

**EGIP-1 Automatic gas proving and ventilation  
interlock system**

**STOP**

I am the installation instructions for a gas **safety system**, please read me before you have a go, the product I support is virtually indestructible but I have no doubt someone will try!!

Intelligas takes every care in ensuring these products reach you in perfect working order. Each system is tested on dispatch and site induced damage **is** easily detectable.

For reference the infrastructure for the system you have is type - GPS2 PCB

**24 hour Technical Support 0845 004 2496**

### **Siting the panel.**

Firstly choose a suitable mounting position for the control unit, mount the unit away from sources of extreme heat, ensure the panel is placed in a position where mechanical damage is unlikely and where it can be easily accessed for use and maintenance.

Fix the panel using the marked enclosure holes only, take care not to damage the internal wiring or PCB of the unit when drilling. The PCB can be carefully removed if required.

### **Field wiring**

All wiring from the supply and to the gas valve carries mains voltage (230v ac nominal). The current edition of the IEE Wiring Regulations should be strictly adhered to, wiring and connections should be made by a suitably qualified electrician or competent person.

Field wiring to the interlocks carries 24vdc, however, to comply with regulations in force this should be insulated within the control panel to the highest voltage present (namely 230vac).

Intelligas recommends the use of FP200 or similar type of wiring for the fixed wiring installation.

Please follow the first fix wiring schedule set out below,

- 1) Gas valve 2 core + E 1.5mm
- 2) Emergency stops 2 core + E 1.5mm
- 3) Pressure switches 2 core + E 1.5mm
- 4) Fire alarm interlock (if req) 2 core + E 1.5mm
- 5) Main supply 2 core + E 1.5mm

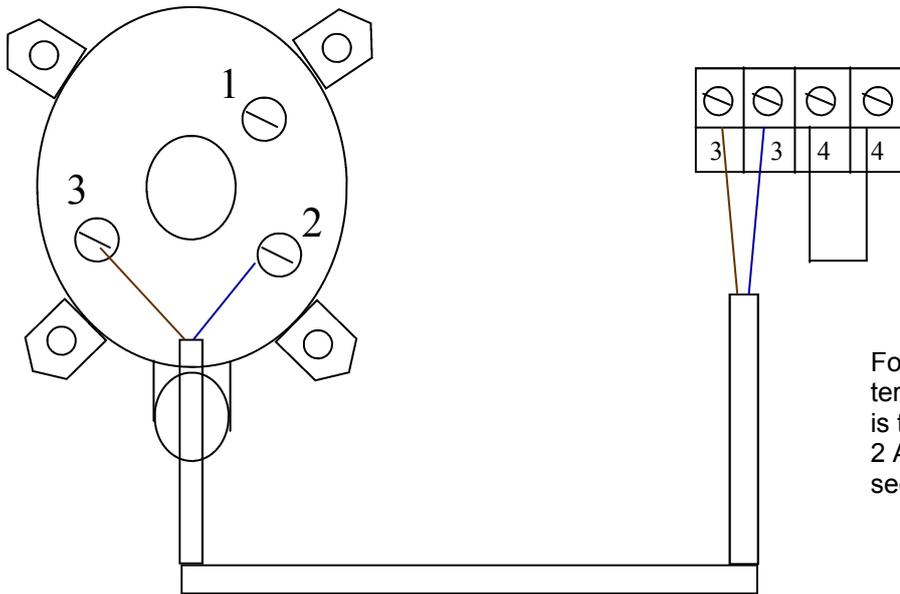
The mains supply should be 230v 1 phase, fed via a fused DP connection switch fused at 5 amp max,

