

GAS INTERLOCK SYSTEM INSTRUCTIONS

MODEL NO.: GICS5120

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 also carries 230 Vac.

Operation

1) Self inspection

1.a) CURRENT SENSING MODE

The default mode is current sensing mode. In this mode, when the unit is powered on and the extraction fan & supply fan is in operation, the unit will auto self-inspected, the three LED-lights will flash in sequence **green, red, then off.** After 15 seconds the flashing will stop. The 1st LED light will be amber, the 2nd and 3rd LED lights will be green, the unit is now in the stand-by state.

1.b) AIR PRESSURE SENSING MODE

When the mode is changed into air pressure sensing, the unit is powered on and the extraction fan & supply fan is operating, the unit will auto self-inspected, the three LED-lights will flash in sequence **green, red, then amber.** After 15 seconds the flashing will stop. The 1st LED light will be amber, the 2nd and 3rd LED lights will be green, the unit is in the stand-by state.



- | | | |
|--------------------|--------------------------|----------------------|
| ● Gas valve closed | ● Alarm/Fault | ● Emergency stop |
| ● Awaiting reset | ● Extraction fan failure | ● Supply fan failure |
| ● Gas valve open | ● Extraction fan OK | ● Supply fan OK |

1st LED light

2nd LED light

3rd LED light

- 2) Press the "Reset" button, all the three lights will turn green, the gas valve will open, and the unit will be in the normal operating state.
- 3) If the supply or extraction fan has a fault and stops, the 2nd and the 3rd LED lights will turn from green into amber to indicate fan failure. After 11 seconds, the buzzer will be activated, and the 1st LED will turn from green to red.
- 4) Press the "Stop / Reset button" to stop the buzzer.
- 5) If the Emergency stop button is pressed for any reason, the 1st and the 3rd LED lights will turn red at the same time, the 2nd LED light will become green, and buzzer alarm will be heard.
- 6) Twist the "Emergency Shut Off" button clockwise, to reset the emergency shut off. If the fans are working, the 1st LED will turn red, while the 2nd and the 3rd LED lights will turn green. Press the "Reset" button to stop the buzzer. Press the "Reset" button again, the 1st LED will turn amber which indicates awaiting reset. Press the "Reset" button for a third time, all three LED lights will then all be green. The unit enters into a normal operation state.

Failure analysis

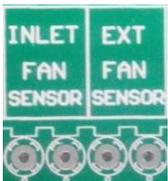
- a) When the "E-STOP" is disconnected, and the fans are working normally, press the "Reset" button, the three LED lights will turn from (RED, GREEN, GREEN) into (RED, GREEN, RED), while the buzzer will sound at the same time.



- b) When the "FIRE ALM" is disconnected, and the fans are working normally, press the "Reset" button, the three LED lights will turn from (RED, GREEN, GREEN) into (RED, RED, GREEN), while the buzzer will sound at the same time.



- c) When the "EXT FAN SENSOR" is disconnected, and the unit is in the standby status, press the "Reset" button, the three LED lights will turn from (AMBER, GREEN, GREEN) into (GREEN, AMBER, GREEN). And after 13 seconds, the three LED lights will turn into (RED, AMBER, GREEN), while the buzzer will sound at the same time.
- d) When the "INLET FAN SENSOR" is disconnected, and the unit is in the standby status, press the "Reset" button, the three LED lights will turn from (AMBER, GREEN, GREEN) into (GREEN, GREEN, AMBER). And after 13 seconds, the three LED lights will turn into (RED, GREEN, AMBER), while the buzzer will sound at the same time.



How to change the sensing mode

1)The default sensing mode is the current sensing. If you want to change it into air pressure sensing mode, please follow the below steps:

Before the unit is powered on, press and keep your finger on the reset button, now power on the unit. The 3 LED lights will flash in sequence **green, red, then amber**, after about 3 to 5 seconds, the unit will beep, the 3 LED-lights will flash in sequence **green, red, then -off.** Lift your finger off the reset button, and then power off the unit. Power on the unit again, it is now in the air pressure sensing mode.

