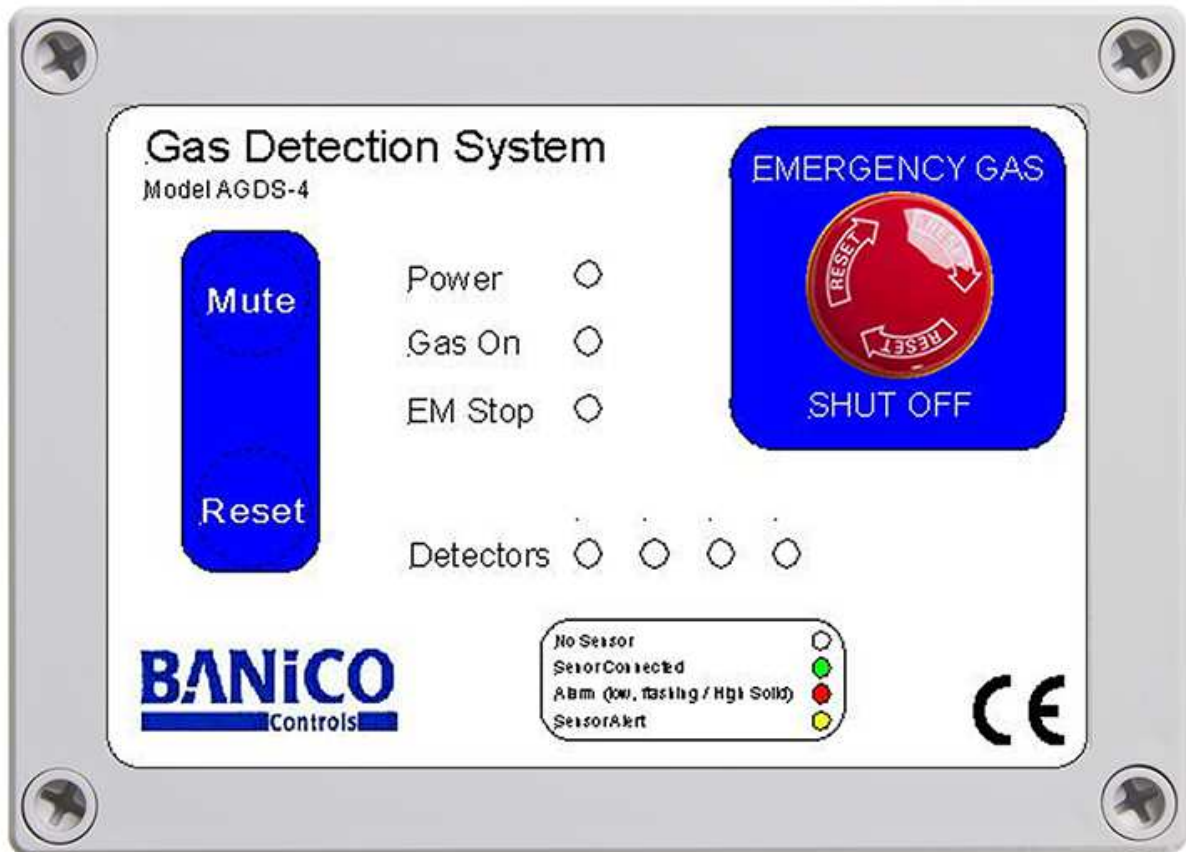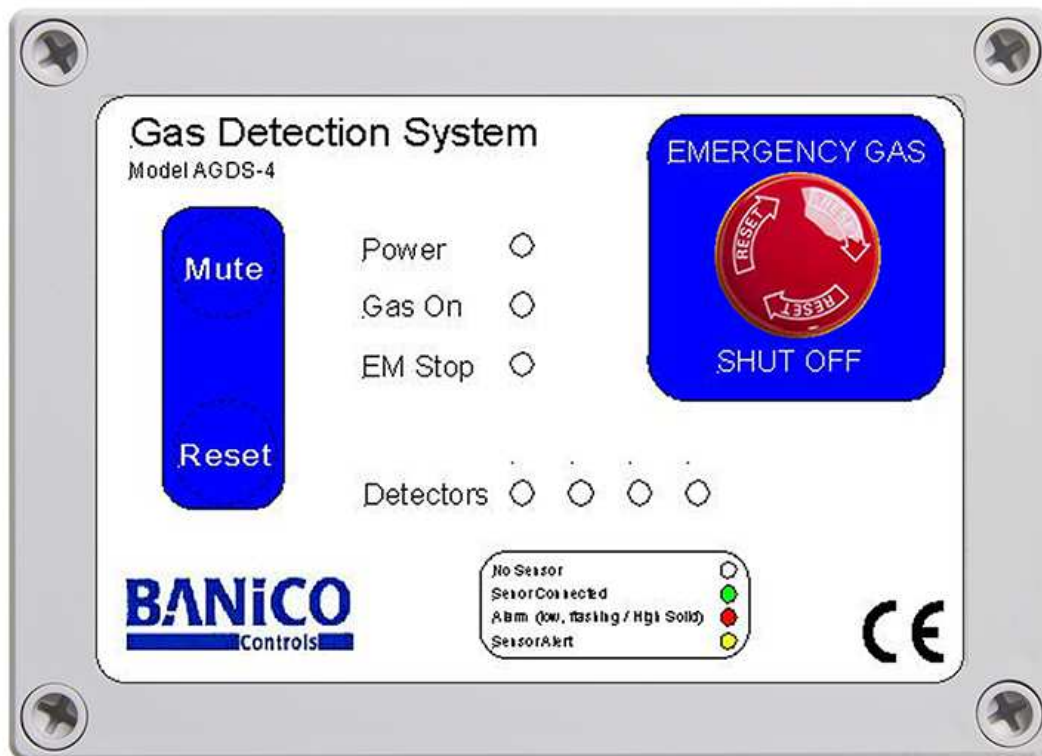# AGDS-4
Four Channel Gas Detection System

