

**Unrivalled performance with  
EN50194-1:2009 approval**

# Flammable Gas in Residential Accommodation



## The dangers of flammable gas in residential accommodation

Natural Gas and LPG (Liquefied Petroleum Gas, also known as bottled gas) are some of the safest forms of energy available, but they can still pose a substantial hazard in homes and static caravan holiday parks if a leak occurs.

Once gas has built up undetected, simple activities such as turning on light switches can provide a source of ignition, potentially causing an explosion.

### There are a number of reasons why gas leaks can occur:

- Mistakes such as forgetting to light a gas ring/or not noticing that gas has been switched on, due to a limited sense of smell or dementia
- Natural causes such as a boiler pilot light blowing out
- Wear and tear of devices such as gas heating and cooking appliances
- Incorrect installation or maintenance of gas fuelled appliances.

## Who is at risk from residential flammable gas leaks?

- Anyone using gas in the home can be at risk from a potential gas leak
- People who are away from their homes; unless someone is in the property to notice the smell of gas, a leak could potentially build up to dangerous proportions before someone returns home and notices the leak has occurred
- People with a desensitised sense of smell due to age or medical condition
- People with memory issues or people suffering from confusion may forget to light gas rings or may leave gas appliances running, potentially causing a leak to build up.

This makes flammable gas leak detection a concern for any housing professionals, residential care professionals, static caravan holiday park owners or home owners.



# HF500 Hard-Wired Flammable Gas Alarms



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.

The HF500 can either be used as a stand-alone device or it can be directly wired to a solenoid valve or control panel/alarm system. There are two model variants available in the HF500 range: HF500NG for the detection of Natural Gas and HF500LPG for the detection of LPG.



## Why choose the HF500?

### High reliability

- Approved to EN50194-1:2009 by BSI (Kitemarked KM 590203)
- Catalytic flammable gas sensor
- Professional design



### Tamper-proof

- Hard-wired for peace of mind

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

- Clearly visible status indication LEDs: power, alarm, fault
- Loud 85dB alarm
- Button for test and alarm mute

### Low total cost of ownership

- Optimised for easy wiring
- Direct connection to a solenoid valve
- 5 year product life with 2 year guarantee

### Easy to install

- Easy to access wiring terminal
- Cable entry from the back or via mini trunking from the sides or bottom
- Fits to standard electrical installation boxes
- The design allows the alarm to be replaced without rewiring
- Installer mode to test the functionality of the relays

### Designed for residential environments

- Small, compact design with stylish look, optimised for residential settings

### Complete solution

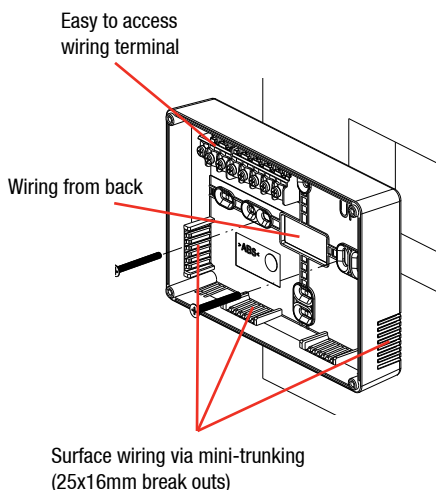
- Integrated alarm relay can operate normally open and normally closed solenoid valves for automatic gas shut off
- Alarm and fault relays can also be used to connect to a control panel/alarm system
- Honeywell also offers a range of suitable solenoid valves

## Installation

The HF500 is hard-wired which ensures the device is always connected to the mains power supply. It also prevents the device being accidentally unplugged which would stop the unit from functioning and could also create a spark that ignites the gas.

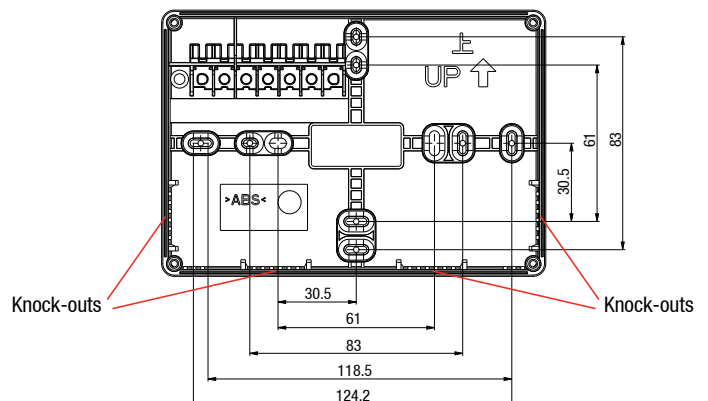
The HF500 is optimised for quick, engineer friendly installation and all wiring can be done on the separate adaptor plate with an easy to access terminal.

### Wiring options



### Mounting holes

The dimensions of the hole locations within the adaptor plate are shown below:



# Delivering a Complete Solution



## Honeywell's solenoid valves

The HF500 alarms can be ideally complemented with Honeywell's solenoid valves to provide an automatic gas shut-off system. The HF500 can be used with either normally open or normally closed solenoid valves. The valves are constructed in such a way that manual intervention is required to reopen the valve after the alarm threshold has been exceeded.

