GENT
by Honeywell

Installation Instructions

Vigilon Compact Voice Alarm panel based

Fire detection and voice alarm system

Contents

Preface

This is the fifth issue of the Installation instructions for the **Vigilon Compact Voice Alarm system**. The manual covers information on the main control panel and installation of devices on the loop circuits to include the micro Distributed Amplifier Unit and various speaker types that can be wired to the micro DAU.

These instructions must be read in conjunction with the recommendations in *BS5839:Part 1,* which is the *code of practice for Fire detection and alarm systems for buildings.*

Associated Documents

4188-769 - Operating instructions
4188-749 - Log book

Conventions

This is a note to highlight important text that is normally hidden in the main text.

This is either a caution to prevent damage to the equipment or a warning to inform of dangerous conditions that may result in injury or death.

Abbreviations

ac - Alternating current
ACC - Audio Controller Card
ADC - Analogue to Digital Converter
AS - Anti surge
BGM - Background Music
C - Common
CH - Channel
DEV - Device (Loop device)
DIL - Dual in line
DKC - Display keyboard card
DPCO - Double pole change over (relay contacts)
EOL - End of line
EP - Environmentally protected
ESD - Electrostatic discharge
GND - Ground
HF - High frequency
I/F - Interface
IO or I/O - Input Output
IP - Ingress protection
IR - Infra Red
LCD - Liquid crystal display
LED - Light emitting diode
LPC - Loop processor card
LPCB - Loss prevention council certification board
LVD - Low voltage directive
MCB - Master control board (CARD 0)
MCP - Manual call point
MIC - microphone
micro DAU - micro Distributed Amplifier Unit
MPEG - Moving Picture Expert Group
MRC - Master repeat card
N/C - Normally closed
N/O - Normally open
NVM - Non Volatile Memory (NVM on MCB CARD14)
OC or O/C - Open circuit
OS - Outstation (Loop device)
PA - Public address
PCB - Printed circuit board
PIN - Personal identification number
(Usercode, password or access code)
PSU - Power supply unit
PTT - Press To Talk
PVC - Polyvinyl chloride
QB - Quick blow (fuse)
RAM -Random access memory
ROM - Read only memory
SC or S/C - Short circuit
SPCO - Single pole change over (relay contacts)
T - Anti-surge (fuse)
TBA - To be advised

Notes on system installation

The power-up of the control panel and commissioning of the system is done by the Servicing organisation.

Installation requirements

It is recommended that the installer follow the general requirements of *BS5839:Part 1:2002*, which is the *code of practice relating to fire detection and alarm systems for buildings* and *BS5839:Part 8:1997*, which is the *code of practice for the design installation and servicing of voice alarm systems.* The installer must follow the relevant parts of *BS7671 : 1992 Requirements for Electrical installations, IEE wiring regulations 16th edition* if installation is in the United Kingdom, UK.

Second fix installation

To prevent the possibility of damage or dirt degrading the performance or appearance of the products, the installation of second fix items should be delayed until all major building work in the area is complete.

The installation of all outstanding parts are usually carried out during commissioning of the system.

Fixture and fittings

It is the installers responsibility to provide adequate fixtures and fittings for the type of construction surface onto which a product is to be installed, whilst utilising the fixing points on the respective product. As an aid to this decision, the weight and overall size of each full assembly together with implications on cable entries and routing should be taken into consideration.

All these procedures assume that the cable, gland, steel box (BESA box) and other related accessories are provided by the installer.

As fitted drawings

The installer should acquire site specific information from the interested parties, for details on the location of products for installation. The acquired information together with this guide and the relevant standards should be used to assist the work.
Each product assembly can be identified from its package label. The contents of all packages should be checked for any discrepancies.

Cable type and routing

Appropriate attention must be given to ensure the correct cable type is installed in accordance with as fitted drawings, site specific information and recommendations of *BS5839 Part 1 : 2002*. The cables must be installed using cable manufacturers recommended fixing and accessories.

Speakers fitted on ceiling tile

The installer should provide where required a suitable backing board that is fixed behind the ceiling tile to support the installed ceiling speaker assembly.

Fire sensor covers

Each fire sensor may be supplied with a plastic dust cover. If supplied, the cover must be fitted to prevent dust and dirt from the building work contaminating the fire sensor.

Earth continuity

All earth connection points should be **clean to provide a good electrical conductivity path. To maintain the earth continuity: all earth leads and fittings** provided should be installed. The **loop cable** screen must be continued through each system device on the loop circuit, whether the earth is connected to the device or not.

Do not use any part of building structure for earthing.

Some of the system products having metal enclosures have a **zinc coating** around the cable termination points, the coating provides a good electrical conductivity path for cable earth termination. The zinc coating on metal enclosures should not be damaged. Any damage will expose bare metal, which can corrode and make a poor earth connection.

Power supply

The power to the system is derived from the mains and battery supplies. Before servicing the system ensure both mains and battery supplies are disconnected.

Mains supply

Mains supply to any fire alarm control and indicating equipment must be via an unswitched 5A fused spur unit. A disconnect device must be provided to disconnect both poles and must have a minimum gap of 3mm. The disconnect device should be available as part of the building installation and must be easily accessible after installation is complete.

All mains powered equipment must be earthed.

Local Manual Call Point

To comply with the requirements of EN54 : Part 2 : 1997 a conventional manual call point must be installed near the main control panel. The call point must be wired to the monitored line input of the control panel. During commissioning of the system the Command Build No 250 associated with the monitored line input must be set up to evacuate all sectors without delay.

Failure to install and configure a local manual call point in the manner described above when delays are set up on the system will result in the panel not complying to EN54 : Part 2 : 1997.

System wiring

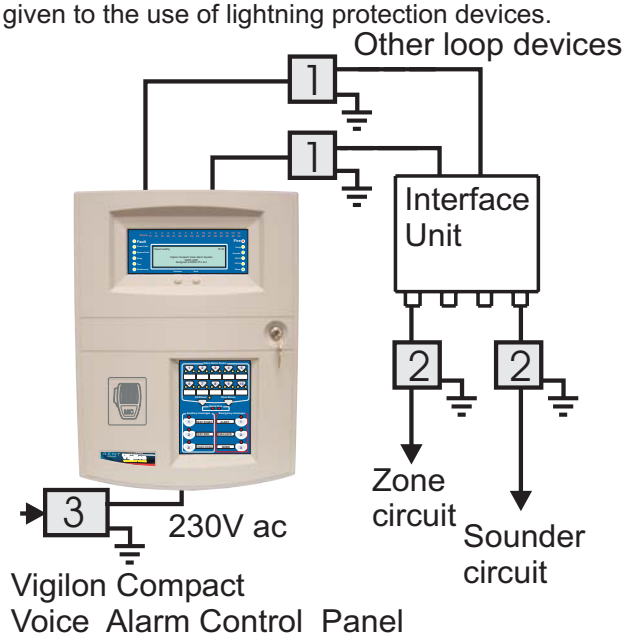
If instructed, the installer may need to terminate as well as connect the cables to the appropriate terminal blocks.

Cable separation

Where the outgoing and return cables of a loop cover more than the equivalent of one zone they must **not** run together, for example, either close to the **Control Panel** or in a **service duct**. There should be as much physical separation as possible between the cables and the mechanical protection of the cable should be to a particularly high standard. This is to minimise the risk of accidental damage to both cables.

Lightning protection

Where a loop cable is mounted to an external wall or between two buildings then consideration should be given to the use of lightning protection devices.



There must be a good earth connection to the voltage surge protection device.

1 Loop voltage surge protection

2 Input Output line voltage surge protection

3 Mains 230Vac voltage surge protection

Requirements of cables

The *British Standard BS5839 Part 1 : 2002 Code of practice for system design, installation, commissioning and maintenance* states the requirements for standard and fire resisting cables in Clause 26.2 section d and e.

"d) **Standard fire resisting cables** should meet PH 30 classification when tested in accordance with EN50200 and maintain circuit integrity if exposed to the following test:

- a sample of the cable is simultaneously exposed to flame at a temperature of 830ºC- 0+40ºC and mechanical shock for 15min, followed by simultaneous exposure to water spray and mechanical shock for a further 15min.

e) **Enhanced fire resisting cables** should meet the PH120 classification when tested in accordance with EN 50200 and maintain circuit integrity if exposed to the following test:

- a single sample of the cable is simultaneously exposed to flame at a temperature of 930ºC - 0+40ºC and mechanical shock for a period of 60min, followed by simultaneous exposure to water spray and mechanical shock for a further 60min."

The cables listed in this manual are those that have been tested for EMC compliance with the system products.

Loop Cable usage

There is a maximum limit of 1Km loop cable usage allowed per loop circuit. This maximum limit is the sum of the cable used on main loop circuit, spurs off main loop circuit, plus cable runs to all input / output lines off loop powered interface units installed on the same loop.

There is a further maximum limit of 100m cable run allowed per input/output line off loop powered interface unit.

Loop cable

Vigilon loop cable carries both data and power, therefore its selection is important. Note the following:

- ☐ In countries where the European EMC directive is in force, only ***EMC Compliant*** cables are to be used.
- ☐ The loop cable usage must not exceed **1Km**. This includes the cable used on main loop and spur circuits.
- ☐ Single pair cable must be used. It is **NOT** permissible to run mixed loops or outgoing and return pairs in a multi core cable, due to inadequate separation and possible electrical interference problems.
- ☐ Each core of the loop cable must not be less than **1.5mm^2** cross section area.
- ☐ the cable screen must be **capable** of being earthed at each system device (outstation).
- ☐ **Red** is the preferred cover sheath for fire applications.
- ☐ The specified loop circuit cables are **also suitable** for wiring master alarm, auxiliary relay, input/output lines and mains supply.

Enhanced cables

- ☐ Mineral insulated cable (MICC) to BS6207:Part 1
- ☐ Approved Enhanced cable: Draka Firetuf Plus Enhanced **FTPLUS2EH1.5RD**

Standard cables

Approved EMC cables for loop wiring

- ☐ Draka Firetuf EMC Standard 1.5mm^2 **FTEMC2EH1.5RDR**
- ☐ Draka Firetuf **FTZ2E1.5 FIRETUF OHLS *** fire resistant data cable
- ☐ Raydex CDT **FG950 ***
- ☐ Cavicel SpA **FIRECEL SR 114H *** distributed by Cables Britain
- ☐ AEI Cables **FIRETEC ***
- ☐ BICC Pyrotenax **FLAMESIL FRC ***
- ☐ Datwyler **LIFELINE ***
- ☐ Alcatel cable **PYROLON E *** distributed by Winstonlead
- ☐ Huber & Suhner **RADOX FR ***
- ☐ Pirelli **FP200 FLEX ***
- ☐ Pirelli **FP200 GOLD ***

The cables marked * utilise laminated aluminium tape with a tinned drain wire for electrostatic screening. Under certain environmental conditions *galvanic action* may take place between the aluminium and the drain wire. This will severely *degrade EMC performance* as the foil to drain wire *impedance will increase.* Armoured variants of these can also be used for wiring a loop circuit.

Audio loop and Speaker circuit cables

Any one of the recommended **loop cable** may be used to wire the Audio loop and speaker circuits. Cable usage:

- ☐ must not exceed 1Km per audio loop circuit
- ☐ must not exceed 100m per speaker circuit.

Mains Supply cable

The mains supply cable must be a standard fire resisting type and should meet PH30 classification, such a any of the standard and enhanced cables listed above.

Background music and PA circuit cable

The recommended cable for the connection of the Entertainment system and Public Address microphone to the Vigilon Compact Voice Alarm panel is that it must be a screened audio cable, such as:

- ☐ Belden No. 9842 EIA RS485 Applications, O/A Beldfoil® Braid
  - The cable usage must not exceed 100m.

Repeat indicator to Control panel cable

A maximum of 1Km cable distance is allowed between Control Panel and Repeat indicator panel

- ☐ Belden No. 9842 EIA RS485 Applications, O/A Beldfoil® Braid having two twisted pairs

Network cables

Enhanced Network cables

☐ **Mineral insulated copper cable (EMC Compliant)**
800m maximum Panel to Panel cable distance.
- BS6207: Part 1
- 3 parallel cores
- having continuous metal sheath encapsulating
- each core having 1.5mm^2 cross section area
- a **red** cover sheath (preferred for alarm applications)

☐ **Fireshield Enhanced FSN G2000**
1.2Km maximum Panel to Panel cable distance
- 3 Core (1 pair + 1 and earth
- each core having 1mm^2 cross section area

Standard Network cables

☐ **Delta Crompton Firetuf FDZ1000***
1200m maximum Panel to Panel cable distance
- Three core

☐ **Huber & Schner Radox series FR communication cable***
1200m maximum Panel to Panel cable distance
- Three core twisted triad screened
- 1.5mm^2 (7/0.42 stranded) conductors
- Nominal impedance 200 ohms (1KHz)
- Capacitance between conductors 110pF/m (1KHz)
- Capacitance between screen to core 210pF/m (1KHz)
- Fire resistance tested to BS6387 category CWZ and IEC 331.

☐ **Belden No 9729 (UL Style 2493) (EMC Compliant)**
1200m maximum Panel to Panel cable distance
- Two twisted pairs
- Each pair individually screened 24AWG (7 strands x 32 AWG)
- Capacitance between conductors 39.4pF/m at 1kHz
- Capacitance conductor to screen 72.2pF/m at 1kHz
- Temperature range -30°C to +60°C .

☐ **Belden Armoured equivalent (EMC Compliant)**
This cable being a two pair cable to BS5308:Part 1 (type 2) 0.5mm^2 (16/0.2mm).
600m maximum Panel to Panel cable distance.

☐ **Teflon jacketed Belden TR No. 89729**
1200m maximum Panel to Panel cable distance
- Two twisted pairs
- Each pair individually screened 24AWG (7 strands x 32 AWG)
- Capacitance between conductors 39.4pF/m at 1kHz
- Capacitance conductor to screen 72.2pF/m at 1kHz
- Temperature range up to 200°C

☐ **Belden No. 9842 EIA RS485 Applications, O/A Beldfoil® Braid**
1200m maximum Panel to Panel cable distance
- Must have following characteristics:
- Two twisted pairs
- 24AWG (7 strands x 32 AWG) conductors
- Characteristic impedance - 120 ohms
- Capacitance between conductors - 42pF/m at 1kHz
- Capacitance conductor to screen 75.5pF/m at 1kHz

☐ **Pirelli FP200 Flex* (EMC Compliant)**
800m maximum Panel to Panel cable distance
- 3 Core
- each core having 1.5mm^2 cross section area

☐ **Pirelli FP200 Gold* (EMC Compliant)**
1.2Km maximum Panel to Panel cable distance
- 3 Core
- each core having 1.5mm^2 cross section area

☐ **Pirelli FP Plus* (EMC Compliant)**
1.2Km maximum Panel to Panel cable distance
- 3 Core
- each core having 1.5mm^2 cross section area

☐ **Draka FT Plus (EMC Compliant)**
1.2Km maximum Panel to Panel cable distance
- 3 Core
- each core having 1.5mm^2 cross section area

☐ **Doncaster Cables Firesure Plus**
1.2Km maximum Panel to Panel cable distance
- 4 Core (2- pair plus earth)
- each core having 1.5mm^2 cross section area

The cables marked * utilise laminated aluminium tape with a tinned drain wire for electrostatic screening. Under certain environmental conditions *galvanic action* may take place between the aluminium and the drain wire. This will severely *degrade EMC performance* as the foil to drain wire *impedance will increase.*

Devices per Device loop

It is important that redundancy is built into the system to accommodate future expansions.

The number of devices on one loop circuit can be limited by the total number of addresses available, the electrical load on the circuit, the maximum cable length and other geographical considerations.

☐ A loop circuit must not cover more than **10,000m²** of floor area of a protected site.

☐ In total a maximum of **200** devices are allowed per loop circuit.

☐ As a general rule allow **1000** load factor per loop circuit

For a precise battery standby value use the Battery Loop Loading calculator. The Battery Loop Loading calculator tool is used during system design stage.

