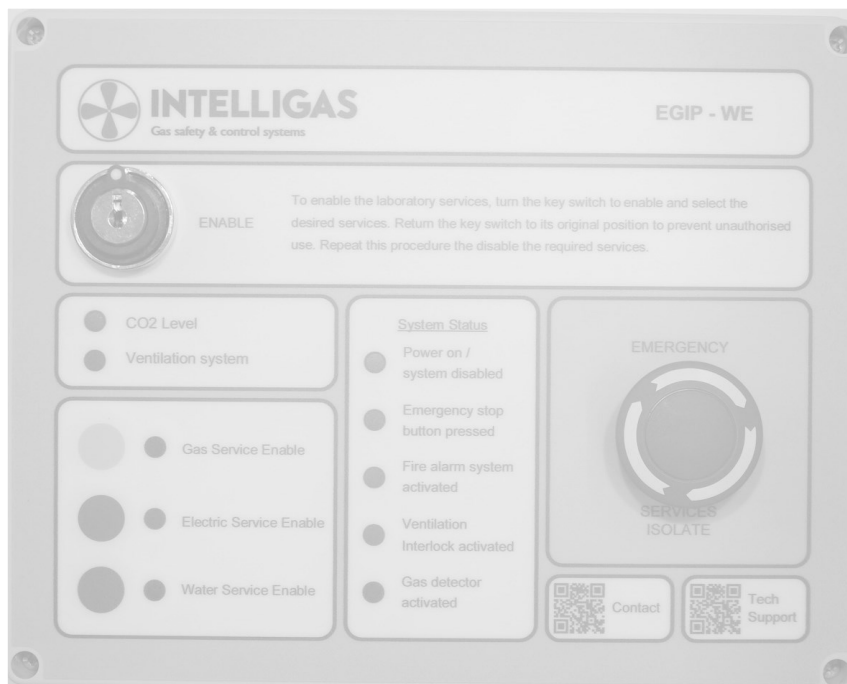# EGIP—WE Installation guide

Gas, Water & Electric lab services control panel with vent & CO2 control

For support go to Intelligas.co.uk/support

Or call

02381 290444

Email: Info@intelligas.co.uk

READ ⚠ THIS

Warnings and statements

!! Warning !!

Read these instructions before attempting installation. Faulty wiring, incorrect termination or poor installation practices can damage the unit beyond repair, cause a dangerous situation or poor operation. This unit should only be installed by suitably trained operatives.

Warranty & limitations

Our 5 year product warranty is limited to the control panel only. No liability is taken for time on site, travel or any other costs, however incurred. It is the purchasers responsibility to package and return the product for inspection, testing and if necessary replacement or repair. Site induced damage is not covered by this warranty. Damaged units returned to us will be properly disposed of or returned at the purchasers cost.

WEEE directive

When this product has reached the end of its life it must be treated as Waste Electrical & Electronics Equipment (WEEE). Any WEEE marked products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used. Please contact your supplier or local authority for details of recycling schemes in your area.

Installation practices

During the construction of this manual, technical ability is presumed. If at any point the terminology, references or expressions become confusing then you should cease installation and seek advice or help from our technical team. Please note. We may advise that you seek help from a further trained professional in order to deliver a compliant installation for the end user. This installation will form part of a gas safety control device and MUST be installed correctly.

Electrical safety

All electrical terminations and connection must be made to the panel with the power off. Risk of electric shock

1.   Mounting the unit

1.1 The unit should be mounted at a height that allows a clear view of the system indicators and easy operation of the switches and controls.

1.2 Carefully remove the rear PCB to ensure no dust from drilling contaminates the terminations

1.3 Ensure the unit is to be mounted on a flat surface to avoid distortion on the PCB mounting pins.

1.4 Mark and drill the four mounting holes position in the corners of the back box. Remove all drilling debris after drilling is complete.

1.5 Make any required canle entry holes in the unit ensuring that cables DO NOT enter from behind the PCB.

1.6 Carefully replace the PCB.

2.   Mains connections

2.1 Connect the mains supply to the unit Live, neutral and CPC.

2.2 Connect the outgoing circuits for the gas valve, water valve and Electrical contactor.

2.3 Connect any other possible mains voltage cables to the desired connections, vent start relay & fault relay.

2.4 Make safe any low voltage cabling within the enclosure and connect the ribbon cable between the PCB's.

2.5 Apply power to the unit and ensure the LED indicators illuminate and carry out the self test routine (intermittent flashing of all LED's. **Switch off the unit and remove the cover for the next stage.**

3.   Low voltage connections

3.1 Connect the low voltage wiring to the unit. It is imperative that polarity is observed to the following connections.

- CO2 detector

- Explosive gas detector

- gas pressure sensor (if selected)

3.2 Short circuit or overload of the systems power supply will illuminate the '24v overload' (red LED). This should be remedied immediately and the power switched off until the fault is found.

