KS22 V6 Trio Safestart for G161

- Touchpad control panel suitable for use with G161 Gas proving system.
- Unique, programmable access code
- Starts ventilation, checks fan operation, starts Gas
- Visually displays failure type (Air or Gas)
- Automatically isolates gas supply at low pressure
- Checks downstream pipework before initiating gas supply.
- IGE/UP/2 Edition 3 and BS6173:2009 compliant

Application

IGEM/UP/2 Edition 3 Installation pipework on industrial and commercial premises.
"The gas supply system shall be interlocked with any mechanical ventilation supply or extract system and this will normally require the fitting of an automatic valve."

BS6173:2009 Installation of gas fired catering appliances for use in all types of catering establishments.
"Whenever an automatic electric isolation valve system is used, an automatic system for proving that all downstream gas supplies to the burners and pilots have been turned of shall be employed prior to the valve being re-energized to open."

In accordance with these requirements, the Trio Safestart securely isolates and safely re-establishes the gas supply to any area which relies on manual isolation of gas outlets (e.g. in hotels, fast food restaurants, schools, colleges and canteens).

Trio Safestart protects personnel and property from damage caused by gas leaks. Inadvertently or intentionally leaving manual gas taps open is dangerous, even when the gas supply is turned off.

If the supply is reinstated with taps open an undetected gas leak will exist. The Trio Safestart prevents this by checking the integrity of the downstream pipe work before allowing the main gas to be opened.

The control panel ensures that only authorized, competent personnel are able to initiate gas supply, thus preventing vandalism and misuse of gas equipments.

If the supply gas pressure drops below a preset threshold the system will automatically operate the low pressure cut off and the gas will be safely isolated.

Configuration

To change the duration of the pipework integrity test, enter the code '221122252091' followed by the ✔. The numeric keyboard will change to red and you can then push a key to select a time in 500ms steps. Keys 1 through 9 refer to 0.5" through to 4.5" respectively. You can press the ✘ to abort and exit at any time.

Some standards require a reset delay following a failed gas test. This delay can be set to two minutes by entering the configuration code '192011820451' followed by the ✔. This will set a 2 minute delay before the system can be reset. Using the same code followed by the ✘ will revert to the default 'immediate reset' mode.

Operation

1. Connect the Trio Safestart to a power supply. A self-test procedure will run. If a failure is detected the green POWER light will blink and local buzzer will sound (1,5 Hz).

2. Enter numeric password (1 to 8 characters in length). At each press the active key will turn to red and a short tone will confirm the operation. Push the ✔ to confirm the code and run the proving test.

(NOTE: In case of incorrect password the buzzer will make a single long tone (1,5 sec). If the password matches the buzzer will make 3 short tones.

Press the ✘ at anytime to halt the operation).

3. During the proving stage, the AIR light will flash waiting for the extract and supply air to be proven within 30 seconds. Once the air is proven the it will stay ON.

4. The GAS light will flash until the gas test is completed.

5. A failure on AIR or GAS will enter an alarm condition, the relevant light will blink and an audible alarm will sound. The gas valve will be turned off and the system will require a manual reset once the problem has been resolved.

6. At any time it is possible to close the GAS Valve and reach a standby condition pressing the STOP button.

Password Setup*

To enter password configuration mode, press and hold keys 1, 6 and 7 together for 5 seconds until the keypad backlight turns red.

2. Enter the numeric password you want to use (1 to 8 characters in length). At each press the active key will turn off momentarily. Press the ✔ to confirm the code.

3. Press the CANCEL key to exit configuration mode at any time, leaving the password unchanged.

*Default password is 1, 2, 3, 4.