Device code number	Description		Load factor per device	Maximum devices per loop
COMPACT-DAU	micro Distributed Amplifier Unit (with max. speaker count of 10)	Max. -3dB -6dB	160 157 99	5
VIG-RPT-72 or VIG-RPT	Repeat panel (loop powered)		3	4 #
S2IP-ST-XX (Low profile range)	Strobe Red / Amber Strobe White		9 22	100 40
VIG-MIM VIG-ZONE	A2 Mimic Panel A2 Zonal Mimic Panel		3	4 #
S4-720	Heat Sensor		0.5	200
S4-780	Heat Sensor & Sounder		7 - 13*	125 - 60*
S4-720-ST-VO	Heat Sensor, Speech & Strobe		17 - 25*	55 - 35*
S4-710	Optical Heat Sensor		0.6	200
S4-770	Optical Heat Sensor & Sounder		6 - 12*	125 - 60*
S4-711-VO	Dual Optical + Heat Sensor & Speech		8 - 15*	125 - 60*
S4-711	Dual Optical Heat Sensor		0.6	200
S4-711-ST	Dual Optical Heat Sensor & Strobe		10	100
S4-771	Dual Optical Heat Sensor & Sounder		7-12*	125 - 15*
S4-711-ST-VO	Dual Optical Heat Sensor, Speech & Strobe		16-24*	55 - 35*
S4-911	Dual Optical Heat Sensor & CO		0.6	200
S4-911-ST-VO	Dual Optical Heat Sensor CO, Speech & Strobe		16-24*	55 - 35*
S4-34410 S4-34450 S4-34420	1 - LV Input interface module 4 - LV Input/Output interface module 1 - MV Output Interface module			
		Switch Input	1	200
		Relay Output	2	200
		Zone Input	26	30
		Every LED Output	5	100
S4-3441 or S4-34415	1 - MV Output Interface module		5	200

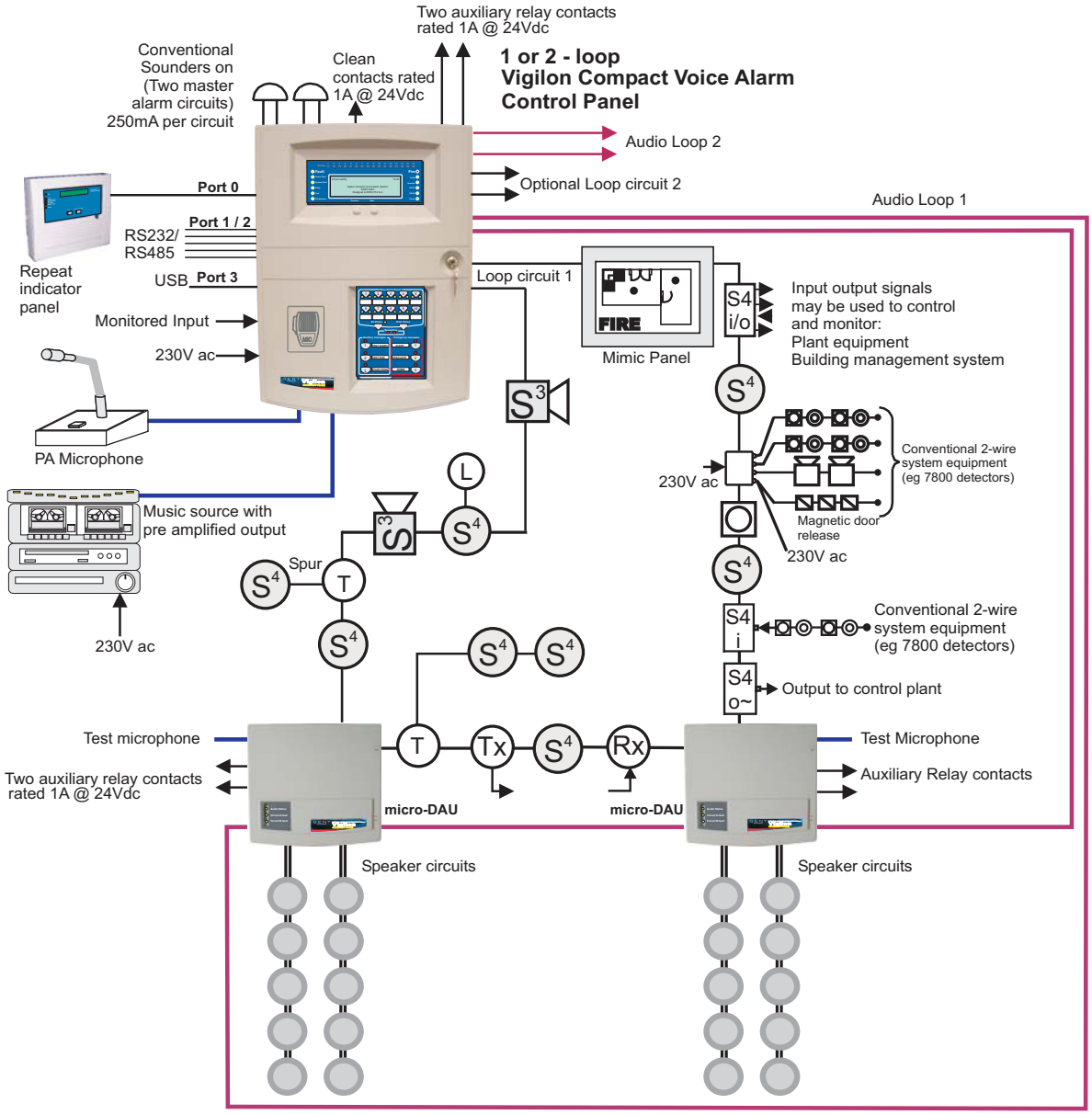
Device code number	Description	Load factor per device	Maximum devices per loop
34440	Mains powered interface	4	8~
S4-34800	new Manual call point	0.3	200
34760	Duct Sensor	1	200
34740	Beam sensor pair	3 (pair)	16 (pair)
34701	Tee breaker	0.4	200
S3-SN-X (low profile range) S3IP-SN-X (low profile range) S2IP-SN-X/XX (system range)	Standard tone	5	200
S3-VO-X (low profile range) S3IP-VO-X (low profile range) S2IP-VO-X (system range) S3-VP-X (low profile range) S3IP-VP-X (low profile range) S2IP-VP-X (system range)	Standard tone with speech Complex tone 'Tone n' with speech	6 17	200 70
S3IP-VO-ST-XX (low profile range) S3IP-VP-ST-XX (low profile range)	Standard tone with red strobe + speech Complex tone 'Tone n' with red strobe	14 25	60 40
S3IP-SN-ST-WA (low profile range)	Standard tone with red or amber strobe	13	60
S3IP-SN-ST-RW(low profile range)	Standard tone with white strobe	25	30

Supported products

34777	Repeat sounder	8	125
34415 or 34410	Single Channel Interface or Loop powered zone module	10	100 ~
34450	Loop powered interface	4	30~
VIG-MIM-A4 VIG-ZONE-A4	A4 Mimic Panel A4 Zonal Mimic Panel	2	4 #
COMPACT O 34710 34720 34729	Optical sensor Optical Heat sensor Heat sensor EP heat sensor	0.5	200
34710-RL 34710-ML	Optical heat + remote LED Optical heat + MCP	1 1	200 200
34770	Optical Heat Sounder	8	125
34780	Heat sounder	8	125
34702 34703	Slave LED Slave Relay unit	0.4	100

- These quantities have been revised due to changes in product specification
~ - A maximum of up to 100 input channels are allowed per loop.
* - These values are applicable when sounder is operating in turbo mode or with bell tone.
LV - Low voltage
MV - Medium voltage

Vigilon Compact Voice Alarm Architecture



Addressable System Devices (Outstations)

- S-Quad Sensor Speech Sounder & Strobe
- S-Cubed Voice enhanced Speech, Sounder, Strobe Unit
- Manual Call Point
- T Breaker
- Beam sensor Transmitter and receiver
- micro-DAU
- S4 4-Input/Output loop powered interface
- S4 1-Input loop powered interface
- S4 1-Output + Confirmation input loop powered interface
- S4 Mains switching output loop powered interface
- 4 - Input/Output mains powered interface unit
- Speaker

Conventional Products off interface inputs

- Magnetic door release
- Alarm sounder
- Conventional Fire Detector
- Manual Call Point
- End of Line Unit

LED off S⁴ sensor

- Remote LED

Where S³ and S⁴ voice products are installed in the system, ensure they are acoustically separate from the Voice alarm speaker circuits.

Vigilon Compact Voice Alarm panel

The Vigilon Compact Voice Alarm panel is designed to meet the requirements of EN54 Parts 2 and 4 and BS5839 Part 8. The panel can accommodate up to 2 loop circuits of Vigilon analogue addressable devices, like fire sensors, manual call points, interface units and micro distributed amplifier units. The system has two audio loops that provide announcement of central messages and live speech via speakers off micro distributed amplifier units. The panel gives local visual and audible indications of system events, fire zone, voice alarm zone status via indicators and message display. The panel has a built in emergency microphone for live announcements and a built in vu signal level meter. An integral mains derived power supply provides power to the panel and loops in normal and alarm conditions and the integral batteries provides a standby supply for up to 24 hours. A lockable front door prevents unauthorised access to the fire alarm controls and emergency microphone. The panel is designed for both flush and surface mounting and facilitates both rear and top cable entry points.

Features

- ☐ Analogue addressable fire alarm control panel.
- ☐ Supports up to two loop circuits that accommodate analogue devices.
- ☐ Support connection of up to 31 panels in a secure network loop.
- ☐ Standby supply to power the system via batteries for 24 hours.
- ☐ Two audio loops over a local system for the centralised announcement of stored messages, live speech via emergency microphone and public address microphone, and background music via entertainment system.
- ☐ Up to 200 addressable devices can be connected to a loop circuit, devices like sensors, call point, Distributed Amplifier units, interface units, repeat and mimic panels.
- ☐ Two master alarm circuits.
- ☐ Dedicated RS485 (Port 0) to connect to repeat indicator panel(s).
- ☐ RS232 (Ports 1 and 2) to connect to external printer and Supervisor.
- ☐ Two sets of auxiliary relay change over contacts configurable to operate with fire, fault or disablement.
- ☐ One set of clean voltage-free change over contacts that operate with master alarms.
- ☐ Monitored input that actions a command build 250
- ☐ Alphanumeric LCD with back light to display event information.
- ☐ Integral 32 zone LEDs (with First fire flashing/steady options and an option to disable the integral zone indicators).
- ☐ LED lights for event indication.
- ☐ Local audible buzzer for event announcement.
- ☐ Push buttons for essential controls and menu driven commands.
- ☐ Two programmable LED indications **CB253** and **CB254**.
- ☐ Two programmable control buttons **U1** and **U2**.
- ☐ Emergency Microphone with press to talk facility.
- ☐ Connections for external Public Address (PA) microphone that outputs to configured voice alarm zones - optional
- ☐ Connections for external entertainment system to output Background music to configured voice alarm zones - optional
- ☐ Connections of Public Address PA microphone for paging personnel - optional
- ☐ 10 - Voice Alarm Zone controls and indications with select All Zones button and Clear Zones button that allows manual selection of zones to output emergency messages and auxiliary messages
- ☐ **3 emergency messages**, factory configured to output: (1) Fire Alert, (2) Fire Evacuate and (3) Bomb Alert. A tone is output before the message announcement. During commissioning the factory selected emergency messages can be changed.
- ☐ **3 auxiliary messages,** factory configured to output: (1) Fire alarm test start , (2) Fire alarm test end and (3) Stand Down. A tone is output before the message announcement. During commissioning the factory selected auxiliary messages can be changed.

Technical data

Control panel

Standard	Designed to EN54 Part 2 : 1997 and BS5839 Part 8
Panel dimensions in mm	height 547 x width 408 x depth 179
Panel weight	approximately 15Kg without batteries 1 - 12V 12Ah battery weight is 4Kg 2 batteries are required
Storage temperature	-10ºC to 55ºC
Operating temperature	0ºC to 45ºC
Relative Humidity (Non condensing) Temperature 5ºC - 45°C	up to 90%
Emission	BS EN 6000-6-3:2001 Residential, Commercial & Light Industry **Class B limits**
Immunity	BS EN50130-4: 1996: Part 4 Alarm systems: *Electromagnetic compatibility* Product family standard: *Immunity requirements for components of fire, intruder and social alarm systems*
Ingress Protection	IP31
Colour	Door: Grey (Pantone 422) Backbox: Graphite Grey (RAL 7024)
Plug in Card Card 1 Card 2	Loop processor card (supplied) Optional second loop card (This location is also used for optional Network card)
Loops (Analogue)	The panel supports up to two loop circuits. The second loop circuit is optional.
Devices per loop	A maximum of up to 200 addressable devices (outstations) per loop
Device labels	Each device can be given a 32 character label for identification to locate events in the system. Each MCP is restricted to 28 character label.
Audio loop	Connects to the micro DAU in the system for output of central messages and live announcements, plus power during fallback operation.
PA Microphone 1	Connects to a desktop or wall mountable paging microphone powered from the panel, having a press to talk PTT button and speak now LED indicator. The microphone connected here can be configured to output to preconfigured voice alarm zones.
PA Microphone 2	Not used
Background music	Pre-amplified 0dB max. stereo or mono input
Network Card	Supports connection of up to 31 panels in a secure network loop
Clean contacts	1 set of voltage free change over contacts rated 1A @ 24Vdc, active with master alarms
Auxiliary relays	Voltage-free contacts rated 1A @ 24Vdc
Aux relay 1	2 sets of change over contacts configured to operate immediately on a Fire event The relay is normally de-energised
Aux relay 2	1 set of change over contacts configured to operate immediately on a Fault event The relay is normally energised The relays can be re-configured to operate with Fire, Fault or Disablement event, with a maximum delay of up to 10 minutes and can operate in a normally energised or de-energised state.
Master alarm circuits and fuses	2 - (24 volt nominal) 250 mA max per circuit MA1 - fuse 250mA HBC (T) FS1 MA2 - fuse 250mA HBC (T) FS2 Both fuses are 20mm x 5mm in size and are located on the master control board
Monitored input	A closed input triggers a command build number 250. The input is normally open.

Ports	Port 0 and fuse	RS485 -Repeat indicator panel (P15) (Mode: **Repeat**) Includes a 24V supply protected by FS3 Fuse 200mA TE5 on MCB
	Port 1	RS232 -Printer / Commissioning Tool (P5) (Mode: **Std,** Printer, Universal or Ascom)
	Port 2	RS485 -Repeat indicator panel (P5) (Mode: **Std** or Repeat) USB - (P16) for Commissioning tool use The factory set baud rate for Port 0 it is 1200 and for Ports 1 & 2 it is 38400. Baud rate can be software reconfigured to another setting.
Indicators		Fire (red) 32 - Zones (red) - hidden til lit Verify (amber) CB253 (amber) CB254 (amber) Power (green) Fault (amber) Disablement (amber) System fault (amber) Power fault (amber) Sounder (amber) Test (amber) Delay (amber) Voice alarm zone (green) All zones (green) Speak now (red) Auxiliary messages 1, 2 and 3 (red) Emergency messages 1, 2 and 3 (red)
Display		Alpha-numeric display - 8 lines by 40 character per line, back-lit, (Black characters on green background, liquid crystal display)
Internal sounder		To announce Fire and Fault events, and a key press confirmation beep.
Controls (with door closed) Access level 1		Next and Previous buttons operable during Fire condition only

Factory configured Emergency and Auxiliary messages and pre tones (Audio Pack 1 has a range of messages and pre tones that can be selected instead of the factory configured ones for operation with the Emergency and Auxiliary controls on Compact Voice Alarm Panel, this change can only be made during commissioning by the servicing organisation)	Factory configured Emergency messages: 1 - Alert message - female voice *Attention tone: Pulsed* *Message: "Your attention please, the fire alarm has been activated in another area, please remain where you are and await further instructions."* 2 - Evacuate message - male voice *Attention tone: Nee Naw* *Message: "Attention please, attention please, this is an emergency, please leave the building by the nearest available exit. Do not use the lifts or escalator."* 3 - Bomb alert message - female voice *Pre tone - continuous* *"May I have your attention please, an incident has been reported in the area, as a precaution please move away from the windows, I repeat, please move away from all windows, further information will follow shortly."* Factory configured Auxiliary messages: 1 - Auxiliary message 1 - (TEST START) female voice *Attention tone - Bing bong* *Message: "Attention please, attention please, this is the test of the fire and voice alarm system, there is no need to take any action."* 2 - Auxiliary message 2 - (TEST END) female voice *Attention tone - Bing bong* *Message: "The test of the fire and voice alarm system has now been completed."* 3 - Auxiliary message 3 - (STAND DOWN) female voice *Attention tone - Bing bong* *Message: "May I have your attention please, the cause of the alarm has been investigated and the system reset. There is no cause for concern. Thank you."*

Controls (with door open) Access level 2	Sound Alarms, Silence Alarms, Reset, Cancel Buzzer, Verify, F1-F4 keys, Menu On/Off key, Numeric keys, U1-U2 keys available if configured to perform site specific actions by triggering of CB251 and CB252 Voice alarm zones 1-10, All zones, Clear zones. Emergency messages: 1 - Alert message 2 - Evacuate message 3 - Bomb alert message Factory configured Auxiliary messages: 1 - Aux. message 1 Test Start 2 - Aux. message 2 Test End 3 - Aux. message 3 Stand-Down
Emergency microphone	Integral hand held microphone with press to talk button for live voice communications, up to 5000Hz.
VU signal meter	Signal level indication of any audio source. Indicates stored message announcements, live speech via emergency and PA microphones, plus background music.
Access level 2a	Customer (Customer PIN)
Access level 3	Engineering (Engineer PIN)
Menus	[Control], [Setup], [Information] and [Test Engineering] menus.
Logs	**Active Logs:** Fire, Fault and Disablement **Historic log**: All events **Event logs:** Fault, Disablement, Warning, Supervisory, Exceptions and Historic fires.(255 events) **Fire Log** (100 events)

Always use the recommended replacement battery, as there is a risk of explosion if incorrect battery is used.

