



**S&S**<sup>TM</sup>  
  
NORTHERN  

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[snsnorthern.com](http://snsnorthern.com)

**Gas Safety Controls  
Product Catalogue**

# GAS SAFETY IN EVERY ENVIRONMENT.

**The UK's leading designer, manufacturer and supplier of  
the latest range of gas safety products.**

Ranges include; gas ventilation and interlock systems for use in commercial kitchens, gas pressure proving systems and gas detection systems for school laboratories and boiler houses.  
Designed and manufactured in the UK.



38 Years Industry Experience



Easy to Install Solutions



3 Year Product Warranty



24/7 Tech Back Up



Fully Trained Sales Engineers



Express Delivery Available

## Product key features

The benefits of each of our products are illustrated in an icon format throughout this brochure, aiding you to select the product and design features most suited for your requirements.

The icons are located at the top of each product page with accompanying detail for ease of reference and comparison of the solutions we have available.

If you have any questions about any products and their features please contact [info@snsnorthern.com](mailto:info@snsnorthern.com).



## Science Lab

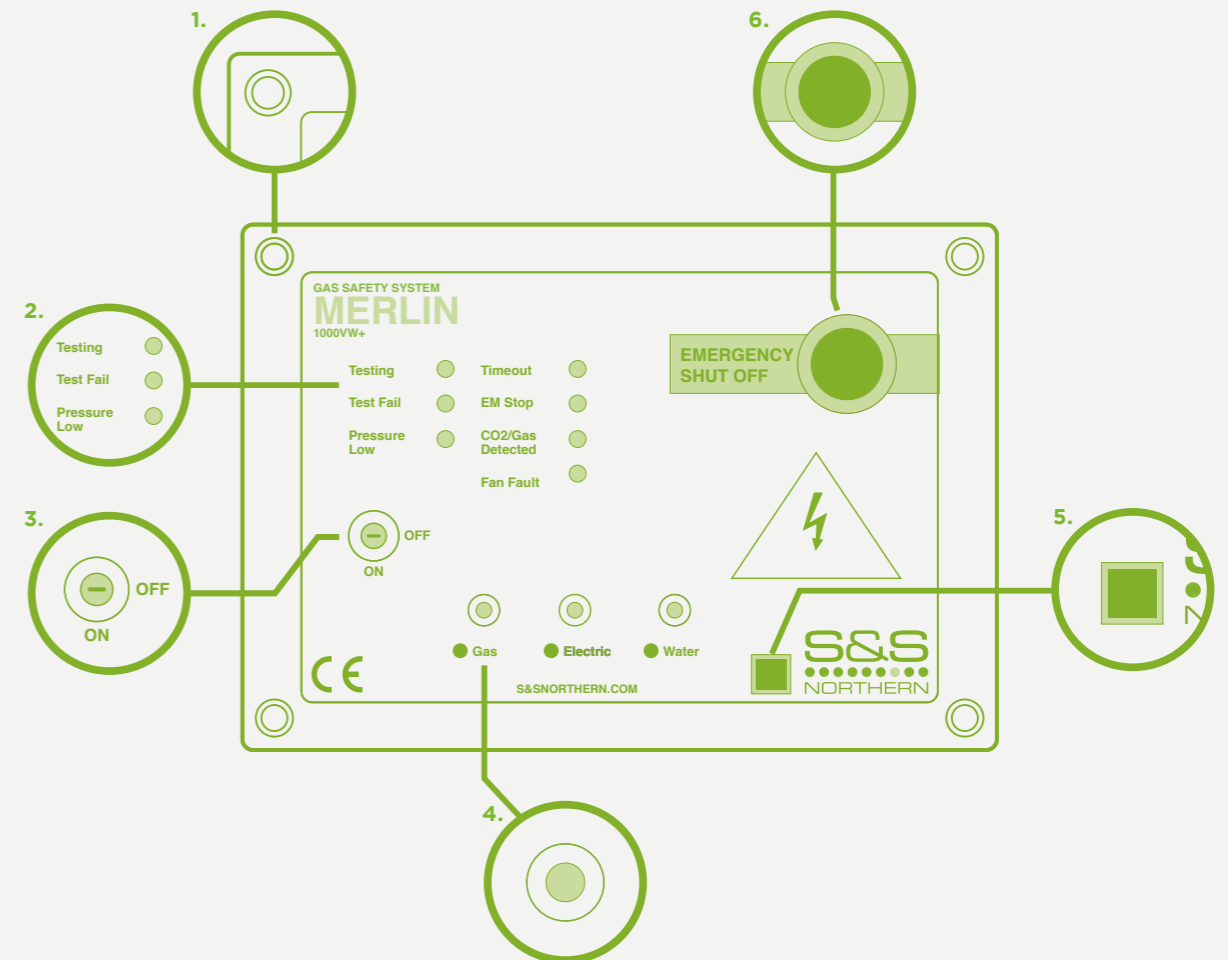
S&S Northern have a range of gas proving systems for educational establishments. Our systems protect Laboratories, food tech and design tech classrooms. We also have products that protect laboratories that have speciality or high pressure gases.