### Key features of Honeywell's solenoid valves:

- Closing time <1 sec (according to EN161 standard)
- Maximum inlet pressure of 500 mbar
- Rated voltage of 220..240 Vac
- Electrical connection with standard DIN plug (according ISO4400)
- CE approved: EN161; GAD and LVD

### VG4000S Series

The VG4000S valve is opened manually and stays open until electrically closed. The body is made out of Copper alloy die cast.

### VG400SA Series

The VG400SA is opened manually and stays open until electrically closed. The body is made out of Aluminium die cast.

### VG400AA Series

The VG400AA series is opened manually and stays open as long as it is electrically energised. When the electric power is removed the valve will close. Compared to the VG4000S and VG400SA series this system provides additional safety in conditions of power interruption and/or interruption of the connection between the HF500 alarm and the VG400AA valve. The body is made out of Aluminium die cast.



VG4000S Series



VG400SA Series

### Order Information

OS number	Connection (inch)	Environmental Protection (IP)
VG4015S2008	½	54
VG4020S2008	¾	54
VG4025S2007	1	54
VG415SA1002	½	65
VG420SA1005	¾	65
VG425SA1000	1	65
VG415AA1004	½	65
VG420AA1007	¾	65
VG425AA1002	1	65

For further details please refer to specific datasheets.

# Technical Specification



Reliability	
<b>Detection principle</b>	Catalytic flammable gas sensor
<b>Calibration gas</b>	Methane for HF500NG Butane for HF500LPG
<b>Calibration level</b>	10% LEL
<b>Accuracy tolerance</b>	+/- 2.5% LEL
<b>Approvals</b>	EN50194-1:2009 Kitemarked (KM 590203)
<b>Other compliances</b>	RoHS
<b>Self check function</b>	Yes
<b>Lifetime/guarantee</b>	5y/2y
Operating environment	
<b>Temperature</b>	-10°C to +55°C
<b>Humidity</b>	0-95% RH (non-condensing)
<b>IP rating</b>	IPX2D
Electrical	
<b>Power supply</b>	110-230VAC 50/60Hz
<b>Power consumption</b>	<6.5W
<b>Alarm relay</b>	5A 250VAC SPDT (single pole changeover)
<b>Fault relay</b>	0.25A 250VAC SPST NO (single pole)
User interface	
<b>Visual indicator</b>	Power: Green LED Alarm: Red LED Fault: Yellow LED
<b>Audible</b>	>85dB @ 1m
<b>Button</b>	For test and alarm mute Installer test mode for relays
Product	
<b>Size</b>	150 x 104 x 37mm
<b>Weight</b>	<400g
Packaging	
<b>Type</b>	Carton box
<b>Dimensions</b>	106 x 185 x 45mm (L x W x D)
Scope of supply	
	HF500 alarm Mounting kit: Screws and plugs User and installer manual

Ordering Information				
Part No	Barcode	Detected Gas	Language	Product Description
HF500NG-EN	5 027526 400041	Natural Gas	English	HF500NG 230VAC Relay (en)
HF500LPG-EN	5 027526 400058	LPG	English	HF500LPG 230VAC Relay (en)

## 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 (GMT).

Our team is happy to answer any queries on our products.

Telephone: +44 (0)1202 645 577



# Our Gas Detection Product Range



## Fixed Gas Monitoring

We offer a wide range of fixed gas detection solutions for a diverse array of industries and applications including: Commercial properties, industrial applications, semiconductor manufacturers, energy plants and petrochemical sites.

- » Detection of flammable, oxygen and toxic gases (including exotics)
- » Innovative use of 4 core sensing technologies – paper tape, electrochemical cell, catalytic bead and infrared
- » Capability to detect down to Parts Per Billion (ppb) or Percent by Volume (%v/v)
- » Cost effective regulatory compliance solutions

## Portable Gas Monitoring

When it comes to personal protection from gas hazards, we have a wide range of reliable solutions ideally suited for use in confined or enclosed spaces. These include:

- » Detection of flammable, oxygen and toxic gases
- » Single gas personal monitors – worn by the individual
- » Multi-gas portable gas monitors – used for confined space entry and regulatory compliance
- » Multi-gas transportable monitors – used for temporary protection of area during site construction and maintenance activities

## Technical Services

We believe in the value of great service and customer care. Our key commitment is providing complete and total customer satisfaction. Here are just a few of the services we can offer:

- » Full technical support
- » Expert team on hand to answer questions and queries
- » Fully equipped workshops to ensure quick turnaround on repairs
- » Comprehensive service engineer network
- » Training on product use and maintenance
- » Mobile calibration service
- » Customised programmes of preventative/corrective maintenance
- » Extended warranties on products

### Find out more

[www.hf500gasalarm.com](http://www.hf500gasalarm.com)  
[www.honeywellanalytics.com](http://www.honeywellanalytics.com)

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