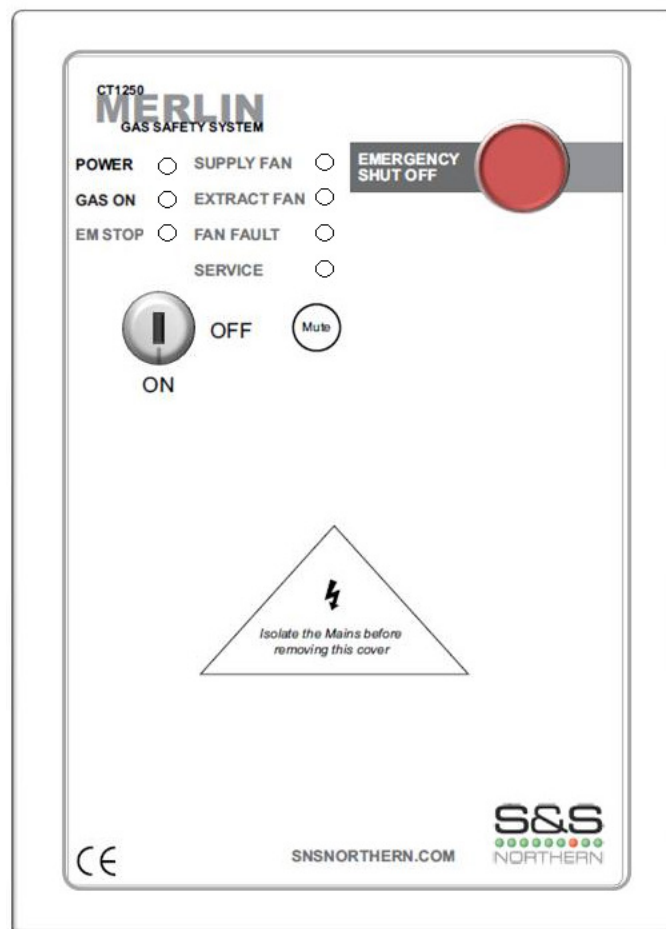


Gas Safety Products

Merlin CT1250 Gas Interlock System



Installation, operation and maintenance



Read these instructions carefully before operating or servicing

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1 General Information

The Merlin CT1250 is a ventilation interlock panel with two built in current monitors.

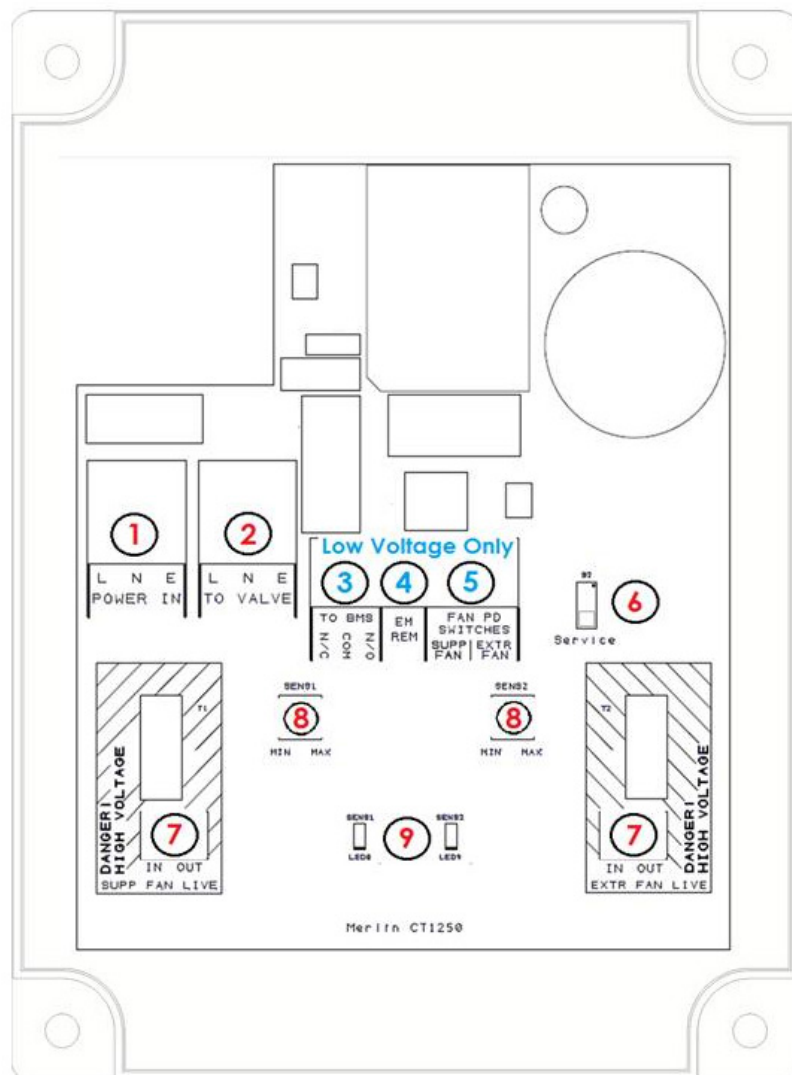
The Merlin CT1250 can receive connections from either remote air pressure differential switches or the internal current monitor & remote emergency shut-off buttons. It can also be integrated with a Building Management System (BMS) and fire alarm system.