PAGES  
18-27

**COMPACT,  
ROBUST &  
RELIABLE**

## Gas pressure proving systems



- ✓ Incredibly easy to use and install
- ✓ Adjustable time out facility
- ✓ Industrial grade polycarbonate material to withstand daily use
- ✓ Meets IGEM/UP11

### 1. Modern design

Slim compact enclosure

### 2. Clear status indication

For each utility

### 3. Quick operation

Keyed authority ON/OFF Alarm reset

### 4. Robust control

Touch sensitive buttons







### 5. Ease of access

Power indication and QR code for easy access to manuals

### 6. Emergency stop button

Recessed panic button eliminates accidental shut down

# Merlin 1000 VW+

-   
Ventilation interlock
-   
Integral Emergency Stop
-   
Isolates gas, water and electric (via contactor)
-   
Designed to IGEM/UP11 standards
-   
Fire Alarm Input & BMS Output
-   
Gas proving feature\*

GAS PROVING,  
ELECTRIC  
& WATER  
ISOLATION, FAN  
INTERLOCK



The Merlin 1000VW+ gas pressure proving, electric and water isolation system is designed specifically for use in educational buildings and Laboratories. The 1000VW+ can also interlock any mechanical ventilation.







**Additional features**

- Facility to interlock with the ventilation units.
- Gas valve output
- Low Pressure Monitoring for incoming gas supply
- Works with Carbon Dioxide Monitor

\*Gas pressure transmitter included

- OFTEN USED WITH
- Gas Solenoid valve  
**Page 50**
  - Water Solenoid Valve  
**Page 51**
  - Merlin CO2-X  
**Page 40**
  - Air Pressure Differential Switch  
**Page 50**

# Merlin 1000V+

-   
Ventilation interlock
-   
Integral Emergency Stop
-   
Isolates gas and electric (via contactor)
-   
Designed to IGEM/UP11 standards
-   
Fire Alarm Input & BMS Output
-   
Gas proving feature\*

- OFTEN USED WITH
- Gas Solenoid valve  
**Page 50**
  - Merlin CO2-X  
**Page 40**
  - Air Pressure Differential Switch  
**Page 50**
  - Emergency Stop  
**Page 48**



The Merlin 1000V+ gas pressure proving and electric isolation system is designed specifically for use in educational buildings and Laboratories with ventilation interlocking between the ventilation system and the gas solenoid valve. The system is compatible with external current monitors or air pressure differential switches in order to interlock with the ventilation units.

**Additional features**

- Facility to interlock with ventilation units.
- Gas valve output
- Low Pressure Monitoring for incoming gas supply
- Works with Carbon Dioxide Monitor

GAS PROVING,  
ELECTRIC  
ISOLATION, FAN  
INTERLOCK

# Merlin 1000V



Ventilation  
interlock



Integral  
Emergency  
Stop



Designed to  
IGEM/UP11  
standards



Fire Alarm  
Input & BMS  
Output



Gas proving  
feature\*

GAS  
PROVING, FAN  
INTERLOCK



The Merlin 1000V gas pressure proving system is designed specifically for use in educational buildings and Laboratories with ventilation interlocking between the ventilation system and the gas solenoid valve. The system is compatible with external current monitors or air pressure differential switches in order to interlock with the ventilation units.