**THIS UNIT UTILIZES AN ULTRA STABLE SWITCH MODE POWER SUPPLY - HIGH VOLTAGES  
MAY BE PRESENT WHEN LIVE.**

**UNDER NO CIRCUMSTANCES SHOULD TERMINATIONS BE MADE OR DISCONNECTED  
WHILE POWER IS APPLIED TO THE UNIT.**

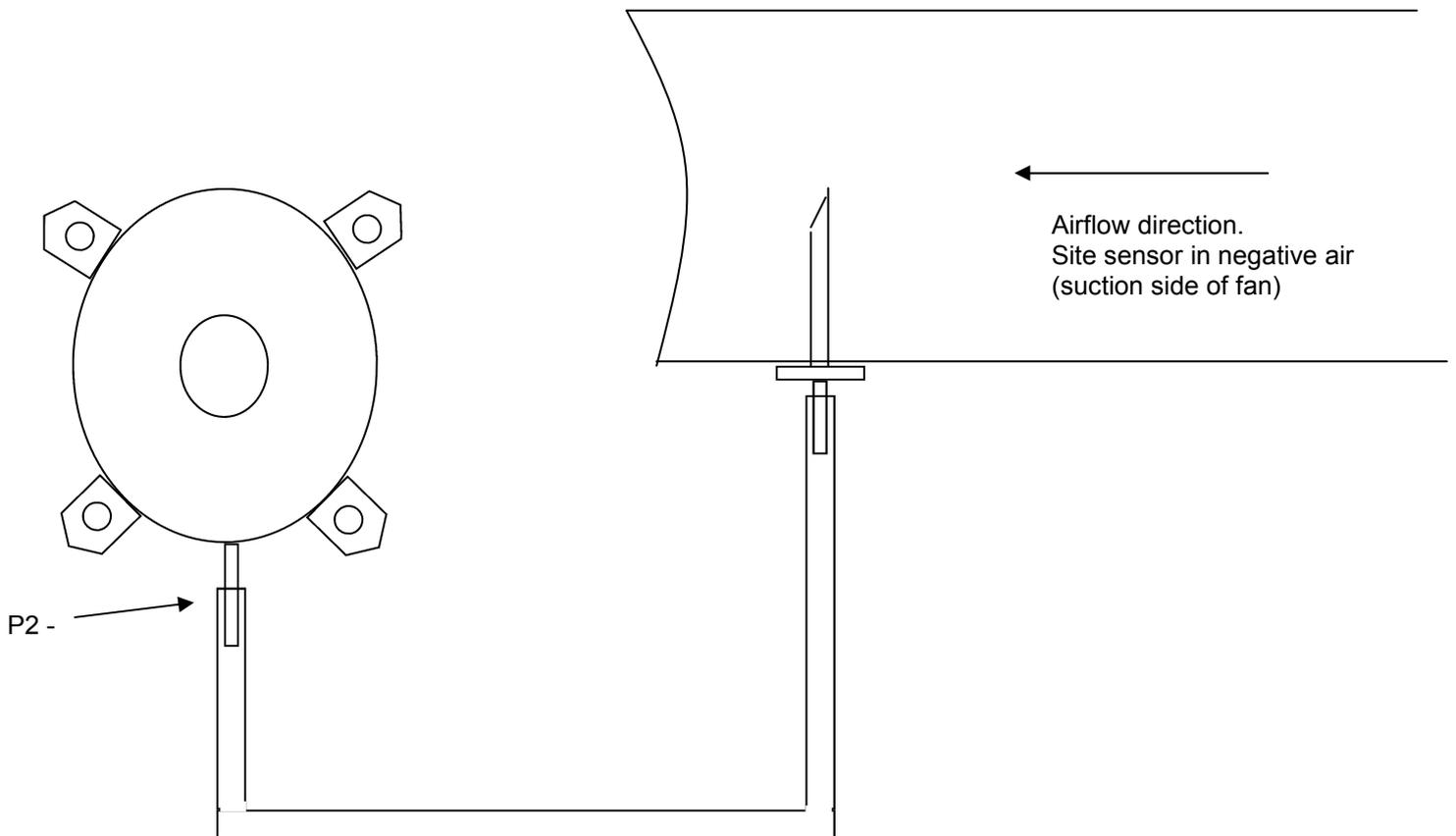
## Peripheral items installation

### Airflow switches (electrical installation)



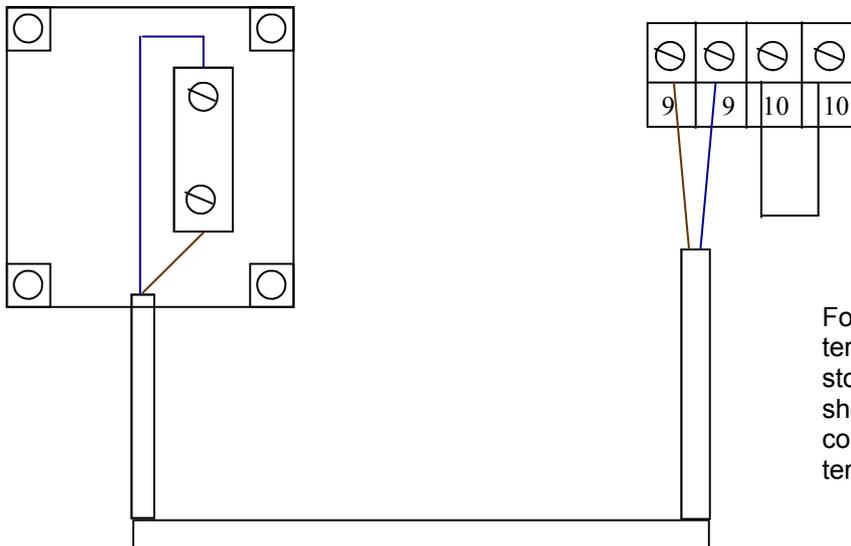
For airflow pressure switches use PCB terminals marked 3,3 & 4,4 if only 1 APS is to be connected link 4,4 as shown or if 2 APS's are to be fitted then connect second APS as first to terminals 4,4

### Airflow switches (mechanical installation)



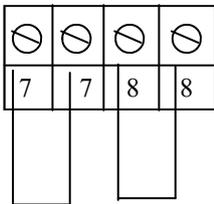
## Peripheral items installation cont...

### Emergency stops (electrical installation)



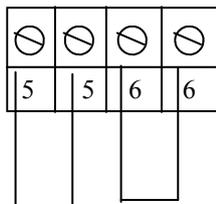
For emergency stop switches use PCB terminals marked 9,9 & 10,10 if only 1 E stop is to be connected link 10,10 as shown or if 2 E stops are to be fitted then connect second E stop as first to terminals 10,10

### Fire alarm interface (if used)



If fire alarm interface is not to be used then link as shown, 2 channels of fire alarm are provided so connection to both the buildings system and possibly connection to an Ansuls system can be achieved. The interlock should be wired normally closed.

