medem SafeSpace V

Please read this sheet as it contains important information

Before commencing installation please familiarise yourself to the equipment by reading the comprehensive installation instructions. If in doubt then please call 0161 233 0600.

It is a statutory requirement that this safety system is installed and commissioned to the satisfaction of the manufacturer.

A commissioning certificate must be issued to the end user along with instructions for the operation of the equipment.

As the Manufacturer Medem UK should commission this safety system whereupon a commissioning report will be forwarded to the installing agent who should provide a copy to the end user.

medem SafeSpace V

Four Channel Gas Detection System

The **SafeSpace V** is a gas detection system with gas valve isolation, it can monitor the atmosphere for natural gas (CH4 & LPG), CO, CO_2 and Oxygen Depletion when fitted with the appropriate Medem detectors.

In the event of a high alarm from one of the sensors the system will isolate the gas supply by closing a connected 240v NC electric control valve.
Emergency stop buttons and thermal links can be monitored and a fire alarm can close the gas valve when connected to the panel.

Any alarm or power failure which causes the gas valve to isolate will require a manual reset of the system.

The system comprises of a mains powered panel capable of monitoring up to four sensors. The sensors are pre-calibrated by Medem (UK) Ltd such that they only require to be addressed then connected to the panel and functionally tested.

27/04/2017

SafeSpace V

Technical data sheet

The model SafeSpace V consists of a mains powered panel capable of operating up to four detectors.

The detectors are connected by low voltage 4 core cable (typically beldon cable) back to the control panel.
The detectors may be mounted up to 100mtrs from the control unit.
The complete system is designed to comply with the latest CE directives including the low voltage directive.

This is housed in an IP65 rated ABS enclosure measuring 180mm high x 129mm wide x 70mm deep.

Relay outputs:

Main valve relay rated at 5 amps to provide a switched live to the solenoid valve.
SELV relay rated at 48volts to activate a remote sounder/beacon or signal a BMS system.

The aux relay function depends on the setting of the "Aux RLY" DIP Switches - this is a dynamic (non-latching) relay. This can advise a BMS of any one of the following conditions.

AX1 - AX2
Off - Off = EM Stop & High Alarm
On - Off = Unused
Off - On = Gas On
On - On = Detector Fault

Gas Detector Types

AD-MED-CO	Carbon Monoxide Detector	(CO)
AD-MED-CO2	Carbon Dioxide Detector	(CO2)
AD-MED-M	Natural Gas Detector (Methane)	(CH4)
AD-MED-LPG	Natural Gas Detector (Propane)	(LPG)
AD-MED–OXY	Oxygen Depletion Detector	(O2)

Detector Alarm levels

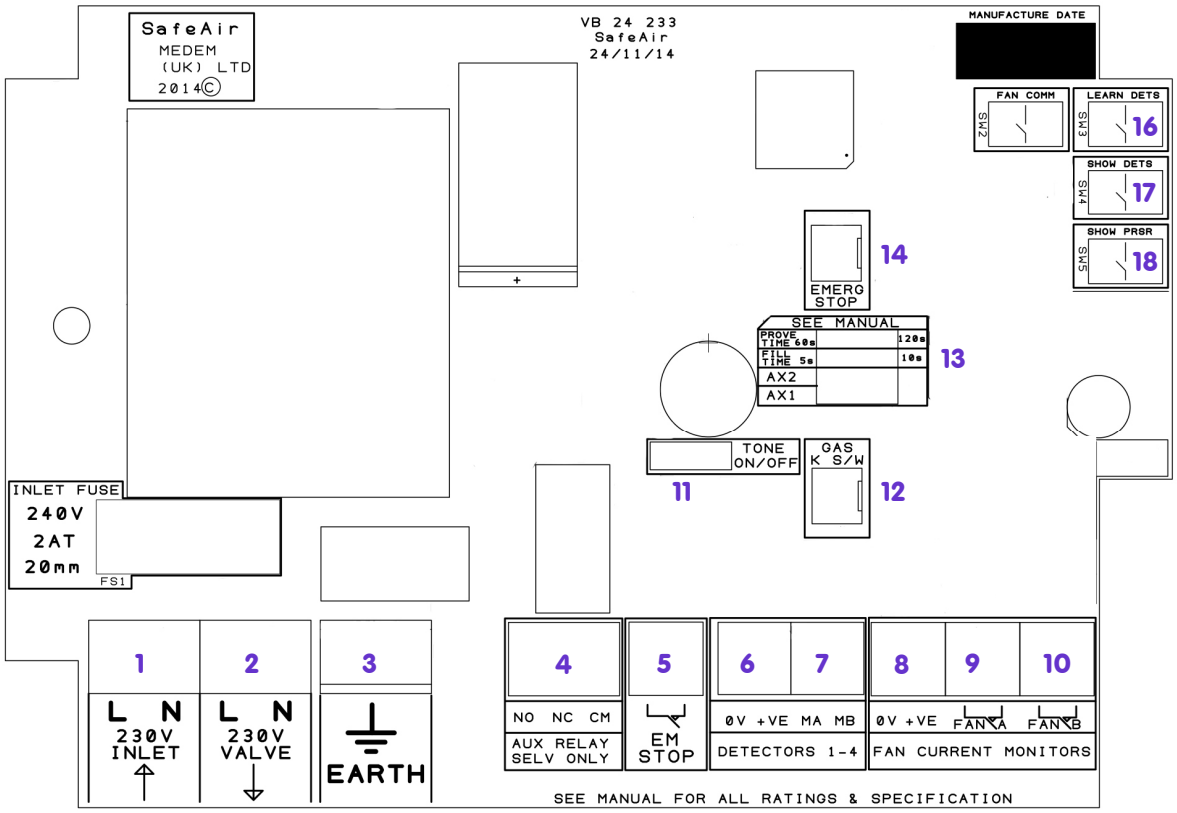
Type	Pre-Alarm	High Alarm
CO:	80ppm	100ppm
CO2:	2800ppm	5000ppm
CH4/LPG	5%	10%

