SafeSpace M

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 M

Four Channel
Gas Monitoring System

The **SafeSpace M** is a gas detection system, 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 alarm. Any connected remote beacons and sounders would then be activated..

The system will automatically restart after a power failure.

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

SafeSpace M

Technical data sheet

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

The system will automatically restart after a power failure.

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:

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 = High Alarm
 On - Off = Unused
 Off - On = Unused
 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%
OXY-DEP	19.5%	18%

All current wiring regulations must be followed with reference to running low and mains voltage cables together.
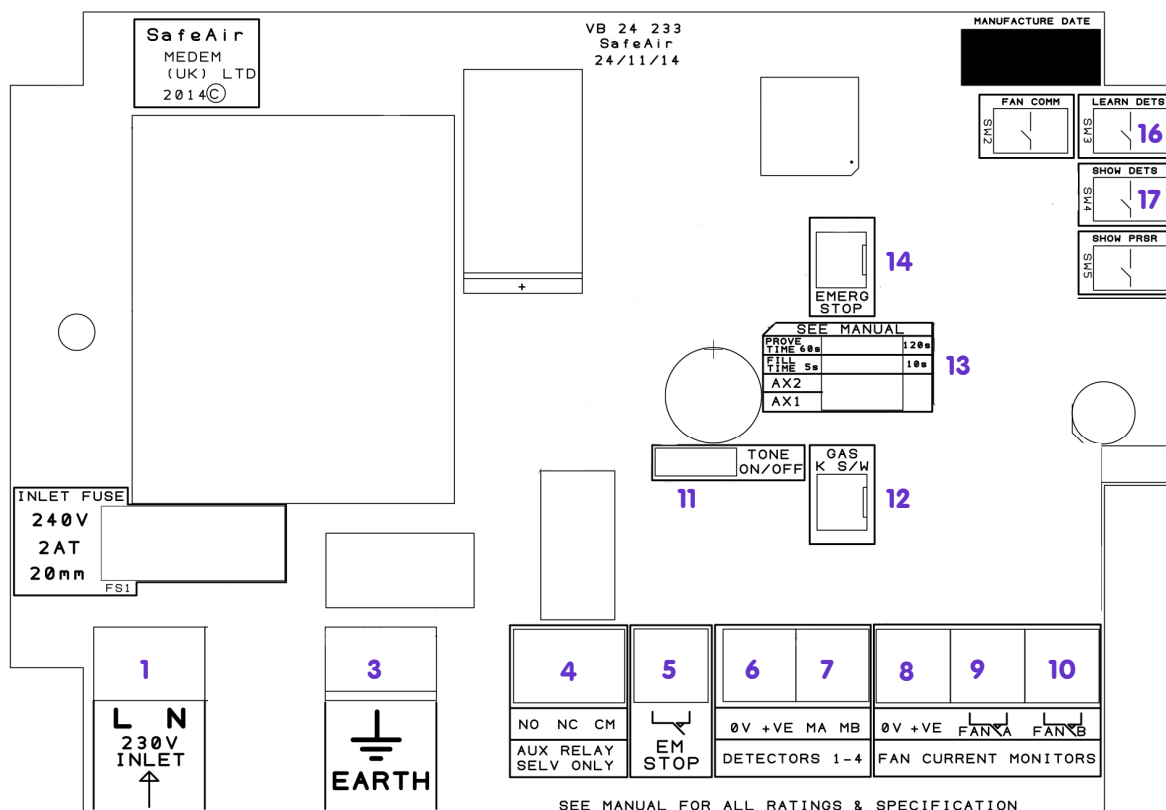
The maximum cable length between a detector and the control panel should not exceed 100 metres, if the distance between the main panel and the detectors is greater than 20metres a 1mm screened cable must be used on the +VE, 0v terminals

