Gas Safety Products

Merlin Gas Detectors

Installation, operating and maintenance

Read these instructions carefully before operating or servicing

The unit should be installed by a competent person only.

The expected life time of the detector/sensor element is: LPG, NG and Hydrogen = 10 years. CO = 5 years.

The unit should be stored in cool, dry conditions.

We do recommend that this product is serviced annually.

If the unit is found to be damaged – Contact us.

Carbon Monoxide (CO). This apparatus is designed to protect individuals from the acute effects of Carbon Monoxide exposure. It will not fully safeguard individuals with specific medical conditions. If in doubt consult a medical practitioner.

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1 General information

S&S Northern supply a full range of remote gas detectors to compliment the Merlin range of panels. These consist of carbon monoxide, natural gas, LPG and oxygen detectors.

Our range of gas detectors are designed to work with a Merlin control panel.

2 Installation

2.1 Mounting the Merlin gas detector

The control panel is designed for surface mounting using two mounting screws. Removing the back plate gives access to the circuit board. Do not attempt to remove the PCB.

For the positioning of specific gas detectors please see below:

- Natural Gas – 300mm from the ceiling.
- Hydrogen Gas – 300mm from the ceiling.
- Carbon Monoxide – 1700mm from ground level.
- LPG – 1000mm from ground level.

2.2 Power Supply

A 12vdc - 24vdc electrical supply should be supplied to the panel and should be connected to the terminals marked **[+ -]**.

2.3 Alarm Relay

The Merlin range of gas detectors can work with various systems. If you are using the GDP range you will need to use the [**C/L**] terminal as an alarm relay whereas on most systems gas detectors should be wired to the gas detector terminal on the Merlin panel using the [**N/C**] & [**COM**].

Note: all low voltage connections should be made using a screened cable to avoid electrical interference.

3 Operation

3.1 System On and Off

1. To turn on any Merlin gas detector you need to supply power to the detector
2. To turn off any Merlin gas detector you need to remove power to the detector

3.2 LED status

Power LED (GREEN)

When the system is connected to the power supply, the Green Power LED will illuminate.

Low LED (AMBER)

When the gas detector has reached the low level alarm state this will illuminate Amber.
Please see Heading 4 on page 4 for further information.

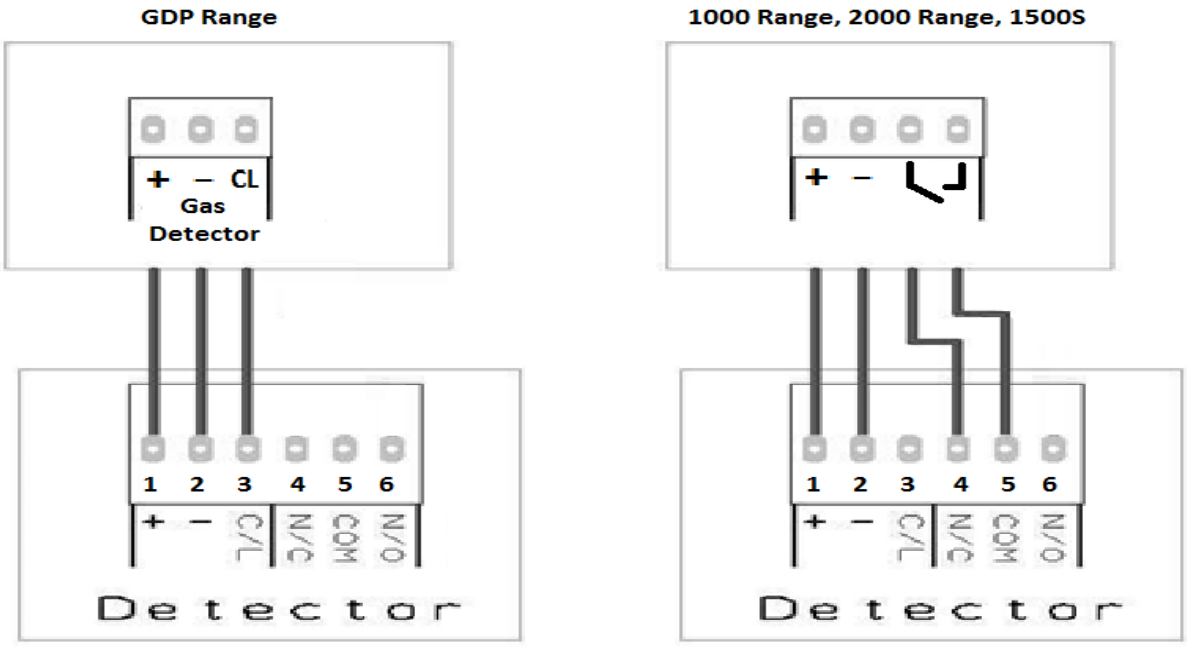
High LED (RED)

When the gas detector has reached the High level alarm state this will illuminate red and the buzzer will sound.
Please see below for further information.

4 Technical Specification

Power supply	7-30VDC, 80mA max
Gas Sensor	Semiconductor type sensor
Typical measuring range	300-10000 ppm **Methane**
	300-10000 ppm **LPG**
	10-10000 ppm **CO**
	100-10000 ppm **Hydrogen**
Power Up - warm up time	1 minute
Low level alarm (pre-alarm)	Methane 8%LEL by volume
	LPG 0.16% by volume
	Carbon monoxide 30ppm
	Hydrogen 8%LEL by volume
High level alarm	Methane 10%LEL by volume
	LPG 0.2% by volume
	Hydrogen 10%LEL by volume
	Carbon monoxide 30 ppm for 2 hours 50 ppm for 1 hour 100 ppm for 10 minutes 300 ppm for 1 minute
Volt free relay output	240VAC 500mA, 30VDC 2A switching current (resistive load)
Net weight/Dimensions	180g/135mm(W)x95mm(H)x38mm(D)
Installation standard	Wall mountable
	CE
Standard Approval	Complies with EN50194 and EN50291

Wiring Diagram



1. Power supply, positive connection from Merlin panel.
2. Power supply, negative connection from Merlin panel.
3. Alarm relay, alarm signal to GDP panel.
4. Alarm relay, volt free connection. Normally closed.
5. Alarm relay, volt free connection. Common.
6. Alarm relay, volt free connection. Normally open.

NOTE: Mains wires and low voltage wires should not run in the same conduit as per the **LOW VOLTAGE DIRECTIVE**

INFORMATION ON WASTE DISPOSAL FOR CONSUMERS OF ELECTRICAL & ELECTRONIC EQUIPMENT

When this product has reached the end of its life it must be treated as Waste Electrical & Electronics Equipment (WEEE). Any WEEE marked products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used. Please contact your supplier or local authority for details of recycling schemes in your area.

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