All current wiring regulations must be followed with reference to running low and mains voltage cables together.

The maximum cable length between a detector and the control panel should not exceed 100 metres, if the distance between the main panel and the detectors is greater than 20metres a 1mm screened cable must be used on the +VE, 0v terminals

Gas detectors, require a four core screened Belden type security cable or 600v rated BMS cable (max cable length of 100meters.)
Remote emergency stops and thermal links require a two core screened cable.
Warranty will be void if Fire Protection Cable or cable over 1mm dia. is used on the SELV side.

SafeSpace V



Connections to panel: marked on board.

1. Live & Neutral 230 volts supply from 3amp switched fuse spur
2. 230 volts out to gas solenoid valve
3. Earth connection terminals
4. BMS to indicate, high alarm, gas on, EM stop, low alarm. (Using No13 AX1 & 2)
   - 00 = EM Stop & High Alarm
   - 10 = Unused
   - 01 = Gas On
   - 11 = Detector Fault

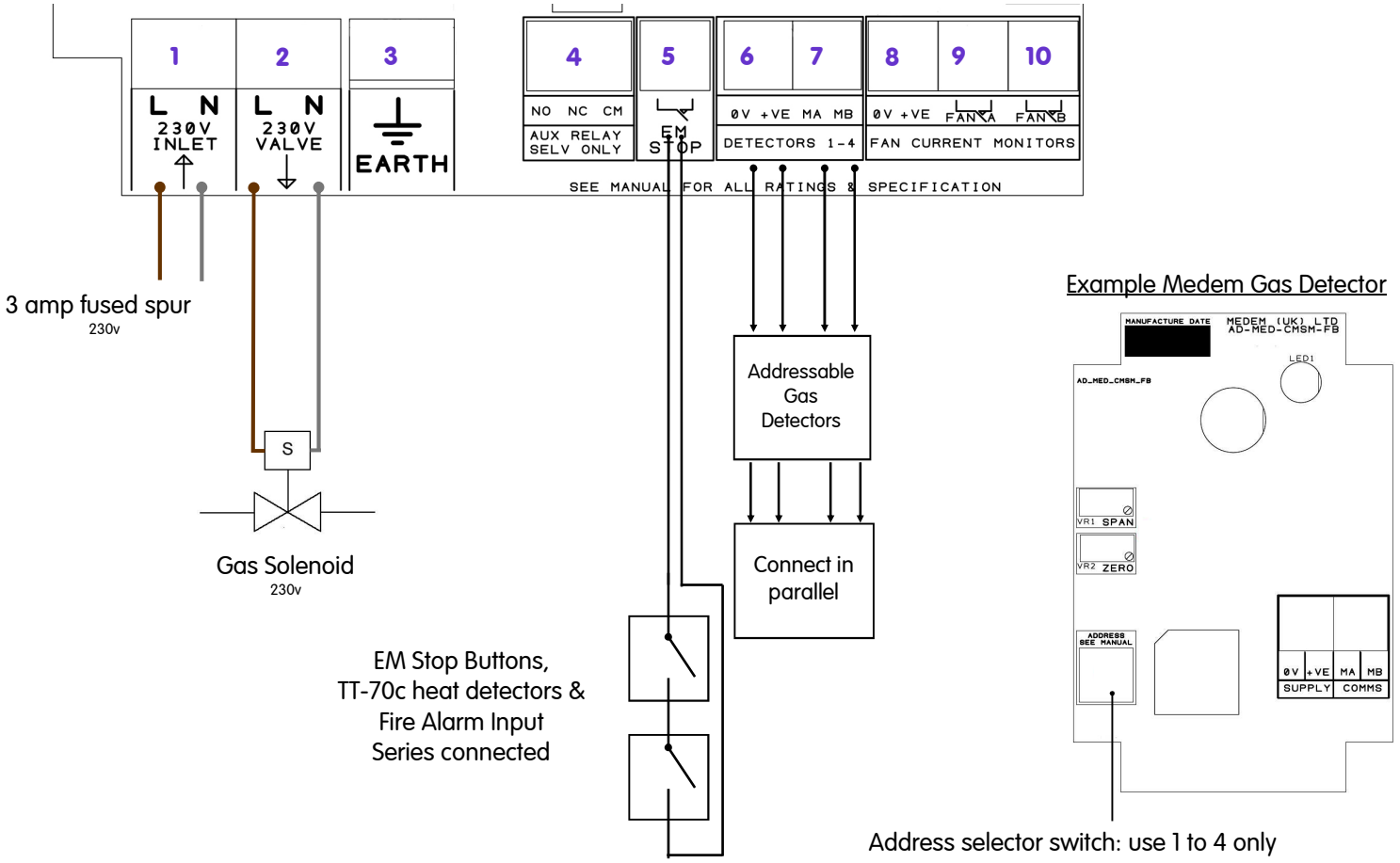
5. Remote emergency stop buttons SELV, connect in series multiple buttons (requires a N/C circuit) - Thermal links and Fire Alarm can also be connected in series