Power supply

Standard	Designed to EN54 Part 4:1997
Mains supply voltage and fuses	230V 50Hz +10% -6% protected by: Fuse - 3.15A (T) 250V Ceramic 20mm x 5mm, located on PSU. Input current - 0.7A
Nominal supply voltage for master alarm circuits	24V ± 4V V_{min} 20.8 V_{max} 30.0V
Lithium Battery	CR2032 3V cell (supplied) on MCB. Replace only with the same or equivalent type battery. Dispose of used batteries according to the manufacturer's instructions.
Battery circuit 'BAT1' and fuse	FS1 Fuse 3.15A (T) TE5 on PSU
PSU voltages and fuses 43V* (quiescent) supply 24V supply * 46V in alarm or when announcements are made via micro-DAU	 FS6 Fuse 1A (T) TE5 on PSU board FS4 Fuse 1A TE5 on PSU board See also fuse size and values in the Control panel data
Battery	2- 12V 12Ah sealed lead acid batteries will that provide 24 hours standby and 30 minutes alarm, determined by loop loading, reference should be made to the Battery Loop Loading calculator
Storage temperature	-10 to 55ºC
Operating temperature	0 to 45ºC
Relative Humidity (Non condensing)	up to 90% Temperature 5 - 45°C
Indicators	**Left LED** (yellow): Indication off battery circuit 2 or 43V supply fault **Centre LED** (yellow): Indication off battery circuit 1 or 24V supply **Right LED** (green): Indication of mains supply fault

Hazardous voltages may still be present even if this indication is extinguished.

Audio Pack 1

A message card is fitted in the Compact Voice Alarm Panel and also one in the micro Distributed Amplifier Unit, it contains the messages and tones of the Audio Pack. A factory supplied Compact Voice Alarm Panel and micro Distributed Amplifier Unit are fitted with Message cards having Audio Pack 1. During commissioning it is possible to re-configure the factory set messages by selecting an alternative centralised and distributed messages and pre tones for Alert, Evacuate, Bomb and Auxiliary 1, 2 and 3 controls.

No.	Type of message	Voice	Message
1	micro DAU Test	Male	The voice alarm volumes are being adjusted there is no need to take any action.
2	Alert *(default - Emergency 1)*	Female	Your attention please, the fire alarm has been activated in another area, please remain where you are and await further instructions.
3	Evacuate *(default - Emergency 2)*	Male	Attention please, attention please, this is an emergency, please leave the building by the nearest available exit. Do not use the lifts or escalator.
4	Bomb *(default - Emergency 3)*	Female	May I have your attention please, an incident has been reported in the area, as a precaution please move away from the windows, I repeat, please move away from all windows, further information will follow shortly.
5	Alert (alternative)	Female	May I have your attention please, may I have your attention please, an incident has been reported in the building, whilst this report is being investigated, please remain at your workplace.
6	Evacuate (alternative)	Male	Ladies and gentlemen, due to unforeseen circumstances we are required to evacuate the building, please leave the building immediately by the nearest available exit.
7	Gas Carbon Monoxide	Male	May I have your attention please, may I have your attention please, excessive carbon monoxide levels have been detected, please leave the area immediately by the nearest available exit.
8	Gas Fixed Extinguishant	Male	May I have your attention please, may I have your attention please, extinguishant gas release imminent, please evacuate the area immediately by the nearest available exit.
9	Fire alarm test *(default - Auxiliary 1)*	Female	Attention please, attention please, this is the test of the fire and voice alarm system, there is no need to take any action.
10	Fire alarm test end *(default Auxiliary 2)*	Female	The test of the fire and voice alarm system has now been completed.
11	Coded message	Female	Would Mr Sands please report to reception.
12	Class change	Female	Class change
13	Gent Limited advertisement	Female	Ladies and gentlemen this speech message is produced by Gent Limited's Vigilon Compact Voice Alarm system. This product integrates voice alarm functions into an analogue fire alarm system ideal for small to medium sized buildings.
14	Stand down *(default - Auxiliary 3)*	Female	May I have your attention please, the cause of the alarm has been investigated and the system reset. There is no cause for concern. Thank you.
15	Navy radiological attack	-	Beep beep beep (950Hz 80ms beep every 420mS)
16	Navy bandit attack	-	Beep beep beep (950Hz 50ms beep every 80mS)
17	Nursery Rhyme 1		Boys & Girls
18	Nursery Rhyme 2		Twinkle Twinkle
19	Factory test	-	Frequency sweep (300Hz to 10KHz in 3s)

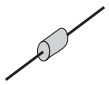
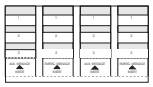
Attention tone

No	Description of tone	No	Description of tone
1	Nee Naw x 8	6	Pulse
2	Two tone (Bing bong)	7	Continuous
3	Four Tones - ascending	8	Bong
4	Four Tones - descending	9	Chopin
5	Bell	10	Jingle

Installing a Vigilon Compact Voice Alarm Panel

The Vigilon Compact Voice Alarm Panel is supplied in three parts, it is important to check the contents of each package:

- ☐ Inner box assembly
- ☐ Inner door assembly (fits on to inner box assembly)
- ☐ Outer door assembly (fits on to inner box assembly)
- ☐ Batteries 2 - 12V 12Ah

Parts in the Spares pack		Quantity
Fuse 3.15A 20mm x 5mm 250V ac		1
Fuse 3.15A		2
Fuse 1A		3
Fuse 200mA		2
10K Ohms Resistor		4
Battery Link		1
Battery Lead		1
Emergency and Auxiliary Labels		1
Voice alarm zone label		1

How to semi-flush mount the panel

The control panel may be semi flush mounted using a semi-flush surround VIG-24-FLUSH or a stainless steel semi-flush surround variant VIG-FLUSH-SS.

a Cut out an aperture in the wall to allow the semi-flush surround to be fitted, see diagram for dimensions of the aperture.

b Using the fixing holes on the semi-flush surround, secure it into the aperture side walls.

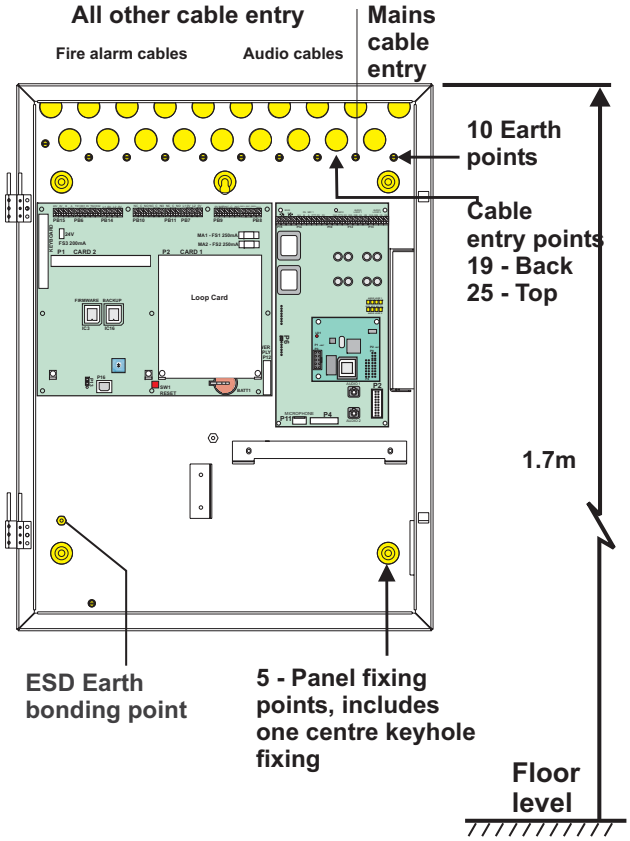
c Knock out the appropriate top or rear cable points on the panel enclosure.

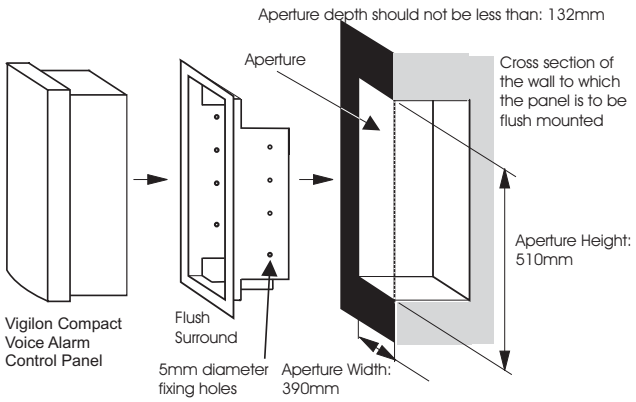
d Route the cables through the cable entry points into the panel and at the same time insert the panel into the semi-flush surround.

e Fit the panel back box to the semi-flush surround using the 4-off 5mm screws supplied with the semi-flush surround.

Mounting the inner box

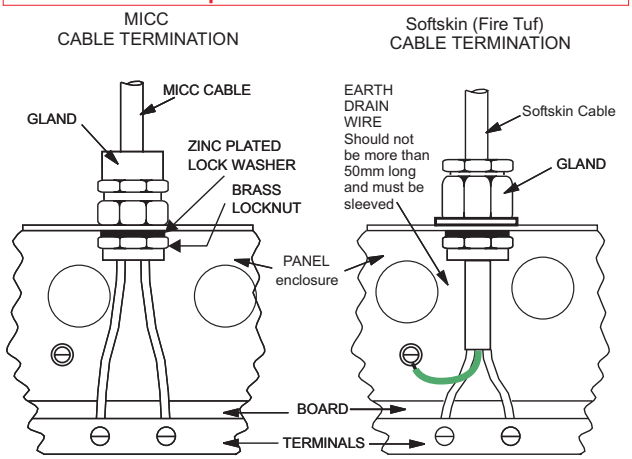
Using the five fixing points in the enclosure mount the inner box using suitable fixtures to a flat wall such that the top of the enclosure is 1.7m above floor level.

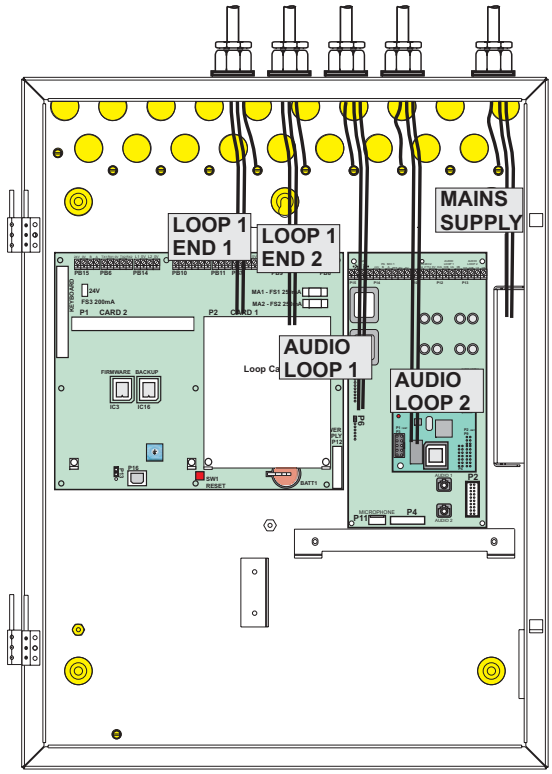




Cable termination points on enclosure

Unused knockouts that have been removed must not be left open.





The wire length between the cable termination and point of connection must be as short as possible. Where a cable has an earth drain wire, the wire must be fitted to the earth point nearest to the cable entry point. Ensure the drain wire length does not exceeding 50mm.

Terminate each cable at the dedicated entry point on the enclosure, using the cable manufacturer recommended techniques.

Where the cable is not required to be connected, leave 400mm tail wire length (unless otherwise instructed) and mark each core identifying its final point of connection. Where the cable is required to be connected, ensure it is secured to the respective terminal.

Wiring test

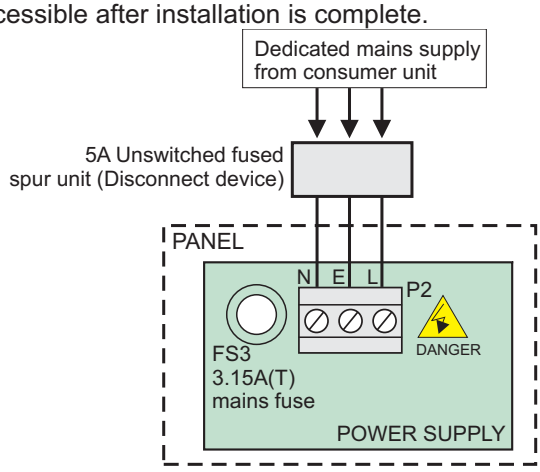
Don't undertake high voltage insulation tests WITH THE CABLES CONNECTED to the panel and system device terminals. Such a test may damage the electronics circuitry in loop devices and at the panel.

Mains supply

Ensure that the mains supply cable enters the panel through a dedicated cable entry.

These fire alarm system products are not designed to be powered from IT Power systems.

All mains powered equipment must be earthed. Mains supply to any fire alarm control and indicating equipment must be via an unswitched 5A fused spur unit. A disconnect device must be provided to disconnect both poles and must have a minimum gap of 3mm. The Disconnect device should be available as part of the building installation and must be easily accessible after installation is complete.



The fused spur isolator cover should be marked:

FIRE ALARM - DO NOT SWITCH OFF

The fire alarm equipment's fused spur unit must be fed from a dedicated switch or protective device at the local mains supply distribution board.

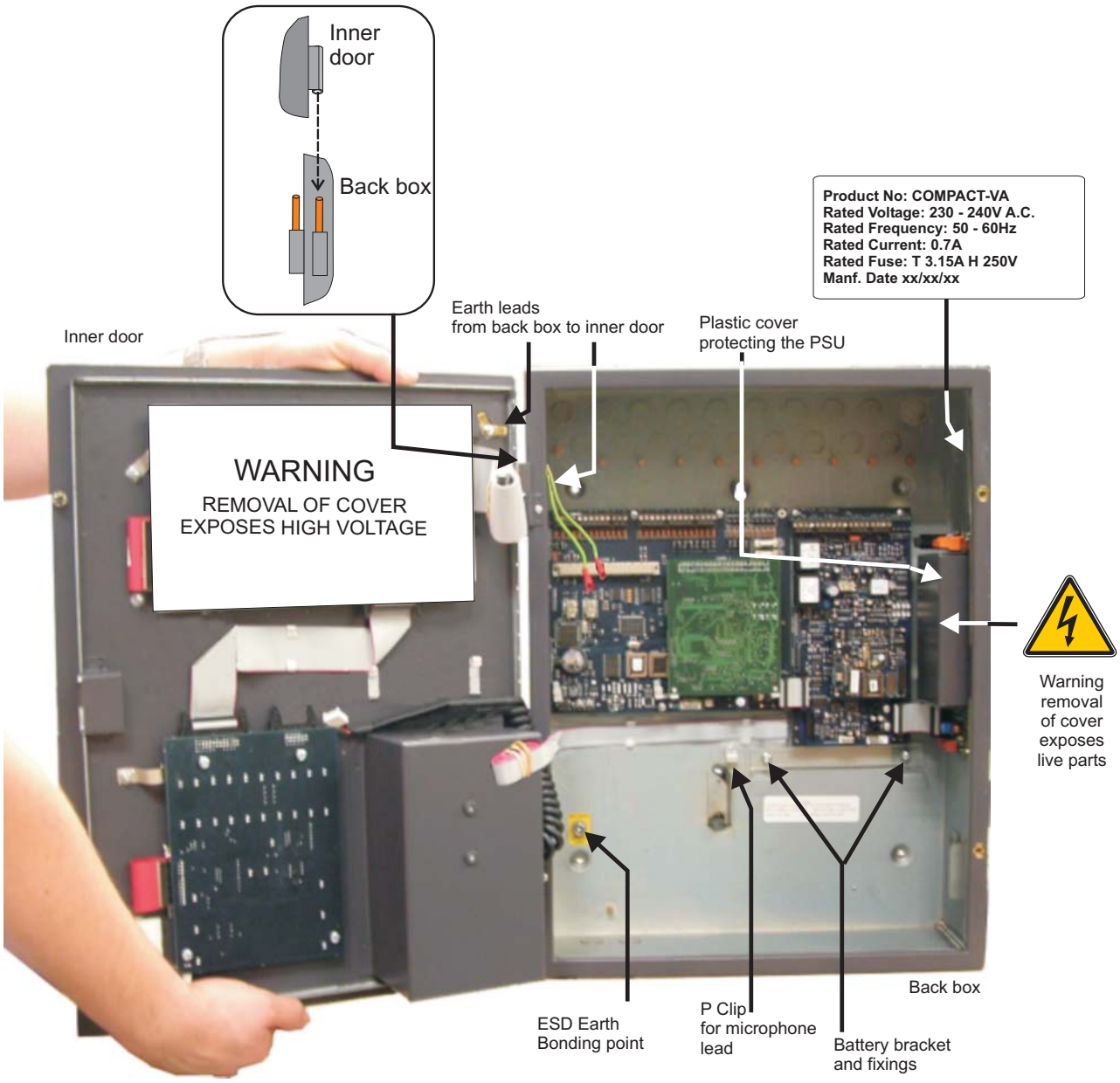
Mains and battery supply connections

The mains and battery supply cables must be installed to the stage to **facilitate the power up** for commissioning, which is carried out by the Servicing organisation.

