

1000BH USER & INSTALLATION GUIDE

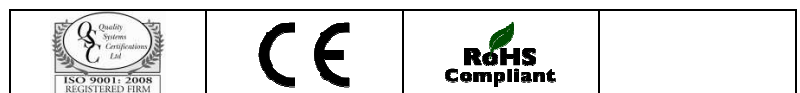


Product description

The Merlin 1000BH is a Gas control panel with gas proving, specifically designed for the boiler houses.

The system comprises a control panel and a gas pressure sensor. The Merlin 1000BH can receive connections from remote emergency shut-off buttons, two gas detectors, fire panel and heat detector. It also can be integrated with a BMS.

It is recommended that the user reads this guide before using the system. Please do **NOT** attempt to operate the unit until the contents of this document have been read and are thoroughly understood.



HOW TO TURN THE SYSTEM ON AND OFF

1. To turn then system On, turn the key switch to On position.
2. To turn the system Off, turn the key switch to Off position.

EXPLANATION OF LED STATUS

Power LED

When the system is connected to the mains supply, the Red LED of the S&S Logo located in the bottom right corner of the panel will illuminate. When no power is present, this LED will not light up.

RED = OK

OFF = No power to 1000S

Gas LED

When the key switch is turned On, the Merlin 1000BH will check the installation for gas leaks. If gas proving is successful, the gas valve will open and the Gas On LED will illuminate GREEN.

GREEN = Gas On

OFF = Gas Off

Testing LED

This LED illuminates GREEN when the panel is checking the integrity of the gas installation.

GREEN = proving the gas line, do **NOT** operate any appliances

Test Fail LED

Under normal working conditions this LED is off. When the panel detects a gas leak, the LED will illuminate YELLOW. Gas valve will remain closed.

OFF = OK

YELLOW = gas proving failed

Pressure Low LED

Under normal working conditions this LED is off. This LED will illuminate YELLOW when pressure of the gas supply drops below 12mBar for 10 secs. Gas valve will close.

OFF = OK

YELLOW = gas supply pressure low

Gas Detector LED

Under normal working conditions this LED is off. If Methane, Carbon Monoxide or LPG is detected (relevant gas detector required), the LED will show RED. The Gas valve will turn Off .

OFF = OK

RED = Gas detected.

Heat Detector LED

Under normal working conditions this LED is off. If heat is detected (heat detector required), the LED will show YELLOW. The Gas valve will turn off.

OFF = OK

YELLOW = High temperature detected.

EM Stop LED

If the Emergency Shut Off button, (either remote or on the panel) is pressed the LED will show YELLOW.

The Gas valve will turn off. The EM Stop button must be re-set before restarting the system.

OFF = OK

YELLOW = EM Stop button pressed

Fire Panel LED

Under normal working conditions this LED is off. If fire is detected (fire panel required), the LED will show YELLOW. The Gas valve will turn Off .

OFF = OK

YELLOW = Fire detected.

USING THE EMERGENCY SHUT OFF

The Emergency shut off button is located on the front of the panel. There is also a facility for remote shut off buttons to be wired in series.

The Emergency shut off button(s) will cut off the gas supply when activated.

To reinstate the system, the Emergency shut off button(s) will need to be reset and the panel restarted.

BMS INTEGRATION

The Merlin 1000BH can be integrated with a BMS to make or break a circuit on gas on/gas off, (valve open or valve closed). This will tell the BMS whether or not the kitchen has use of the gas supply.

There is a dip-switch located on the inside facia of the Merlin 1000BH labelled 'BMS Selection'. This is factory set in the 'off' position which signals the BMS on gas on/gas off. When switched to the 'on' position, the Merlin 1000BH will only signal the BMS on a fault, i.e. gas detected, EM Stop pressed, etc.

FIRE ALARM INTEGRATION

The Merlin 1000BH can be integrated with a fire alarm using normally closed output from the fire panel, to close the gas supply automatically in the event of a fire.

GAS FILL AND PROVE TIME

Gas fill and prove times are adjustable. There are two dip-switches located on the inside facia of the Merlin 1000BH labelled "Fill Time" and "Prove Time". They are factory set in the 'off' position. Fill and prove time can be changed by turning the relevant dip switch to on position.

