GAS DETECTION AND CONTROLS FOR BOILER HOUSE APPLICATIONS

GAS DETECTION EQUIPMENT - ENGINEERED IN THE UK TO DELIVER EXCEPTIONAL LEVELS OF SAFETY

THE MERLIN RANGE

DESIGNED FOR BOILER ROOMS

S&S™ NORTHERN

www.snsnorthern.com

S&S NORTHERN

GAS DETECTION AND CONTROLS FOR BOILER HOUSE APPLICATIONS

S&S Northern is the UK's leading designer, manufacturer & supplier of the latest range of gas detection and gas pressure proving systems.

We also design manufacture & supply a full range of gas safety systems for use in laboratories and commercial kitchens.

S&S Northern was established in 1995 and has become the trusted name to provide gas safety and installation solutions to the commercial market throughout the UK. Our fully-qualified designers and engineers keep up to date with industry changes and health and safety requirements, meaning that our customers can rest assured that the service and technical back-up they receive is second to none. A family-run business with excellent customer service and value for money at its heart, S&S Northern's position as the UK's leading gas safety experts is based on over two decades of excellent customer service and satisfaction.

Meeting Gas Safety Standards Is Our Business And Our Passion

The gas detection systems we supply are the most up to date in the market. Whether its gas detection only or gas detection and gas pressure proving of the gas line we have the panel to meet your requirements. Designed to protect the building and occupants of the building our gas safety systems give protection and peace of mind 24 hours of the day. All S&S products are designed to be easy to use, simple to install and carry a three year warranty.

Advantages Of Working with S&S Northern Ltd

- Full technical team available
- Competitively priced
- Complete after sales care
- First rate customer service
- Full product catalogue available at www.snsnorthern.com
- Simple and easy installation
- All products available next working day
- Web Support
- O&M instructions available online
- Full UK coverage
- All Panels manufactured in the UK

CESA
CATERING EQUIPMENT SUPPLIERS' ASSOCIATION

S&S Northern - Head Office

S&S Northern - Southern Office

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THE MERLIN RANGE
GDP2 SYSTEM

The Merlin GDP2 can be used as a single or two zone gas detection and shut off system. Used in a variety of applications including boiler-houses, plant-rooms and factories.

The Merlin GDP2 can operate with up to two Merlin detectors to monitor a variety of gases, the more common being Natural gas (Methane), Carbon Monoxide and LPG.

Gas detectors are fixed remote from the GDP2 panel & should be wired back to the GDP2 panel with three core low voltage cable. Remote emergency shut-off buttons and thermal links can also be connected to the Merlin GDP2 panel

Advantages of the Merlin GDP2 System

- Easy to install – The use of clearly marked PCB connections, low voltage wiring and push-fit wiring connections makes the GDP2 very simple to install.
- Multi zone system - Can be used as a single or two-zone gas detection/shut-off system.
- User friendly – Digital LED design gives clear system indication at all times.
- Easily Adaptive - Will work with building management systems and remote fire panels.
- Fitted with emergency stop as standard - capable of accepting any number of additional emergency shut off buttons.
- Covered by the S&S Northern 3 year warranty.

WIRING DIAGRAMS
AND ANCILLARY PRODUCTS

Merlin GDP2 Box Dimensions: ***Height: 140mm x Length: 190mm x Depth: 60mm (Excluding EM Stop)***

Merlin GDP2 System Wiring Diagram

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

GDP Detector Dims: ***H: 95mm x L: 133mm x D: 38mm***

THE MERLIN RANGE
GDP4 SYSTEM

The Merlin GDP4 is a gas detection and shut off system that can be used with up to twelve Merlin gas detectors, Used in a variety of applications including boiler-houses, plant-rooms and factories.

The Merlin GDP4 can operate with Merlin gas detectors to monitor a variety of gases, the more common being Natural gas (Methane), Carbon Monoxide and LPG. Gas detectors are fixed remote from the GDP4 panel and are wired back to the GDP4 panel with three core low voltage cable.