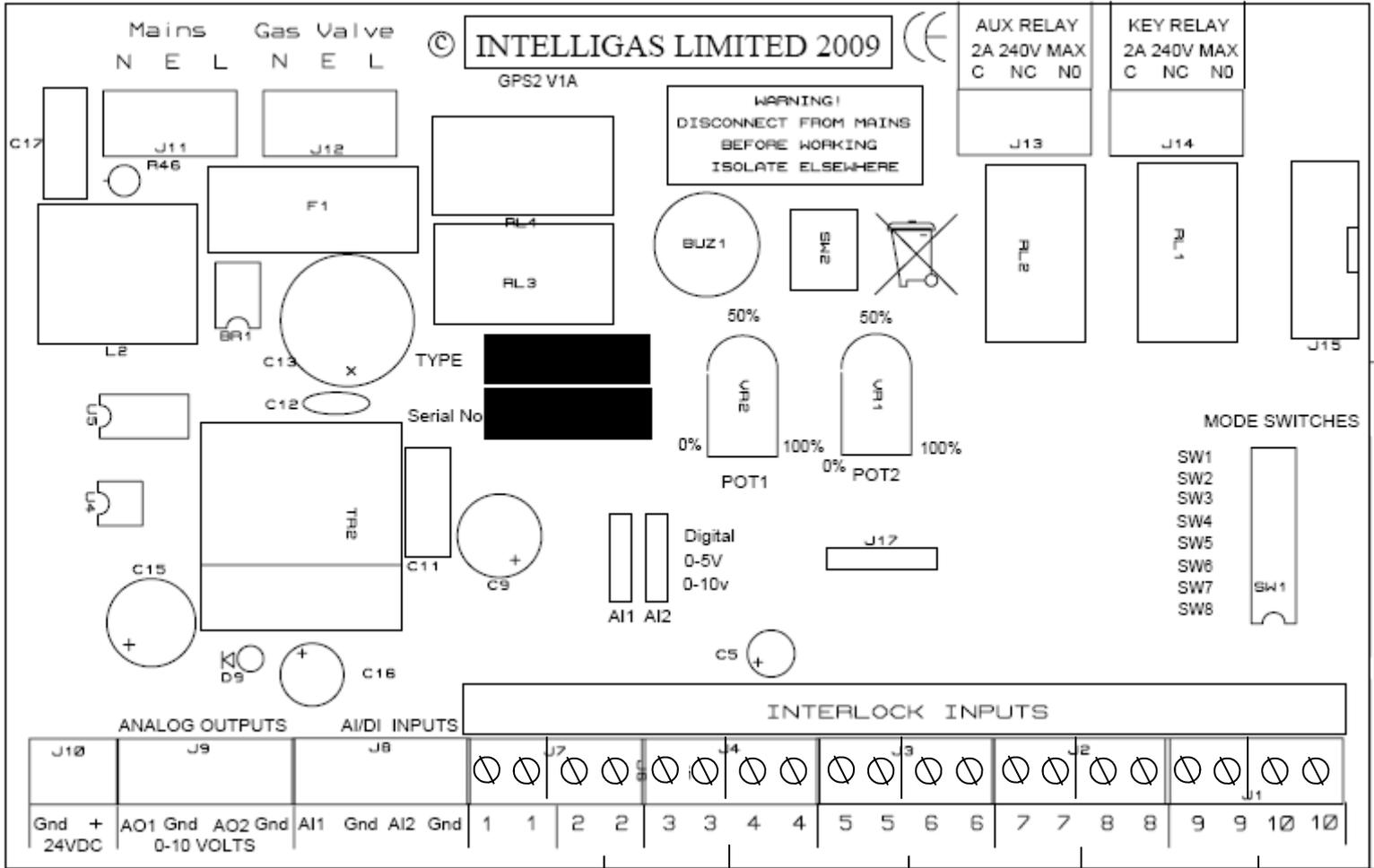
### Aux interlocks (if used)



If the aux interlock is not to be used then link as shown, 2 channels of auxiliary interlock are provided so connection to other control devices such as time clocks or gas detectors can be achieved. The interlock should be wired normally closed.

# Mains Connections and interlock inputs

5 A 230v Supply Max  
 ↓  
 2 A 230v Output Max  
 ↑



Other than the "early warning" input all interlocks are normally closed, therefore if any of the interlocks are not required they should be linked through as shown below.

Below is a scenario where only one air pressure switch is required.

See "early warning"