6. Power connections for detectors, Methane, LPG, CO, CO2, Oxygen, Temperature
7. Comms connections for detectors, Methane, LPG, CO, CO2, Oxygen, Temperature
8. 12 volt power for current monitor (CM2M-K)
9. Fan A interlock for current monitor (CM2M-K) or PD switches.
10. Fan B interlock for current monitor (CM2M-K) or PD switches.
11. Jumper link to disable audible alarm sounder.
12. Header socket for front panel key switch.
13. AUX relay settings (see No4).
14. Header socket for front panel Mute button.

16. Learn detectors button, press once only when all detectors are connected and powered
17. View detectors

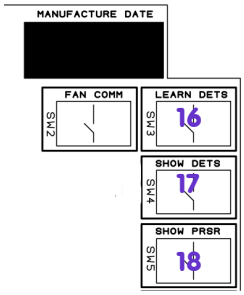
27/04/2017

SafeSpace V



Example Medem Gas Detector

Address selector switch: use 1 to 4 only



Installing gas detectors

Gas detectors are wired via a four core low voltage cable into terminals marked 6 & 7. The detectors must have **their** "address id selector switch" set to the addresses 1-4.

CO detectors must be number addressed before natural gas detectors.

Once connected and addressed the system must be "taught" which detector types are on which address. This is done by pressing button marked 16 'Learn Dets'. The system will beep to confirm the action.

Pressing No 17 will display detector addresses 1 &2, pressing 17 & 18 together will display addresses 3 & 4.

Detector Fault DXX Lost Comms

If the system displays a message "Detector Fault DXX Lost Comms" the system is informing you that a detector which has been previously "learnt" to address DXX is no longer communicating. This could be because the detector has had its address changed or has been removed. In which case "re-learning" using button 17 will correct the addressing.
If the detector is present, but not being seen by the system on its address channel, then check the wiring between the main control panel and detector.

SafeSpace V

27/04/2017

It is essential that the installation of the system is carried out in the order given below to ensure the correct operation of the system.

This guide, when completed, should be posted to Medem UK in order that the warranty period can be activated.

Site Name

Installing Company

Engineers Name

Date Completed

Return one copy of this sheet to the address below:

Manufactured by:
Medem (UK) Limited
Project House, 19 Dallimore Road, Roundthorn Industrial Estate,
Manchester, M23 9NX
Tel: +44 (0)161 233 0600
Fax:+44 (0)161 233 0601
sales@medem.co.uk

With the panel fitted to the wall the following steps should be followed.

1. Connect the Control valve twin & earth to the marked terminals.
2. Connect BMS, beacons, sounders etc to the relay outputs.
3. Connect any additional EM stop buttons and thermal links in series to the terminals marked "EM STOP".
4. Each detector has a rotary address switch and each switch should be set to a different number starting with "1". Then connect the gas detectors to terminals marked "detectors" on the panel. Detectors can be wired "Daisy chain".
5. Connect the 3 amp fused spur 240 volt supply to marked terminals.
6. Press the "learn dets button" this is on the main circuit board in the top right corner. Pressing this once allows the panel to learn how many and which type of detectors are fitted.
7. Once power is connected to the panel the detectors will flash the green LED's for 90 seconds after which the LED's will be on continuously.
8. Turn on the Key-switch to start the system and open the gas valve.

Tick as each step is completed

1: All wiring checked tight and connected as per the installation instructions.	
2: Each detector has an individual number from adjusting the rotary switch before the "learn" button was pressed.	
3: All detectors have a solid green LED Illuminated when not in alarm.	
4: Each detector has been recognised by the panel.	
5: On applying test gas to the detectors the LED turns red and the panel alarms and closes the gas valve.	
6: On activating each emergency stop button the panel alarms and closes the control valve.	

Detector type	Methane	CO	LPG
Number fitted			

Please do not hesitate to call for advice on the following numbers:
0161 233 0600 office hours