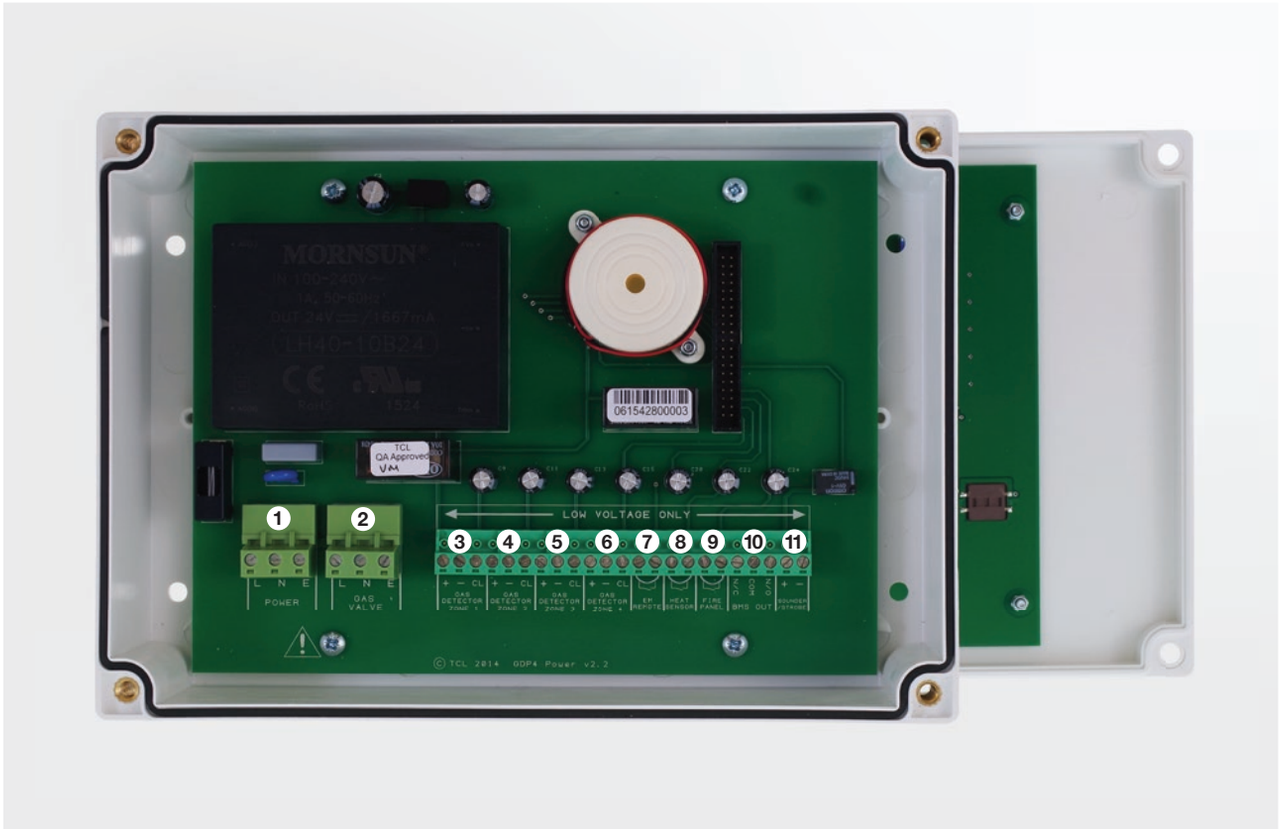
The GDP4 can be used to monitor the same or a number of different gases. Remote emergency shut-off buttons and thermal links can also be connected to the Merlin GDP4 panel.

Advantages of the Merlin GDP4 System

- Easy to install – The use of clearly marked PCB connections, low voltage wiring and push-fit wiring connections makes the GDP4 very simple to install.
- Multi zone system - Can be used with up to twelve gas detectors.
- User friendly – Digital LED design gives clear system indication at all times.
- Easily adaptive - Will work with building management systems and remote fire panels.
- Fitted with emergency stop as standard - capable of accepting any number of additional emergency shut off buttons.
- Covered by the S&S Northern 3 year warranty .