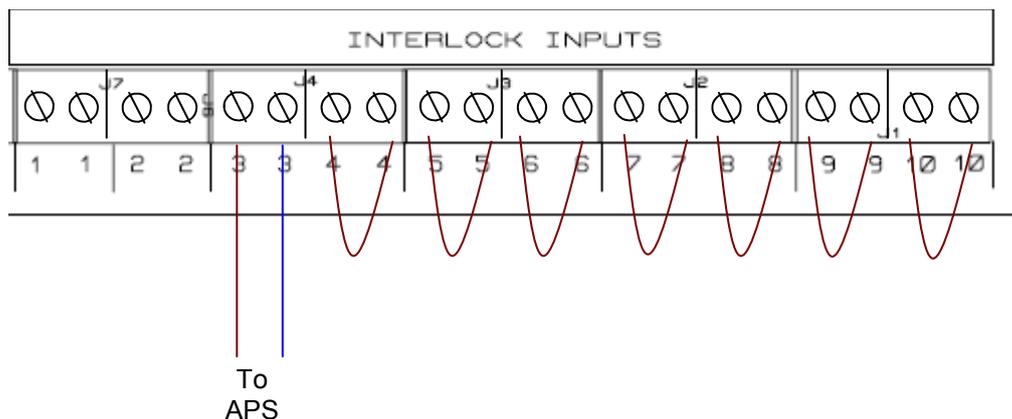
3,3 & 4,4 Air pressure switches

7,7 & 8,8 Fire alarm interlock inputs

Gas Pressure Switch. Terminals 2 & 3

5,5 & 6,6 auxiliary interlock inputs

9,9 & 10,10 Emergency stop Inputs



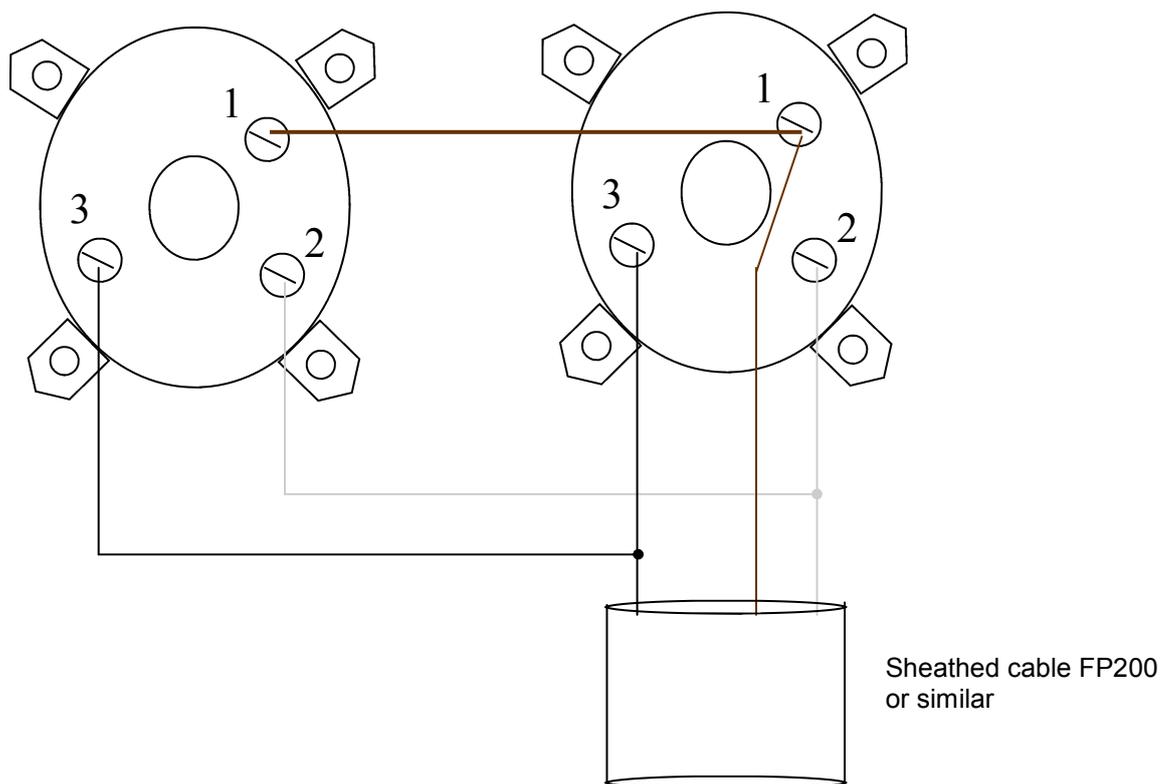
## Using the early warning feature of the intelligas EGI range

All systems in the intelligas EGI range have the ability to provide an “early warning” or “double knock” warning of a failed air pressure sensor. This feature can provide indication that cleaning of sensors is required before a nuisance shutdown occurs. It is strongly advised that if you are not completely confident with “technical wiring” then you should contact our technical department before attempting to connect this feature.

