INTELLIGAS

Gas safety & control systems

# 100P Automatic Gas Proving System

## INSTALLATION GUIDE

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.

Ensure the operation of this unit is explained fully to the kitchen staff.

**24 hour technical support line - 02381 290444**

**intelligas.co.uk**

# Introduction

**Thank you for choosing an Intelligas product. Please follow these instructions to ensure a safe, functional and long-lasting installation.**

**This information is important and should be read and understood before attempting installation.**

**If you are unsure of the terminations and their design voltages or function then refer to this guide or our technical support line, you can call 02381 290444 or you can text 07952269791 and we'll get back to you as soon as we're available.**

# Siting the panel

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.

Under no circumstances should wiring be routed behind the PCB of the control panel.

# Control panel supply

All our control panels (except the KVM-SF) should be supplied via a fused spur connection unit. The fuse should be changed to one that's rated at 5amps.

***KVM-SF ONLY*** if the panel is supplying the fans directly from the PCB then it should be supplied via a 16amp single phase isolator. If the panel is controlling Inverters and only the output signals are being used then, as above, the panel should be supplied by a 5amp fused spur.

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# 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.

The field wiring voltage to the interlock inputs is reduced to 24 volts, do not connect mains to the air pressure switch terminals, e-stop, analogue input/output 0-10v control, gas detector or fire alarm terminals.

Please follow the first fix wiring schedule set out below:

1) Main supply 2 core + E 1.5mm (as per regulatory requirements)
2) Gas valve 2 core + E 1.5mm (as per regulatory requirements)
3) Pressure switches 2 core + E 1.5mm (YY type cable)
4) Fire alarm interlock (if req) 2 core + E 1.5mm (FP type cable)
5) Emergency stops 2 core + E 1.5mm (YY type cable)
6) Gas detection equipment, If fitted, 3 core screened (CY type cable)
7) Gas pressure switch, if fitted, 2 core + E 1.0mm (YY type cable)
8) 0-10v signal wiring, if fitted, 2 core 1.0mm (CY type cable)

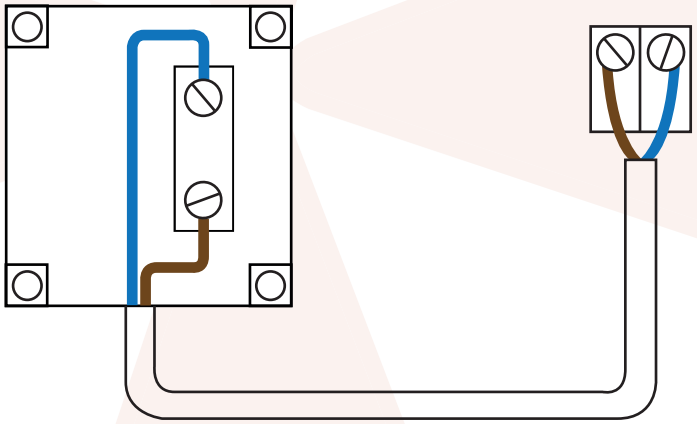
Where multiple supplies enter a control panel, perhaps in a current sensing interlock. It is preferable that each supply is on the same phase. If this can't be achieved, then additional warning labels should fixed in a suitable location on the control panel.

*The advice given on these instruction pages, specifically to cable types and ratings may change depending on cable lengths and installation conditions. If you are not sure about any of the cable types or ratings then contact our technical support team.*

# Connections

### E stop connections

For emergency stop switches use PCB terminals marked Estop

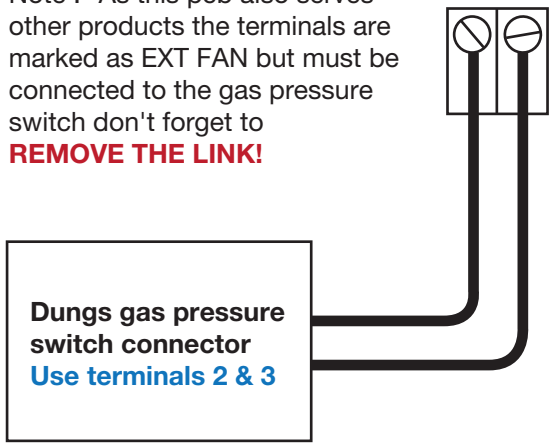


### Fire alarm interface (if used)

If fire alarm interface is not to be used then link as shown.