WIRING DIAGRAMS
AND ANCILLARY PRODUCTS

Merlin GDP4 Box Dimensions: ***Height: 180mm x Length: 255mm x Depth: 62mm (Excluding EM Stop)***



Merlin GDP4 System Wiring Diagram

1. Mains Input 230VAC.
2. Gas Solenoid Valve Power Output, 230VAC, Max 3A.
3. Remote Gas detector input, 24VDC power supply (sold separately).
4. Remote Gas detector input, 24VDC power supply (sold separately).
5. Remote Gas detector input, 24VDC power supply (sold separately).
6. Remote Gas detector input, 24VDC power supply (sold separately).
7. Remote EM Stop buttons (sold separately). VOLT FREE INPUT
8. Fusible Links (sold separately). VOLT FREE INPUT
9. Fire panel (Supplied by others). VOLT FREE INPUT
10. BMS output contacts. Normally Closed, Common & Normally Open.
11. Sounder Alarm, 24VDC power supply (sold separately).

GDP Detector Dims: ***H: 95mm x L: 133mm x D: 38mm***

THE MERLIN RANGE
1000BH SYSTEM

The Merlin 1000BH has been designed specifically for use in boiler house applications. It is a gas pressure proving panel that has the ability to carry out an auto restart after a power failure, as required by technical bulletin BB100.

After a genuine alarm, such as gas detected or emergency shut-off, the panel will need to be manually reset in order for the alarm condition to be assessed before gas is re-introduced.

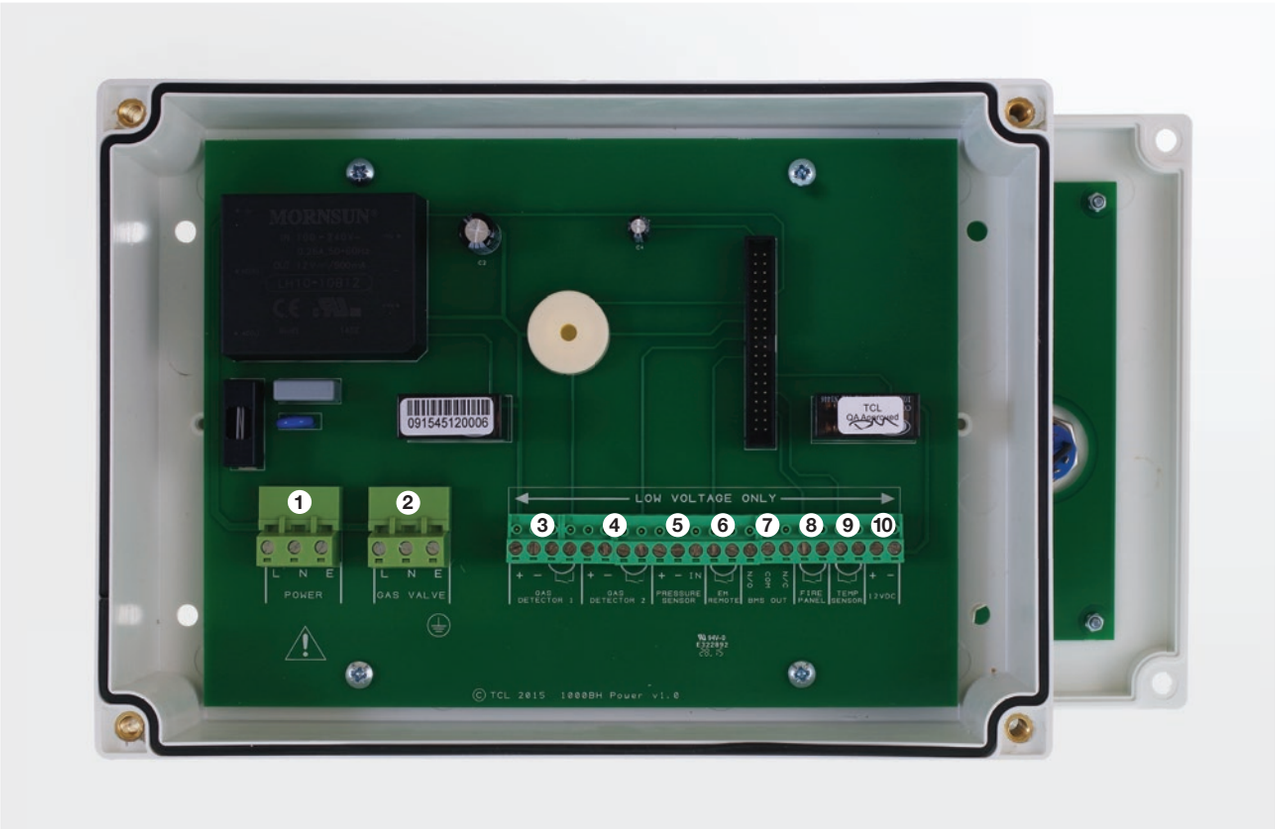
The Merlin 1000BH can work in conjunction with up to two gas detectors, the more commonly used being Natural gas (Methane) carbon monoxide & LPG. Remote emergency shut-off buttons and thermal links can also be connected to the Merlin 1000BH panel.

