

# Gas Safety Products

## Merlin CT1200S Gas Interlock System



# Installation, operating and maintenance

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## 1 General information

The Merlin CT1200S is a ventilation interlock panel.

The Merlin CT1200S can receive connections from remote air pressure differential switches and remote emergency shut-off buttons. It can also be integrated with a BMS and fire alarm.

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 230-volt 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 Power IN"
- 2.3 Gas solenoid valve.** The gas solenoid valve should be powered using the terminals on the Merlin CT1200S marked "LNE to VALVE".
- 2.4 Air Pressure differential Switches.** These terminals are linked out as a factory setting. Wiring to the air pd switches should be made using two-core volt free connections. The wiring connections should be made from the terminals marked "FAN PD SWITCHES". If supply and extract air pd switches are being used terminals marked "SUPP FAN" and "EXTR FAN" should be used. If only one fan is being used the terminals not in use should be left linked out.
- 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 Remote emergency shut off buttons.** The terminal for remote emergency shut-off buttons is detailed on the circuit board as "EM Rem". These connections are linked out as a factory setting. Remote emergency shut-off buttons should be volt free and wired to the Merlin CT1200S using two-core cable.
- 2.7 Internal Buzzer.** Operates at 65dB measured 30cm from closed panel.
- 2.8 Service Mode.** The service dip switch inside the Merlin CT1200S can be used to allow the gas valve to remain open for 4 hours without the fans running on each activation of the key.  
**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 Fans On.
2. Turn the key switch to on position.
3. To turn the system off, turn the key switch to off position.

## **3.2 Explanation of LED status**

### **3.2.1 Power LED**

When the system is connected to the mains supply, the Power LED will illuminate. When no power is present, this LED will not light up.

RED = OK

OFF = No power to CT1200S

### **3.2.2 Gas on LED**

When the fans are running at the correct speed and the key switch is turned on, the Merlin CT1200S will open the gas valve and the green 'Gas On' LED will illuminate.

GREEN = Gas On

OFF = Gas Off

### **3.2.3 EM Stop LED**

If an emergency shut off button (either remote or on the panel) is pressed, the LED will illuminate AMBER and the gas will be turned off. The EM Stop button must be re-set before restarting the system.

OFF = OK

AMBER = EM Stop button pressed

### **3.2.4 Supply fans LED**

Under normal working the LED will illuminate GREEN. If a supply fan fault is present, the LED will be flashing.

GREEN = OK

FLASHING = The supply fan is not running.

### **3.2.5 Extract fans LED**

Under normal working the LED will illuminate GREEN. If a supply fan fault is present, the LED will be flashing.

GREEN = OK

FLASHING = The extract fan is not running

**IF SUPPLY AND/OR EXTRACT FAN LED FLASHES FOR MORE THAN 20 SECS, THE Merlin CT1200S WILL SHUT OFF THE GAS.**

### **3.2.6 Fan Fault LED**

Under normal working conditions this LED is off. If a fan fault is present for more than 20 seconds, the LED will illuminate AMBER.

OFF = OK

AMBER = the gas supply has been shut off due to a ventilation fault.

**WHEN A FAULT IS PRESENT YOU WILL NEED TO CONTACT YOUR SERVICE/MAINTENANCE COMPANY.**

**YOU SHOULD NOT ATTEMPT TO CARRY OUT A REPAIR OR RECTIFY THE FAULTS UNLESS YOU ARE QUALIFIED TO DO SO.**

### **3.2.7 Service LED**

When the service light is illuminated green this means the service dip switch inside the Merlin CT1200S has been placed in the "on position".

This will allow the gas valve to remain open for 4 hours without the fans running on each activation of the key. At the end of the 4 hours the gas will shut off and the service LED will flash.

### **3.3 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.

### **3.4 BMS integration**

The Merlin CT1200S 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.

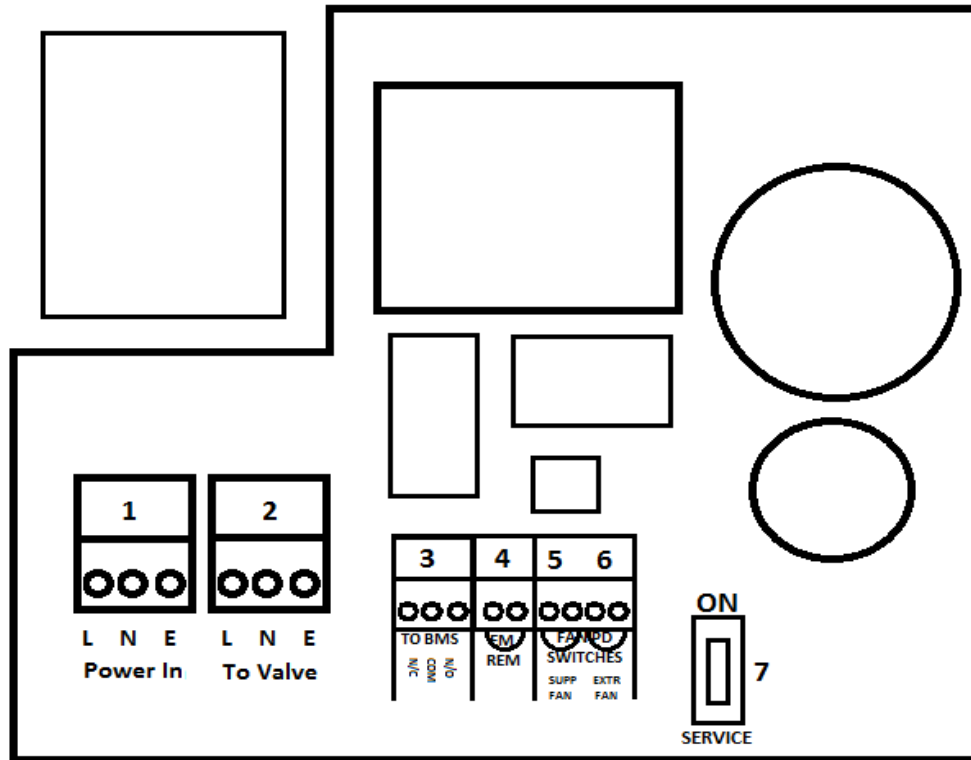
### **3.5 Fire alarm integration**

The Merlin CT1200S can be integrated with a fire alarm to close the gas supply automatically in the event of a signal from the fire alarm panel.

The volt free fire alarm signal can be wired in series with any remote emergency shut off buttons.

If there is no remote emergency stop buttons installed wire this directly to the terminal marked 'EM REM'.

## CT1200S Wiring Diagram



1. Mains Input 230VAC Single Phase.
2. Gas Solenoid Valve Power Output, 230VAC.
3. BMS output contacts. Normally Closed, Common and Normally Open.
4. Remote EM Stop buttons and Fire Alarm input wired in series (purchased separately). **VOLT FREE INPUT**
5. Supply Fan pressure differential switch or current switch. **VOLT FREE INPUT**
6. Extract Fan pressure differential switch or current switch. **VOLT FREE INPUT**
7. Service Switch

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

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