#### Additional features

- Facility to interlock using current switches or air pressure differential switches (4 fans)
- Gas valve output
- Low Pressure Monitoring for incoming gas supply
- Works with Carbon Dioxide Monitor

\*Gas pressure transmitter included

OFTEN  
USED  
WITH

Gas Solenoid  
valve  
Page 50

Merlin CO2-X  
Page 40

Air Pressure  
Differential  
Switch  
Page 50

Emergency  
Stop  
Page 48

# Merlin 1000SW+



Integral  
Emergency  
Stop



Isolates gas,  
water and  
electric



Designed to  
IGEM/UP11  
standards



Fire Alarm  
Input & BMS  
Output



Gas proving  
feature\*

OFTEN  
USED  
WITH

Gas Solenoid  
valve  
Page 50

Water Solenoid  
Valve  
Page 51

Merlin CO2-X  
Page 40

Emergency  
Stop  
Page 48



The Merlin 1000SW+ is a gas pressure proving system designed specifically for use in educational buildings and Laboratories with the facility to isolate the gas supply, water supply and bench electrics.

#### Additional features

- Gas valve output
- Low Pressure Monitoring for incoming gas supply
- Interlocking available with Carbon Dioxide Monitor

\*Gas pressure transmitter included

GAS PROVING,  
ELECTRIC  
& WATER  
ISOLATION

# Merlin 1000S+



Integral Emergency Stop



Designed to IGEM/UP11 standards



Fire Alarm Input & BMS Output



Gas proving feature\*



The Merlin 1000S+ is a gas pressure proving system designed specifically for use in educational buildings and Laboratories with the facility to isolate the gas supply and bench electrics.

**Additional features**

- Gas valve output
- Teacher full control of the gas supply and bench electrics.
- Low Pressure Monitoring for incoming gas supply
- Interlocking available with Carbon Dioxide Monitor



Gas Solenoid valve  
Page 50

Merlin CO2-X  
Page 40

Emergency Stop  
Page 48

# Merlin 1000S



Integral Emergency Stop



Isolates gas



Designed to IGEM/UP11 standards



Fire Alarm Input & BMS Output



Gas proving feature\*



Gas Solenoid valve  
Page 50

Merlin CO2-X  
Page 40

Emergency Stop  
Page 48



The Merlin 1000S is a gas pressure proving system designed specifically for use in educational buildings and Laboratories with the facility to isolate gas.

**Additional features**

- Gas valve output
- Low Pressure Monitoring for incoming gas supply
- Interlocking available with Carbon Dioxide Monitor