Advantages of the Merlin 1000BH System

- Easy to install – The use of clearly marked PCB connections, low voltage wiring and push-fit wiring connections makes the 1000BH very simple to install.
- Multi zone system - Can be used with up to two Merlin gas detectors.
- Comes complete with gas pressure transducer as standard.
- Checks for gas leaks - carries out a gas pressure test on the gas line at start-up.
- Continuous check on gas line – if the incoming pressure drops below 12 mbar for more than 10 seconds the panel will shut off the gas.
- Meets BB100 – can be used as an auto restart panel after power failure.
- User friendly – Digital LED design gives clear system indication at all times.
- Easily adaptive - Will work with building management systems & remote fire panels.
- Fitted with emergency stop as standard - capable of accepting any number of additional emergency shut off buttons.
- Covered by the S&S Northern 3 year warranty.

WIRING DIAGRAMS
AND ANCILLARY PRODUCTS

Merlin 1000BH Box Dimensions: ***Height: 180mm x Length: 255mm x Depth: 62mm (Excluding EM Stop)***



Merlin 1000BH System Wiring Diagram

1. Mains Input 230VAC.
2. Gas Solenoid Valve Power Output, 230VAC, Max 3A.
3. Remote Gas detector input, 12V power supply and volt free input.
4. Remote Gas detector input, 12V power supply and volt free input.
5. Gas pressure transducer, power supply & returned signal.
6. Remote EM Stop buttons and Fire Alarm input wired in series. VOLT FREE INPUT
7. BMS output contacts. Normally Closed, Common & Normally Open. Max.1A @ 230VAC.
8. Fire panel. VOLT FREE INPUT
9. Fusible Links. VOLT FREE INPUT
10. Permanent 12VDC output when there is power at the panel.

Gas Pressure Transducer Dimensions:

L: 110mm (Incl. port connection) L: 100mm (Excl. port connection)
W: 25mm Port connection ¼" bsp thread

THE MERLIN RANGE
CT500S SYSTEM

The Merlin panel is designed to provide the user with an effective means of isolating the gas, via a key switch or in the event of an emergency, by operation of the emergency shut off button.

The key operated CT500S has an emergency shut off button fitted as standard. The control panel has three indicator LED.s "power", "gas on" and "E.M. stop".

To power up the system the key switch should be turned to the on position, the "power" L.E.D will illuminate and any connected valves will open. In the event of the emergency stop button being activated any valve connected to the panel will close. To reopen the valve the panel can be reset using the key switch.

Merlin CT500S System Wiring Diagram

1. Mains Input 230V Single Phase.
2. Gas Solenoid Valve Power Output, 230VAC.
3. Remote EM Stop buttons and Fire Alarm input wired in series (sold separately). VOLT FREE INPUT
4. Permanent 12VDC output.