The AGDS-4, Gas detection system has been designed for use in boiler houses and plant rooms.

Up to 4 low voltage sensors for the detection of natural gas, LPG or carbon monoxide can be connected to the panel.
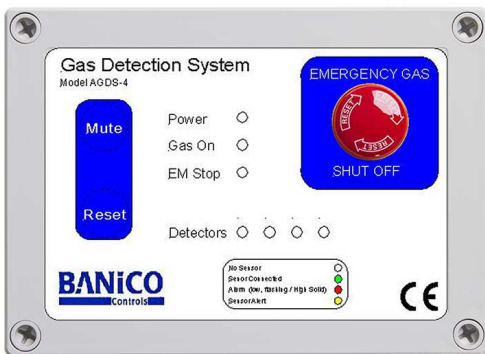
In the event of a high alarm from one of the sensors the system will isolate the gas supply by closing a connected electric control valve.

Emergency stop buttons, thermal link heat detectors can be fitted and a fire alarm can close the gas valve when connected to the panel.

Design Features

- **Gas detection** of Natural gas, Carbon monoxide and Butane/Propane L.P.G.

- **Compact** W180mm, H130mm, D60mm easy to install system.

- **Remote signalling** can be connected to B.M.S and fire alarm systems.

- **User friendly,** digital design means clear system status indication at all times.

- **Emergency** shut off buttons and thermal links, all low voltage, can be connected.

- **2 Year Warranty**

The AGDS-4 gas detection panel has been designed as a compact and versatile system able to accept digital signals from one to four addressable gas detectors.

The AGDS-4 will accept Banico gas detectors for natural gas, carbon monoxide and LPG. In the event of the target gas being detected the panel will show either a pre alarm or high alarm condition.

In the pre alarm condition the AGDS-4 will indicate by flashing the LED marked "low alarm" and, if enabled, the internal sounder. The system will not isolate the gas supply in the pre alarm condition.

On high alarm the panel isolates the gas supply by closing the control valve. At the same time a BMS and a beacon or sounder can be activated. The AGDS-4 connects to 240 volt normally closed valves but it is possible to run other types of valve.

An emergency shut off button or buttons can be connected to the AGDS-4 panel. Emergency shut off button connections are wired low voltage, normally closed, open on alarm.

Thermal links can be connected to the system, connections are again low voltage. The AGDS-4 can also take a signal from a fire panel to close the control valve in the event of a fire alarm situation.

A mute button has been incorporated into the panel lid as well as a reset button in order that a connected valve can be reopened after a high alarm situation has been resolved.

All Banico systems are supported by Banico.

Technical data sheet

The model AGD-4 consists of a mains powered panel capable of operating up to four gas detectors.

The detectors are connected by low voltage 4 core cable (typically data or belden cable) back to the control panel.
The sensor units may be mounted up to 100mtrs from the control unit. Potential voltage drop issues can occur above this range.
The complete system is designed to comply with the latest CE directives including the low voltage directive.

This is housed in an ABS enclosure measuring 180mm high x 129mm wide x 70mm deep.

The LED indications on the panel :

Power on   Green
High alarm   Red 2 flash per second
Low alarm   Red 1 flash per second
Gas on   Red
Em stop   Yellow
Alert   Yellow

Audible indications:

An internal buzzer is provided to give the following sounds:
Alarm, beep every 1 second.
There is an option to disable the alarm buzzer on the panel circuit board by removing a jumper plug.

Relay outputs:

Main valve relay rated at 5 amps to provide a switched live to the main solenoid valve.
230 volt rated potential free changeover alarm relay to activate a remote sounder and or beacon or signal a BMS system.