\*Gas pressure transmitter included





## Detectors

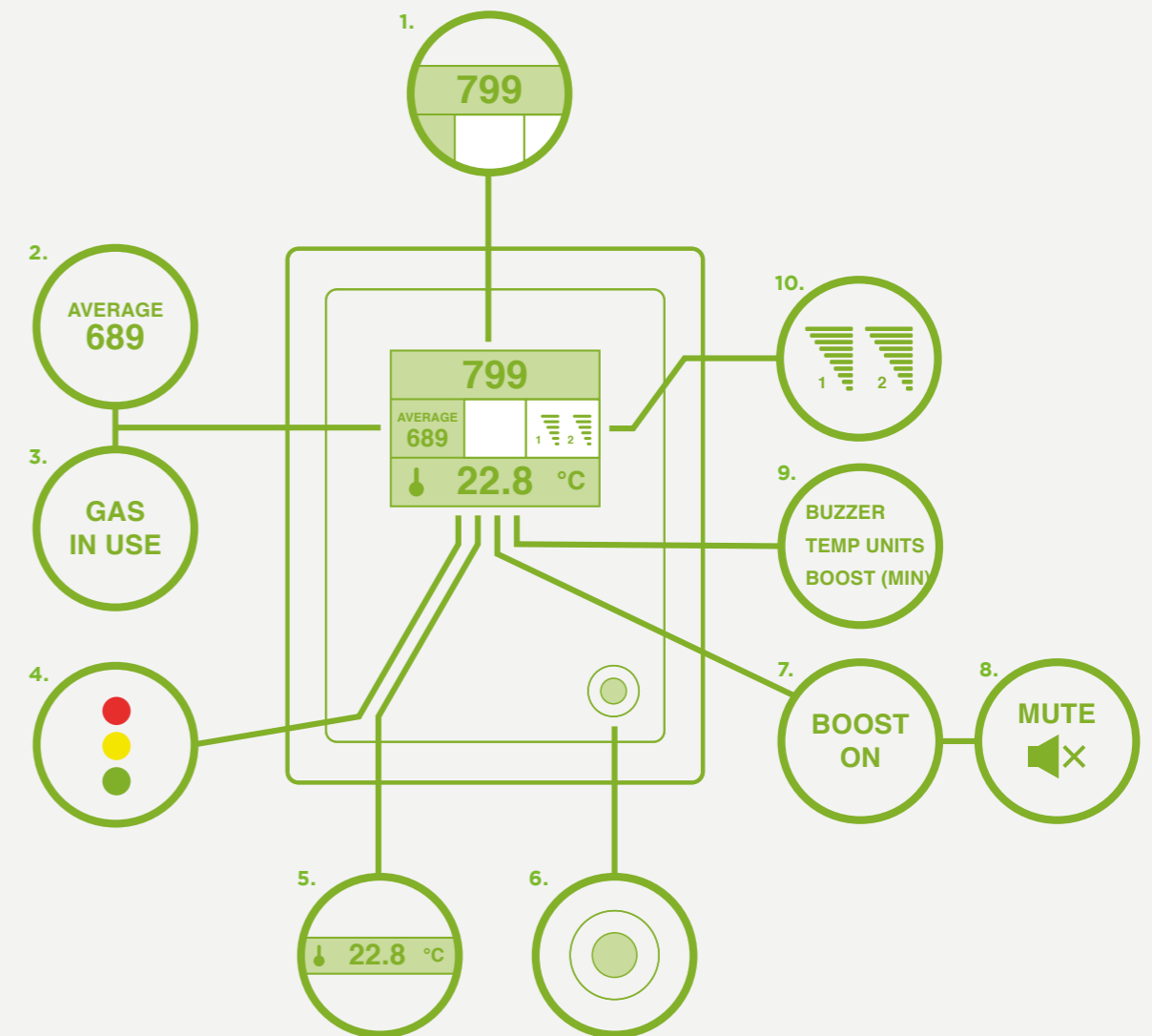
S&S Northern manufacture a wide range of gas detectors for monitoring air quality, toxic gases, explosive and flammable gases. They are designed to be easy to install and maintained. Each target gas has unique characteristics and therefore the detector needs to be installed to suit the target gas. Please contact us or have a look on our website for mounting height information and advice on installation.



PAGES  
36-45

**SIMPLE,  
EFFICIENT &  
RELIABLE**

## Carbon Dioxide and temperature monitor



- ✓ Dual power 230V AC or 12-24V AC/DC
- ✓ Modern design with a slim and compact enclosure

### 1. CO2 Levels

Displays current c02 gas levels in parts per million (ppm).

### 2. Average CO2 Levels

Average c02 readings over an 8 hour period when above 600ppm.

### 3. Gas in use

Indication when the gas is being used.

### 4. Traffic light indicator

Display changes colour dependent on the c02 levels and temperature. Green-Safe, Yellow-Attention, Red-Danger.

### 5. Temperature reading

Displays temperature levels over 30 minute periods.

### 6. Touch button

Used to activate 'Boost' or 'Mute'.

### 7. Boost on

Analogue outputs will run at optimum voltage (10V) to run a fan.

### 8. Mute

Sounder alarm mute indication.

