. When the alarm is triggered, a visible warning signal – "ALARM" in large red text – will light up and accompany the audible alarm to warn deaf and hearing-impaired occupants.

Sleep easy with Do Not Disturb mode at night

This is an automatic brightness adjustment of the green POWER light, which is enabled when the ambient brightness of the room is very low (i.e. at night). The brightness of the flashing green POWER light will be reduced, thereby reducing the impact of the standby indicator light on the home owner.

Reduced sound levels for testing

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.

Super slim design

At just 25mm, this is the thinnest CO alarm on the market, making it compact and beautifully designed to fit into any home.

Easy touch button

The whole surface of the R100C-1 is the TEST/MUTE button, making it much easier to use.

IP44 grade water & dust proof

The IP44 protection classification means that you can install the device in your outdoor spaces, such as conservatories, sheds, and covered patios, where there may be damp or dusty conditions.

10 year lifespan

With a 10 year lifespan battery, our R100C-1 alarm comes with peace of mind, and a cost-saving against other, less reliable alarms.

Alarm memory (end user)

CO cannot be detected by humans. If your alarm is triggered whilst you are out, the Memory function will keep the Red Light flashing until the button is pressed or 7 days have passed. This is also useful to flag any alarm malfunctions.

Tamper-proof

Professional landlords want to ensure that installed alarms cannot be deactivated by their tenants. Our R100C-1 alarms all have sealed batteries which cannot be removed by the end user. Also, once installed, a tool (screwdriver) is required to remove the alarm.

End-of-life signal

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 Home CO alarms.

Alarm hush

There may be an occurrence where you want to mute the extremely loud alarm sounder, for example, if you are calling the emergency services, a utilities engineer, or 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 would be 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.

Maintenance free operation

This device comes with 10 year lifespan batteries, with no additional cost for replacement parts or labour to fit them. The only maintenance required is occasional cleaning of the product.

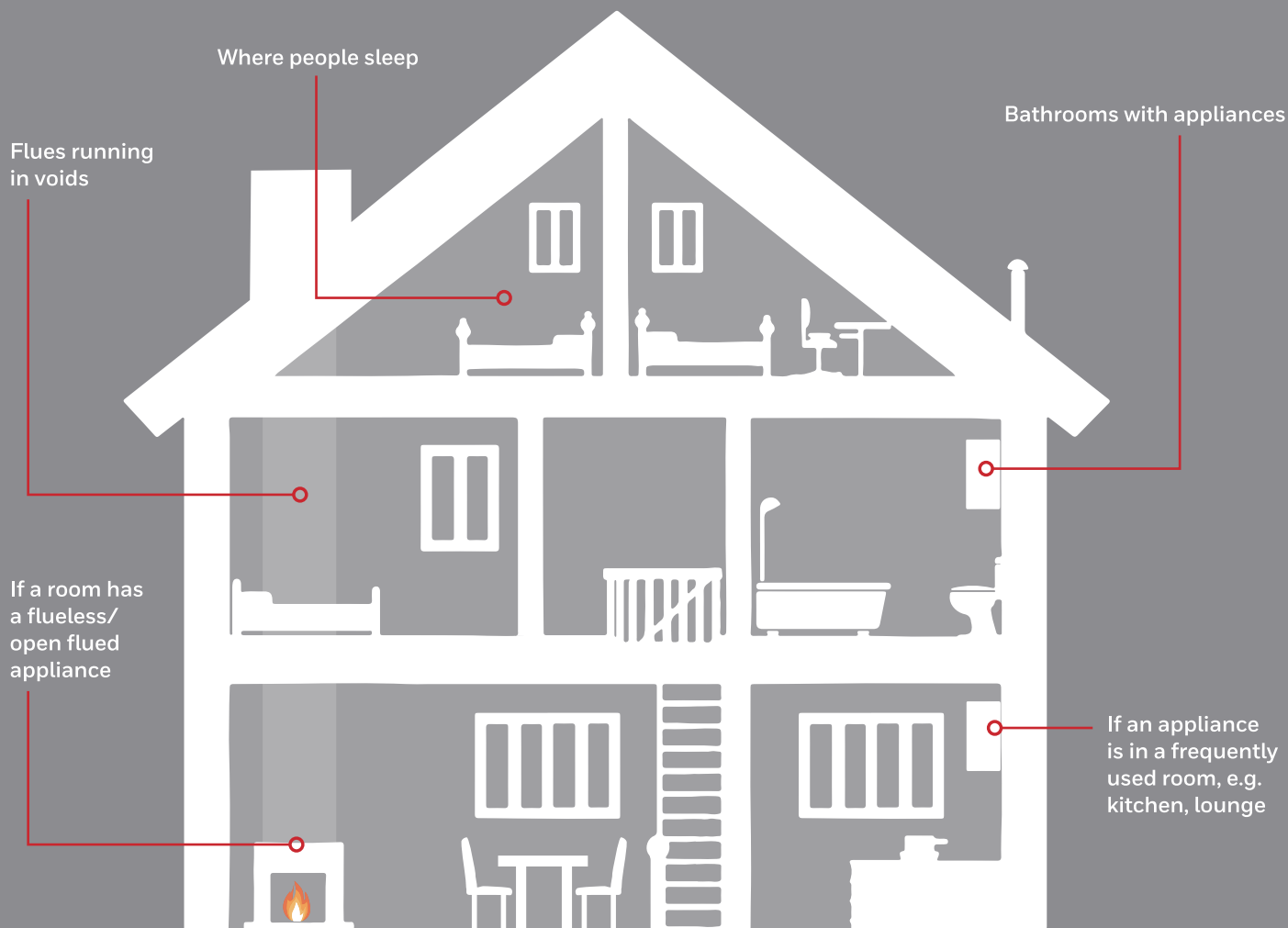# CO Alarms – Where to Install?

