Alarm messages:

" E-Stop Pressed ",	Either the front panel or external emergency stop buttons are pressed.
" Fire Alarm ",	The external fire alarm contact is open.
" Proving Failed ",	The gas proving sensor indicated no gas pressure at the end of the proving cycle. – Gas will not come on (Note 1).
" Sup Fan Low ",	The supply fan current is below the lower limit.
" Sup Fan High ",	The supply fan current is above the higher limit.
" Ext Fan Low ",	The extract fan current is below the lower limit.
" Ext Fan High ",	The extract fan current is above the higher limit.
" CO2 Warning ",	The external sensor indicates a warning level of CO_2 (Note 2).
" CO2 Level High ",	The external sensor indicates a high level of CO_2 (Note 2).
" CO2 Sensor Flt ",	There is no signal from the external CO_2 sensor (Note 2).

Engineering Menu: -Code 1111 (Hold 3 & Press 4 to enter code)

"Fan Start"	Time allowed for fans to start. 1 to 100 seconds, default 10.
"Test Fill"	Time that test valve opens for at the start of the gas proving cycle (Note 1). 1 to 10 seconds, default 2.
"Proving "	Time allowed after the test fill period before checking the gas proving signal. 1 to 10 seconds, default 10 (Note 1).
"Run On "	Time that fans will run after shutting the gas valve after a CO fault. 1 to 20 minutes, default 2.
"Re Alarm "	Re-Alarm time when siren cancelled in warning state. 1 to 60 minutes, default 3.
"CO2 Warn "	Threshold setting for gas warning 2000 – 2800 ppm, default 2200 (Note 2).
"CO2 Limit"	Threshold setting for gas shut-down 2000 – 3500 ppm, default 2500 (Note 2).

Fan setting Menu: -Code 4444 (Hold 3 & Press 4 to enter code)

"S Fan Hi "	Supply fan high current alarm limit. 0.00 to 20.00 Amps.
"S Fan Lo "	Supply fan low current alarm limit. 0.00 to 20.00 Amps.
"E Fan Hi "	Extract fan high current alarm limit. 0.01 to 20.00 Amps.
"E Fan Lo "	Extract fan low current alarm limit. 0.01 to 20.00 Amps.

Operating stage (displayed on top line of text when no alarms):

" Off ",	System is off, press 'start' to begin.
" Starting Fans ",	Fans started.
"Gas Proving Fill",	Gas proving, system being filled from the test valve (Note 1).
"Gas Proving Wait",	Gas proving, waiting before checking the proving pressure (Note 1)..
" Running ",	Running with gas valve open.

Note 1. Only if 'Gas Proving' selected – See DIP switch settings.
Note 2. Only if CO_2 sensor is selected – See DIP switch settings.

DIP switches:

Dip Switch 4: ON = Gas proving enabled. OFF = Gas proving disabled.
Dip Switch 3: ON = Current alarms are warning only. OFF = Current alarms shutdown gas valve.
Dip Switch 2: ON = CO_2 sensor enable.   OFF = CO_2 sensor disabled.
Dip Switch 1: not used.

Basic operating cycle:

When off, the fans are off and the gas valves are closed.

Pressing the start button will switch the fans on.

The system waits for up to "Fan Start" seconds for the fans to reach operating performance.

If gas proving is enabled, the gas test valve is opened for "Test Fill" seconds to pressurise the installation. The system then waits for the "Proving" time before checking the signal on the gas proving input; if the pressure has been maintained then the system moves on to run, otherwise the "Proving Failed" alarm is raised.

Pressing the stop button at any time will return the system to the off condition. If the gas has been switched on for any time then the fans will run-on for the selected time before stopping.

Operating the E-stop or Fire Alarm inputs at any time will immediately shut the gas valve and stop the fans running.

Once running, if the fan current goes above or below the set limits then an alarm is raised and displayed on the screen. If Dip Switch 3 is 'off' then the system will switch the fans off once the run-on time has elapsed. If Dip switch 3 is 'on' *and* the CO2 sensor is enabled (Dip switch 2 'on') then the system will continue to run but the siren will re-alarm after the selected time.

With Dip Switch 2 'on' CO2 PPM will be displayed on the bottom line of the display alternating with the supply and extract fan currents.

Active alarms are shown on the top line of the display. Press 2 to cancel the audible alarm siren. Press 1 to reset the system once the alarm has been cleared.

The BMS fault relay will close on any fault.