### 9. Easy installation

Engineers settings menus for easy navigation

### 10. 0-10V Outputs

0-10V analogue outputs progress bars

# CO2-X Monitor



Clear digital display



Designed specifically for BB101



Automatic alarm



12V DC, 24VDC or 230V AC powered.



Fan controller enabled relay output

CARBON DIOXIDE MONITOR



The CO2-X is a dual powered carbon dioxide and temperature monitor, which has the ability to show average readings over an 8 hour period.

#### Additional features

- Can automatically change alarm settings based on gas valve activation
- CO2 and temperature levels measured and displayed clearly.

- 2 x 0-10V Signal output.
- Displays average readings of CO2 concentration over an 8 hour period.
- End of life and fault notifications.
- Pre alarm and alarm output.
- Variable CO2 and temperature output

OFTEN USED WITH

Merlin 2000S  
Page 15

Merlin 1000VW+  
Page 22

Merlin 1000S  
Page 27



Clear digital display with traffic light feature



Designed to IGM/UP11 standards



Mains powered

OFTEN USED WITH

Merlin 2000S  
Page 15

Merlin CT1650+  
Page 12

Merlin 1000VW+  
Page 22

Merlin 1000S  
Page 27

# Merlin CO2-C1



The budget friendly Merlin CO2-C1 detector is a mains powered monitor to give the end user simplified analysis of the carbon dioxide levels in the surrounding area. The Merlin CO2-C1 has a traffic light colour system (red, amber, green) with high, medium, low indications.

#### Additional features

- Traffic light display to clearly indicate low, medium and high levels of CO2.
- Low voltage switch when levels of carbon dioxide increase
- Mains powered

CARBON DIOXIDE MONITOR (NO SCREEN)

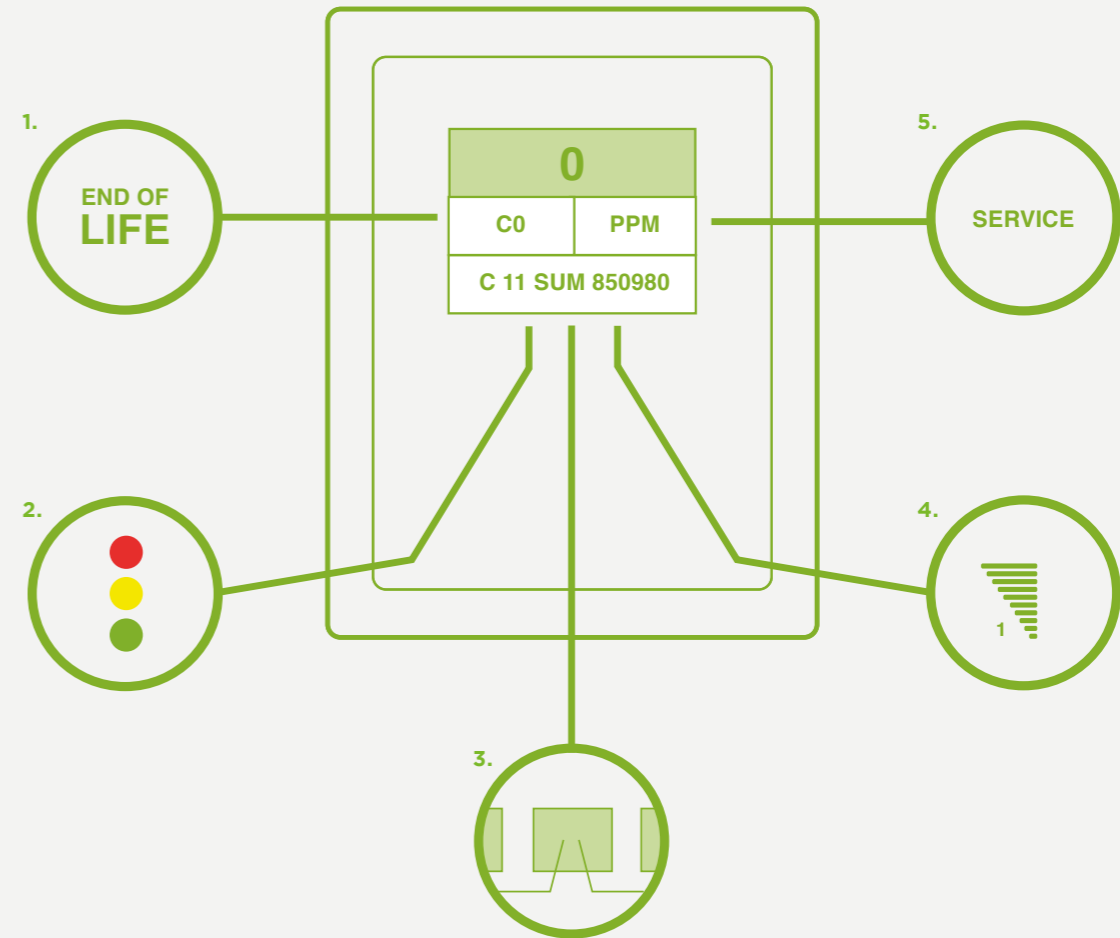
OFTEN  
USED  
WITHMerlin GDPX+  
Page 18Merlin GDP2X  
Page 20Merlin 1000BH  
Page 21