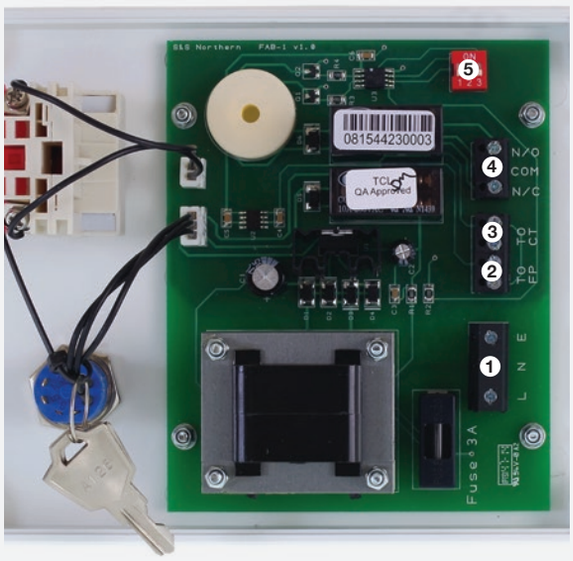
Dims: ***H: 140mm x L: 190mm x D: 60mm (Excl. EM Stop)***

THE MERLIN RANGE
FAB1 SYSTEM

The Merlin FAB 1 (Fire Alarm Bypass) system gives the user the ability to have use of the gas for a pre-set time whilst the fire alarm is being tested. Without a FAB-1 the Gas could be shut-off via the buildings BMS system during a fire alarm test.

With prior notice to a fire alarm test, the user can turn the key on the FAB1 to the on position, giving an uninterrupted gas supply for between 10 and 45 minutes. During this time the system controlling the gas will ignore shut-off signals from the buildings fire alarm system.

The bypass time can be adjusted using the dip switches inside the panel. During the bypass time gas can still be shut off, pressing the emergency gas shut off button will close the gas solenoid valve.



Merlin FAB1 System Wiring Diagram

1. Mains Input 230VAC.
2. Fire alarm input.
3. Connect to fire panel terminal in the merlin panel.
4. BMS input.
5. Switches for bypass time adjustments.

Dims: ***H: 140mm x L: 190mm x D: 60mm (Excl. EM Stop)***

ANCILLARY EQUIPMENT

S&S Northern provide a comprehensive package, supplying not only gas detection and interlock panels but also a full range of ancillary equipment.

Gas Solenoid Valves

The most common product supplied is a solenoid valve for isolation of the gas supply. We supply a large number of valves for use in any area where a gas supply is in place this includes schools, kitchen, plant rooms and even some domestic sites. The valves supplied are all covered by the S&S Northern 3 year warranty and are tested and certified to European Standard EN161 as Class “A”.

Emergency shut-off buttons

All panels in the Merlin range will accept the connection of volt free remote emergency shut-off buttons. The shut-off buttons should be wired in series back to the Merlin panel, there is no limit on the amount of buttons that can be connected in this manner.

Gas Detectors

S&S Northern supply a full range of remote gas detectors and thermal links to compliment the Merlin range of panels. The Natural gas detectors should be located approximately 30cm from the ceiling and at detection will go into alarm at 10% of the low explosion level. This will trigger isolation of the power supply to the solenoid and as such isolation of the gas supply. This can then be rectified by resolving the leak, allowing the sensor head to clear and resetting the attached Merlin panel.

Carbon Monoxide Detectors are normally situated approximately 1 metre from ground level. When the sensor head detects carbon monoxide at a level exceeding 50ppm for over 4 minutes the attached system will trigger into the alarm state.

LPG detectors are generally fitted at approximately 50cm from floor level to detect any LPG build up. The detector is installed at low level as LPG build up occurs from the ground upwards due to the dense nature of the gas. At 10% of the low explosion level the detector will trigger the attached Merlin system causing an alarm condition and instant isolation of the gas valve.

Heat Detectors

All panels in the Merlin range will accept the connection of heat detectors (Fusible Links). It is recommended that heat detectors should be positioned over the heat source, whether it be a boiler or water heater. The heat detector will trigger the alarm state at temperature of 72 degrees centigrade.

FOR OUR FULL RANGE OF PRODUCTS AND THE REVOLUTIONARY SPEC WIZARD VISIT US AT WWW.SNSNORTHERN.COM

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