Where mains cable is to remain disconnected, its tail ends must be insulated to prevent dangerous conditions arising in the event of accidental switching On of the mains supply.

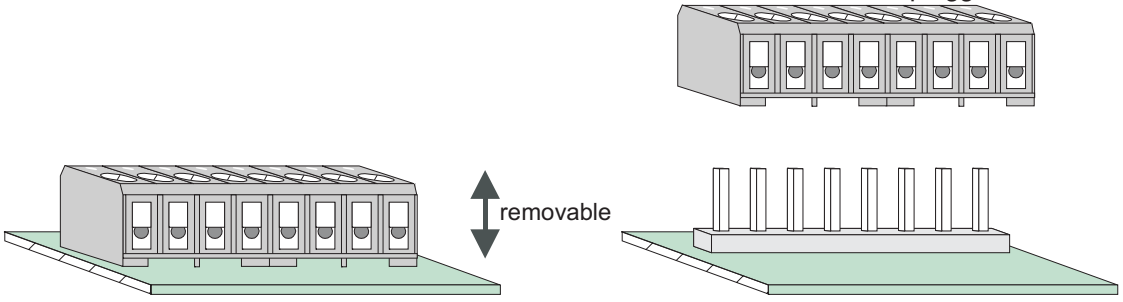
Fitting the inner door

The inner door assembly must be hooked onto the hinge pins on the front flange of the back box.
An earth bond must be made between the inner door and back box, this is done by connecting the earth leads fitted in the backbox to the inner door. The ribbon cables and microphone lead on the inner door may be left disconnected until commissioning of the system.



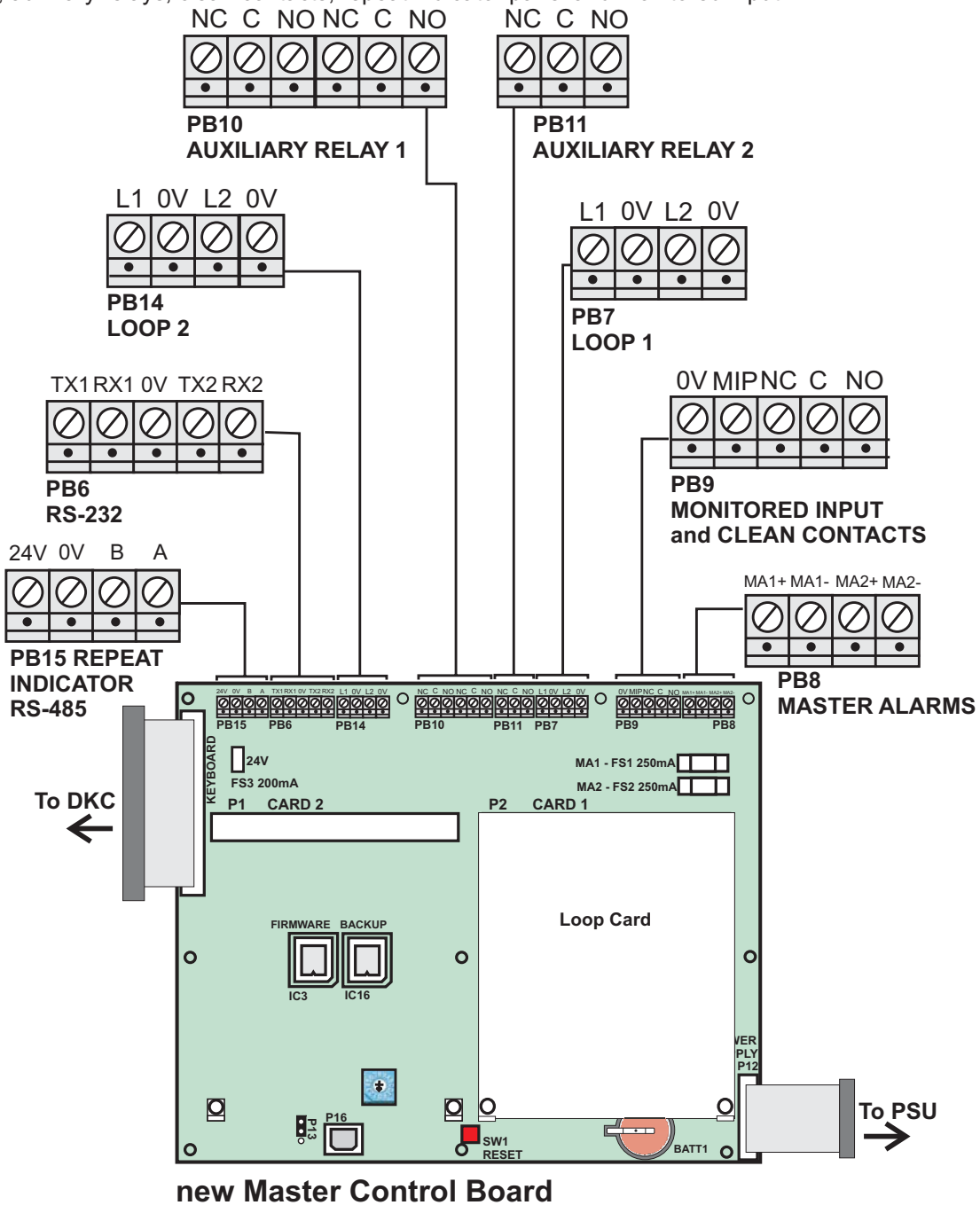
Removable terminal block

To ease installation the terminal blocks on the Master Control Board can be unplugged from the board.



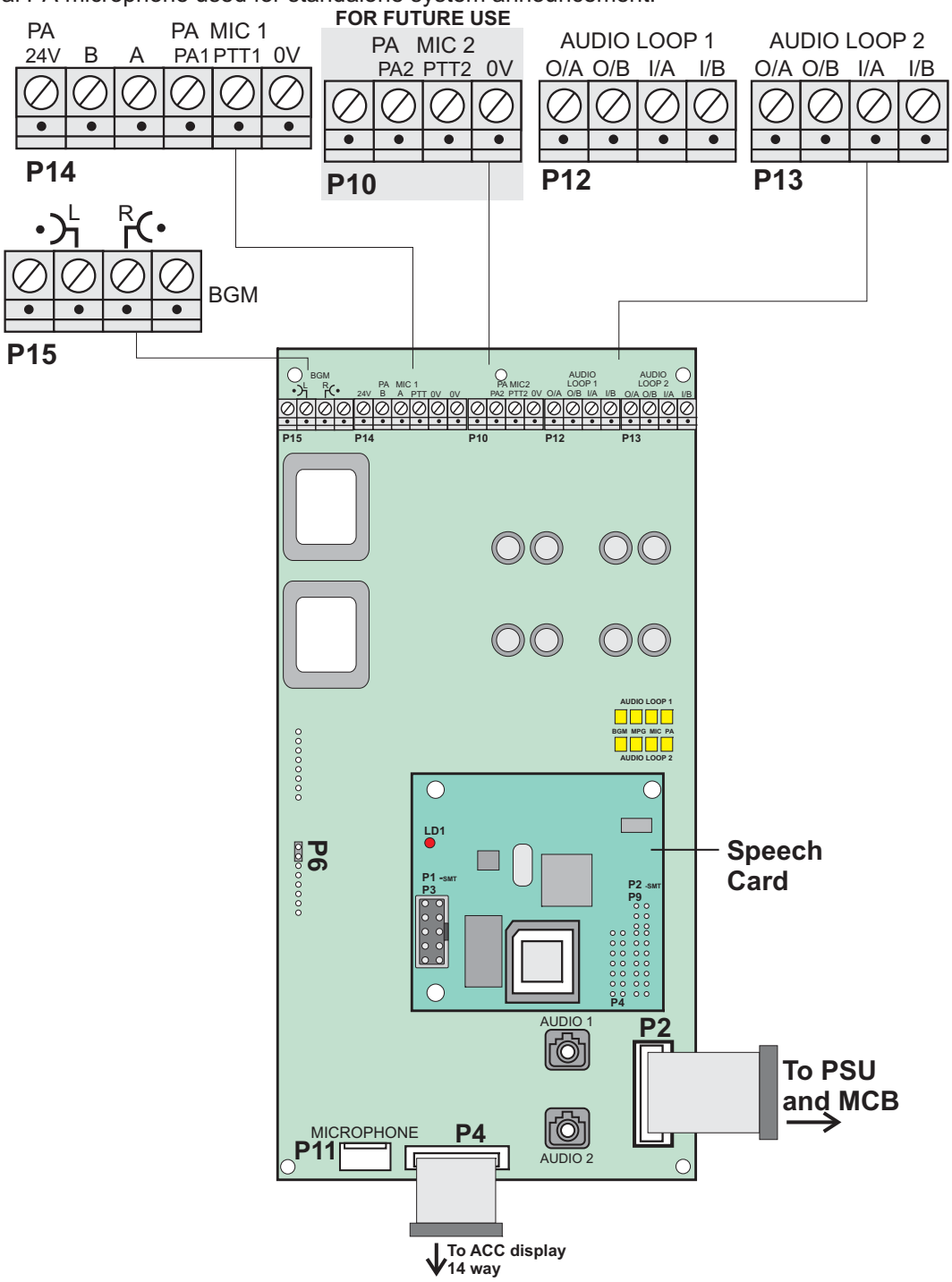
Terminals for external circuits on Master Control Board

The Master Control Board (MCB) holds all the terminals for the connection of fire alarm loop circuits, master alarms, auxiliary relays, clean contacts, repeat indicator panel and monitored input.

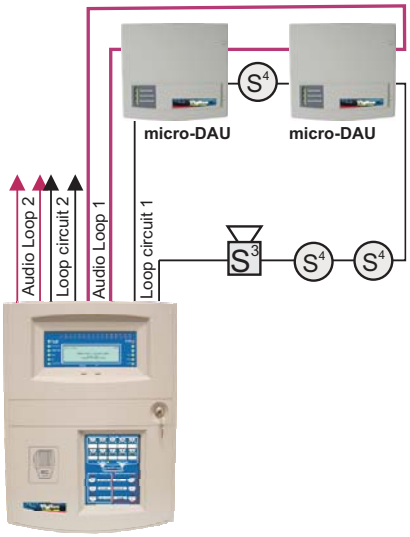


Terminals for external circuits on Audio Control Card

The Audio Control Card has the terminals for the connection of system Audio loop, central background music and central PA microphone used for standalone system announcement.



Analogue Loop and Audio loop circuits



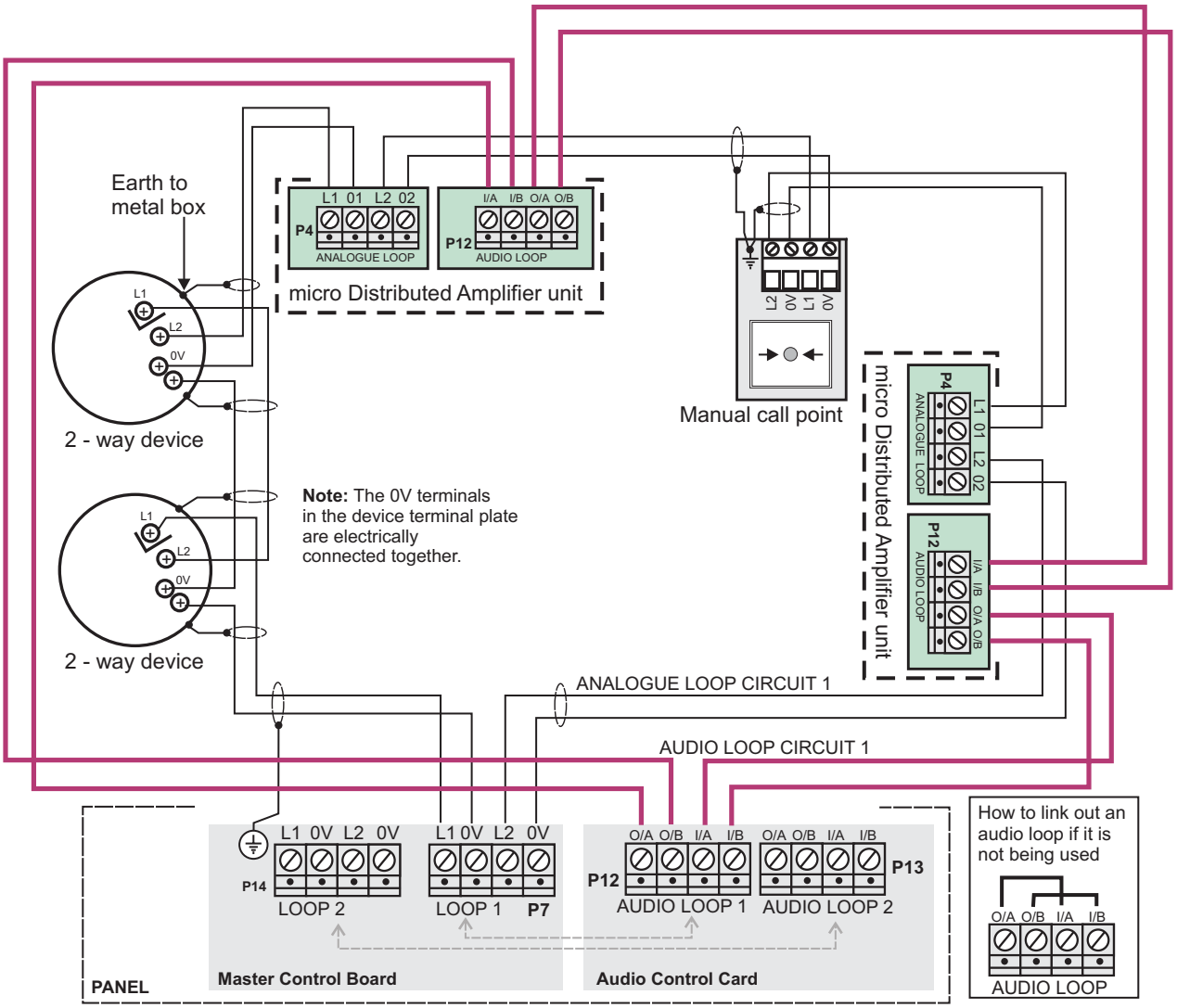
Vigilon Compact Voice Alarm Control Panel

The two analogue loop circuits can each accept connection of addressable devices / outstations, up to 200 maximum per circuit. To maintain earth continuity on a loop, the **loop cable screen** must be continued through each system device, whether the earth is connected to a device or not.

A loop circuit must not cover more than 10,000m² of floor area of a protected site. A spur circuit must always be taken from the "line common" terminals of a 3 ways device. A spur must not cover more than the equivalent of one zone as defined in BS5839 Part 1.
As every device has a loop isolator, the application of more than 32 devices does not require any special consideration.

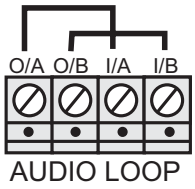
The two audio loop circuits can each accept connection of micro Distributed Amplifier Units, up to 5 maximum are allowed per audio loop circuit. All the micro Distributed Amplifier units on analogue loop 1 must also be connected audio loop circuit 1 as illustrated below. Similarly the micro Distributed Amplifier Units connected to analogue loop 2 must also be connected to audio loop 2.

Always connect the micro-DAU on the MAIN DETECTION LOOP (analogue loop) and not on Spur circuit off the main loop.



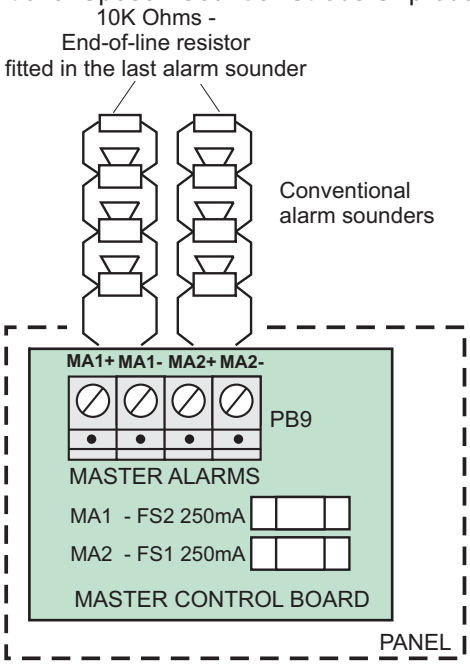
How to link out an audio loop

If an audio loop is not being used then it must be linked out to inhibit audio loop fault indications at the panel.



