Troubleshooting Guide

Merlin CT1650+ Gas Interlock System

Gas Safety Products

12/05/2016

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1   General information

The Merlin CT1650+ is a ventilation interlock system with in-built current monitoring. This system is designed for use with fans up to 18A running current (Min 0.1A) located in commercial kitchens.

2   Fault LED

2.1   No Power LED Illuminated

1   If the system is connected to the mains supply, the Power LED will illuminate. Please ensure there is in fact 230/240V going to the 'Power IN' terminal.
2   Please make sure the ribbon, which connects the front and back PCB's, is securely connected.
3   If none of the above have rectified the fault please contact S&S Northern for further assistance.

2.2   Emergency Stop Fault

1   If the front fascia emergency stop has been pressed, please re-press the button to release then reset the panel using the key switch.
2   If you have a remote emergency stop connected to the Merlin CT1650+ please ensure this has not been activated. If this has please reset the emergency stop then reset the CT1650+ with the key.
3   If you have multiple remote emergency stops connected to the same control panel, please ensure these have been wired in series to our panel and connected to the 'EM REM STOP' terminal in the Merlin CT1650+.
4   If you are not using an additional emergency stop, please ensure the 'EM REM STOP' terminal is linked out. Check that the link is securely connected by ensuring you have continuity.
5   If none of the above have rectified the fault please contact S&S Northern for further assistance.

2.3   Fan Fault

1   Ensure the fan(s) are operational.
2   If you are using the built in current monitors please ensure that this is correctly wired and has been calibrated with the fans you are using. If the fans have not been calibrated the red LED light will continuously flash (Located on the front fascia PCB). Once the fan(s) have been calibrated the red LED light will illuminate steady.
3   If none of the above have resolved the error please contact S&S Northern for further assistance.
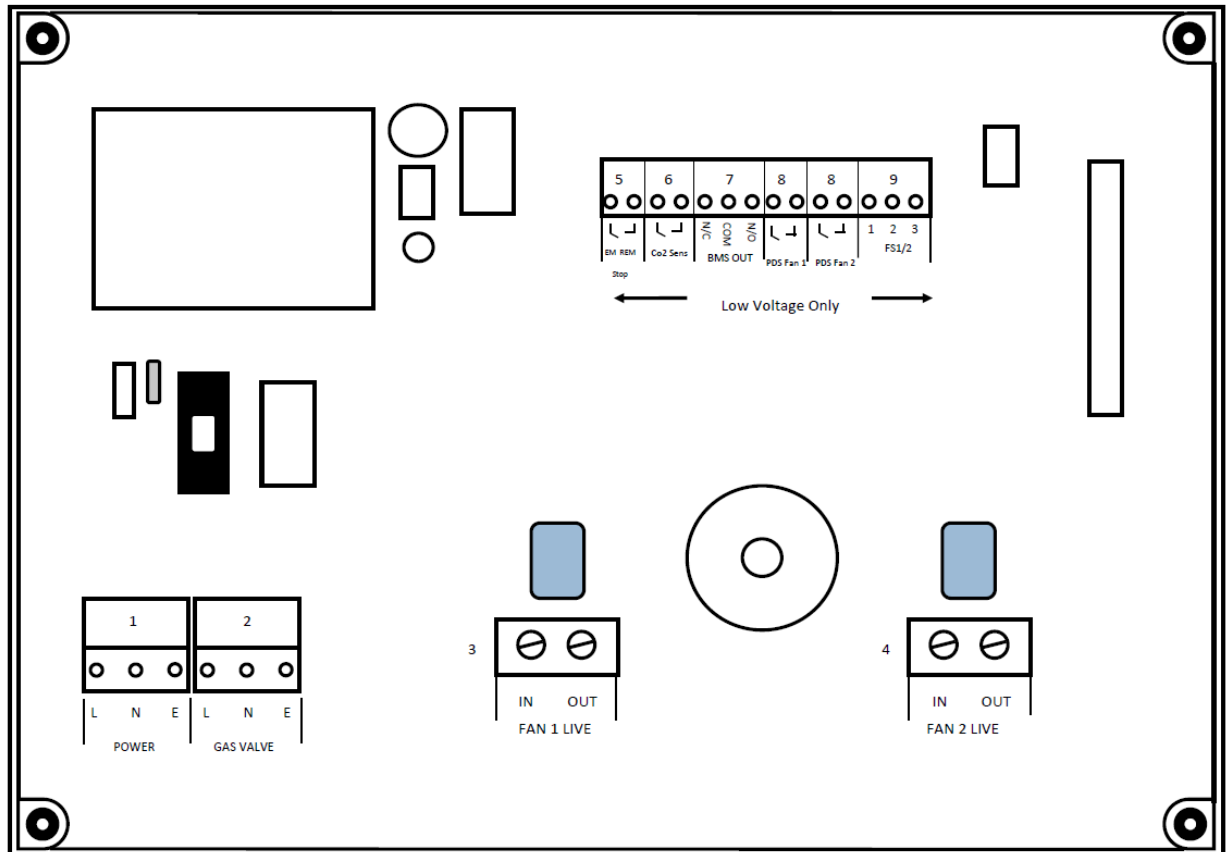
2.4 CO_2 High