If you want to change the unit from air pressure sensing mode into current sensing mode, Before the unit is powered on, press and keep your finger on the reset button, now power on the unit. The 3 LED lights will flash in sequence **green, red, then off**, after about 3 to 5 seconds, the unit will beep, the 3 LED-lights will flash in sequence **green, red, then amber.** Lift your finger off the reset button, and then power off the unit. Power on the unit again it is now in the current sensing mode.

Default Setting

The default sensing mode is the current sensing mode.

The default setting of the potentiometer is 0.1A, therefore, the unit can be applied to all fan systems whose load is 0.1A and over. **We strongly recommend that the potentiometers is not adjusted by the customer.**

The potentiometers are factory set to sense 0.1A so should not need adjusting before use. If for some reason the potentiometers have been tampered with they will need to be readjusted.

Once the fan(s) are wired and are working normally but triggers the alarm and the display shows 1st LED Light RED, 2nd and the 3rd LED lights amber, this indicates fan failure and that the sensor cannot sense the current flow and will need adjusting.

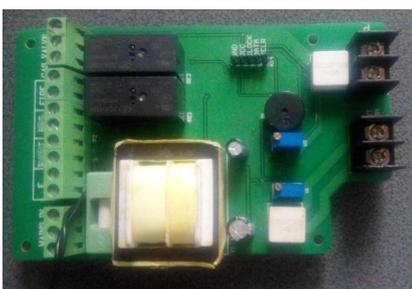
How to adjust the potentiometer

Adjustment Methods: (Unscrew the front cover off the unit to get to the circuit)

Ensure that the unit is in the current sensing mode and the corresponding terminals are connected. Locate the 2 blue potentiometers on the back, they will have an adjustment screw on them.

When the fans are not turning due to the sensors not reading the current, the 2 blue lights on the potentiometers will be either on or off. Turn the screws right or left until the blue light turns off or on (stop immediately as soon as the lights turn either on or off!)

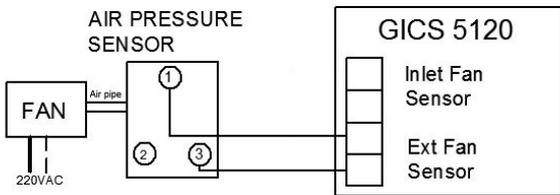
To ensure the adjustment is successful, turn the fan(s) on and check if the blue LED light(s) is /are on. Then also turn off the fan(s) and check if the LED light(s) is /are lighting off.



How to wiring in different sensing mode

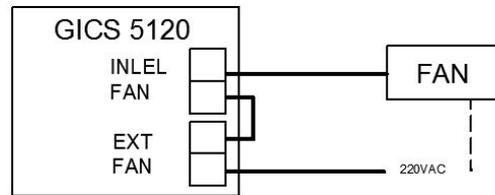
Air Pressure Sensing Mode

One Fan Wiring

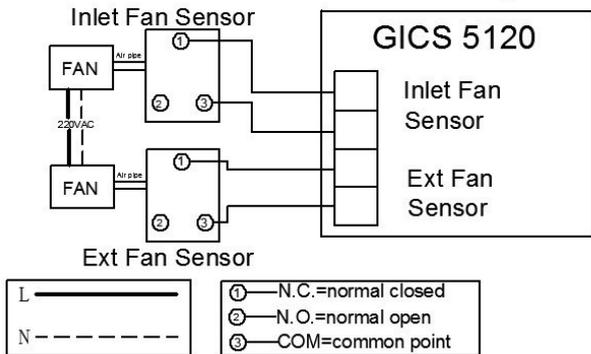


Current Sensing Mode

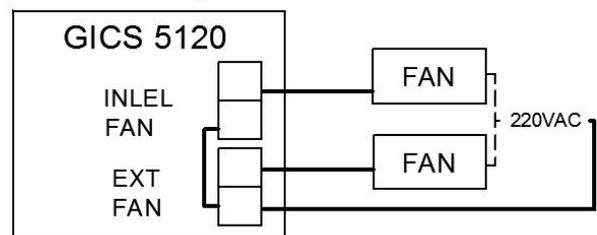
One Fan Wiring



Two Fan Wiring



Two Fan Wiring



Note: The unit must be wired by a qualified electrician.