Warranties

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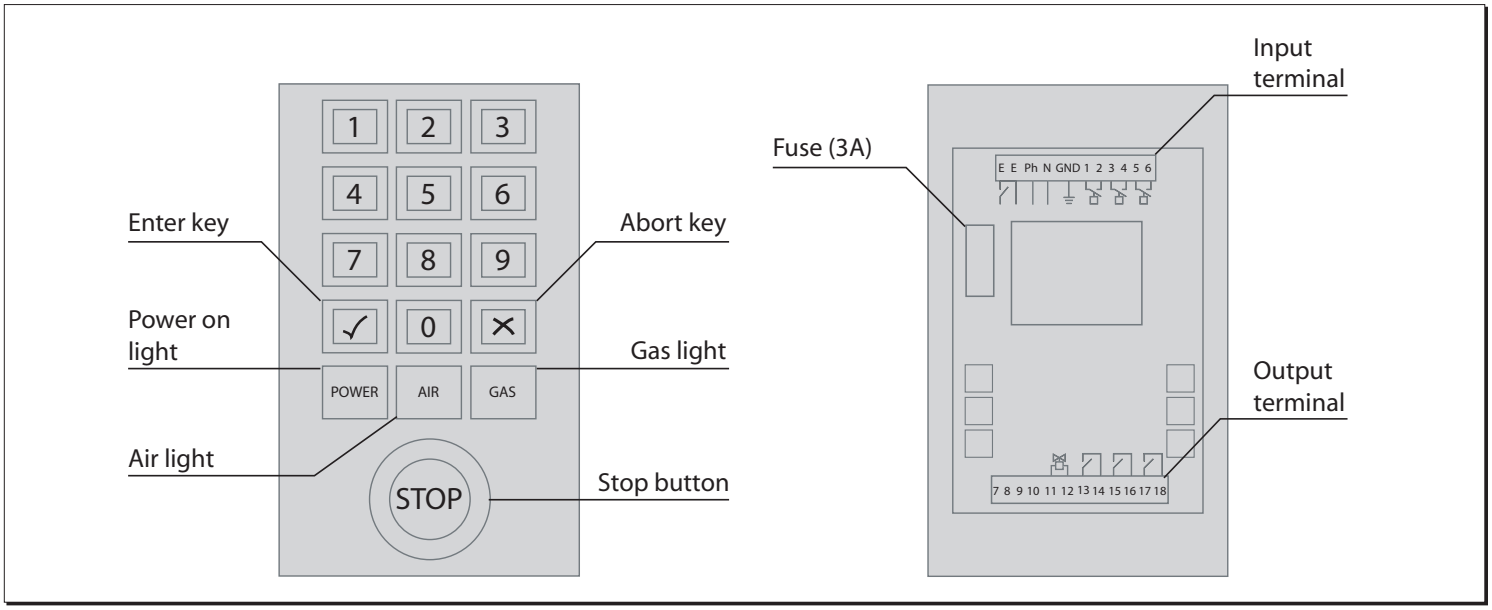
When Duomo UK Ltd products are combined with equipment manufactured by others and/or integrated into systems designed or manufactured by others, the Duomo UK Ltd warranty pertains only to Duomo UK Ltd products and not to any other equipment or to the combined system or its overall performance.

Fault Memory

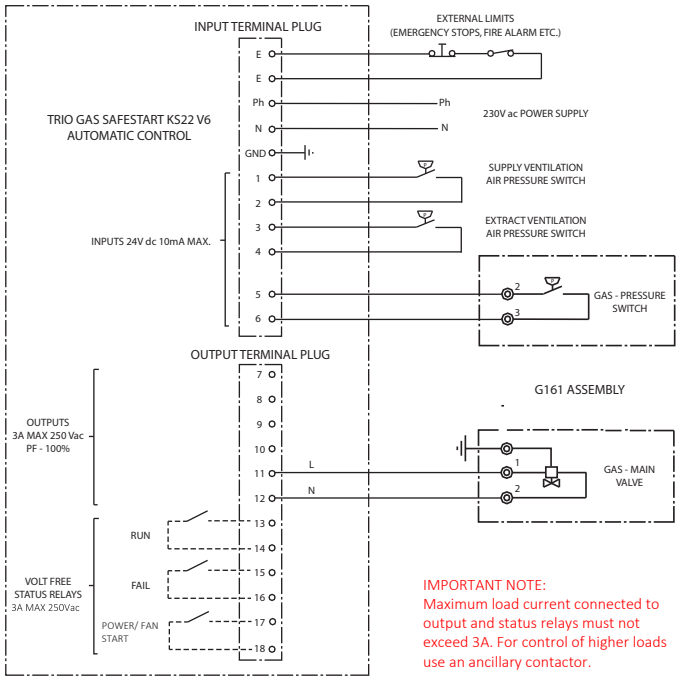
The Trio Safestart features a unique 'fault memory' system. When the unit goes into alarm, the cause is logged in an internal memory. The next time the unit is powered up, the last cause of alarm (either Power, Air or Gas) will flash during the self diagnostic stage allowing an engineer to quickly diagnose the fault on site.

