

# PANTHERALERT

## OPERATION & INSTALLATION MANUAL



# PANTHERALERT – Model: PA04

## Gas Monitoring & Fire - Alarm & Automatic Cut Off System

FUNCTION: to Monitor & Detect gas /fire/heat and to:

[1] WARN - by means of alarms.

[2] REDUCE RISK - by automatically closing gas valve.

[3] INFORM - by indicating the activated zone on the monitor.

**NATURAL GAS/ LP GAS** - When the mixture of Natural Gas or LP gas to air is between 5% and 15% it is potentially explosive. 5% is the lower explosive limit [LEL] 15% is the higher explosive limit [HEL]

Natural / LP Gas detectors are calibrated to activate at 10% of LEL [0.5%] to give a very big safety margin.

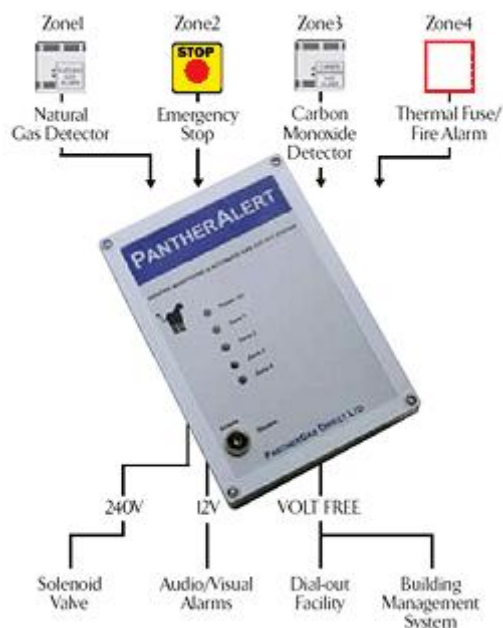
Natural Gas is lighter than air and therefore rises.

LP Gas is heavier than air and therefore falls.

**CARBON MONOXIDE**- is lighter than air. Carbon Monoxide detectors are calibrated to alarm at 100 ppm. [Parts per million]

Carbon Monoxide at concentrated levels is poisonous. Exposure to even low levels (above 200ppm) over a long period of time can have adverse health consequences. You cannot smell Carbon Monoxide.

Note: The utilisation of the inputs and outputs in this diagram are by way of illustration only.



## HOW THE SYSTEM OPERATES

If there is detection of gas or other detectors “alarm” (heat /fire) or there is a manual activation of an emergency stop button wired to the monitor then simultaneously the:

- [1] Detector - alarm sounds and the alarm visual indicator shows red.
- [2] Monitor - internal buzzer sounds and the zone indicator shows red.
- [3] Remote Alarms - will sound [if fitted].
- [4] Solenoid Valve - will close.
- [5] There are also Volt Free contacts enabling a signal to inform via Security Panel, Building Management Systems and Auto- Diallers etc
- [6] The valve will stay closed until manually reset (either at the valve & monitor for manual reset valves or at the monitor for automatic reset valves).
- [7] The monitor will stay in alarm mode until re-set with the key.
- [8] The detector will stay in alarm mode until the gas has cleared.

## HOW TO OPERATE THE SYSTEM-

1. Insert the key into key-switch and set to the ENABLE position.
  2. Switch on power at the spur unit located next to the monitor.
- The system is now fully operational.

Monitor- Green visual indicator – POWER ON

Gas Detectors- Green visual indicator – POWER ON

The gas detectors are pre-set and require no calibration.

## ALARM STATE

- \* **Monitor buzzer on** \* **monitor zone indicator red**
- \* **Detector alarm sounds** \* **detector alarm indicator red**
- \* **Solenoid valve closed** \* **remote alarms sound**

1. Find out which zone has activated [see monitor].
2. Inform relevant authority immediately.

**All work done on any gas installations /appliances must be carried out by an appropriately qualified CORGI registered person.**

Switch to DISABLE to terminate activation of alarms.

3. ONLY after the fault has been identified and rectified should you re-set system.

## **POWER FAILURE**

Monitor and detector(s) will cease to operate .On return of power the system will return to operating mode. Ensure that the gas valve, if manual re-set, is reset.