### Gas pressure switch connections

Note :- As this pcb also serves other products the terminals are marked as EXT FAN but must be connected to the gas pressure switch don't forget to **REMOVE THE LINK!**

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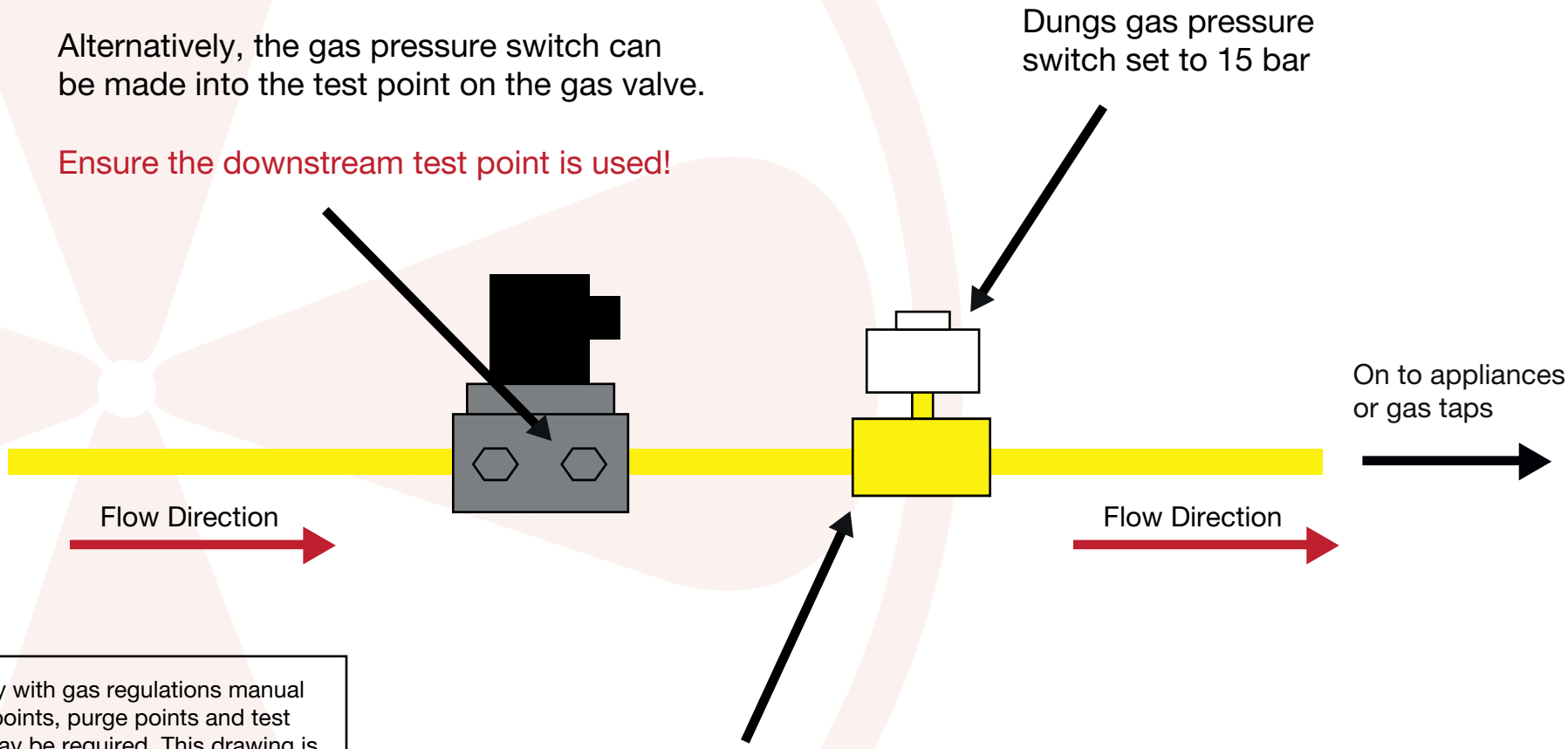
# Intelligas gas proving system mechanical layout

## Installation option 1

Alternatively, the gas pressure switch can be made into the test point on the gas valve.

Ensure the downstream test point is used!




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.