The system will require 2 air pressure switches per fan installed and each fan should be connected as set out below. The early warning will be displayed on the front panel by way of a steady amber light on the upper LED, this may have another meaning particularly on the EGIP and it should be explained to the end user what the indication means if it comes up during service but the gas still remains connected.

An early warning will also emit a chirp on the buzzer every 20 seconds, this will remain until the fault is cleared.

It is advised that for ease of wiring the air flow sensors are placed side by side but the piezo tubes are placed in different locations to prevent the possibility of equal fail times (e.g. equal build up of fat or grease on the sensor tubes).



With the above wiring layout you would connect the grey and black into air pressure switch terminals 3 & 3 on the PCB as normal. These connections would in effect be the actual interlock.

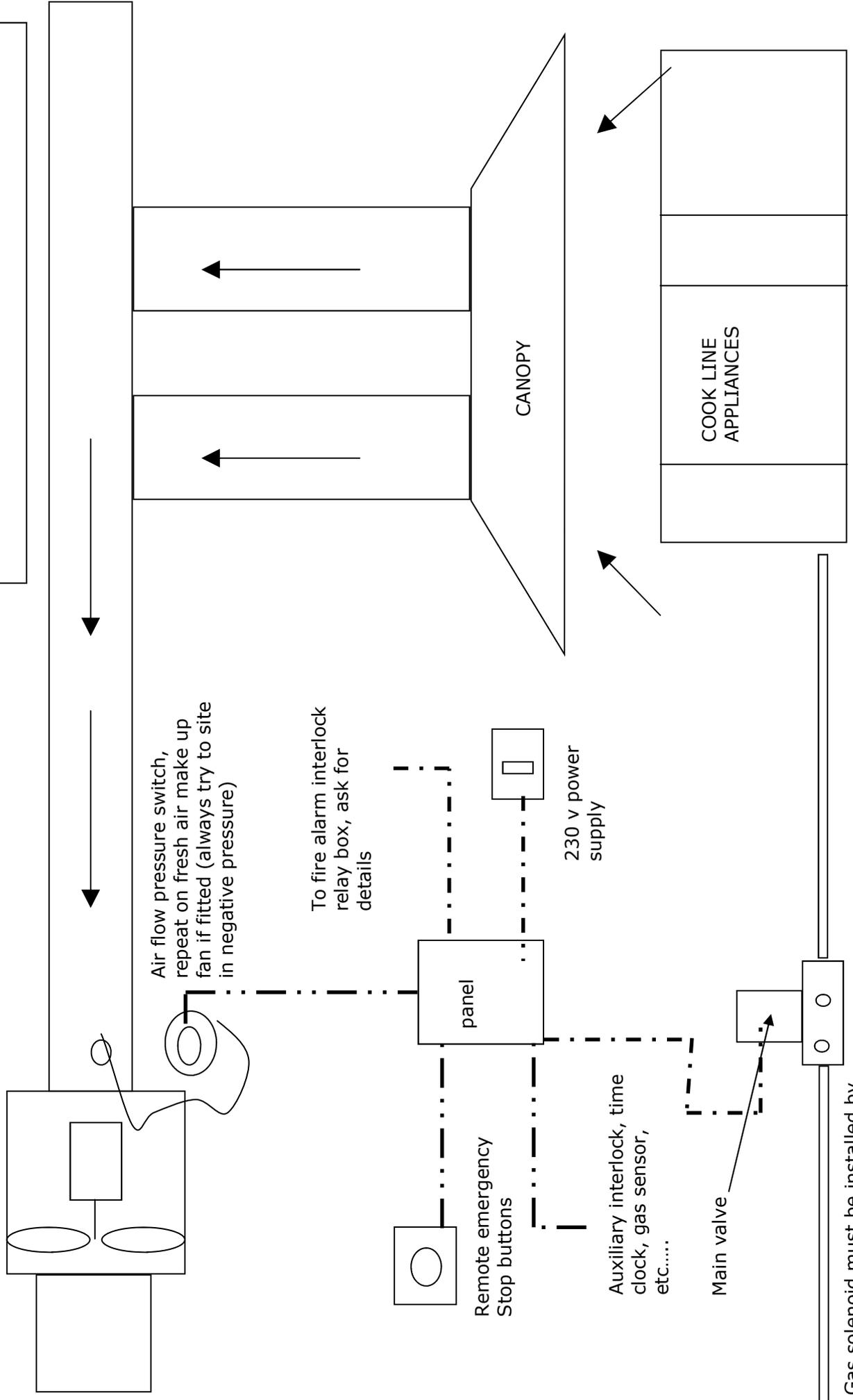
Connect the brown cable to the right hand terminal marked 1 on the PCB.