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.
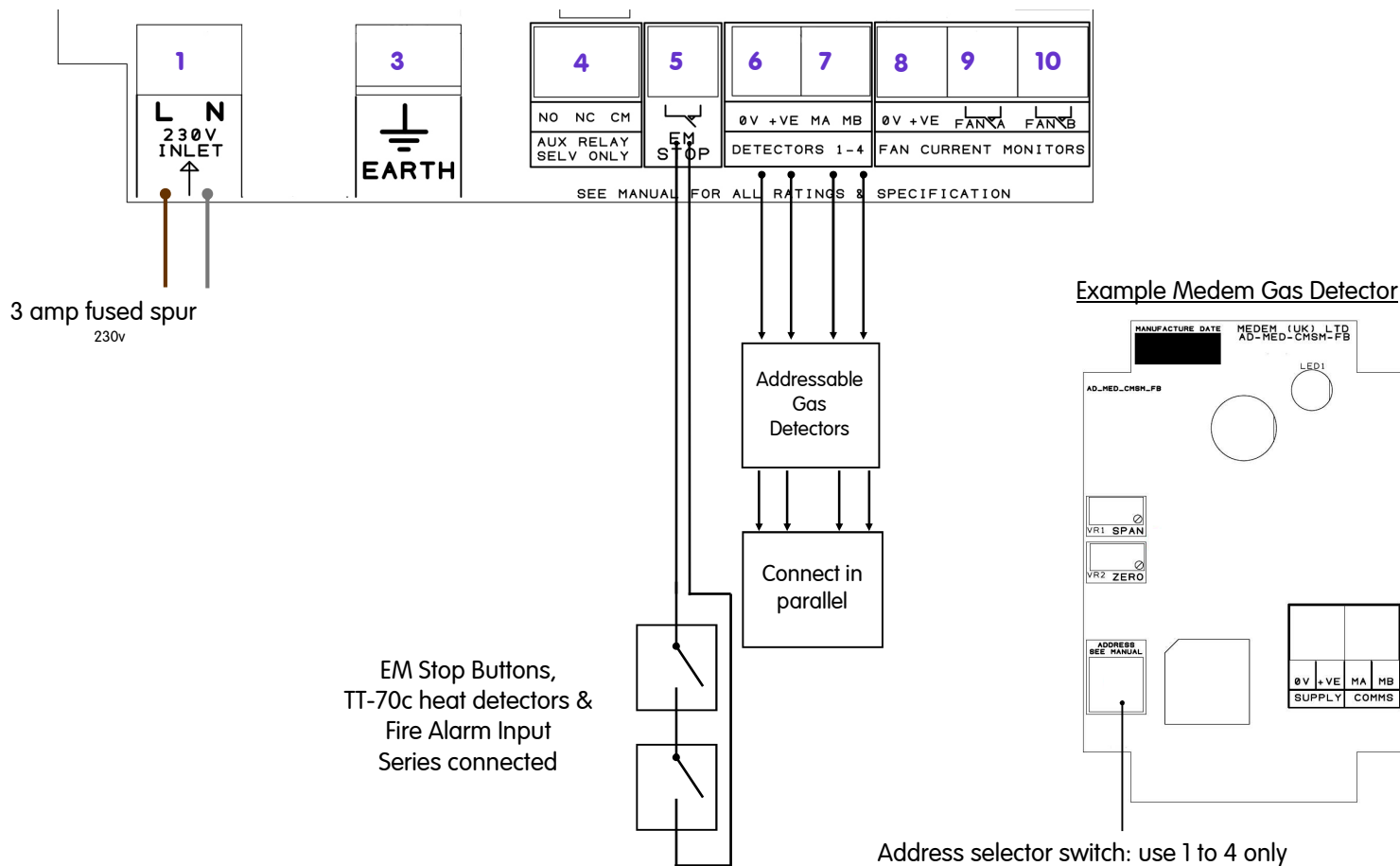
medem **SafeSpace M**

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Connections to panel: marked on board.

1. Live & Neutral 230 volts supply from 3amp switched fuse spur

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

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1	3	4	5	6	7	8	9	10
L N		NO NC CM		0V +VE MA MB		0V +VE	FAN A	FAN B
230V INLET	EARTH	AUX RELAY SELV ONLY	EM STOP	DETECTORS 1-4		FAN CURRENT MONITORS		

SEE MANUAL FOR ALL RATINGS & SPECIFICATION

3 amp fused spur
230v

Addressable Gas Detectors

Connect in parallel

EM Stop Buttons,
TT-70c heat detectors &
Fire Alarm Input
Series connected

Example Medem Gas Detector

MANUFACTURE DATE   MEDEM (UK) LTD
AD-MED-CMSM-FB

AD_MED_CMSM_FB

LED1

VR1 SPAN

VR2 ZERO

ADDRESS
SEE MANUAL

0V +VE   MA MB
SUPPLY   COMMS

Address selector switch: use 1 to 4 only

MANUFACTURE DATE

FAN COMM	LEARN DETS
SW2	SW3 16
	SHOW DETS
	SW4 17
	SHOW PRSR
	SW5 18

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.

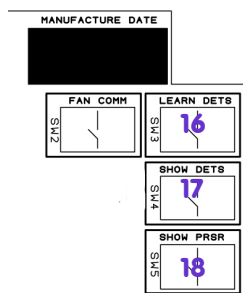CO detectors must be number addressed before natural gas detectors.

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.

medem SafeSpace M

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 BMS, beacons, sounders etc to the relay outputs.

2. Connect any additional EM stop buttons and thermal links in series to the terminals marked "EM STOP".

3. 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".

4. Connect the 3 amp fused spur 240 volt supply to marked terminals and switch on.

5. 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.

6. 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.

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.

Detector type	Methane	CO	LPG
Number fitted			

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