2 Installation & Connection

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 Circuit Board Diagram



2.3 Mains Supply (1) [LNE POWER IN]

A 240-volt mains electrical supply should be supplied to the panel. This should be externally fused at 3 Amps using a fused spur.

2.4 Gas Solenoid Valve (2) [LNE TO VALVE]

The gas solenoid valve should be powered using a 240-volt supply to the terminals on the Merlin CT1250.

2.5 Building Management Systems (3) [TO BMS]

Terminal connections are available on the circuit board for connections to Building Management systems etc. These are volt free connections marked normally closed [N/C], common [COM] & normally open [N/O].

2.6 Remote Emergency Shut Off Buttons (4) [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 CT1250 using two-core cable.

2.7 Air Pressure Differential Switches (5) [FAN PD 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.

[SUPP FAN] = Supply Fan & [EXTR FAN] = Extract Fan

If only one fan is being used the terminal not in use should be left linked out. See 2.9.1

2.8 Service Mode (6)

The service dip switch inside the Merlin CT1250 can be used to allow the gas valve to remain open for 4 hours without the fans running on each activation of the key.

2.9 Current Monitor (7) [SUPP FAN LIVE] & [EXTR FAN LIVE]

There are two terminals, one marked [SUPP FAN LIVE] the other marked [EXTR FAN LIVE]. If you are monitoring the fan by measuring electrical current going to the fan these terminals should be used. The live feed from the fan controller should be taken to the Merlin CT1250 and connected to either the supply or extract side depending on which fan/s are being monitored. **MAX 20 AMPS.**

2.9.1 Potentiometers (8) [SENS1] & [SENS2]

[SUPP FAN LIVE] = **[SENS1]** Potentiometer (DO NOT OVERTURN)

[EXTR FAN LIVE] = **[SENS2]** Potentiometer (DO NOT OVERTURN)

The fan/s should be run at the minimum required speed and the relevant potentiometer turned slowly clockwise until the green LED on the circuit board (9) lights up. This indicates the panel has detected the electrical current going to the fan.

IMPORTANT!

If both supply and extract fans are being monitored both links of [FAN PD SWITCHES] (5) should be removed. If only one fan is being monitored the relevant link should be taken out of this terminal connection (5).

2.10 Internal Buzzer

Operates at 65dB measured 30cm from closed panel.

Use a screened cable to avoid electrical interference in LOW VOLTAGE connections

3 Operation

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 Panel LED Status

3.2.1 POWER

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

RED = OK

OFF = No power to CT1250, faulty wiring or the fuse may not be intact.

3.2.2 GAS ON

When the fans are running at the correct speed and the key switch is turned on, the Merlin CT1250 will open the gas valve and the green 'Gas On' LED will illuminate.

GREEN = Gas On

OFF = Gas Off

3.2.3 EM STOP

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 FAN

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 and after 20 seconds the gas will shut off.

3.2.5 EXTRACT FAN

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 and after 20 seconds the gas will shut off.

3.2.6 FAN FAULT

Under normal working conditions this LED is off. If a fan fault is present for more than 10 seconds, the LED will illuminate AMBER.

OFF = OK

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

3.2.7 SERVICE

When the service light is illuminated this means the service dip switch inside the Merlin CT1250 has been placed in the ON position.

This will bypass the fans for 4 hours on each activation of the key in order to open the gas solenoid valve.

At the end of the 4 hours the gas will shut off and the service LED will flash.

IF A FAULT IS FOUND YOU WILL NEED TO CONTACT YOUR SERVICE/MAINTENANCE COMPANY. DO NOT ATTEMPT TO CARRY OUT A REPAIR OR RECTIFY THE FAULTS UNLESS YOU ARE QUALIFIED TO DO SO.