# PRE-CALIBRATED AND COMPACT

GAS SENSOR TYPE	NG: Semi-conductor	MEASURING RANGE	NG:300-10,000 PPM
	LPG: Semi-conductor		LPG:300-10,000 PPM
	H: Semi-conductor		H: 100-10,000 PPM
	CO: Electro-chemical		CO: 10-10,000 PPM
	O2: Electro-chemical		O2: 0-30%
GAS LEVEL PRE-ALARM	NG: 8% LEL	GAS LEVEL ALARM	NG: 10% LEL
	LPG: 8% LEL		LPG: 10% LEL
	H: 8% LEL		H: 10% LEL
	CO: 20 PPM		CO: 30 PPM @ 2 HOURS 50 PPM @ 1 HOUR 100 PPM @ 10 MINS 300 PPM @ 1 MINS
	O2: 18.5-19.5%		O2: <18.5% / >23%
EXPECTED SENSOR LIFE	NG: 10 Years		
	LPG: 10 Years		
	H: 10 Years		
	CO: 5 Years		
	O2: 3 Years		

## Gas Detectors

The S&S range of gas detectors are used in various applications such as boiler/plant rooms, hospitals, laboratories and high rise buildings.



- ✓ Modern design with a slim and compact enclosure
- ✓ No calibration required - pre-calibrated in the factory
  - ✓ Power supply 12-24V AC/DC
- ✓ Various outputs to work with control panels
- ✓ Connections available for Modbus outputs

### 1. End of life indicator

To alert the user that the detector has reached its expected operational lifecycle.

### 2. Traffic light indicator

To summarise gas levels: display changes colour dependent on live gas levels. Green-Safe, Yellow-Attention, Red-Danger.

### 3. Multiple detector chains

Individually identify each detector and the monitoring zone the detector is located.

### 4. Gas levels

Displays current gas levels in parts per million (ppm) or low explosion level (LEL) dependent on the gas detector type. Levels visible at all time.

### 5. Service & Maintenance

A service screen will intermittently flash every 30 seconds after one year of service.



**Ancillaries**

**PAGES  
46-55**

## FAB-1 Fire Alarm bypass



Merlin  
GDP-2  
Page 33

Merlin  
1000BH  
Page 32

OFTEN  
USED  
WITH

The Merlin FAB1 can be integrated with any of the Merlin products to give the operator the ability to temporarily bypass the S&S controller. With prior notice to a fire alarm test, the operator can turn the key to the on position giving an un-interrupted 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 and allow factors such as heating systems to remain operational. The bypass time can be adjusted using the blue switches inside the panel. During the bypass time gas can still be shut off by pressing the emergency gas shut off button on the fascia.

## Emergency Stop



Merlin  
2000S  
Page 15

Merlin  
3000S  
Page 10

Merlin  
1000VW+  
Page 22

OFTEN  
USED  
WITH

The Emergency Stop button is used to isolate the gas supply into an area in the event of emergency.