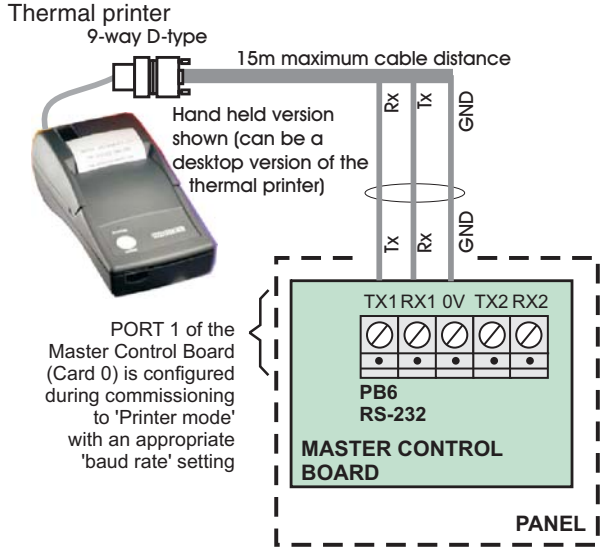
Master alarm circuits

The two master alarm circuits accept the connection of conventional alarm sounders including the conventional Speech-Sounder-Strobe S^3 products.



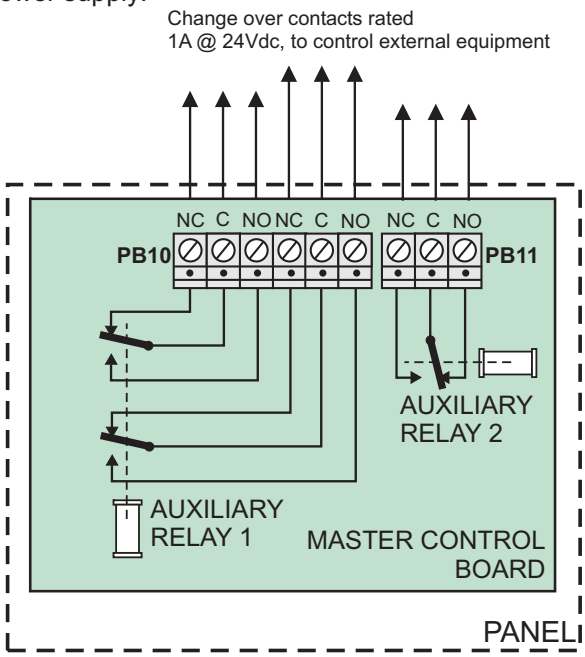
Connecting a thermal printer

An external serial printer can be connected to the RS232 Port.



Auxiliary relay circuits

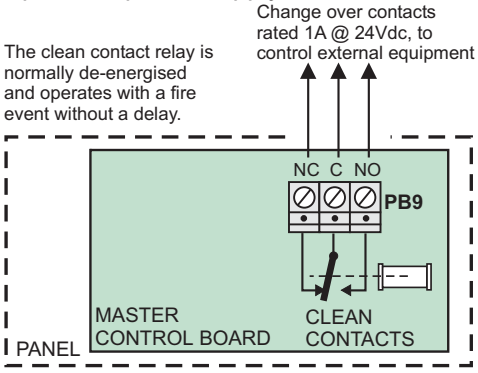
The control panel will operate the auxiliary contacts when the configured event is received from the system. The contacts of auxiliary relays 1 and 2 can be used to control external equipment, such as an automatic dialler that makes the call for fire fighting action. The relays can be individually re-configured to operate with either fire, fault or disablement event in the system. The relay operation can also be delayed by up to 10 minutes and can be set up to operate in a normally energised or de-energised state. The contacts should be powered from an independent power supply.



Factory default:
Aux relay 1 is normally de-energised and operates with a fire event without delay.
Aux relay 2 is normally energised and operates with fault event without delay.

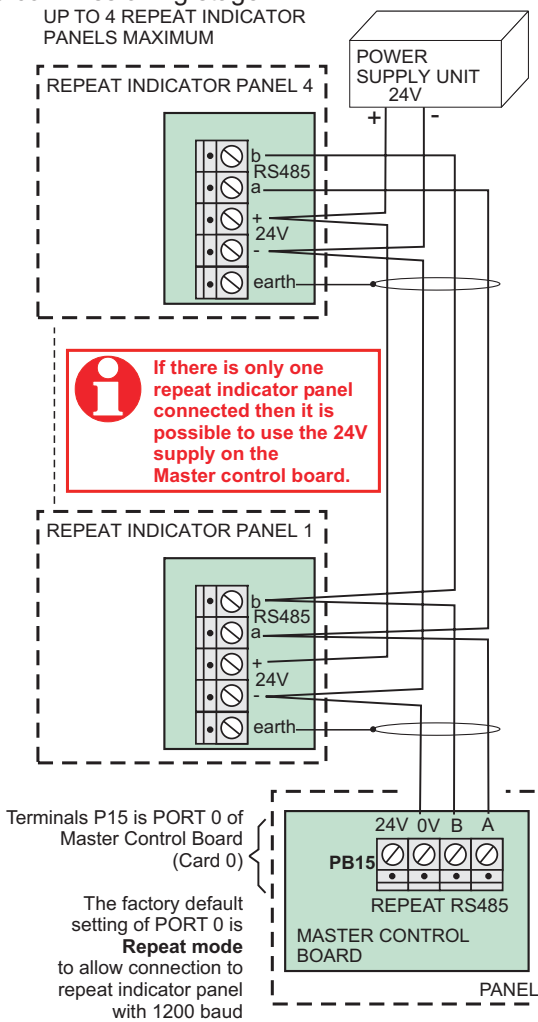
Clean contacts

The control panel operate these clean contacts when a fire event is received from the system. The clean contacts can be used to switch plant equipment, such as lift control system. The relay operates in the event of a fire. The contacts should be powered from an independent power supply.



Repeat indicator panel

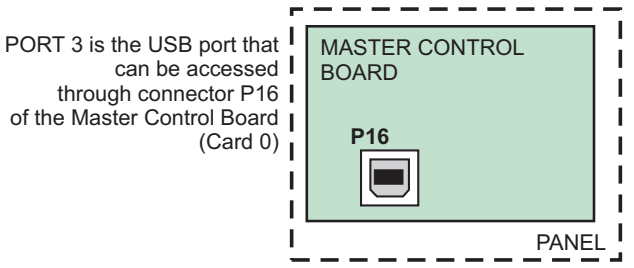
Up to four repeat indicator panels can be connected directly to the fire panel at Port 0. The furthest repeat indicator panel can be installed a maximum of 1Km cable distance away from the fire panel. The Port 0 is configured for Repeat mode and set up for RS485 communication and the baud rate is selected during the commissioning stage.



USB Port

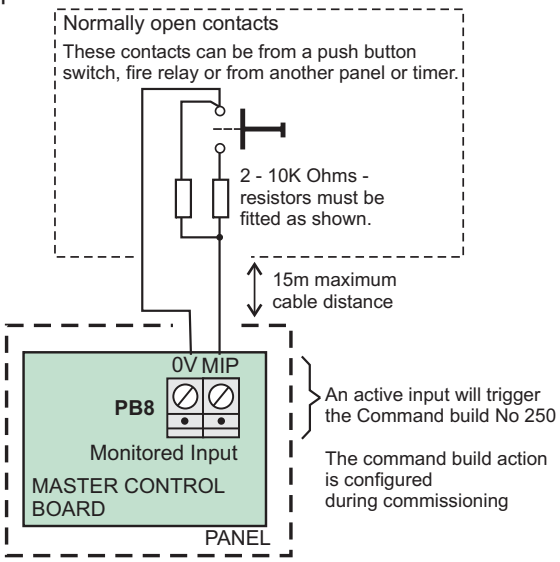
The Port 3 is a USB port that is used to connect to the commissioning tool only.

This is a slave USB port and therefore no power can be taken from the port.



Monitored input circuit

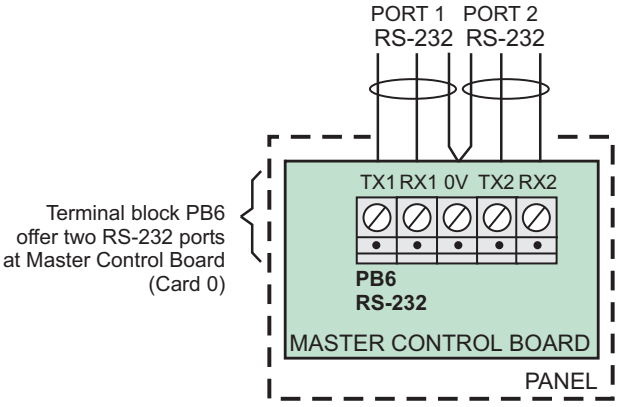
The monitored input at the fire panel is activated by an external switch installed a maximum of up to 100m cable distance away from the panel. The input is monitored for both short and open circuit fault. When the input is active it triggers a command build number 250 of the fire panel. The command build action is configured during the commissioning of the system. For example the action can be to sound the alarms of the system for the duration the push button is pressed.



RS232 Ports

The ports 1 and 2 of the fire panel offer RS232 communication, having configurable modes of operation and baud rate which are set during the commissioning of the system. The configurable modes include, standard (default), printer, universal or Ascom.

The ports can be used to connect an external printer or commissioning tool.



PA Microphone

The DPM102 is a one zone pre-amplified microphone from communication technology, that is supplied with 1.8m 15 way D terminated screened multi-pair cable, with free end stripped and tinned.

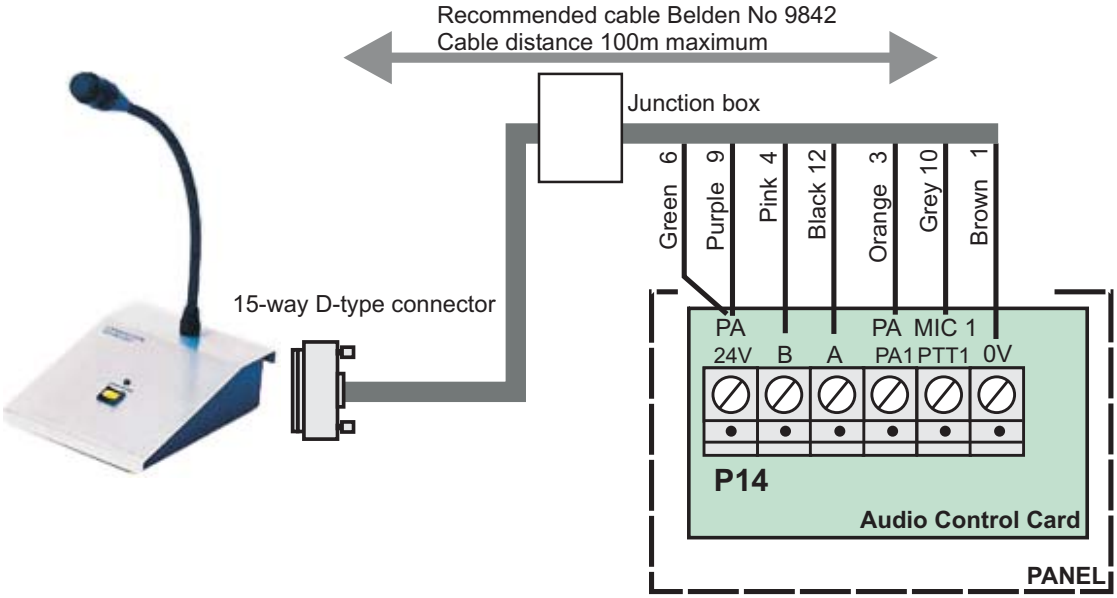
Microphone settings

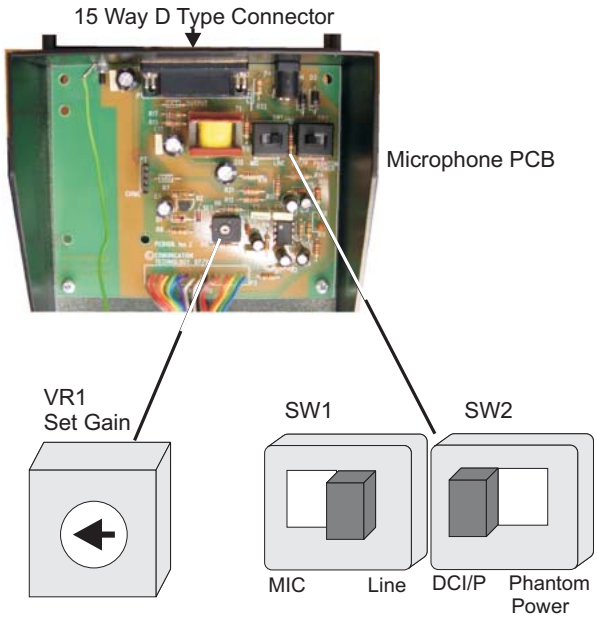
a Open the microphone cover by removing the 3 fixing screws

b Ensure the switch SW1 is set to **Line** and switch SW2 is set to **DC I/P**.

Do not adjust VR1 as it is factory set. However if there is feedback or distortion then there may be a need to adjust the gain setting.

c Close the microphone cover.



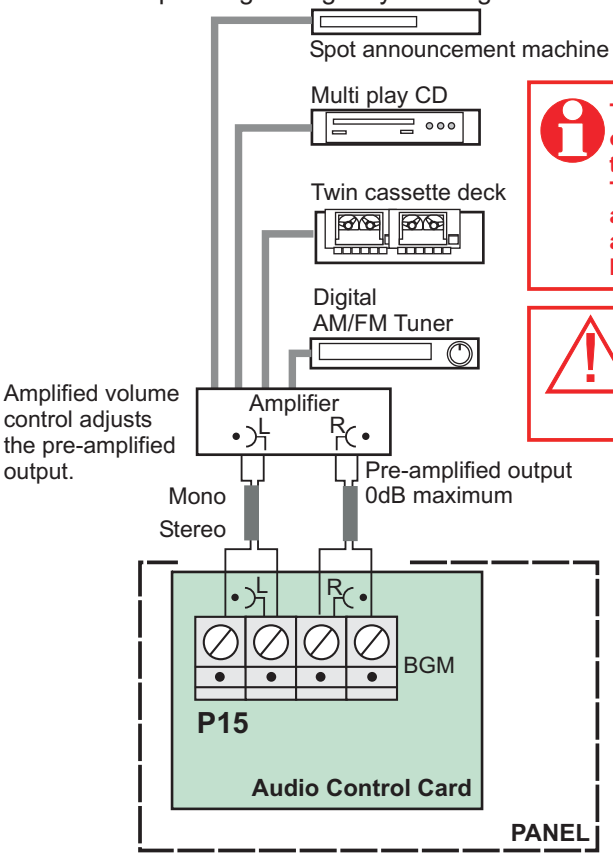


CONN Pin No	DPM 102	Cable Colour
1	0V	Brown
2	ACCESS ZONE 2	Red
3	LED 1	Orange
4	LINE OUTPUT	Pink
5	0V COMMON	Yellow
6	LED (COMMON POSITIVE)	Green
7	SCREEN (0V)	Mint
8		Navy Blue
9	+12/24V DC POWERING	Purple
10	ACCESS ZONE 1	Grey
11		White
12	LINE OUTPUT	Black
13		Black / White
14	LED 2	Red/White
15		Black/White

Always check the cable colour against instructions supplied with the microphone.

Background Music

The Vigilon Compact Voice Alarm panel can accept the connection of entertainment system for broadcast of background music. The background music can be configured for output to selected voice alarm zones and at a required volume level, these are set during system commissioning. The background music can be made to operate with the panel's timeblock facility, this allows music output when required, for example during occupied periods and turned off during unoccupied periods, this is configured during commissioning. The background music will stop during emergency message announcements.



There are many types of entertainment systems that are commercially available. This example show one arrangement of how an entertainment system may be connected to the panel.

DO NOT connect the Speaker outputs of the Amplifier to the Audio Control Card.

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Network wiring

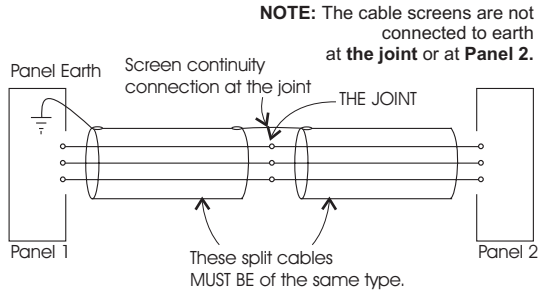
In countries where the European EMC directive is in force use only those cables that are EMC Compliant, see list under the heading Network cables.