As many early warning inputs as you like can be connected to this terminal so if there are 2 fans on site then connect the second fans sensors as above but use the terminals marked 4 & 4 on the PCB for the grey and black cables and again common the brown into the right hand terminal marked 1 on the PCB.

### 3) installation schematic (basic install, shown in kitchen)

**KEY**

- Mains rated wiring 2core
- - - Mains rated wiring 2core + earth



Air flow pressure switch,  
repeat on fresh air make up  
fan if fitted (always try to site  
in negative pressure)

To fire alarm interlock  
relay box, ask for  
details

230 v power  
supply

Remote emergency  
Stop buttons

Auxiliary interlock, time  
clock, gas sensor,  
etc.....

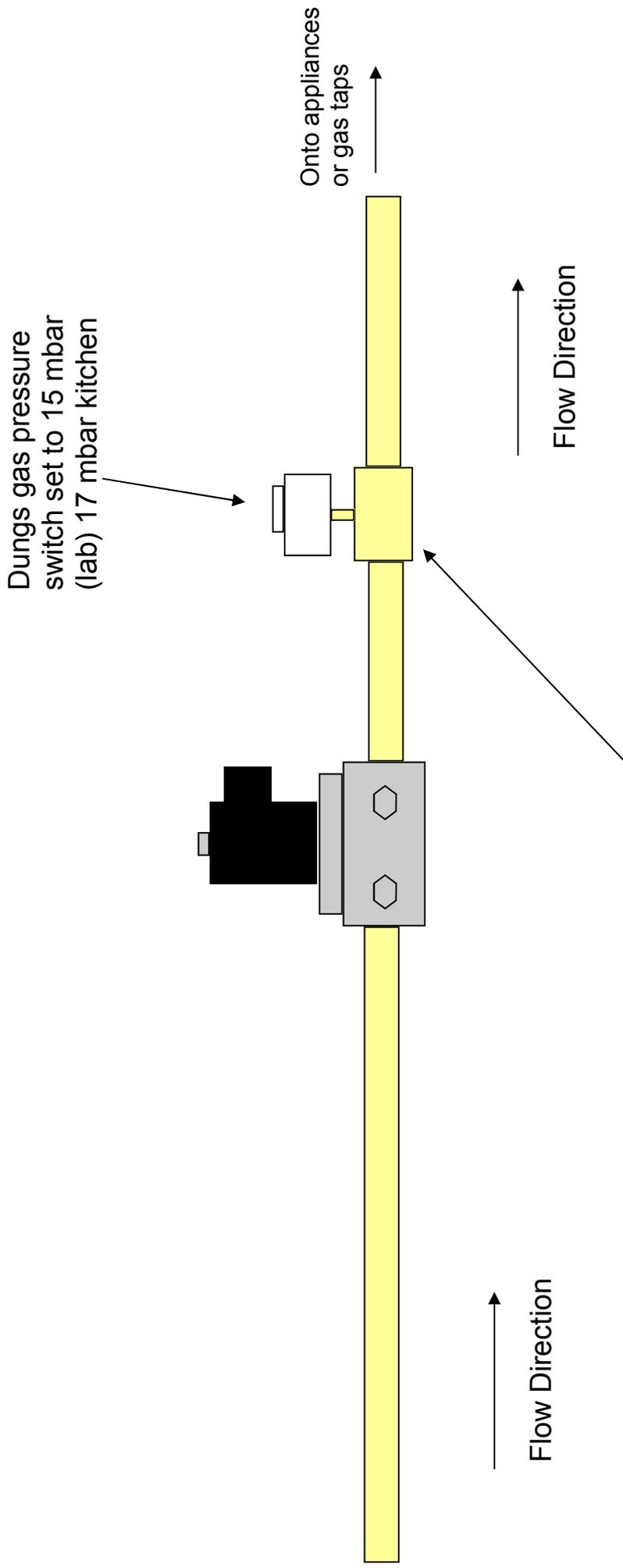
Main valve

COOK LINE  
APPLIANCES

CANOPY

Gas solenoid must be installed by  
gas safe engineer

# Intelligas gas proving system mechanical layout (lab & kitchen)



Unequal tee joint or centre reduced down to 1/4" male nipple to make directly into Dungs gas pressure switch

To comply with gas regulations manual isolation points, purge points and test nipples may be required. This drawing is for information only and the necessity of the above items should be checked to ensure compliance with the current regulations.



# Commissioning

Double check all terminations have been made and checked for tightness, check all peripheral equipment such as emergency stops, pressure switches and gas valve are connected and the covers are in place.

Start all fans and set any speed controllers to minimum, assuming the minimum fan speed still satisfies minimum ventilation levels in the kitchen continue and set the pressure differential switches. This can be done by slowly increasing the Pascal setting on the pressure differential switch until it clicks off, then turn it back down in 5 Pascal increments waiting 10 seconds each time until it makes again (use a test meter across terminals 2 & 3 to check continuity) once the switch makes turn the setting down a further 10 pascals to ensure anti flutter. Repeat this procedure for each pressure switch installed. Replace all covers!

