Merlin CT1200S

Ventilation Interlock system

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Installation, Operation & Maintenance

Please read this manual carefully and retain for future use.

For specific requirements that may deviate from the information in this guide – contact your supplier.

Oceania Gas Safety

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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.

1.1 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.

The PCB should be removed before drilling entry holes into the case

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Important Warning Statements

Never ignore your device when in alarm.

This device requires a continual supply of electrical power – it will not work without power.

This device should not be used to substitute proper installation, use and/or maintenance of fuel burning appliances including appropriate ventilation and exhaust systems.

Your product should reach you in perfect condition, if you suspect it is damaged, contact your supplier.

Information on waste disposal for consumers of electrical & electronic equipment. (EEE)

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.

2   Circuit Board Terminals

2.1   POWER IN

A 110-240VAC electrical supply should be externally fused at 3A and connected to the terminals marked [POWER IN LNE].

2.2   TO VALVE

The 110-240VAC output to a gas solenoid valve should be powered using the terminals on the CT1200S detailed [GAS VALVE LNE].
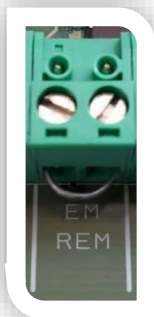
2.3   TO BMS

Connections to Building Management systems.

This is a relay that changes state in alarm or when gas is on/off and other external relays that affect other devices and controls such as purge fans, audible alarms etc.

Detailed on the circuit board as [BMS OUT] normally closed (N/C), common (COM) and normally open (N/O). These are volt free connections.

2.4   EM REMOTE

The terminal for remote emergency shut-off buttons is detailed on the circuit board as [EM REMOTE].

These connections are linked out as a factory setting.

Remote emergency shut-off buttons should be volt free and wired to the CT1200S.

2.5   FAN PD SWITCHES

These terminals are used to receive an input signal from external air pressure switches or external current monitors.

These are linked out as a factory setting as shown.

Wiring to switches & current monitors should be made using two-core volt free connections.

If only one fan is being used in Mode 1 (see 3.5) the terminals not in use should be left linked out.

If only one fan is being used in Mode 2 (see 3.5), pressure switch or current monitor should be wired into both, Supply and Extract terminals.

3   Installation & Operation

3.1   System ON and OFF

- ➢ Turn the fans on.
- ➢ Turn the key switch to on position.
- ➢ To turn the system off, turn the key switch to off position.

3.2   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 on the circuit board.

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.

3.3   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.

3.4   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 shut off buttons.
If there are no remote buttons installed wire this directly to the terminal marked [EM REM].

3.5   Ventilation Mode

There are two ventilation interlock operating modes.

Mode 1 - The panel is simply looking for a closed circuit from the air pressure differential switch, once the panel has a closed signal, the gas will come on. If the circuit is then opened the gas valve will close.

Mode 2 - The Panel needs to see a change in state of the pressure differential switch. Once the switch has gone from open to closed, the gas will come on. If the switch is already closed system will wait for the switch to open then close again before allowing the gas on. If the circuit is then opened the gas valve will close.

OFF	MODE 1 (Default)
ON	MODE 2

4   Panel LED Status

- **Power**

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

- **Gas on**

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

- **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.
OFF = OK
ON = Emergency Stop button pressed – De-press the button and reset the system.

- **Supply Fan**

Under normal working the LED will illuminate GREEN. If a supply fan fault is present, the LED will be flashing. If the LED flashes for more than 20 seconds, the gas will be shut off.
ON = OK
FLASHING = the supply fan is not running.

- **Extract Fan**

Under normal working the LED will illuminate GREEN. If a supply fan fault is present, the LED will be flashing. If the LED flashes for more than 20 seconds, the gas will be shut off.
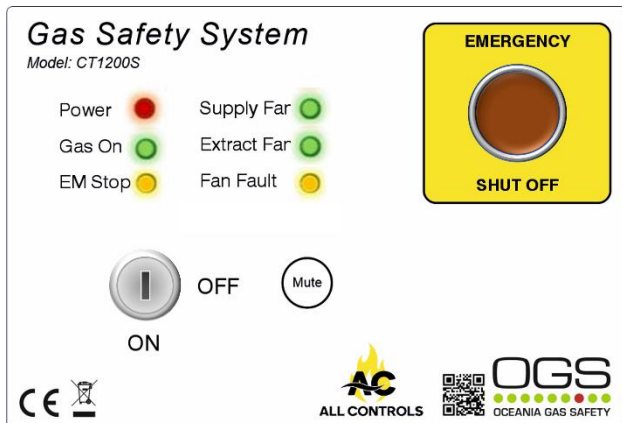ON = OK
FLASHING = the extract fan is not running.