Keypad & Internals

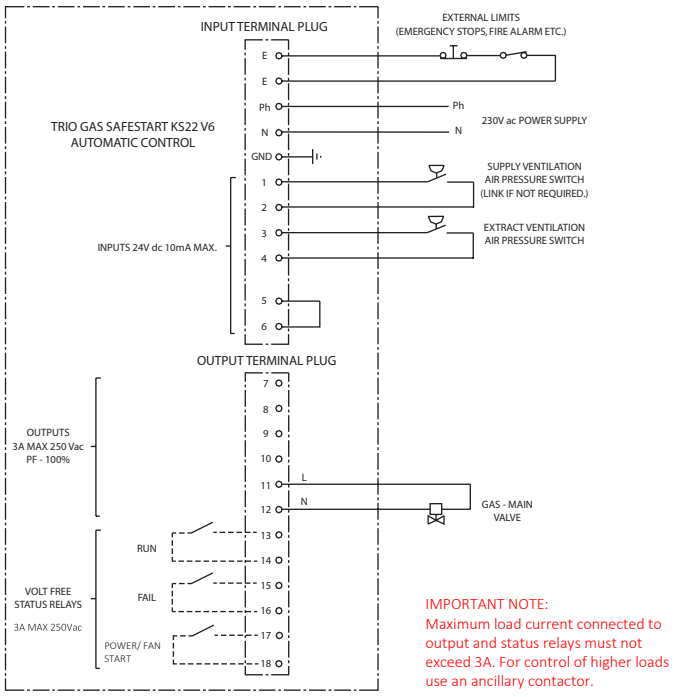


Keypad (Fig. 1)