The aux relay function depends on the setting of the "Aux RLY" DIP Switches - this is a dynamic (non-latching) relay. This can advise a BMS of any one of the following conditions.
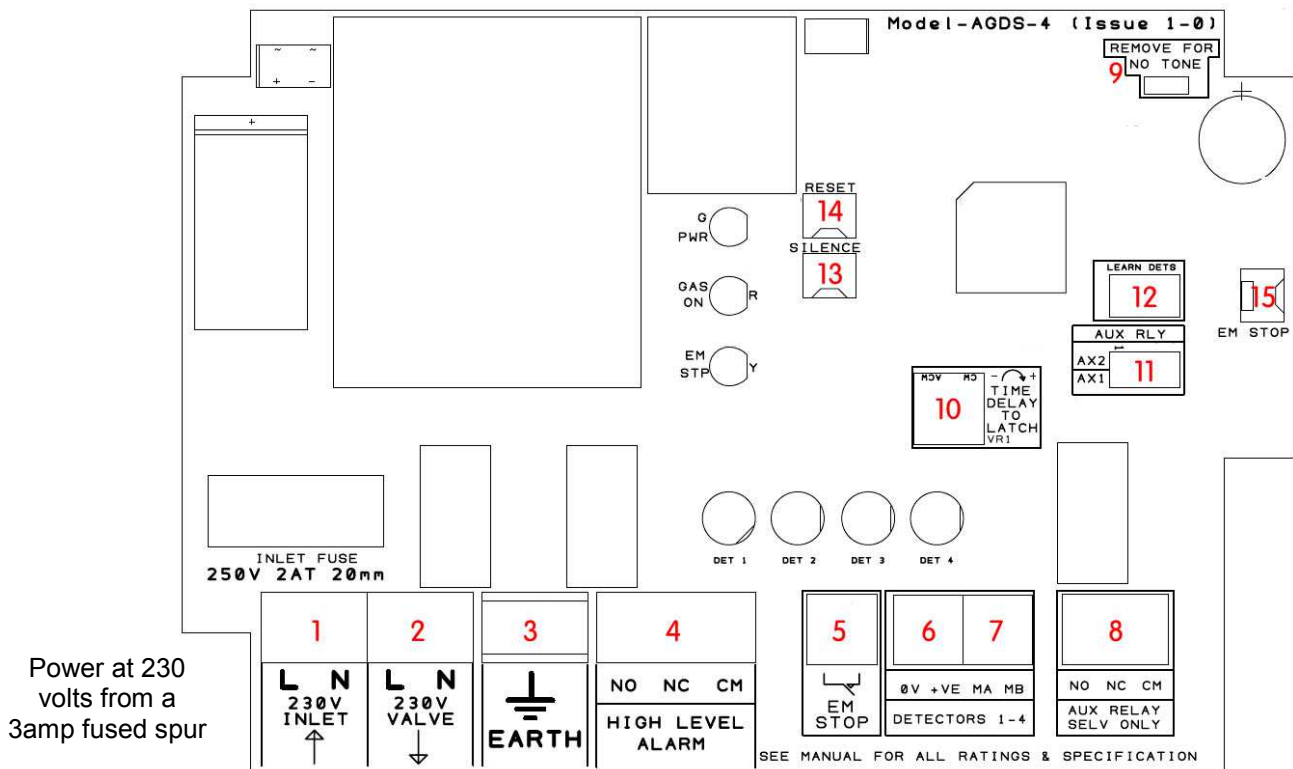Off/Off = Low alarm
Off/On = Detector Alert
On/Off = Em Stop
On/On = Gas On

Gas detection settings

The combustible gas detectors are pre calibrated at works to detect gas at 5% of the low explosion level (pre alarm) and at 10% of the low explosion level (high alarm).
The CO detectors are calibrated at 80ppm for pre alarm and 100ppm for full alarm.

Power at 230 volts from a 3amp fused spur

Connections to panel: marked on board

1. Live & Neutral 230 volts supply from 3amp switched fuse spur
2. 230 volts out to gas solenoid valve (5amp relay)
3. Earth connection terminals
4. High Alarm BMS relay (potential free contact, mains rated, max load 5amp)
5. Remote emergency stop buttons SELV, multiple buttons connect in series (requires a N/C circuit)
6. Power connections for detectors, Methane, LPG, CO.
7. Comms connections for detectors, Methane, LPG, CO.
8. Aux Relay, (potential free contact, SELV Only) - see 11 for settings (non-latching)
9. Jumper link to disable audible alarm sounder.
10. High alarm time delay function - Controls the length of time between a High alarm and the closing of the gas valve
11. Aux Rly Switch - Setting controls the Aux Relay switching conditions

Aux1	Aux2		State
OFF	OFF	=	Low Alarm
OFF	ON	=	Detector Alert
ON	OFF	=	Em Stop
ON	ON	=	Gas On

12. Learn Detectors - Press after connecting & addressing Banico gas sensors (detector address's 1 - 4 only)
13. Front Panel button connection - Mute
14. Front Panel button connection - Reset
15. Front Panel button connection - Emergency Stop

If you have any queries about any of our products and services or would like some more information, then fell free to get in touch with us on the details below.

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