3.3 Each switched input has an LED to indicate that the input is 'made'. This should aid installation and is featured in the following inputs.

- Em stop

- On/Off

- Fire

- Gas switch

- Vent start Signal

- APS

3.4 Once the low voltage connections have been successfully connected and terminations checked, then the power can be re-applied and the system operation verified.

3.5 Now set the setpoints of the inputs used as described in the section '**setting the system setpoint levels'**

Terminology

Vent start relay   The control panel's output to start any supply and extract fans which serve to ventilate the monitored space.

APS   Air pressure interlock that tells the system that the required vent level has been achieved.

Em stop   Connection for external extra emergency stop buttons.

On/Off   An external input provided to shut the panel and services down. Possibly a BMS control input or timeclock.

Fire   Fire alarm input that isolates all services in the event of a fire alarm activation.

Gas detector   Terminals to connect an explosive gas detector (if required).

Gas pressure   Terminals to connect a 0-10v gas pressure transducer (if used).

Gas switch   Terminals to connect a gas pressure switch (preferred).

Vent start signal   Terminal to connect an external switch which will operate the vent start relay regardless of CO_2 level.

Exp Gas Trip Level   The setpoint at which the panel will switch off the gas service and go into alarm in a response to the **gas detector** input.

Vent Start Interlock Time   The amount of time provided by the panel for the ventilation level to be confirmed by the **APS** input (0-100seconds) (if this input isn't made then a ventilation interlock will be activated and the gas isolated.

Vent Start Set point   The setpoint level at which the ventilation system will be started, based on the CO_2 detector input.

CO2 Trip level   The level at which the gas is isolated and the system is in CO_2 alarm mode.

Setting the system setpoint levels

Each of the systems trip levels can be set on the 4 pots their ranges are as follows. To set these ranges precisely you will ned a multi-meter with a DC volt input.

Setting the explosive gas trip level - This is set in the system using a 0-5v signal. Therefore if you have a 2-10v methane detector the scale of which is over 0-25% LEL and you required the alarm to operate at 10% LEL the calculation is as follows:

8 (volts in the detectors scale) / 25 (percentage points of the detectors range) = 0.32 therefore each % LEL = .32volts input

So 10% LEL would = 10 x 3.2v + the 2 volts that is the detectors baseline = 5.2 volts
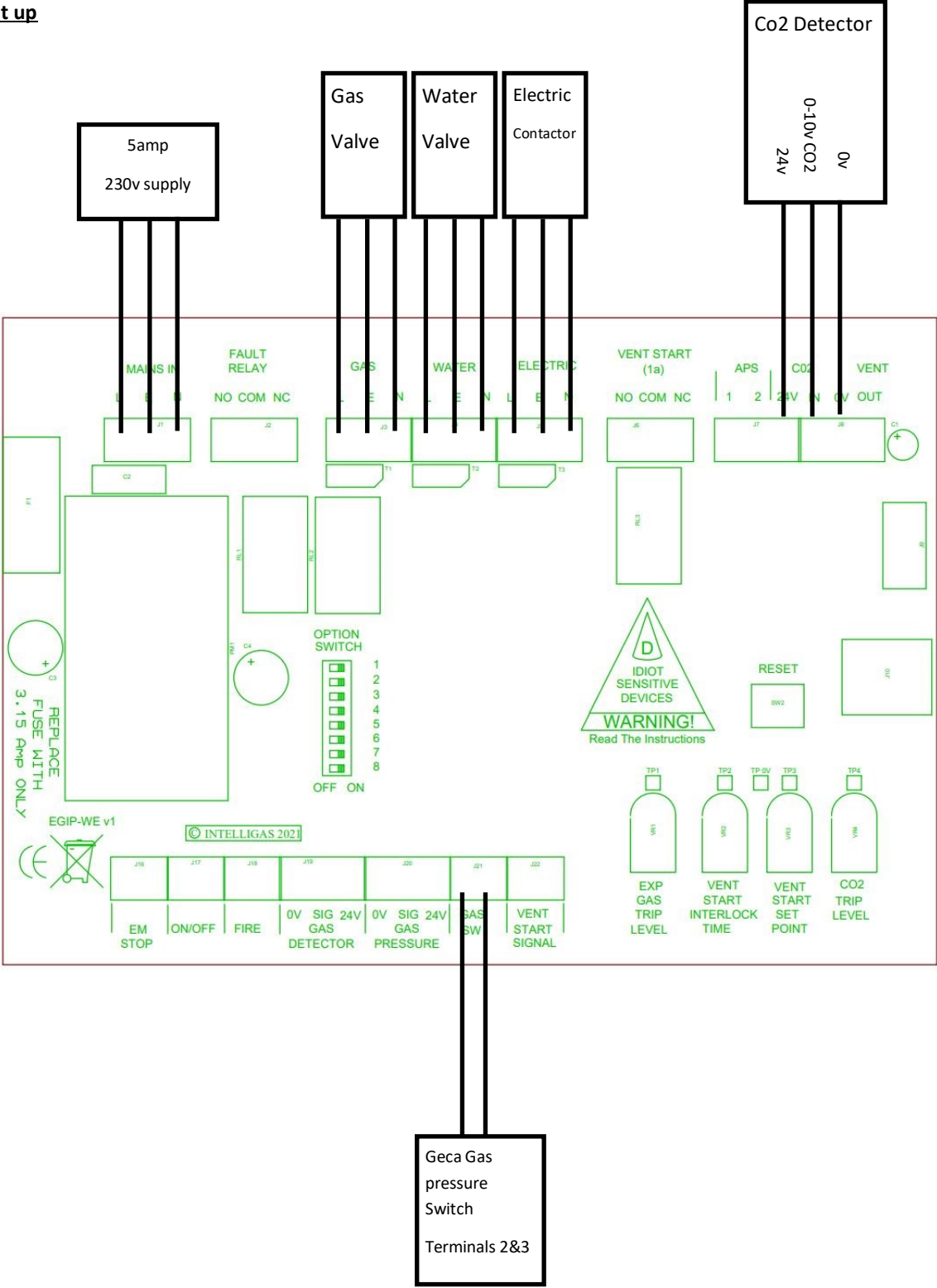
Convert that to a 0-5volt scale by halving it and that becomes our set point. Put your black lead on tp0v and your red lead on TP1. Adjust the pot until the desired level is met.