When terminating the cables and wiring the panel ensure the Network cables are physically separated from Loop circuit cables, this is to prevent interferences that may cause possible communication failure.

Network cable screen continuity

Ensure a good screen continuity joint exist where there is a split cable.

DO NOT mix cables of different types on the same leg of a network, as this will create impedance imbalance and disruption to data communication.



How to minimise cross talk

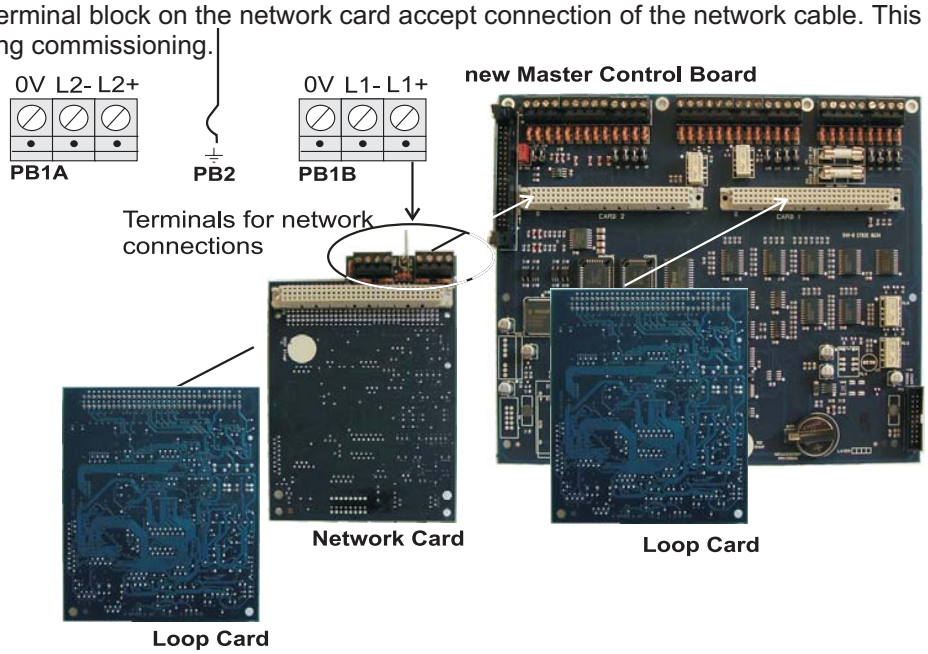
When using standard MICC cable in a network, the different legs of the cable must not be closely placed together, as this will cause signal crosstalk which results in communication failure.

There are three practical way of overcoming the crosstalk problem:

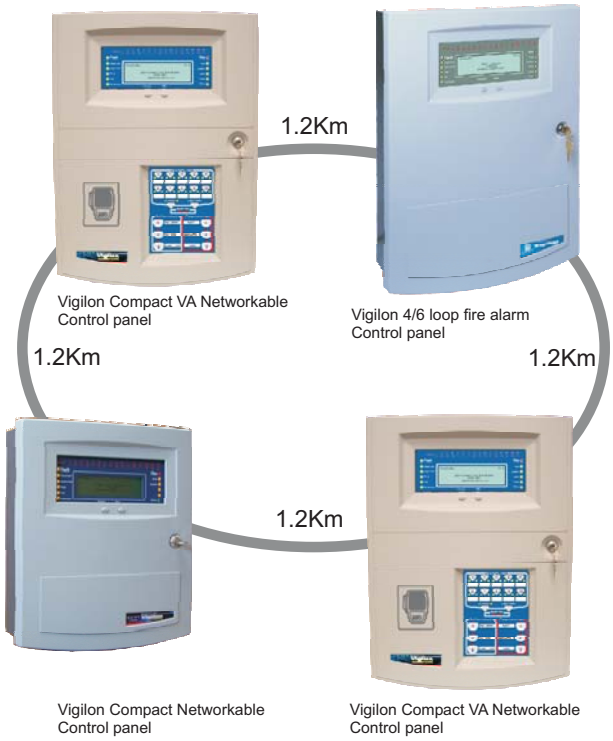
- ☐ use a twisted-core MICC cable
- ☐ put a ferrous screen between the cables (ie in the two runs of steel conduit)
- ☐ maintain a distance between the network cables of at least 50mm

Network card

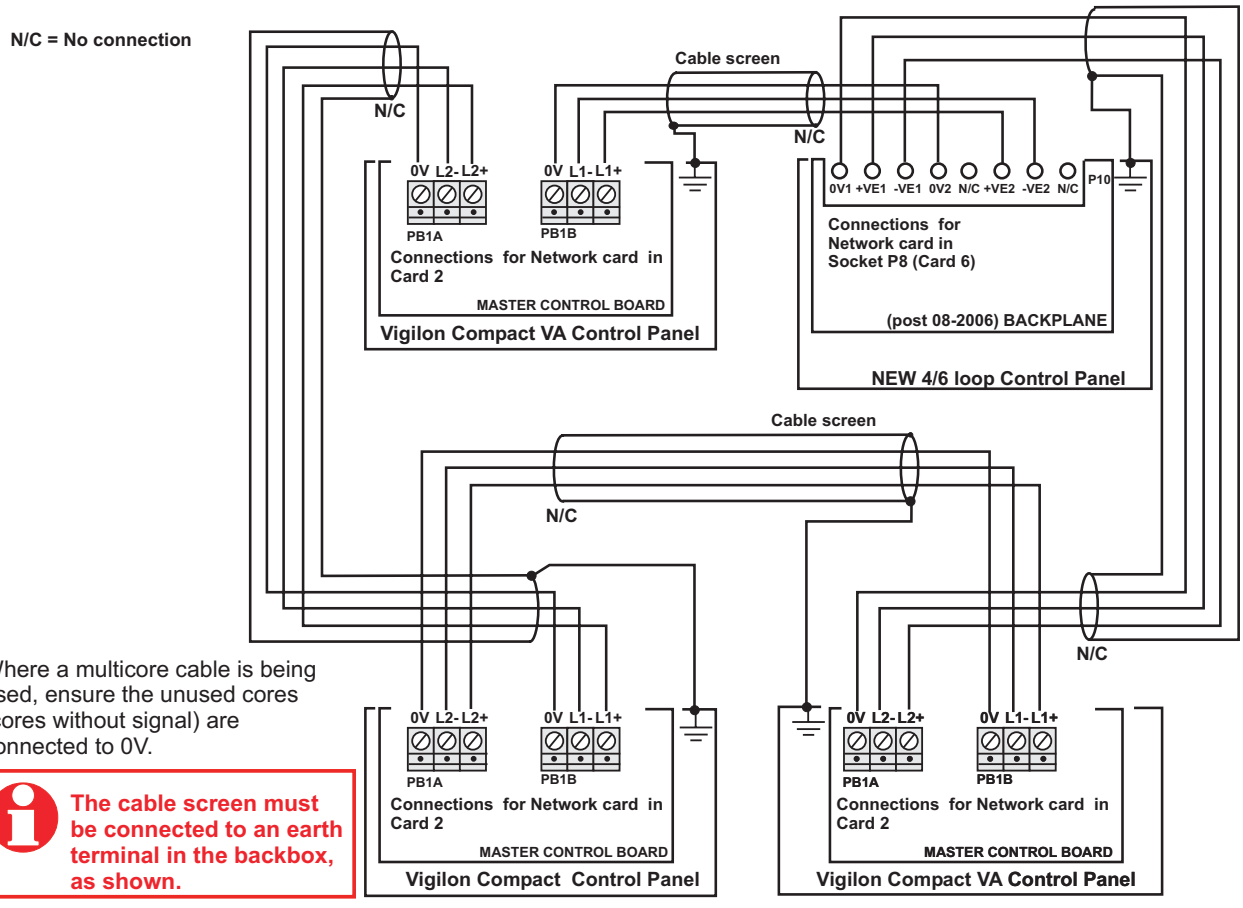
The Network card can only be used with the new Master Repeat Card to connect together up to 31 fire panels. The card allows the network of fire but not the voice alarm, for example live announcement are to the local system only. The terminal block on the network card accept connection of the network cable. This wiring is normally done during commissioning.



Network Connections

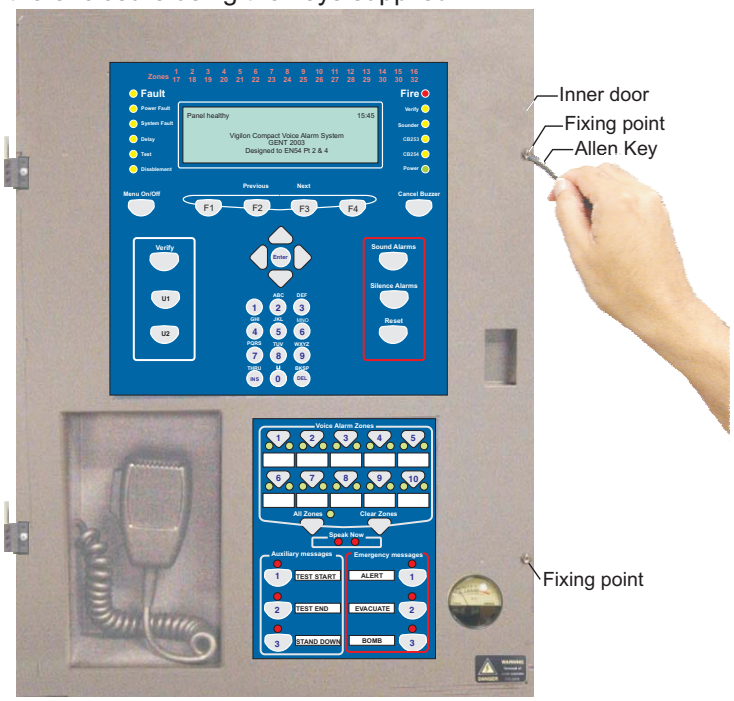


A secure network can have up to 31 control panels connected in a loop using any one of the recommended network cable. The panels can be Vigilon Compact VA, Vigilon Compact or new Vigilon 4/6 loop panel. The network cable is connected directly to the network card.



Doors

Using the Allen Key secure the inner door, the key is located on the inside of the outer door.
Lock the outer door of the enclosure using the keys supplied.



micro Distributed Amplifier Unit

A micro Distributed Amplifier Unit (COMPACT-DAU) must be connected to a Vigilon Compact Voice Alarm panel, to its analogue and audio loop circuits. The unit can accommodate two speaker circuits each having up to 5 high efficiency speakers connected. The unit has local message store for output to the speaker circuits for announcement of emergency and auxiliary event messages. Centralised and live messages from the main control panel are received via the audio loop for output to the speaker circuits. The unit is remotely powered by the main control panel via the analogue detector loop.

- ☐ Connects to audio loop of the Vigilon Compact Voice Alarm system for live speech, public address, background music, and centralised message announcements.
- ☐ Connects to the analogue loop of the Vigilon Compact Voice Alarm system for monitoring and control of loop devices.
- ☐ Up to 5 micro DAUs per loop circuit
- ☐ Each micro DAU has 2 speaker circuits
- ☐ Each speaker circuit is able to accommodate 5 High efficiency 64 Ohms speakers
- ☐ Local volume adjustment of Voice alarm, Public Address and Background music via IR remote control (volume adjustment can be made using the commissioning tool)

Technical Data

Panel dimensions in mm	height 227 x width 245 x depth 77
Panel weight	approximately 2Kg
Storage temperature	-10ºC to 55ºC
Operating temperature	0ºC to 45ºC
Relative Humidity (Non condensing)	up to 90% Temperature 5ºC - 45°C
Emission	BS EN 61000-6-3:2001 Residential, Commercial & Light Industry **Class B limits**
Immunity	BS EN50130-4: 1996: Part 4 Alarm systems: *Electromagnetic compatibility* Product family standard: *Immunity requirements for components of fire, intruder and social alarm systems*
Ingress Protection	IP31
micro Distributed Amplifier Unit per loop	1 to 5 micro Distributed Amplifier units can be connected to analogue loop
Test microphone	Connects to an external microphone that cab be used for test purposes
Speaker circuits	Two speaker circuits, each can accept between 1 to 5 - 64 Ohms speakers connected in parallel
Auxiliary relay	Voltage-free contacts rated 1A @ 24Vdc The two sets of change over relay contacts will operate with: ☐ Central Emergency microphone operation ☐ Local message activation ☐ Central message activation ☐ Central PA activation ☐ Background music ☐ Local Auxiliary input (background music) ☐ Local Test microphone operation During the commissioning of the system the relay can be reconfigured to operate with any of the above and in any combination.

Audio Pack 1

A message card is fitted in the Compact Voice Alarm Panel and also in the micro Distributed Amplifier Unit, it contains the messages and tones of an Audio Pack. A factory supplied Compact Voice Alarm Panel and micro Distributed Amplifier Units are fitted with Message cards having Audio Pack 1. During commissioning it is possible to re-configure the factory set message by selecting an alternative centralised and distributed messages and pre tones for Alert, Evacuate, Bomb and Auxiliary 1, 2 and 3 controls.

No.	Type of message	Voice	Message
1	micro DAU Test	Male	The voice alarm volumes are being adjusted there is no need to take any action.
2	Alert *(default - Emergency 1)*	Female	Your attention please, the fire alarm has been activated in another area, please remain where you are and await further instructions.
3	Evacuate *(default - Emergency 2)*	Male	Attention please, attention please, this is an emergency, please leave the building by the nearest available exit. Do not use the lifts or escalator.
4	Bomb *(default - Emergency 3)*	Female	May I have your attention please, an incident has been reported in the area, as a precaution please move away from the windows, I repeat, please move away from all windows, further information will follow shortly.
5	Alert (alternative)	Female	May I have your attention please, may I have your attention please, an incident has been reported in the building, whilst this report is being investigated, please remain at your workplace.
6	Evacuate (alternative)	Male	Ladies and gentlemen, due to unforeseen circumstances we are required to evacuate the building, please leave the building immediately by the nearest available exit.
7	Gas Carbon Monoxide	Male	May I have your attention please, may I have your attention please, excessive carbon monoxide levels have been detected, please leave the area immediately by the nearest available exit.
8	Gas Fixed Extinguishant	Male	May I have your attention please, may I have your attention please, extinguishant gas release imminent, please evacuate the area immediately by the nearest available exit.
9	Fire alarm test *(default - Auxiliary 1)*	Female	Attention please, attention please, this is the test of the fire and voice alarm system, there is no need to take any action.
10	Fire alarm test end *(default Auxiliary 2)*	Female	The test of the fire and voice alarm system has now been completed.
11	Coded message	Female	Would Mr Sands please report to reception.
12	Class change	Female	Class change
13	Gent Limited advertisement	Female	Ladies and gentlemen this speech message is produced by Gent Limited's Vigilon Compact Voice Alarm system. This product integrates voice alarm functions into an analogue fire alarm system ideal for small to medium sized buildings.
14	Stand down *(default - Auxiliary 3)*	Female	May I have your attention please, the cause of the alarm has been investigated and the system reset. There is no cause for concern. Thank you.
15	Navy radiological attack	-	Beep beep beep (950Hz 80ms beep every 420mS)
16	Navy bandit attack	-	Beep beep beep (950Hz 50ms beep every 80mS)
17	Nursery Rhyme 1		Boys & Girls
18	Nursery Rhyme 2		Twinkle Twinkle
19	Factory test	-	Frequency sweep (300Hz to 10KHz in 3s)

Attention tone

No	Description of tone	No	Description of tone
1	Nee Naw x 8	6	Pulse
2	Two tone (Bing bong)	7	Continuous
3	Four Tones - ascending	8	Bong
4	Four Tones - descending	9	Chopin
5	Bell	10	Jingle

Installing a micro Distributed Amplifier Unit

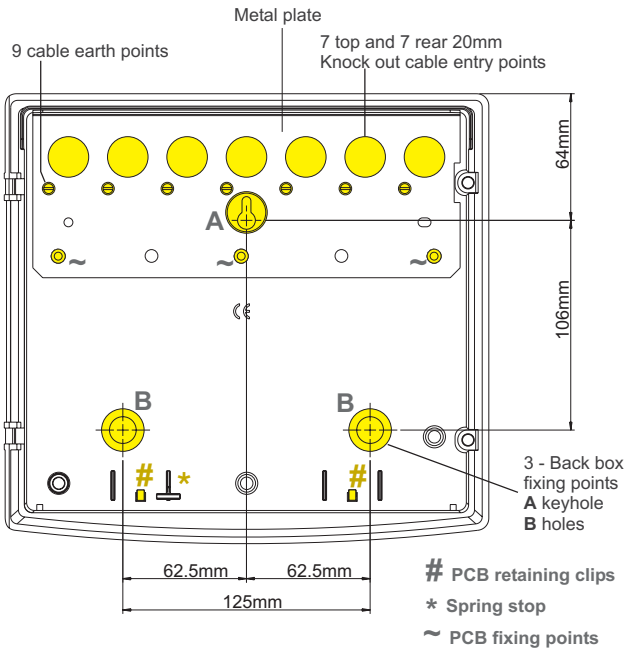
The micro Distributed Amplifier unit is supplied as two assemblies:

- ☐ Backbox with front cover
- ☐ PCB assembly

Parts in the spares pack		Quantity
Allen key		1
M4 Socket head screw (for door)		2
Cable entry bungs		3
Screw (PCB fixing)		1
Washer (use with screw)		1

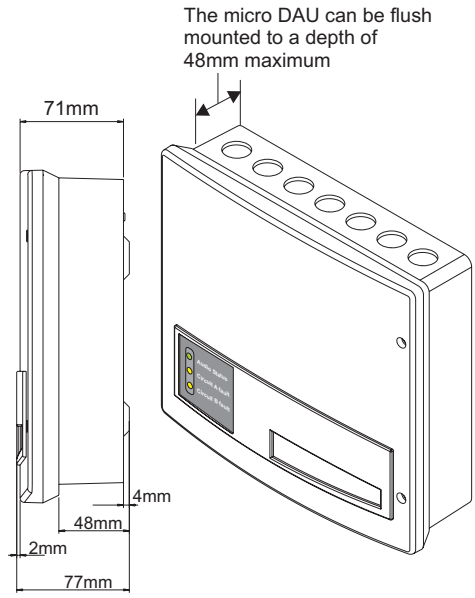
Open the outer door using the allen key.