## **EMERGENCY STOP BUTTON**

If an Emergency Stop Button is wired to the Panther Alert Monitor then on activation the system will “alarm”. Please ensure that before resetting the system, the

Emergency Stop  
Button is returned to NORMAL position.

## **PILOT LIGHT**

After a close down all pilot lights to appliances etc. must be relit.

## **WHAT NOT TO DO**

[1] Reset system without finding gas leak- **result:** system will alarm and close down gas.

[2] Forget to relight pilot lights- **result:** system will alarm and close down gas.

[3] Use excessive steam, paint, solvents or glue in areas near the detectors-**result:** system will “alarm” and close down gas.

## **MAINTENANCE WORK**

If you need to carry out maintenance work or other work which might activate the detectors switch the system to DISABLE mode. In this mode the detectors may activate but the valve will not close and there will be no activation of the monitor. Please ensure you return to ENABLE mode when the work is completed.

## **NUISANCE ALARMS**

Can be caused by solvents, steam, paint etc. Ensure that the system is in DISABLE mode until these fumes have gone.

## **INSPECTION AND TESTING**

The system should be tested every 6 months and a maintenance check and test carried out every 12 months. The monitor and detectors carry a 1 year warranty.

**Detectors MUST be replaced after 5 years.**

## **Panther Alert - Model PA04**

### **SPECIFICATION**

The Panther Alert Monitor is a 4 channel unit designed to operate with gas detectors, manual emergency push buttons, heat detectors, thermal fire links etc.

The monitor has 4 LED to indicate the zone status and one LED to indicate power status.

There is a key reset facility with ENABLE and DISABLE positions.

There are volt free contacts and an Aux. +12 V supply and a 240V input.

There are settings to enable NO or NC operation, common or separate output relays, zone output, and the operation of an internal buzzer.

### **Technical Specification:**

Supply Voltage: 230 -250 V AC

Current Draw: < 250MA Idle : < 500MA Alarm Status

Operating Voltage: + 12 V DC

Operating Current : < 100MA Idle: < 600 MA Full Alarm Status

AUX Supply: + 12 Regulated: Max. Current 1 Amp Fused

Visual Indicators

Green LED: Power Supply.

Red LED: Alarm Status (Zoned)

Red LED: Aux. Supply (on PCB)

Audible Alarm 2.4kHz: 85bd at 20 cm ( lid off)