The button is fitted with a Perspex screen which should be pressed to activate, and then can be reset using a key (supplied with every emergency knock-off button). This button can be linked with any Merlin gas safety system to give various means of isolation within an area.

OFTEN  
USED  
WITH

Merlin  
GDP2X  
Page 31

Merlin  
1000BH  
Page 32

Merlin  
GDP2  
Page 33

Merlin  
GDPX+  
Page 30

## Fusible Link



The fusible link is most commonly used in a boiler room application. These are fitted as a mean of fire protection. If the boiler room temperature reaches over 72 degrees then the fusible wire inside will melt and therefore send an electronic signal to isolate the gas supply. Multiple fusible links can be fitted in one area.

## Sounder Alarm Beacon



OFTEN  
USED  
WITH

Merlin  
GDP2X  
Page 31

Merlin  
GDPX+  
Page 30

Merlin  
GDP2  
Page 33

The Sounder Alarm Beacon is a remote alarm beacon most commonly used outside a boiler room. This sounder alarm beacon can give both an audible and visual alarm in the event of an emergency. Various colours are available to suit the application.

# Air Pressure Differential Switch

Merlin  
CT1200S  
Page 14

Merlin  
1000V+  
Page 23

OFTEN  
USED  
WITH



An air pressure differential switch is a mechanical switch fitted in ductwork which can be used to monitor and check airflow rates. These switches are adjustable and have a range from 20-300PA. They also come with a 1m duct kit to be fitted into the ductwork to detect the airflow.

# Gas Solenoid Valve

Merlin  
1000BH  
Page 32

Merlin  
1000S  
Page 27

Merlin  
2000S  
Page 15

OFTEN  
USED  
WITH



Our gas solenoid valves are 230V powered, normally closed, auto-reset and will most commonly be powered from our Merlin gas safety systems. In the event of an emergency, the Merlin gas safety system will take power away from the gas solenoid valve causing it to slam shut, and when power is re-instated this will then allow gas to flow through the pipework.

We have a full range of sizes available, both screwed and flanged, and can offer specialist gas valves on request.

# Water Solenoid Valve

OFTEN  
USED  
WITH

Merlin  
1000VW+  
Page 22

Merlin  
1000SW+  
Page 25



Our water solenoid valves are most commonly found in science laboratories where the teachers want full control of the water supply to the benches, but they can be used in a range of applications.

Similar to a gas solenoid valve, our water solenoid valves are normally closed, auto-reset and 230V so they can be controlled by the Merlin gas safety systems.

Once again, we have a full range of sizes available, WRAS approved and can offer specialist types on request.

# Pressure Transducer

OFTEN  
USED  
WITH

Merlin  
GDPX+  
Page 30

Merlin  
1000S  
Page 27

Merlin  
2000S  
Page 15



A transmitter used to check for leaks in the gas line, by detecting pressure drops from the downstream port of the gas solenoid valve.

# DPM2

Merlin 2000S Page 15  
Merlin 1000S Page 27  
Merlin 1000BH Page 32

OFTEN USED WITH

The DPM-2 is a dual pressure monitor which enables connection of two gas solenoid valves and two pressure sensors to any Merlin gas proving panels.



# PM2+

Merlin 2000S Page 15  
Merlin 3000S Page 10  
Merlin CT1750+ Page 11

OFTEN USED WITH

The Merlin PM2+ Current Monitor is a dual fan current monitor and is to be used in conjunction with the Merlin systems: the unit can be used as an alternative to an air pressure differential switch.



# CS1/CS2

OFTEN USED WITH

Merlin CT1200S Page 14  
Merlin 1000V Page 24  
Merlin CT1650+ Page 12

The Merlin CS1 & CS2 Current Switch is to be used in conjunction with the Merlin range of ventilation interlock systems and can be used as an alternative to air pressure differential switches.