3.3 Using the Emergency Shut Off Button

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 CT1250 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 CT1250 can be integrated with a fire alarm to close the gas supply automatically in the event of a fire.

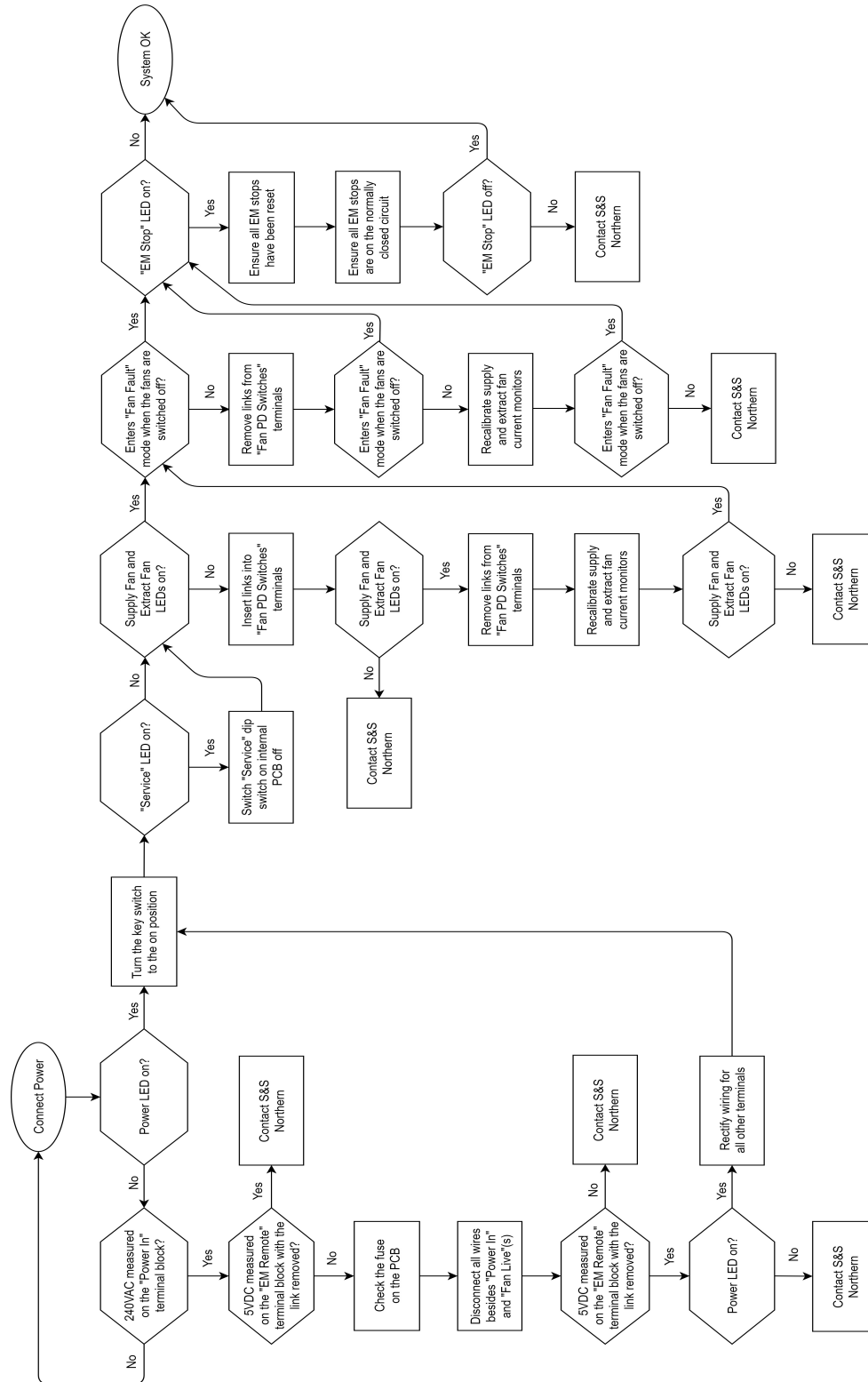
The volt free fire alarm signal can be wired in series with any remote emergency shut off buttons.