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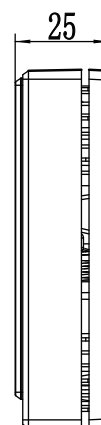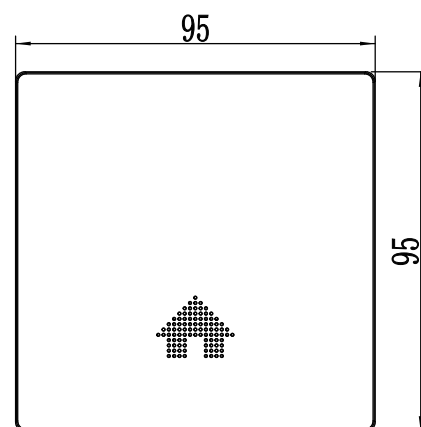
For premises such as bedsits, caravans or boats, where the accommodation is a single living space incorporating the sleeping area, the alarm should be positioned as far from cooking and heating appliances as possible and closer to where the occupant sleeps.

Installation Guidance

Where people sleep

Bathrooms with appliances

Flues running in voids

If a room has a flueless/ open flued appliance

If an appliance is in a frequently used room, e.g. kitchen, lounge

Specification

Model:	R100C-1
Gas detected:	Carbon Monoxide
Sensor technology:	Electrochemical Cell
Third party approvals:	EN50291-1:2018 EN50291-2:2019
Type of device:	R100C-1
CO alarm sensitivity setting:	50PPM: Alarm between 60 to 90 minutes 100PPM: Alarm between 10 to 40 minutes 300PPM: Alarm within 3 minutes
Other compliances:	RoHS, REACH
Lifetime:	10 years
Temperature:	-10°C to +45°C
Humidity:	25 - 95% RH (non-condensing)
IP rating:	IP44
Power supply:	Long life lithium battery, 3 V, sealed for the life of the product (no replacement necessary)
Visual indicators:	Power: Green LED Alarm: Red LED - large text message Fault: Yellow LED
Audible:	≥85 dB@3m
Detection range:	Max. 40 m² within a room
Dimensions:	95 x 95 x 25 mm
Weight:	120 g
Installation:	wall mount, ceiling
Type:	Carton box with euro hole
Dimensions:	120 x 35 x 120 mm
Scope of supply:	CO alarm. Mounting kit: Nail, Instruction manual

For more information
resideo.com

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