Wiring Diagrams

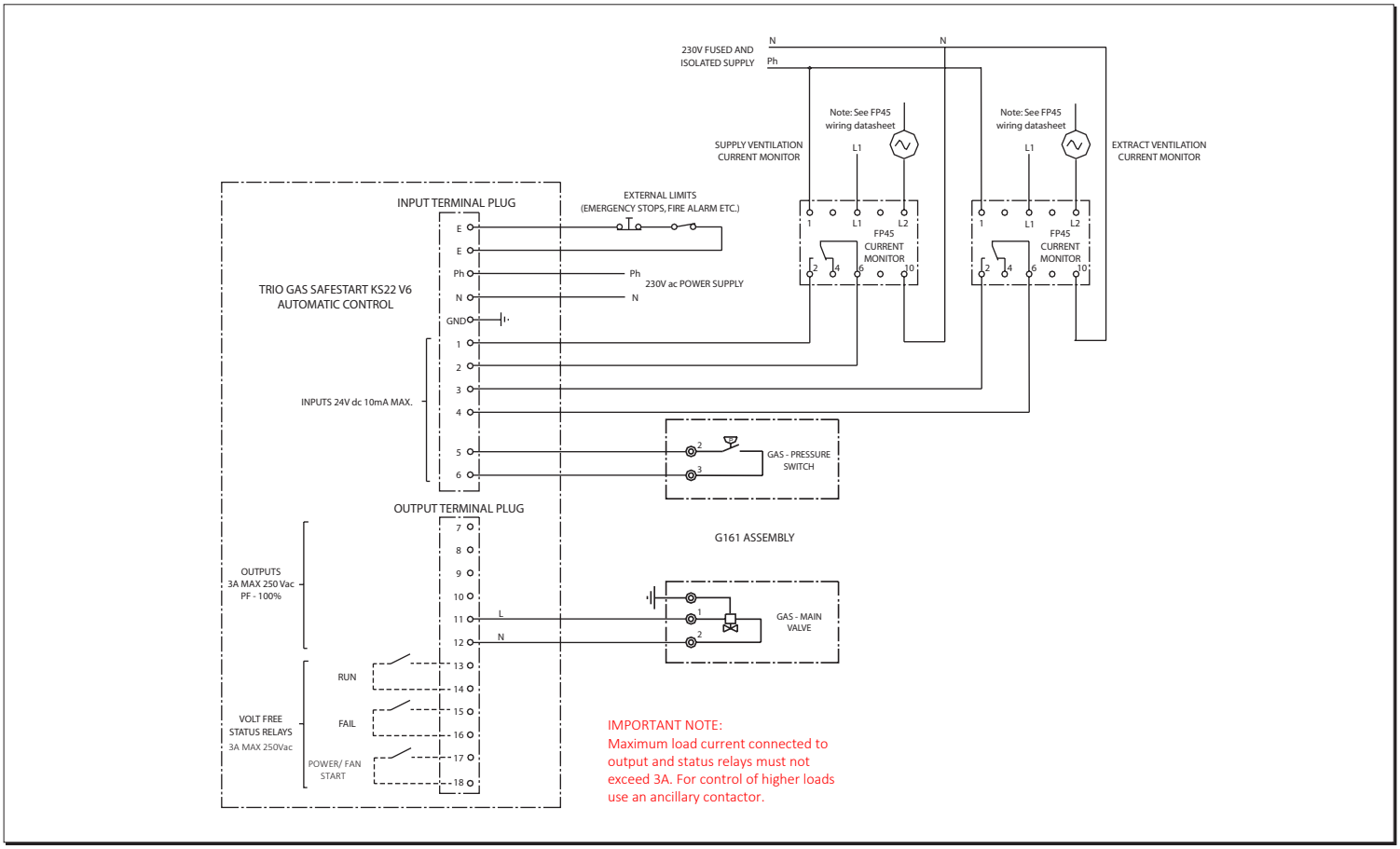


A Typical electrical connection schematic for a commercial catering kitchen. Flame failure devices ARE NOT fitted to all gas appliances. This system shows Ventilation proved using ADP10 air pressure switches (Fig. 2)