1   If the CO_2 monitor is detecting levels of CO_2 higher than the permitted alarm level (generally 4500ppm) for this unit, which in turn is sending a fault signal to isolate the gas supply. To prevent this please try increasing the ventilation or contact S&S for any further back up.
2   If you are not using a CO_2 monitor please ensure the 'CO_2 Monitor' terminal has been linked out and is securely above the metal plate.
3   Please make sure the wiring is correct between the Merlin CT1650+ and the CO_2 monitor, this will be wired normally closed & common into the alarm or pre-alarm terminals.
4   If none of the above have resolved the error please contact S&S Northern for further assistance.

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.
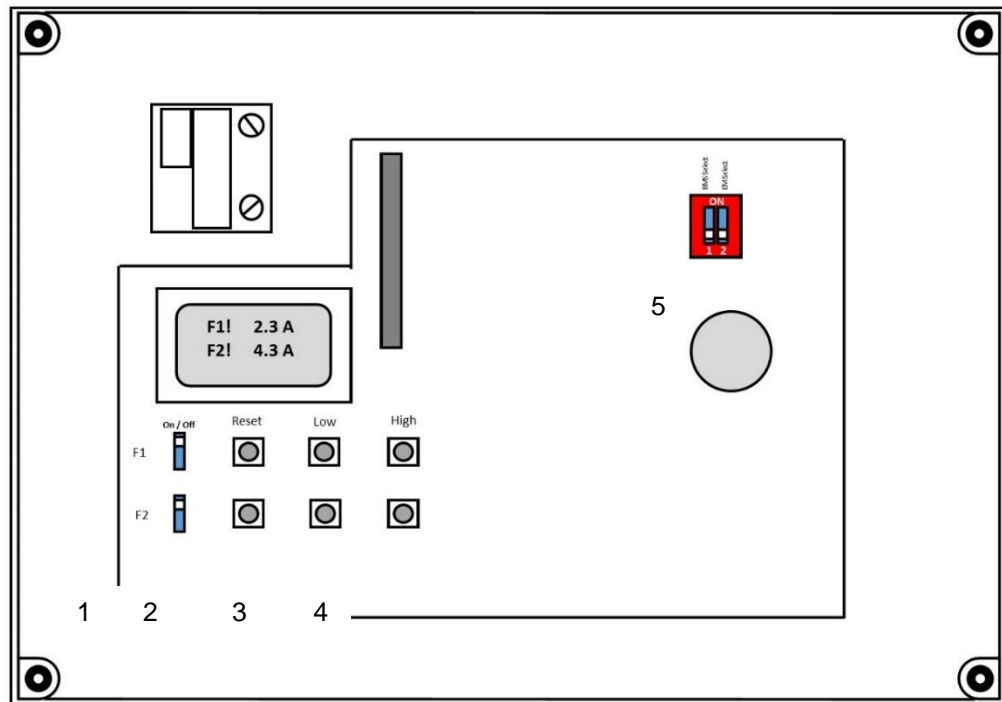
CT1650+ Main PCB Wiring Diagram

1.   Mains Input 230VAC.
2.   Gas Solenoid Valve Power Output, 230VAC.
3.   FAN 1 IN / OUT **MAX 18AMPS**
4.   FAN 2 IN / OUT **MAX 18AMPS**
5.   Remote EM Stop buttons and Fire Alarm input wired in series (purchased separately).
VOLT FREE INPUT
6. CO_2 Monitor (purchased separately). **VOLT FREE INPUT**
7.   BMS output contacts. Normally Closed, Common and Normally Open.
8.   Normally closed switches for additional external PD switches or current monitors
9.   Fan Switch 12vdc output (purchased separately). For wiring instruction see Fan Switch user manual.

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

CT1650+ Front PCB Wiring Diagram

1.   Fan Current Monitor On/Off switches.
2.   Fan Current Monitor Reset Button
3.   Fan Current Monitor Low Button
4.   Fan Current Monitor High Button
5.   BMS Selection / EM Selection.

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