Fill time: Off – 5 secs

On – 10 secs

Prove time: Off – 30 secs

On – 50 secs

AUTO RESET

The Merlin 1000BH has a built-in Auto Reset feature. There is a blue dip-switch located on the inside facia of the Merlin 1000S labelled "Auto Reset". This is factory set in the 'off' position. When the power is restored after the power cut, panel has to be restarted manually. On installation, this can be switched to the 'on' position if required. This will instruct the system to restart automatically when power is restored after the power cut.

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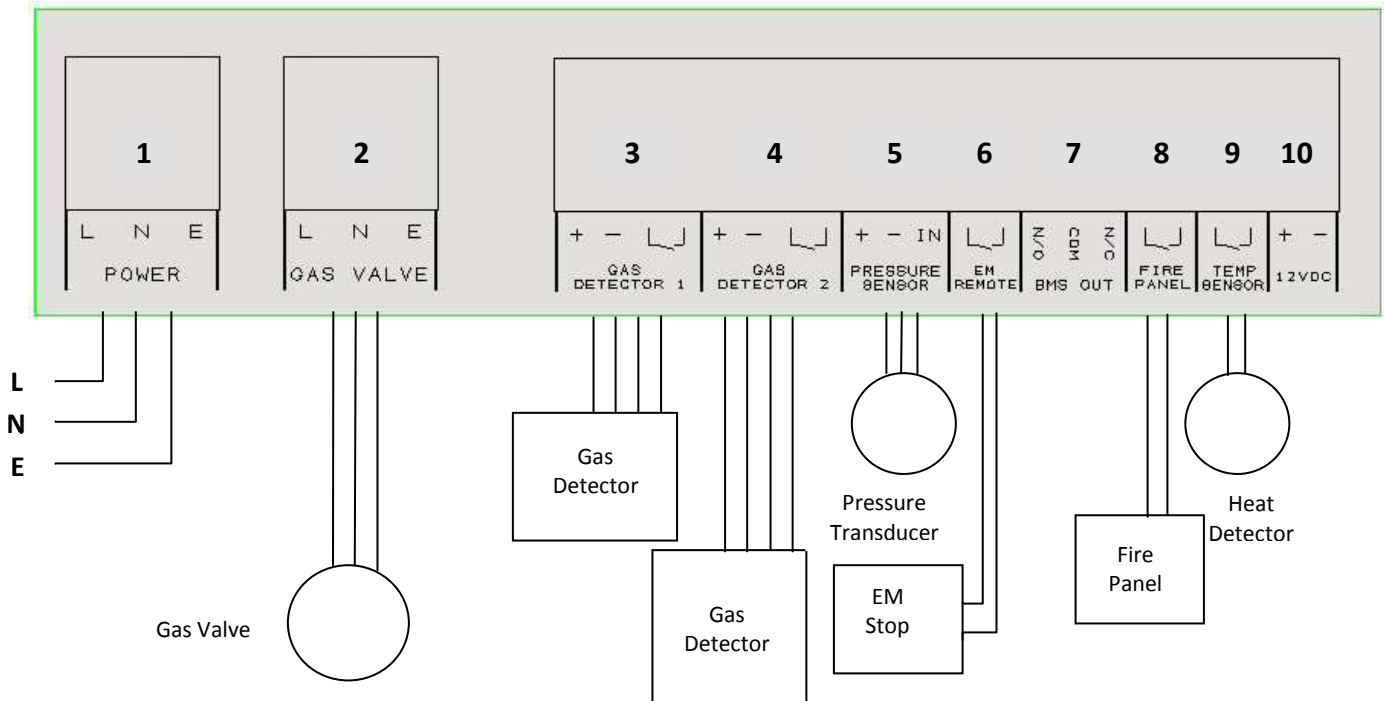
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1000BH Wiring Diagram



1. Mains Input 230V Single Phase.
2. Gas Solenoid Valve Power Output, 230VAC, Max 3A.
3. Methane, CO or LPG Detector, power supply and **volt free input** (purchased separately).
4. Methane, CO or LPG Detector, power supply and **volt free input** (purchased separately).
5. Gas pressure transducer, power supply and returned signal (supplied).
6. Remote EM Stop buttons wired in series (purchased separately). **VOLT FREE INPUT**
7. BMS output contacts. Common, Normally Closed and Normally Open. Max.1A @ 230VAC.
8. Fire panel. **VOLT FREE INPUT**
9. Heat Detector (purchased separately). **VOLT FREE INPUT.**
10. Permanent 12VDC output. Max 100mA.

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