Outputs: Four change over contacts

Rate at 240V ac 6A

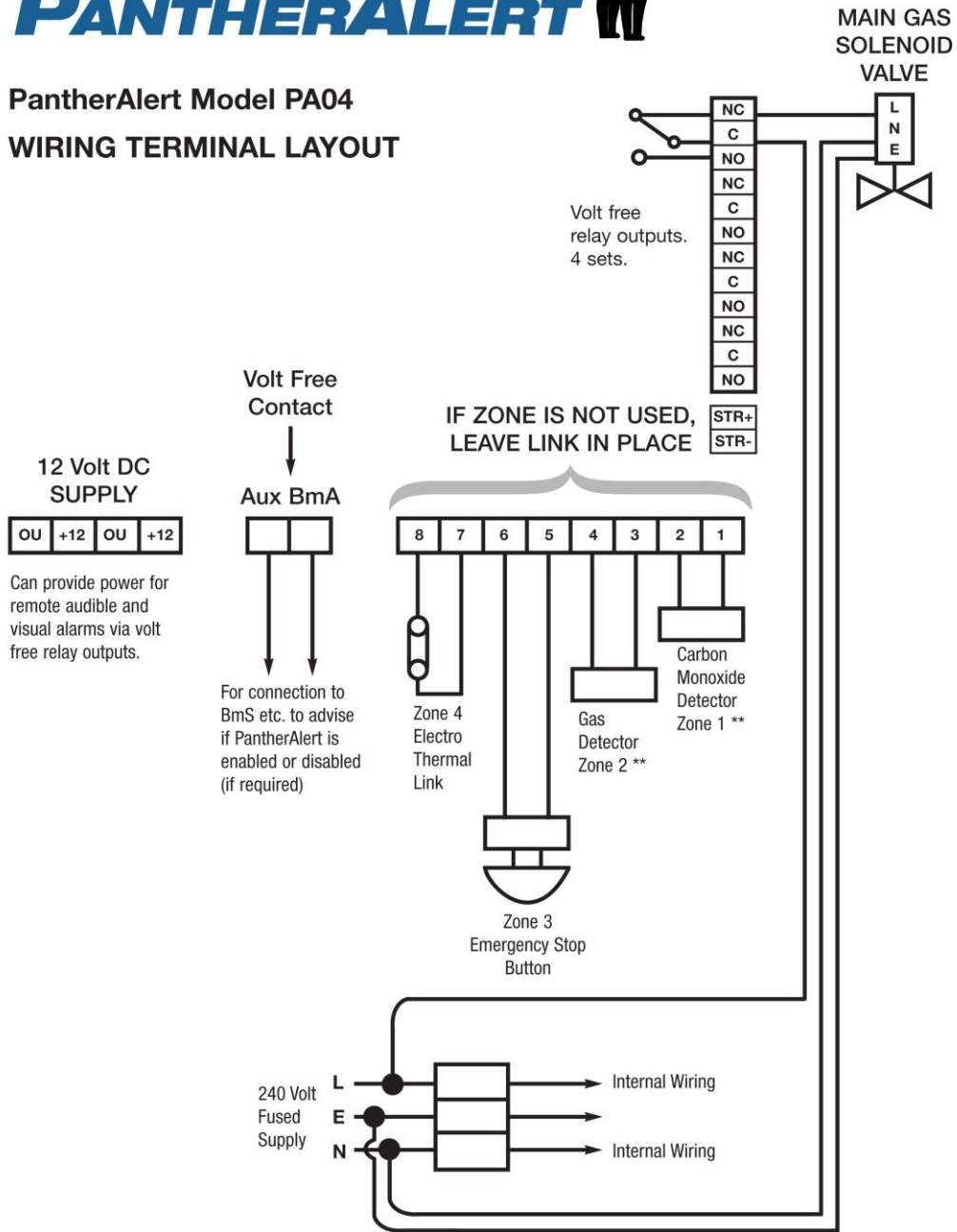
Key Switch Operation: Enable -Reset

(Key removable only in Enable position)

Size: 250 mm x 178 mm x 76 mm



**PantherAlert Model PA04**  
**WIRING TERMINAL LAYOUT**



\*\* Gas Detector and Carbon Monoxide Detector.  
 Also require 240 Volt AC power supply.

**NOTE:** The inputs to Zones 1-4 are by way of example only.  
 Zones can be utilised for separate area monitoring or for a variety of monitoring detectors.  
 More than one detector can be used on any Zone.

# **PANTHERALERT - Model PA04**

## **NATURAL, LP AND CARBON MONOXIDE GAS DETECTORS - INSTALLATION NOTES**

The detector should only be installed by a competent electrician and wired in accordance with current IEE regulations.

Isolate the mains electricity supply before starting installation.

Do not tamper with the inside of this detector -no maintenance or adjustment is required.

### **WIRING**

240v circuit LIVE Brown NEUTRAL Blue  
SWITCHING CIRCUIT black/ black

### **LOCATION**

The detector is designed to operate inside a building with free access to air in the room. They should be wall mounted.

**Natural Gas and Carbon Monoxide** are lighter than air and these detectors should be located between a minimum height equal to 75% of the room height and a maximum height 30cms below the ceiling.

**LP Gas** is heavier than air. Detectors should be located 30cms from floor level.

**Do not** install the detector:

- [1] Directly above a cooker or sink
- [2] Next to a window or extractor fan
- [3] In areas of extreme temperature below -5°C or +40° C
- [4] In damp or humid areas.

**Heat Detectors** – Locate on ceiling- off set from the Burners.

**Thermal Links-** Locate above burners

### **APPLICATIONS**

#### **Boiler Plant Rooms -**

Place as instructed above. Locate on wall nearest to Boiler(s) and gas “train”. Ensure detectors are on “Boiler side” of any ventilation airflow.

**Laboratories** - Place as instructed above. It is recommended that power to each detector is individually isolated.

**Kitchens** - Place as instructed above. Avoid areas of steam and excessive heat. Site away from toasters & cookers etc.

Each detector will cover an area 5 metres x 5 metres. Additional detectors may be required for enclosed and meter areas.