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

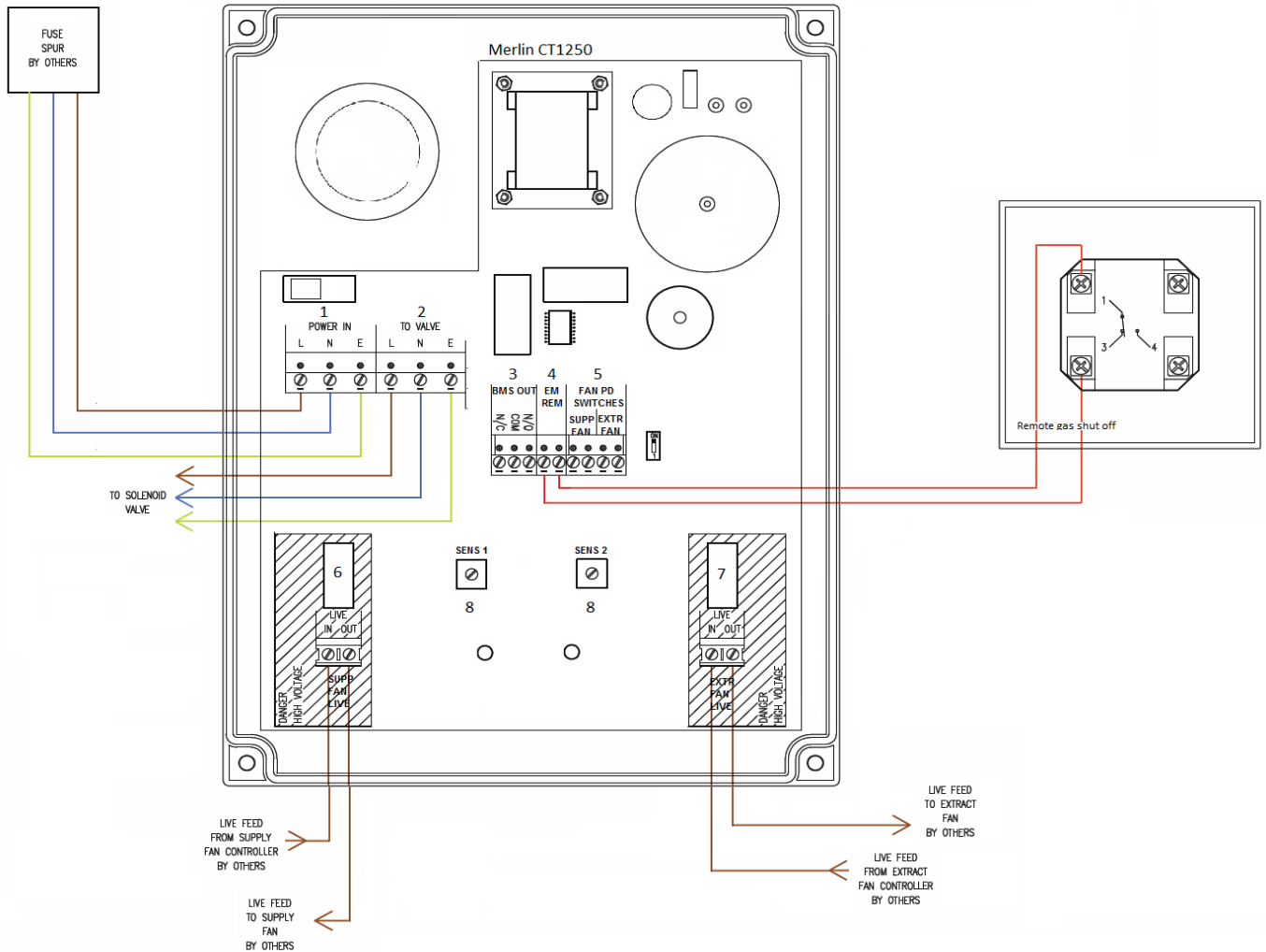
PLEASE NOTE:

**MAINS AND LOW WIRING SHOULD NOT RUN IN THE SAME CONDUIT AS PER THE
LOW VOLTAGE DIRECTIVE (LVD) 2014/35/EU**

4 Troubleshooting Flow Chart



5 Wiring Diagram



240V Mains LIVE

Neutral

Earth

LOW VOLTAGE

**INFORMATION ON WASTE DISPOSAL FOR CONSUMERS OF ELECTRICAL & ELECTRONIC EQUIPMENT**

When this product has reached the end of its life it must be treated as Waste Electrical & Electronics Equipment (WEEE). Any WEEE marked products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used. Please contact your supplier or local authority for details of recycling schemes in your area.

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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