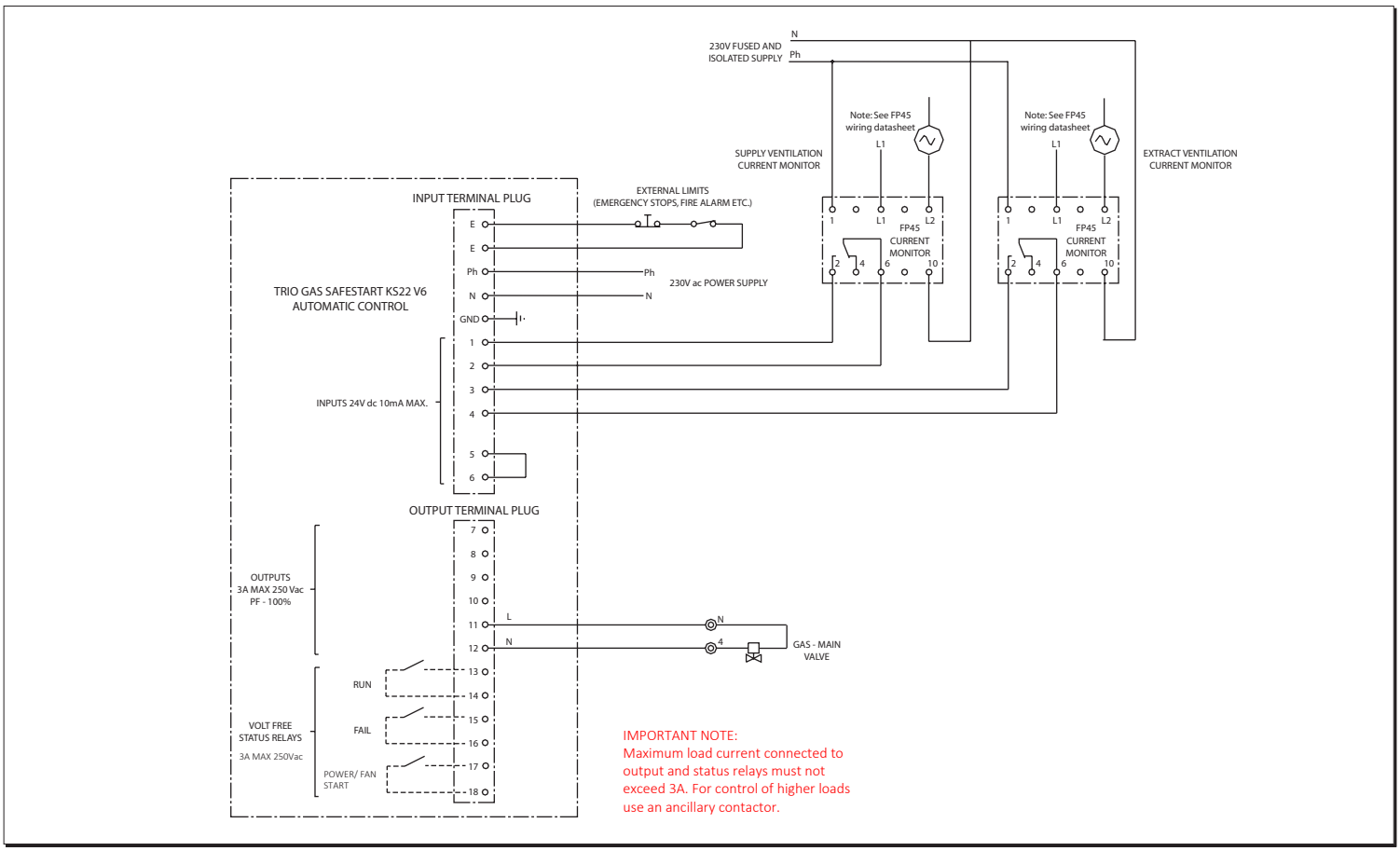


A Typical electrical connection for a commercial catering kitchen when flame failure devices are fitted to all gas appliances. This system shows ADP10 air pressure switches for supply and extract (Fig. 3)

Wiring Diagrams (cont.)

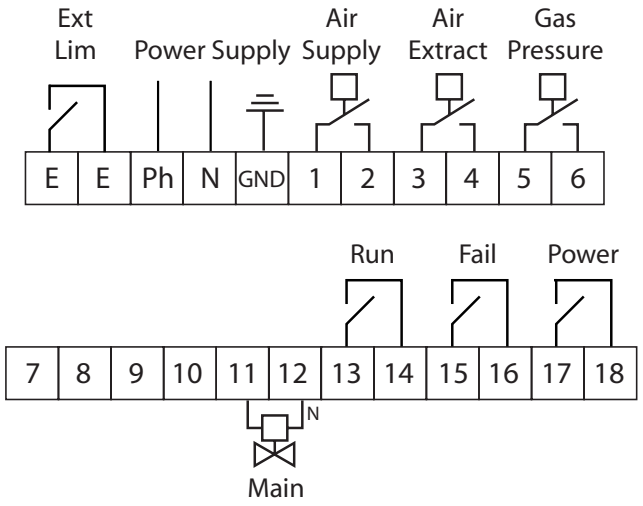


A Typical electrical connection schematic for a commercial catering kitchen. Flame failure devices ARE NOT fitted to all gas appliances. This system shows Ventilation proved using FP45D current monitors (Fig. 4)