Backbox



Flush fixing the micro DAU

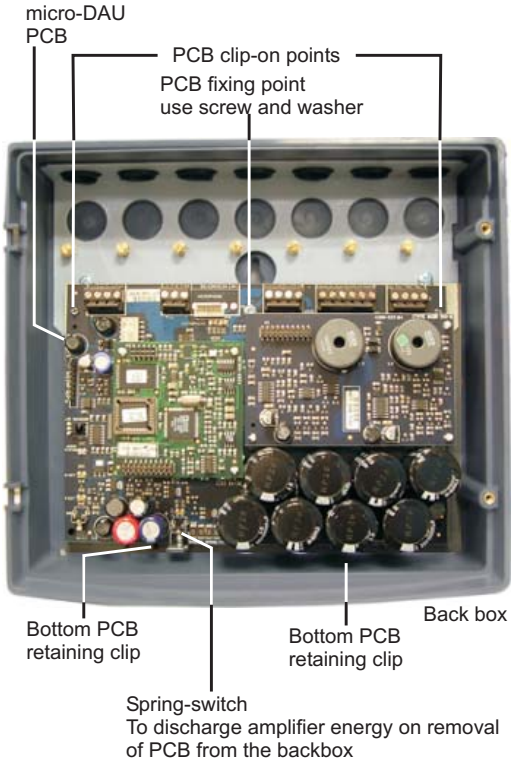
The micro Distributed Amplifier Unit can be flush fixed.



Fitting the micro DAU PCB

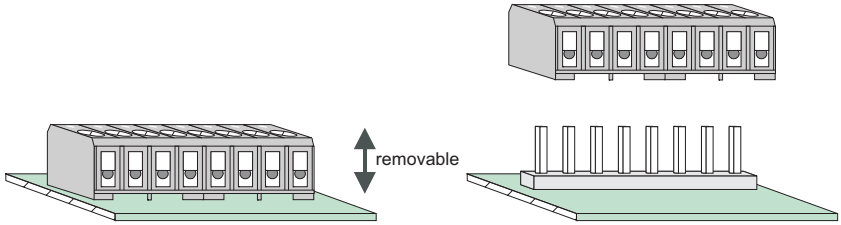
Mount the backbox to a flat wall surface using suitable fixings and then fit the PCB assembly into the backbox using the screw and washer.

⚠ When fitting the micro DAU PCB in the backbox ensure the spring on the bottom edge of the board engages into the spring stop and the bottom edge of the board fits under the retaining clips.



Removable terminal block

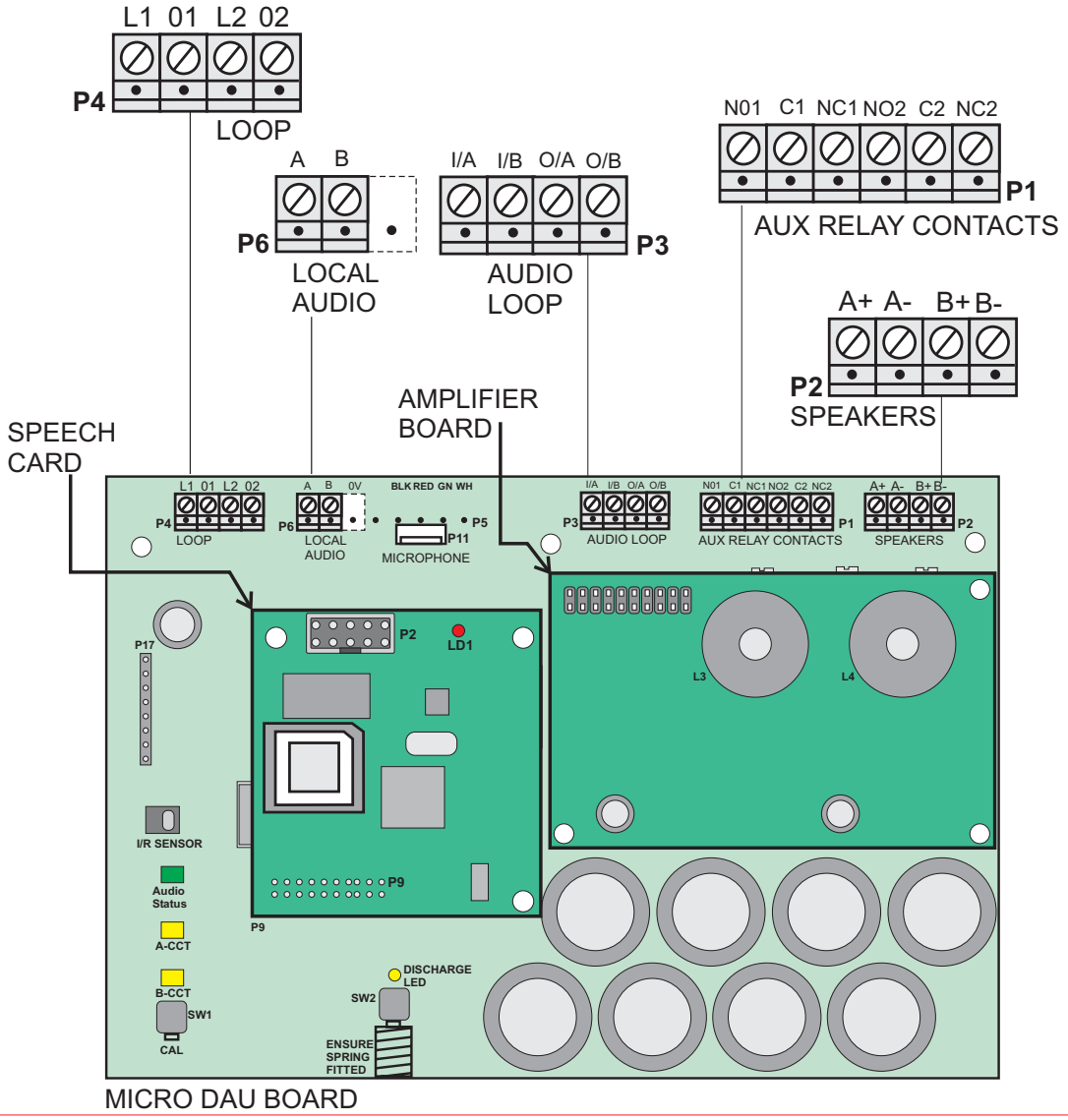
To ease installation the terminal blocks in the micro Distributed Amplifier Unit can be unplugged from the board.



Terminals for external circuits on micro Distributed Amplifier Unit

The micro Distributed Amplifier Unit PCB assembly has terminals for the connection of analogue loop circuit, audio loop circuit, local test microphone and local background music.

Always connect the micro-DAU on the MAIN DETECTION LOOP (analogue loop) and not on spur circuit off the main loop.

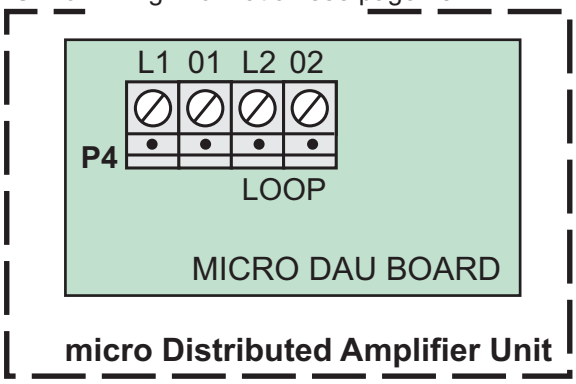


MICRO DAU BOARD

After wiring ensure the unused cable entry holes are fitted with bungs supplied in the spares pack to cover the unused cable entry holes. Close the outer door and use the socket head screws to secure the door.

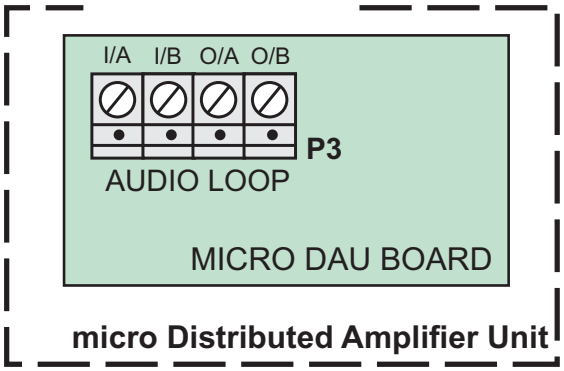
Analogue loop connections at micro DAU

The micro Distributed Amplifier Unit connects to the analogue loop of a Vigilon Compact Voice Alarm System at these terminals. The main panel of the system will monitor and control the loop the micro DAU. For wiring information see page 23.



Audio loop circuit at micro DAU

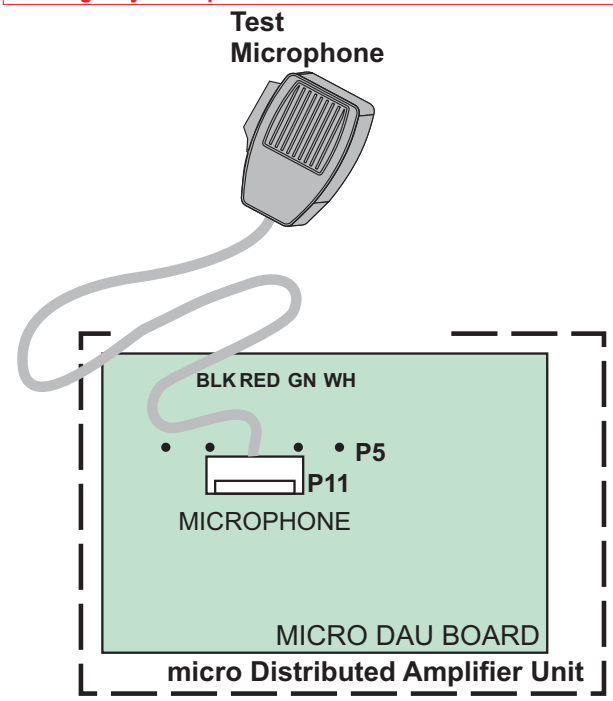
The micro Distributed Amplifier Unit also connects to the audio loop of a Vigilon Compact Voice Alarm System at these terminals. The main panel of the system makes use of this loop to send centrally held messages, live announcements and background music. For wiring information see page 23.



Microphone at the micro DAU

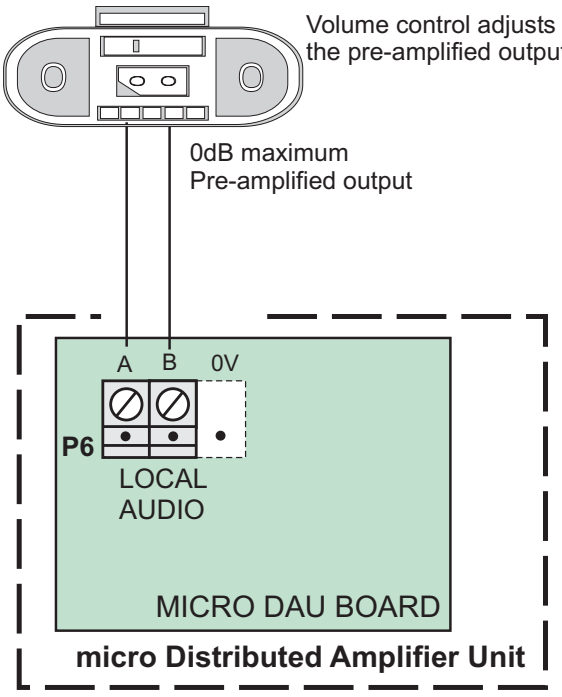
A test microphone can be connected to the micro Distributed Amplifier Unit for test announcement to local speaker circuits.

A test microphone must never be used as an emergency microphone.



Local audio input at the micro DAU

The local audio input accepts connection of local background music, this permits interruption free listening whenever the central PA is in operation and the micro Distributed Amplifier Unit alarm zone is excluded from PA announcement.



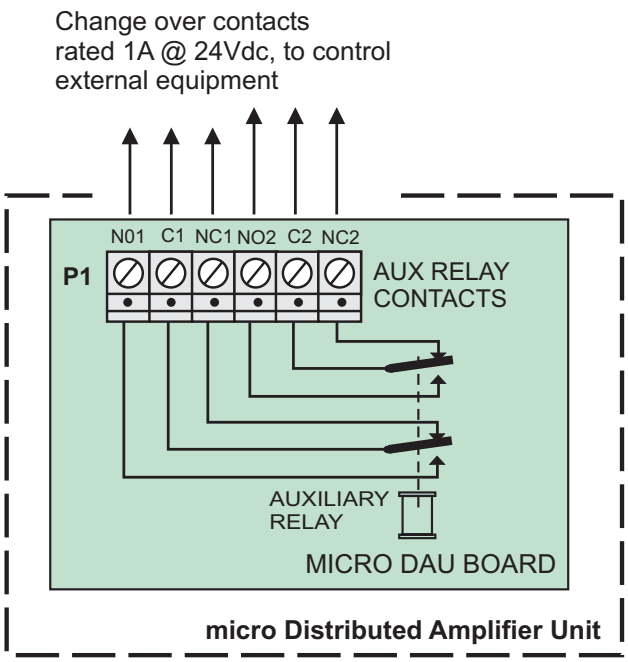
Auxiliary relay contacts at micro DAU

The auxiliary relay in the micro Distributed Amplifier unit can be configured to operate on occurrence of:

- ☐ central Emergency microphone operation
- ☐ local message activation
- ☐ central message activation
- ☐ central PA activation
- ☐ Background music
- ☐ local Auxiliary input (background music)
- ☐ local Test microphone operation

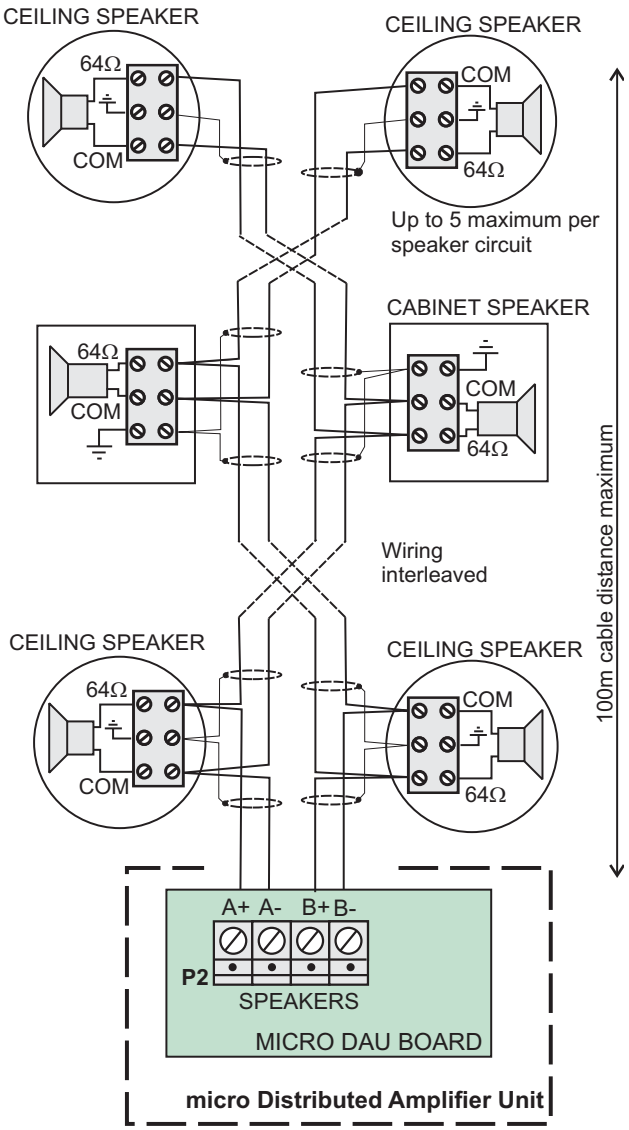
During the commissioning of the system the relay can be reconfigured to operate with any of the above and in any combination. For example, it is possible to configure the relay to only operate with local and central message activation.

