

GM-4CS Control Unit, including fan current sensors for Interlock System

INSTRUCTION SHEET



GM-4CS

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.

Description

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

The unit which is designed to operate with in-built fan current sensors and a 230 volt gas solenoid (there is an option to switch off the current sensors and connect appropriate air proving switches).

Operation

The "Gas 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 "Gas 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. Fan on indicators also will illuminate for each fan when on

Wiring Instructions

The mains supply must be isolated before connection.

The following precautions should also be taken:-

- Set the fan speed to the minimum desired speed and slowly turn the screw of the blue "pot" (VB1 or VB2) to corresponding fan channel until the green LED is illuminated
- When current sensors are used then links should be inserted on Extractor A/F and Supply A/F
- If remote switch facility is not used leave link in place across remote (on/off) contacts.
- If Differential switches are being used instead of fan current sensors then switch the micro-switch on FAN SET to ON to disable fan sensor 1 or 2, then connect differential pressure switch to the Extractor A/F and/or Supply A/F

Wiring

The mains supply must be isolated before connection.

The mains supply should be 230V, single phase, fed via a fuse, 5 amps max

2 core + Earth 1.5mm cable to be used for all connections

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.

INCASE DIFFERENTIAL PRESSURE SWITCHES ARE BEING USED RATHER THAN CURRENT SENSORS

Air Pressure switch 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).

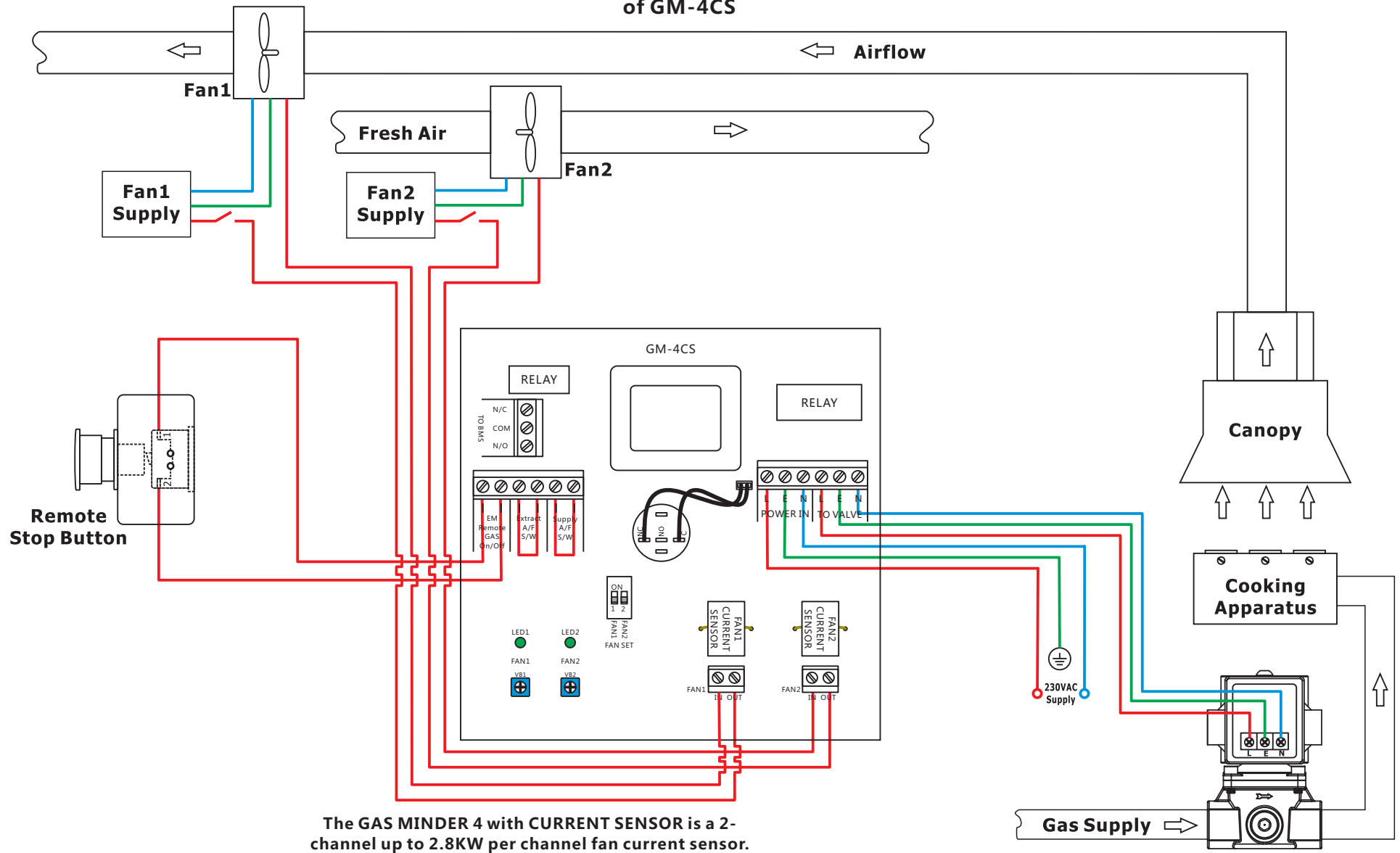
Tube from port P2 should be positioned inside canopy/ducting at the suction side of the extractor fan (in negative air pressure) with tube opening facing away from fan. Tube from Port P1 should be left open to the atmosphere.

If only the Extractor Fan is to be used leave link in place across Supply Air Flow Switch contacts.

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.

INTERLOCK SYSTEM INSTALLATION SCHEMATIC of GM-4CS



Set the fan speed to the minimum desired speed and slowly turn the screw of the blue "pot" (VB1 or VB2) to corresponding fan channel until the green LED is illuminated;
 Note: In order to use the current sensors properly, links should be inserted on Extract A/F and Supply A/F;

GM-4CS also has terminals to wire devices like Differential Pressure Switch (DPS) as an alternative solution.
 Switch the microswitch on FAN SET to ON to disable fan sensor 1 or 2, then link the DPS device to the Extract A/F or Supply A/F.

Solenoid Gas Valve