A Typical electrical connection for a commercial catering kitchen when flame failure devices are fitted to all gas appliances. This system shows FP45D current monitors for supply and extract air (Fig. 5)

Terminal Block



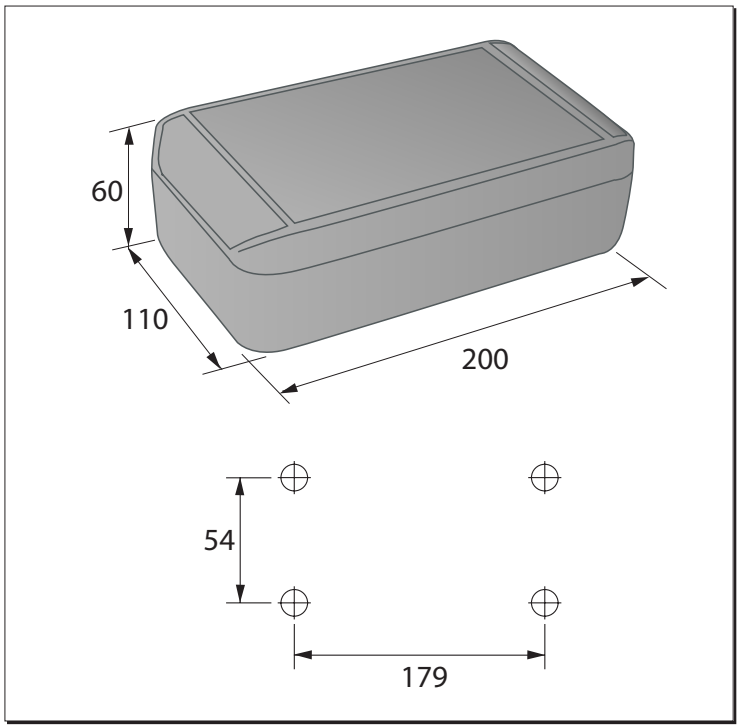
E - External limit/interlock (Out)
E - External limit/interlock (Return)
Ph - Power supply phase
N - Power supply neutral
GND - Protection ground
1 - Supply air pressure switch (Out)
2 - Supply air pressure switch (Return)
3 - Extract air pressure switch (Out)
4 - Extract air pressure switch (Return)
5 - Gas pressure switch (Out)
6 - Gas pressure switch (Return)
7 - N/A
8 - N/A
9 - N/A
10 - N/A
11 - Main gas valve (Phase)
12 - Main gas valve (Neutral)
13 - Run SPST contact
14 - Run SPST contact
15 - Failure SPST contact
16 - Failure SPST contact
17 - Power on SPST contact
18 - Power on SPST contact

Terminal block layouts (Fig. 6)

Specification

Supply voltage	230 V ±15%
Frequency	50/60 Hz
Power consumption	7 VA max
Max out switching voltage	250 Vac / 100 Vdc
Max out current (all relays)	3 A
Max out breaking capacity	2500 VA
Out contact operations	> 100 x 103
External limit contact	> 3A @ 250Vac
Line fuse 5x20mm	SLOWBLOW 3 A
Operating temperature	0 to 60 °C
Storage temperature	-20 to 80 °C
Gasket silicon	-40 to 120°C
Relative humidity	Also condensing 90 % max
Enclosure	ABS/FR -40°C ÷ 80°C halogen free
Dimension	200x110x60 mm
Colour	Light grey RAL 7035
Protection class (EN69529)	IP66
Flame retardant	UL94 V-0
Mounting position	Any
Weight	<1Kg max
G161 Gas Safestart assembly max operating pressure	50 mbar

Dimensions



KS22 V6 dimensions (Fig. 7)

