

GM-4 Control Unit for Interlock System

INSTRUCTION SHEET



GM-4

Safety

The user is responsible to ensure that regulations within the Health & Safety at Work Act 1974 are complied with.

The unit should be installed by a suitably qualified person under I.E.E. regulations and the gas solenoid should be adequately protected.

Also, necessary precautions must be taken, by the installer, with regard to flame failure protection or gas pressure proving in accordance with BS6173 2001.

Ensure there is a switched fused spur on the supply input

Description

The design of the Gas Minder ensures that there is no gas flow to burners unless air extraction is present.

An IP55 rated enclosure is used to house the unit which is designed to operate with a 230 volt gas solenoid and either an appropriate air differential switches or fan current sensors. Dim: 14 x 14 x 6 Cm

Operation

The "Fan Off" indicator will illuminate and no gas flow will be available when the extract or supply fans are switched off, when mains are applied to the unit.

The "Fan Off" indicator will go out and gas flow will be available when the fans are switched on.

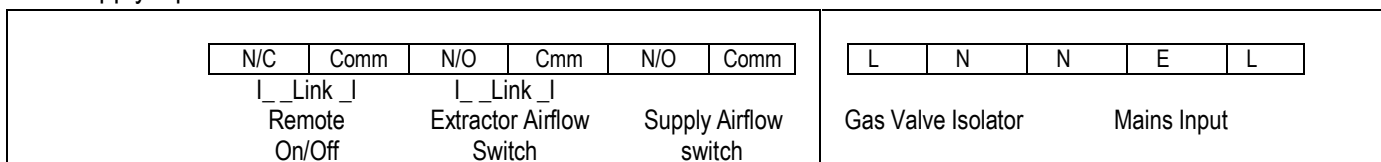
A separate on/off facility is available for manual remote switch or volt free contacts operation but gas will be prevented from being switched on if no air extraction is present.

Wiring Instructions

The mains supply must be isolated before connection.

The following precautions should also be taken:-

- 1) If remote switch facility is not used leave link in place across remote (on/off) contacts.
- 2) When only the Extract Fan is been used leave the link in place across supply air flow switch contacts.
- 3) Connections between the unit and air switch or current sensor must be connected to the common and normally open contacts/terminal. In the unlikely event that the unit fail indicator illuminates, switch off the gas manually and replace unit.



Wiring

The mains supply must be isolated before connection. Mains input and gas valve terminals are clearly marked on the PCB. If Remote Emergency Stop Button is required this should be connected to the N/C and Common terminals. If not required a link should be connected between the terminals.

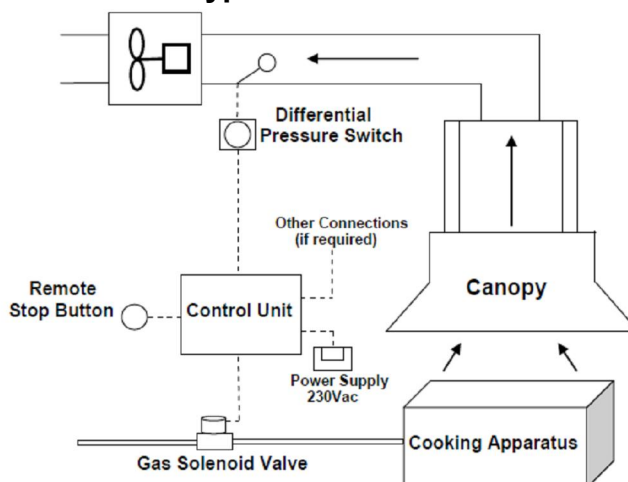
Air Pressure switch or current sensor should be connected to the N/O and Common terminals (Extractor Airflow). Pressure Switch terminals are numbered 1 (N/C), 2 (N/O) and 3 (Common).

When pressure switch is being used then tube from port P2 should be positioned inside canopy/ducting at the suction side of the extractor fan (in negative air pressure) with tube opening facing away from fan. Tube from Port P1 should be left open to the atmosphere. If only the Extractor Fan is to be used leave link in place across Supply Air Flow Switch contacts.

