Gas Safety Products

Merlin FAB-1 System

Installation, operating and maintenance

23/08/2016

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1   General information

The Merlin FAB-1 is a fire alarm bypass panel.

The Merlin FAB-1 is designed to allow gas to remain on, for a pre-determined time, during a fire alarm test. The FAB-1 should be activated before a fire alarm test to allow the gas supply to remain on. This is done by turning the key switch on the fascia of the panel as far clockwise as possible. Once released the key will return to its original position and a countdown timer is activated. The countdown timer can be adjusted inside the panel to allow the gas supply to remain on for between 10 and 45 minutes.

When the FAB-1 is in operation the panel will beep every 20 seconds until there is 5 minutes before the end of the timeout, the FAB-1 will then beep every 10 seconds and the bypass LED will start to flash. During the bypass time gas can still be shut off, pressing the emergency shut off button will close the gas solenoid valve.

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.

2   Installation

2.1   **Panel Mounting.** The control panel is designed for surface mounting using 4 mounting screws. Removing the cover on the panel gives access to the circuit board.

2.2   **Mains Supply.** A 230volt electrical supply should be supplied to the panel. This should be externally fused at 3 Amps using a fused spur and should be connected to the terminals marked "LNE"

2.3   **Fire Alarm Panel Connection.** The terminal for the connection to a fire alarm panel is detailed on the circuit board as "TO FP". This is a volt free connection.

2.4   **Merlin Control Panel Connection.** The terminal for the connection to a Merlin control panel is detailed on the circuit board as "TO CT". This is a volt free connection.

2.5   **BMS Connections.** Terminal connections are available on the circuit board for connections to Building Management systems etc. Detailed on the circuit board as "TO BMS N/C, Com and N/O" these are volt free connections.

2.6   **Timeout Facility.** The bypass time can be adjusted using the blue switches inside the panel. Please see below the timeout variation you can select.

S1	S2	S3	Time	
O	O	O	10mins	O = OFF
O	O	X	15mins	X = ON
O	X	O	20mins	
O	X	X	25mins	
X	O	O	30mins	
X	O	X	35mins	
X	X	O	40mins	
X	X	X	45mins	

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

3   Operation Instructions

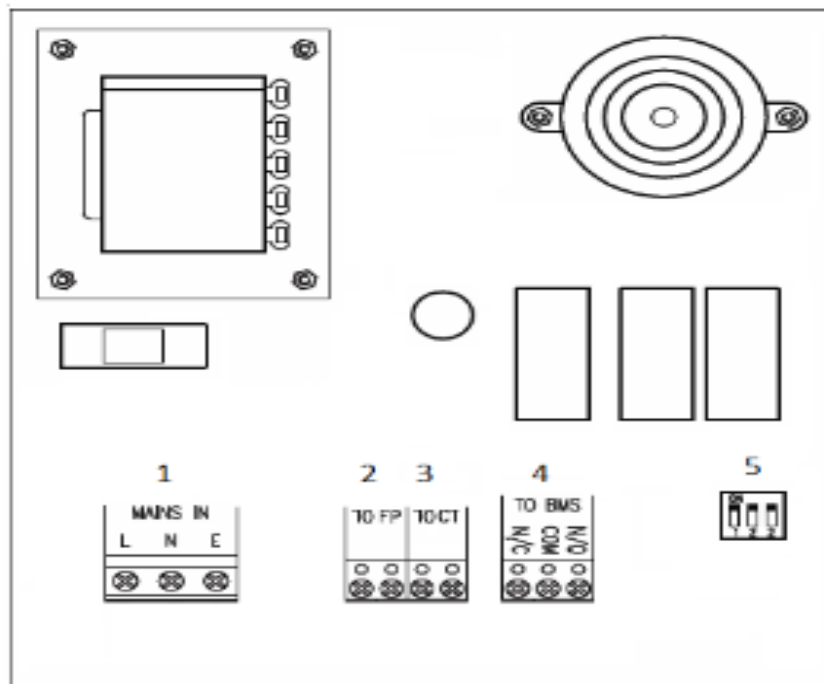## 3.1   How to turn the system on and off

1. Turn the key switch to on position.
2. To turn the system off, turn the key switch to off position.

3.2   Explanation of LED status

3.2.1   Bypass On LED

This LED will illuminate green when the key switch on the fascia of the panel has been turned to "ON" position. 5 minutes before the timeout facility is about to end, the Bypass ON LED will start to flash. When the bypass time has finished the LED will turn off.

Merlin FAB-1 Wiring Diagram

1. Mains Input 230VAC.
2. Remote EM Stop buttons and Fire Alarm input wired in series (purchased separately). **VOLT FREE INPUT**
3. Merlin control panel connection. **VOLT FREE INPUT**
4. BMS output contacts. Normally Open, Common and Normally Closed..
5. Switches for bypass time adjustments. (Please see page 3 for further information on the different time selections.

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

CONTACT US:

S&S Northern Head Office
Tel: +44(0) 1257 470 983
Fax: +44(0) 1257 471 937
www.snsnorthern.com
info@snsnorthern.com

South East Division
Tel: +44(0) 1702 291 725
Fax: +44(0) 1702 299 148
south@snsnorthern.com

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