Once the pressure switches have been set apply the power and continue to the next stage of commissioning.

Check all fans are running and the emergency stops are all reset, the control panel should now display bottom led red. Disconnect the unit from the mains.

Now the Dungs pressure switch needs to be set up, assuming the gas pipe and meter are correctly sized the standing pressure should be 21mbar (natural gas) or 37mbar (LPG). The pressure switch should be set to no more than 3mbar under the standing pressure or 1mbar under the measured pressure when the cook line is fully "on load"

Now the gas pressure switch has been commissioned and the covers replaced the system can be fully tested. Set the purge and prove times using the jumper links on the PCB, larger systems will require more time to purge and prove.

Re-apply the power, start all fans and reset all emergency stops, press the stop/reset button, the bottom led will be red, turn the keyswitch clockwise and allow to spring return, the system will now begin to auto prove the gas line, take notice of the led array for information about what the system is doing, if gas on is not shown after the sum of the set prove time and purge time then check all down stream gas valves are shut and check what the panel is showing, its most likely to be purge failed—low gas pressure, restart the system by first pressing the stop / reset button and then turning the keyswitch, before contacting technical please ensure every effort has been made to pressurise the system).

THE KEY IS TO BE HANDED TO THE KITCHEN MANAGER AND NOT THE CHEF, IT IS THE KITCHEN MANAGERS RESPONSIBILITY TO ENSURE THE SAFETY OF THE GAS SYSTEM THEREFORE HIS DUTY TO ARM AND RESET IF REQUIRED THE PROVING SYSTEM.