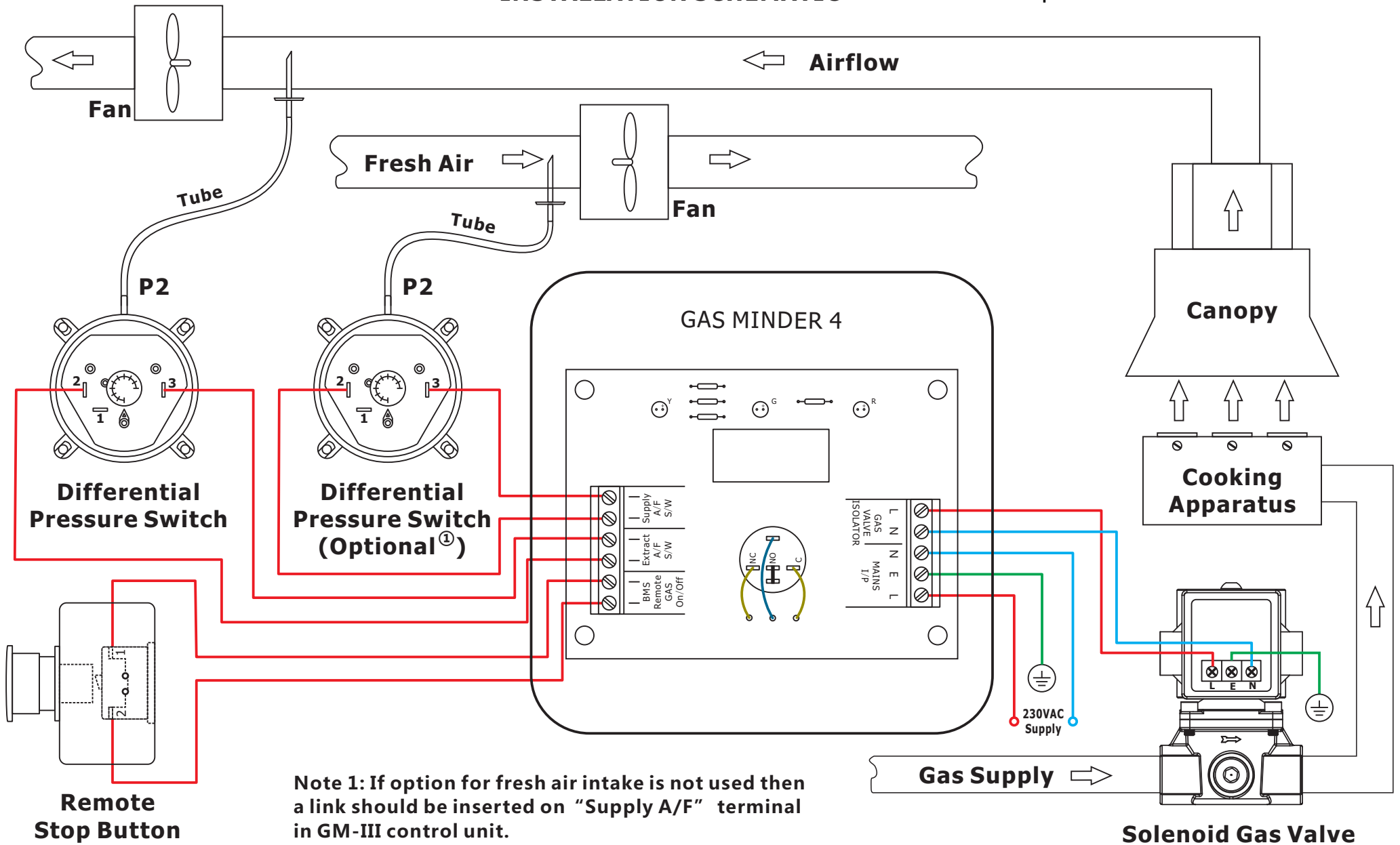
When pressure switch is being used, start extractor fan and adjust setting dial on Pressure switch until it makes to activate opening of Gas Valve.

In the unlikely event that the Unit fail indicator illuminates, switch off the gas manually and replace unit.