Setting the vent start interlock time - This timer is 0—100 seconds. The amount of time is set in the system using a 0-5v signal. Therefore each volt = 20 seconds of delay before the vent interlock is tripped, 2.5volts = 50 seconds and so on. Place the black lead of your meter on tp-0v and the red lead on tp2. Turn the pot until the desired level is reached.

Setting the vent start set point - This is set in the system using a 0-5v signal. Therefore each 1000ppm of CO_2 = 1volt. If you want the ventilation to automatically start at 1500ppm then this set point would be 1.5volts. Put your black lead on tp0v and your red lead on TP3. Adjust the pot until the desired level is met.

Setting the CO2 trip level - This is set in the system using a 0-5v signal. Therefore each 1000ppm of CO_2 = 1volt. If you want the CO_2 alarm level to be 4500ppm then this set point would be 4.5volts. Put your black lead on tp0v and your red lead on TP4. Adjust the pot until the desired level is met.

Basic set up

Co2 Detector

0v
0-10v CO2
24v

5amp
230v supply

Gas Valve

Water Valve

Electric
Contactor

MAINS IN
L E N

FAULT RELAY
NO COM NC

GAS
L E N

WATER
L E N

ELECTRIC
L E N

VENT START (1a)
NO COM NC

APS
1 2

CO2
24V IN 0V

VENT
OUT

C2

J1

J2

J3

T1

T2

T3

J6

J7

J8

C1

REPLACE FUSE WITH 3.15 Amp ONLY

OPTION SWITCH
1
2
3
4
5
6
7
8
OFF   ON

⚠ D
IDIOT SENSITIVE DEVICES
WARNING!
Read The Instructions

RESET
SW2

EGIP-WE v1

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EM STOP
J16

ON/OFF
J17

FIRE
J18

0V SIG 24V
GAS DETECTOR
J19

0V SIG 24V
GAS PRESSURE
J20

GAS SW
J21

VENT START SIGNAL
J22

TP1
EXP GAS TRIP LEVEL

TP2 TP0 0V
VENT START INTERLOCK TIME

TP3
VENT START SET POINT

TP4
CO2 TRIP LEVEL

Geca Gas pressure Switch

Terminals 2&3

Dip switch settings (function)

Switch 1 - Explosive gas detection on / off

Switch 2 - **On** Gas pressure sensed on 0-10v. **Off** gas pressure sensed on gas switch input

Switch 3 not currently used

Switch 4 not currently used

Switch 8 not currently used

Dip Switch Settings (services timer)

Services run time settings

Switch 5 on - services cut off after 1 hour

Switch 6 on - services cut off after 2 hours

Switch 5&6 on - services cut off after 3 hours

Switch 7 on - services cut off after 4 hours

Switch 5&7 on - services cut off after 8 hours

Switch 6&7 on - services cut off after 12 hours

Switch 56&7 on - Services cut off after 48 hours