

# Troubleshooting Guide

## Merlin GDP4 Gas Detection System



26/01/2016

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## 1 General information

The Merlin GDP4 is a four-zone gas detection panel which can be used in many applications, e.g. factories, car parks, shopping centres and the most common being a boiler house application. The GDP4 can be used with up to 12 gas detectors wired in parallel (maximum 3 detectors per zone).

Many varieties of detectors are compatible with GDP4, e.g. Natural Gas, Carbon Monoxide, LPG and Oxygen depletion. These detectors can be used in any combination. Also multiple thermal links can be used, when wired in series. The GDP4 can be integrated with a BMS, fire alarm and remote emergency shut-off buttons.

## 2 Fault LED

### 2.1 No Power LED Illuminated

- 1 If the system is connected to the mains supply, the Power LED will illuminate. Please ensure there is in fact 230/240V going to the 'Power' terminal.
- 2 If the system is connected to the mains supply and the power LED is not illuminated please check to see if the 3A fuse is still intact.
- 3 If none of the above have rectified the fault please contact S&S Northern for further assistance.

### 2.2 Emergency Stop Fault

- 1 If the front fascia emergency stop has been pressed, please re-press the button to release then reset the panel using the key switch.
- 2 If you have a remote emergency stop connected to the Merlin GDP4 please ensure this has not been activated.
- 3 If you have multiple remote emergency stops, please ensure they are correctly wired in a loop series to our panel and connected to the 'EM REMOTE' terminal in the Merlin GDP4. If incorrectly wired in a parallel circuit the stop buttons will not activate.
- 4 If you are not using an additional emergency stop, please ensure the 'EM REMOTE' terminal is linked out.
- 5 If none of the above have rectified the fault please contact S&S Northern for further assistance.

### 2.3 Gas Detected Zones

- 1 Please ensure there is not an actual gas leak.
- 2 If you have any gas detectors connected to the panel such as Natural Gas, LPG or Carbon Monoxide please ensure these are wired back correctly to the gas detector Terminals inside the Merlin GDP4.
- 3 If any of the zones are not being utilized, please ensure that the relevant zone dipswitch, located on the front fascia PCB, has been disabled.
- 4 If none of the above have resolved the error please contact S&S Northern for further assistance.

### 2.4 Heat Detector

- 1 Inspect any heat detector/ fusible links wired back to the Merlin GDP4 to see if they have gone into alarm. If they are, this is generally caused by temperatures of 72°C & above being detected.
- 2 If you have any heat detectors/ fusible links connected to the panel please ensure these are wired correctly to the 'Heat Detector' terminal.
- 3 If you are not using any heat detectors fusible links please ensure that the 'Heat Detector' terminal has been linked out and is securely above the metal plate.
- 4 If none of the above have resolved the error please contact S&S Northern for further assistance.