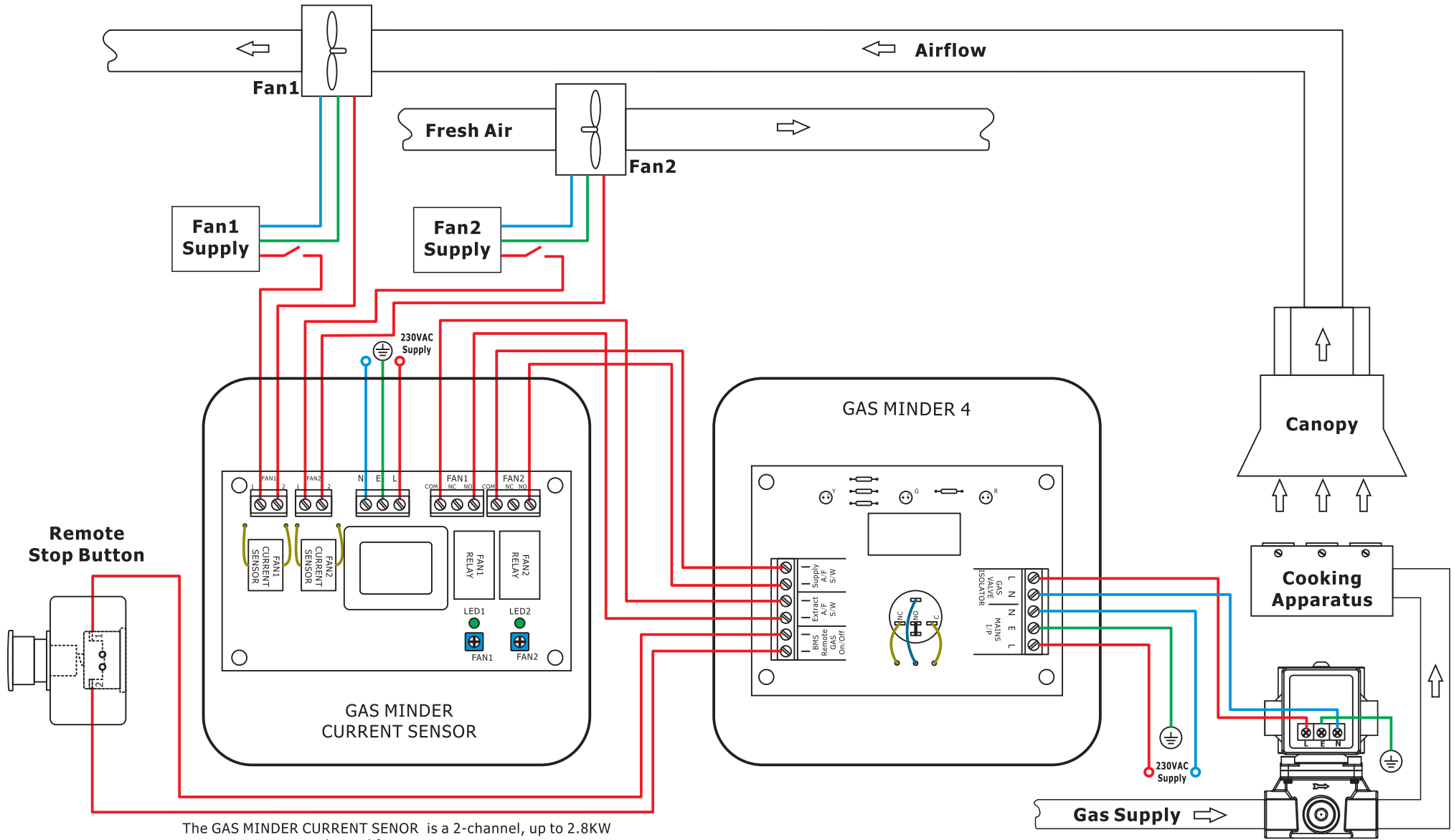
Typical Installation Schematic



INTERLOCK SYSTEM INSTALLATION SCHEMATIC when differential pressure switches fitted



INTERLOCK SYSTEM INSTALLATION SCHEMATIC when current sensors fitted of GM-4 & CM-CS



The GAS MINDER CURRENT SENSOR is a 2-channel, up to 2.8KW per channel fan current sensor.

Set the fan speed to the minimum desired speed and slowly turn the screw of the blue "pot" to corresponding fan channel until the green LED is illuminated.

Note: If option for fresh air intake is not used then a link should be inserted on "Supply A/F" terminal in GM-4 control unit.

Solenoid Gas Valve