## Installation option 2

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

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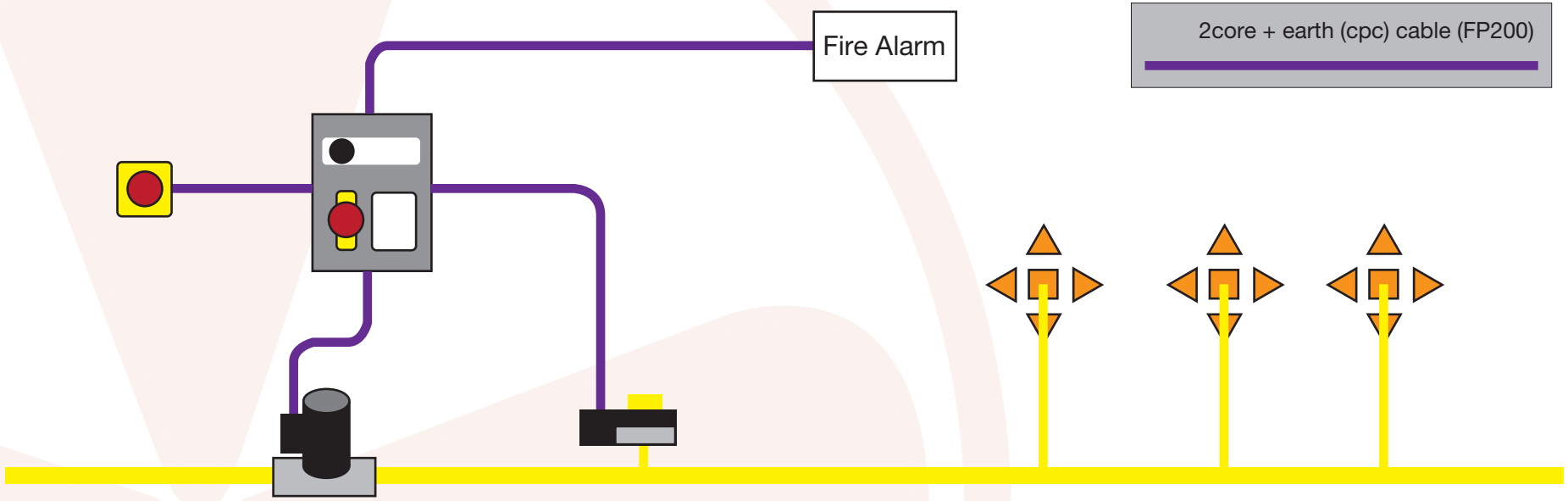
# Intelligas 100P installation schematic




## Wiring, commissioning & fault finding

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.

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.

Apply the power & reset all emergency stops, the top LED should be green and the bottom LED red.
Turn the key switch and press the stop/reset button, release the key switch. The bottom led will turn green “gas valve open” and the centre LED will go amber “testing”.

After 5 seconds the bottom LED will go red and the gas valve will be closed for the proving time of 45 seconds. *Continued on next page...*

# Wiring, commissioning & fault finding (continued)

If the system is sound after the proving time has elapsed, the bottom LED will go green indicating “gas valve open”. The centre LED will also go green indicating “test passed”.

If the test fails i.e. a leak is detected then the bottom LED will go red showing “gas valve closed”. The centre LED will go red indicating “prove failed / gas pressure low”.

If at any point after a successful prove the gas pressure drops below the gas pressure switch set point. The system will display the bottom LED as red showing “gas valve closed”. The centre LED will also go red indicating “prove failed / gas pressure low”.

Note :- All faults are displayed until the reset / start button is pressed, so if after the panel is powered up a fault is displayed then ensure the reset / start button is pressed to reset the fault. If the fault remains then the unit should be powered down and the wiring checked.

**THE KEY IS TO BE HANDED TO THE GAS MANAGER / RESPONSIBLE PERSON ONSITE. IT IS THE RESPONSIBILITY OF THE MANAGEMENT ONSITE TO ENSURE THE SAFETY OF THE GAS SYSTEM. THERFORE IT IS THEIR DUTY TO ARM AND RESET THE PROVING SYSTEM.**

**Fault Finding**

**System does not detect a forced / test leak.**
1) Ensure the gas pressure switch is down stream of the gas valve
2) Check switch operation (closed on pressure, open on no pressure across term 2 & 3)
3) Contact technical support on 02381 290444

**No power to gas valve**
1) Check PCB fuse
2) Contact technical support on 02381 290444

**System constantly displays emergency stop**
1) Check all connections to emergency stops are correct and emergency stops are a closed circuit / loop.
2) Contact technical support on 02381 290444