## 2.5 Fire Panel

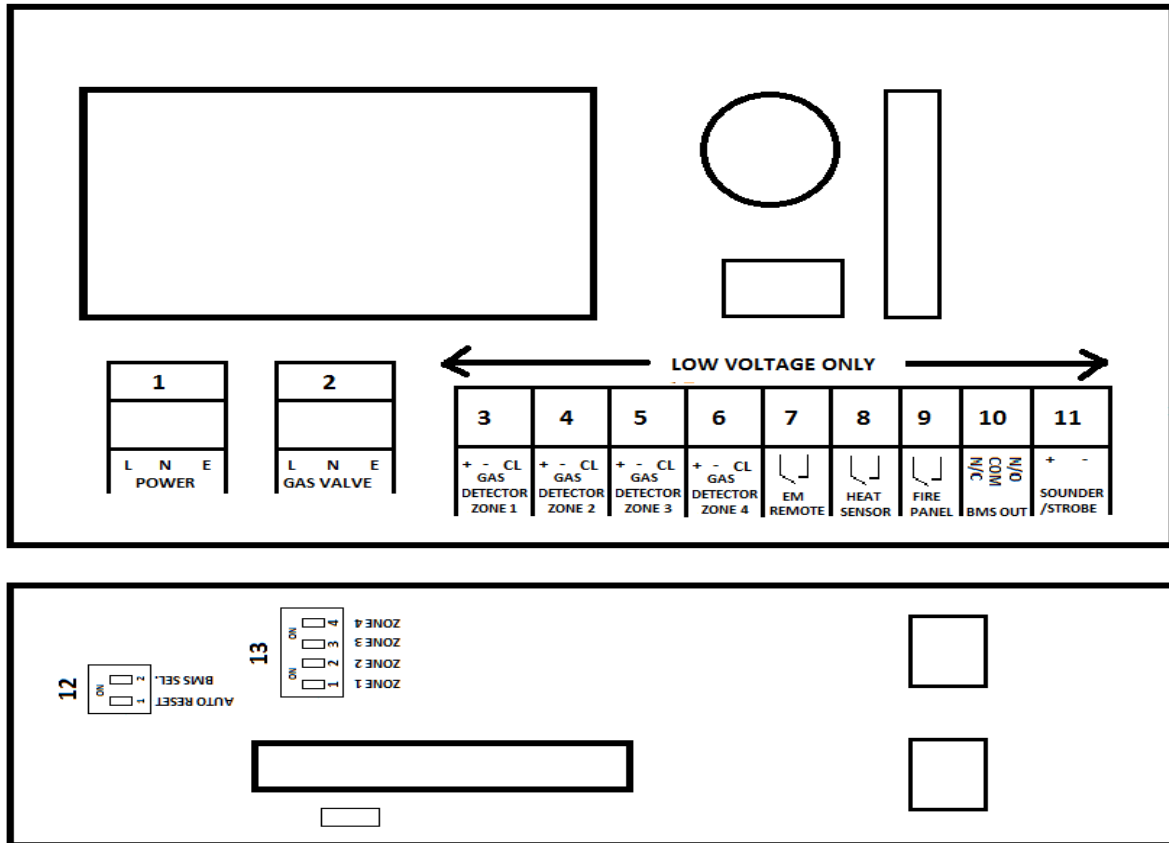
- 1 If you have a fire alarm connected to the Merlin GDP4 please ensure this has not been activated.
- 2 If you are not linking the fire alarm to this system, please ensure the 'FIRE PANEL' terminal is linked out and the link is securely connected above the metal plate.
- 3 Please note, this should be volt free, normally closed (open in alarm) and wired to the Merlin GDP4 using two core cable.
- 4 If none of the above have rectified the fault please contact S&S Northern for further assistance.

## 3 Operation Instructions

### 3.1 How to turn the system on and off

1. To turn the system on press reset to start the testing sequence.
2. The system will close the solenoid valve when an emergency stop has been pressed, gas has been detected or any alarm signal has been triggered.

## GDP4 Wiring Diagram



1. Mains Input 230VAC.
2. Gas Solenoid Valve Power Output, 230VAC.
3. Gas Detector, 24VDC power supply (purchased separately).
4. Gas Detector, 24VDC power supply (purchased separately).
5. Gas Detector, 24VDC power supply (purchased separately).
6. Gas Detector, 24VDC power supply (purchased separately).
7. Remote EM Stop buttons (purchased separately). **VOLT FREE INPUT**
8. Fusible Links (purchased separately). **VOLT FREE INPUT**
9. Fire panel (Supplied by others). **VOLT FREE INPUT**
10. BMS output contacts. Normally Closed, Common and Normally Open.
11. Sounder Alarm, 24VDC power supply (purchased separately).
12. BMS selection & Auto reset.
13. Zone 1, 2, 3 & 4 enable/disable dipswitches.

Please note, Mains wires and low voltage wires should not be run in the same conduit as per the **LOW VOLTAGE DIRECTIVE**

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