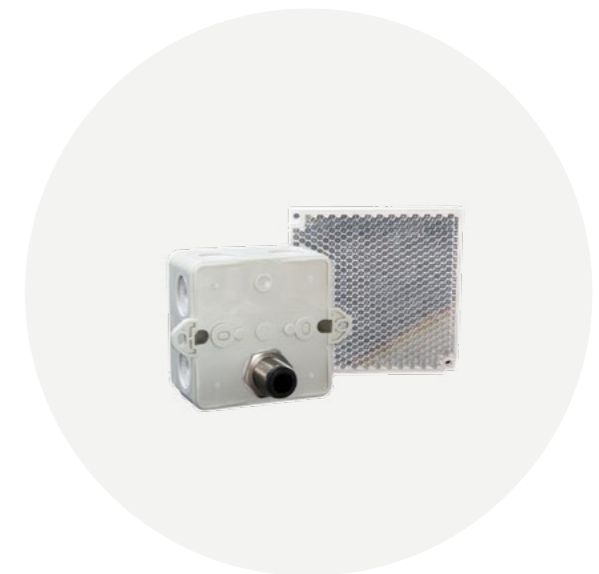


# Optical Sensor

OFTEN USED WITH

Merlin 3000S Page 10

The Optical Sensor emits a beam across the kitchen canopy, if the beam is interrupted by excess smoke/steam it will send a signal back to the control panel.





# Spec Wizard

## Ensure your project has the correct equipment

Here at S&S Northern we ensure your project is meeting all the latest gas regulations and recommendations.

As part of our dedication to continual progress and development, the S&S Northern team has developed the pioneering Spec Wizard. Spec Wizard is a dynamic resource that significantly reduces a consultant's workload by searching for and identifying the most appropriate equipment for a project, location or specification.

By simply answering questions from the drop down menu, Spec Wizard will instantly generate the ideal specification a consultant needs to meet various gas regulations on their project.

Spec Wizard will then create and email an equipment list which can then be directly used within a specification document, saving hours of time and money during the research and sourcing stages.

For help with the Spec Wizard or if you would like one of S&S Northern's technically trained sales engineers to explain the process over the telephone, please call us on +44 (0) 1257 470 983

## Book Your Free CIBSE Accredited Webinar.

Do your projects include Boiler/PlantRooms? Laboratories? Commercial kitchens? Receive up to date knowledge of Gas Safety Regulations.



## The CPD session will cover the following 4 areas:

BB100 & IGEN  
UP/2 - GAS  
SAFETY IN  
BOILER HOUSES  
/ PLANT ROOMS

IGEM UP/11 EDITION 3  
(2018) - GAS CONTROL  
IN EDUCATIONAL  
ESTABLISHMENTS,  
SUCH AS FOOD  
TECHNOLOGY ROOMS  
AND LABORATORIES

BS6173:2009 &  
DW172 2018 - GAS  
INTERLOCKING  
FOR COMMERCIAL  
KITCHENS

IGEM UP/19 - CO2  
MONITORING FOR  
COMMERCIAL  
KITCHENS



[SNSNORTHERN.COM/CPD](https://www.snsnorthern.com/cpd)

**S&S Northern is a friendly family business proving top quality products and outstanding customer service.**

S&S Northern is a friendly family business proving top quality products and outstanding customer service. S&S Northern has built a reputation in the UK that is second to none. Established in 1995, S&S Northern has become synonymous with designing and manufacturing gas pressure proving and gas detection equipment.

S&S Northern has achieved its position as the market leader as a result of its staff's dedication to supply top quality products that are safe, reliable and meet every client's individual requirements. Its aim is to always provide total satisfaction to those who specify, purchase and install S&S Northern products.

S&S Northern continually invests in training for every member of staff to ensure the customer receives the right product to meet their requirements at the right price and delivered on time. S&S Northern is committed to investing in research to improve its efficiency and the quality of its gas interlocking, gas ventilation and gas shut off systems and products. With bases in the North and South of the UK, S&S Northern is perfectly placed to respond to customer demand in any area and to respond immediately to requests for site visits or general enquiries.

Keep up to date with S&S Northern and industry news at [snsnorthern.com/blog](https://www.snsnorthern.com/blog) or follow us on social   [@snsnorthern](https://www.linkedin.com/company/snsnorthern)

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