- **Fan Fault**

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

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

5   Maintenance

To keep your panel in good working order, you must follow these steps:

- ✓ DO carefully remove any accumulated dust from the outer enclosure once a month.
- ✗ NEVER use detergents or solvents to clean your device – this may permenantly or temporarily damage the panel
- ✗ NEVER spray air fresheners, hair spray, paint or other aerosols near the device.
- ✗ NEVER paint the device. Paint will seal vents and interfere with the device.

6   CT1200S Wiring Spec
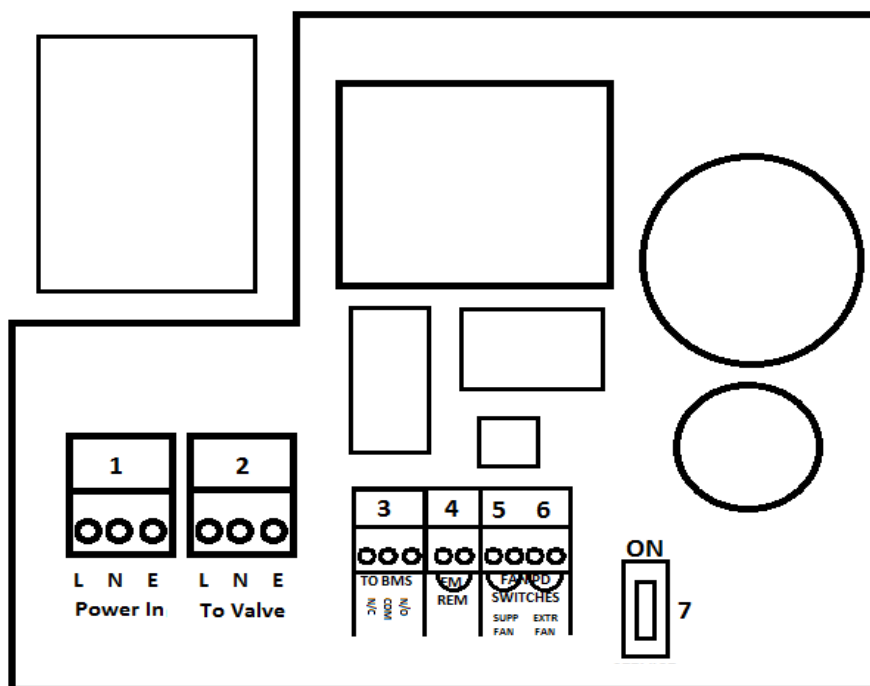
1. POWER IN: Mains Input 100-240VAC Single Phase.
2. TO VALVE: Gas Solenoid Valve Power Output, 100-240VAC.
3. TO BMS: output contacts. Normally Closed, Common and Normally Open.
4. EM REM: Remote emergency stop buttons and Fire Alarm input wired in series (purchased separately). **VOLT FREE INPUT**
5. FAN PD SWITCH: Supply fan pressure differential or current switch. **VOLT FREE INPUT**
6. FAN PD SWITCH: Extract Fan pressure differential or current switch. **VOLT FREE INPUT**
7. Ventilation Interlock MODE Switch

7   Manufacturer's Warranty

3 Year Limited Warranty

Warranty coverage: The manufacturer warrants to the original consumer purchaser, that this product will be free of defects in material and workmanship for a period of three (3) years from date of purchase. The manufacturer's liability hereunder is limited to replacement of the product with repaired product at the discretion of the manufacture. This warranty is void if the product has been damaged by accident, unreasonable use, neglect, tampering or other causes not arising from defects in material or workmanship. This warranty extends to the original consumer purchaser of the product only.

Warranty disclaimers: Any implied warranties arising out of this sale, including but not limited to the implied warranties of description, merchantability and intended operational purpose, are limited in duration to the above warranty period. In no event shall the manufacturer be liable for loss of use of this product or for any indirect, special, incidental or consequential damages, or costs, or expenses incurred by the consumer or any other user of this product, whether due to a breach of contract, negligence, strict liability in tort or otherwise. The manufacturer shall have no liability for any personal injury, property damage or any special, incidental, contingent or consequential damage of any kind resulting from gas leakage, fire or explosion. This warranty does not affect your statutory rights.

Warranty Performance: During the above warranty period, your product will be replaced with a comparable product if the defective product is returned together with proof of purchase date. The replacement product will be in warranty for the remainder of the original warranty period or for six months – whichever is the greatest.

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