The factory setting of the auxiliary relay is to operate with emergency microphone or local / central message.



Speaker circuits at micro DAU

A micro Distributed Amplifier Unit can accept two separate speaker circuits. Each speaker circuit can have between 1 to 5 high efficiency 64 ohms speakers connected in parallel.



Both speaker circuits must be used. There must be at least one speaker connected to each speaker circuit.

Ceiling speaker

The COMPACT-RCS is a 64ohms round ceiling speaker from Penton is supplied with a steel fire dome.

Technical Data

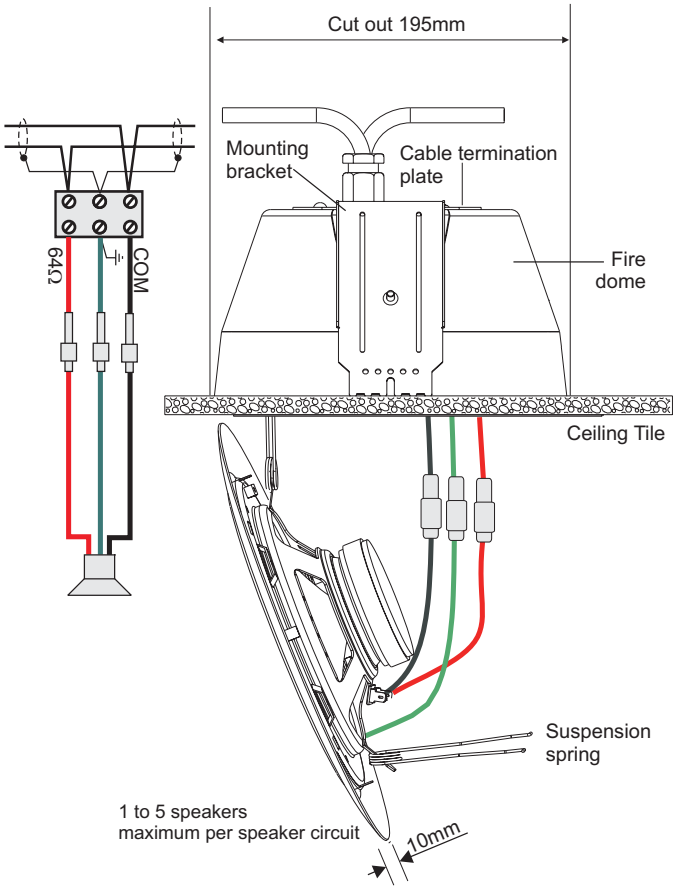
Standard	BS5839 Part 8 compliant for use in voice alarm system
Rated power	6W
Driver impedance	64 Ohms @ 1KHz
Effective frequency range, Hz	100 - 20KHz
S.P.L @ 1m, 1 Watt, dB, 1KHz	95dB
Dimension	240mm diameter
Net weight	1.9Kg
Colour/Finish	White RAL9016
Material	Steel
Mounting	Torsion spring
Cut-out	195mm

a. Cut out a 195mm diameter hole at the required position on the ceiling tile for speaker mounting.
b. Remove the terminal plate from the fire dome.
c. Loosen the two plastic nuts in the fire dome and raise the two clamping plates. Secure the plates in this position.
d. Feed the external cable through the hole in the ceiling tile and terminate the cables to the termination plate.
e. Secure the terminal plate to the fire dome. Insert the fire dome inside the hole in the ceiling tile. Lower the clamps on the fire dome and secure the assembly to the ceiling tile.
f. Hook one of the speaker suspension spring on the one bracket of the fire dome.

The angled part of the mounting spring must point towards the centre of the speaker.

Care must be taken to prevent injury when hooking the suspension springs.

g. Connect the speaker wires to the terminal block on the speaker.
h. Hook the other speaker suspension spring on to the bracket of the fire dome and close the speaker onto the ceiling tile. Ensure cable connected to the speaker is fed into the fire dome and does not get trapped between the speaker and ceiling tile.



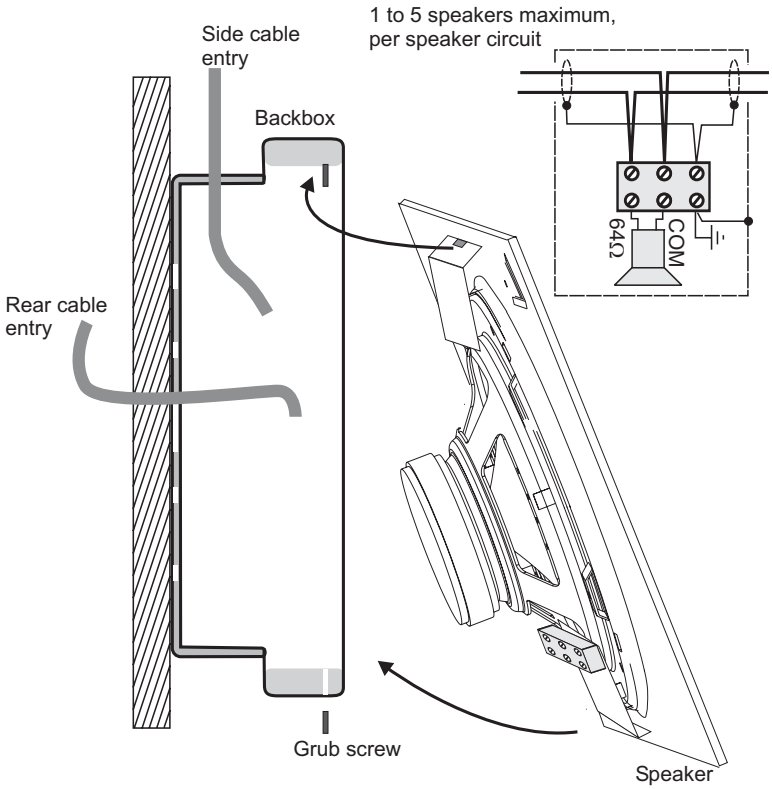
Metal Cabinet speaker

The COMPACT-CAB is a 64ohms cabinet speaker from Penton.

Technical Data

Standard	BS5839 Part 8 voice alarm compliant
Rated power	6W
Driver impedance	64 Ohms at 1KHz
Effective frequency range, Hz	100Hz to 20KHz
S.P.L @ 1m, 1 Watt, dB, 1KHz	95dB
Dimension	190mm height x 190mm width x 75mm depth
Net weight	1.9Kg
Colour/Finish	White RAL9016
Material	Steel front, die cast backbox
Mounting	Screw
Cable entry point	2 - 20mm diameter side 1 - 20mm rear.

a. Slacken the grub fixing screw and remove the speaker from the back box.
b. If rear cable entry point is not being used, then knock out the required top cable entry hole.
c. Secure the back box to a flat surface using the fixing holes provided.
d. Terminate the cable to the backbox.
e. Connect the cable to the ceramic terminal block on the speaker, see diagram.
f. Secure the speaker onto the back box using the grub fixing screw.



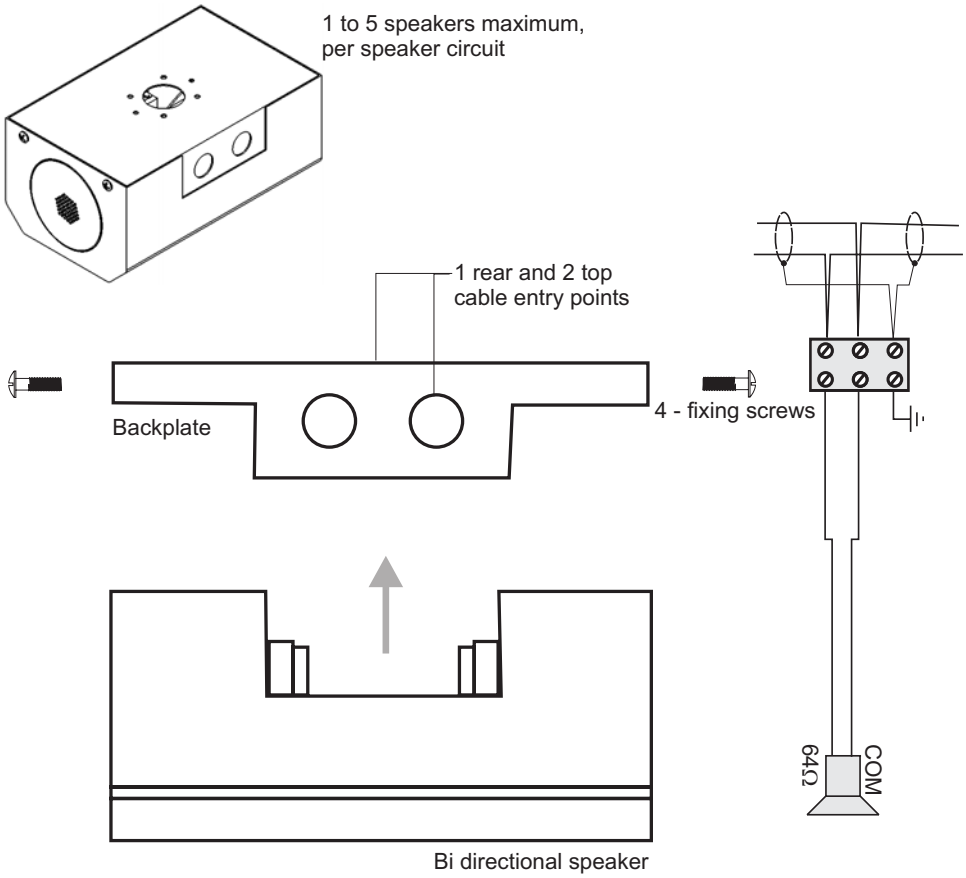
Metal Bi-directional speaker

The COMPACT-BDCAB is a 64ohms twin cabinet speaker from Penton.

Technical Data

Standard	BS5839 Part 8 voice alarm compliant
Rated power	6W
Driver impedance	64 Ohms at 1KHz
Effective frequency range, Hz	100Hz to 20KHz
S.P.L @ 1m, 1 Watt, dB, 1KHz	95dB
Dimension	210mm height x 130mm width x 98mm depth
Net weight	2Kg
Colour/Finish	White RAL9016
Material	Steel
Mounting	Screw
Cable entry point	2 - 20mm diameter side 1 - 20mm rear.

a. Remove the four fixing screws to separate the speaker from the mounting plate.
b. If the rear cable entry point is not being used, then knock out the required top cable entry hole on the mounting plate.
c. Secure the mounting plate to a flat surface using the fixing holes provided.
d. Terminate the cable to the backplate.
e. Connect the cable ends to the ceramic terminal block on the speaker, see diagram.
f. Secure the speaker to the backplate using the fixing screw.



Repeat Panel (loop connectable)

The repeat panel duplicates all of the control panel indications and the essential controls.

The repeat panel has its own mains derived power supply with battery for standby power in the event of mains supply failure. A lockable front door prevents unauthorised access to fire alarm controls but allows all of the indicators to be seen. The panel is designed for semi-flush or surface mounting and facilitates both rear and top cable entry points.

This repeat panel can be installed on a loop circuit of an EN or BS Gent Vigilon fire detection and alarm system. It can be sited near an entry or exit point of a building and fit in with the loop cable routing.

Compatibility

The new repeat panel is compatible with system control panel having card and software listed below:

Control panel CARD	Control Panel Software	
	EN54	BS5839
LPC **New Shorter Card ONLY**	≥ V4.19	≥ 3.90

≥ means equal to or greater than

Technical Data

Panel dimensions	height 403mm, width 338mm, depth 101mm
Weight	9Kg with battery (approximate)
Storage temperature	-10 to 55ºC
Operating temperature	0 to 45ºC
Relative humidity (Non condensing)	Up to 90% temperature 5 - 45°C
Battery	12V 7Ah sealed lead acid
Mains operating voltage	230V 50Hz +10% -6%
Emission	BS EN61000-6-3 : 2001
Immunity	BS EN50130-4 : 1996 : Part 4
LVD	BS EN 60950-2006
Ingress protection	IP31 (estimated)
Colour	Door - Pantone 422 Back box - Graphite Grey (RAL 7024)
Controls (with door closed) Access level 1	Next and Previous buttons operable during fire condition only.
Control buttons (with door open) Access level 2	Sound Alarms, Silence Alarms, Reset Fire, Cancel Fault Buzzer, Verify, F1-F4, Menu On/Off and U1-U4.
Indicators	Fire, Verify, Power, Fault, Power Fault, System Fault, Delay and CB253/254. ***EN panel only:*** Sounder, Sounder, Delay, Disablement Test and 32-Fire Zone LEDs. ***BS panel only:*** Commission and Warning. ***Display:*** 8 lines 40 characters per line, back-lit LCD.
Loop connection	3-way connection to a loop circuit
Maximum number per loop	Max. number of repeat and mimic panels per loop = 4 load factor per panel = 3 (load factor 1000 max per loop)
EN54-17 data Fire detection and fire alarm system short circuit isolators	V_{max} 42V V_{nom} 40V V_{min} 24V $V_{SO\ max}$ 14V $V_{SO\ min}$ 10V $I_{C\ max}$ 0.4A $I_{S\ max}$ 1A $I_{L\ max}$ 20µA $Z_{C\ max}$ 0.1Ω

Installation

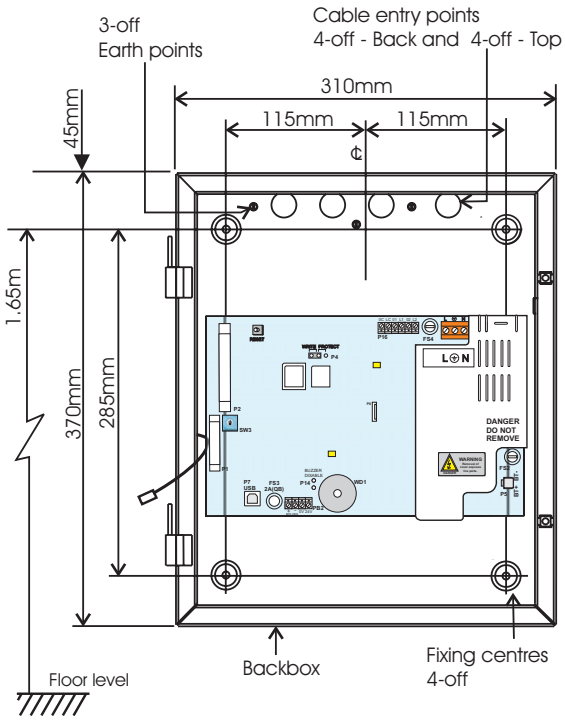
The Repeat Panel Set consists of:

	Parts	Quantity
①	Backbox assembly	1
②	Outer door assembly	1
③	Inner door assembly	1
④	20 Way ribbon cable	1
⑤	40 Way ribbon cable	1
⑥	Spares pack (includes battery leads and membrane labels for BS panel)	1
⑦	Battery 12V 7Ahr	1

Fuses on the Master Repeat Card

Fuse	Rating
FS4	3.15A AS 20mm x 5mm
FS2	3.15A AS 20mm x 5mm
FS3	2A QB 20mm x 5mm

Back box mounting



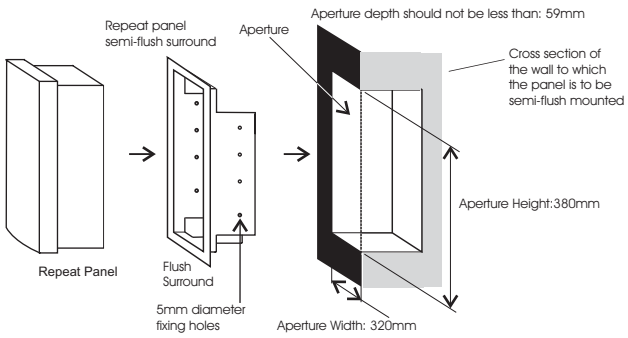
a. Find the Repeat panel Back box ① package and remove the temporary cover.

b. Secure the back box to the wall with suitable fixings. If the backbox is to be semi-flushed then use the optional semi-flush surround.

c. Terminate the cable at the entry point leaving **400mm** tail wire length.

If mains supply cable ends are not required to be connected then ensure the ends are insulated for safety.

d. Refit the temporary cover to protect the panel until all building work is complete.



Doors, Cables and Power up

The doors and cables can be installed after the building work has finished.

a. Remove the protective cover from the backbox.

b. Fit the inner door ③ to the panel enclosure remembering to connect the earth lead from the backbox to the inner door. Fit the outer moulded door ② to the backbox.

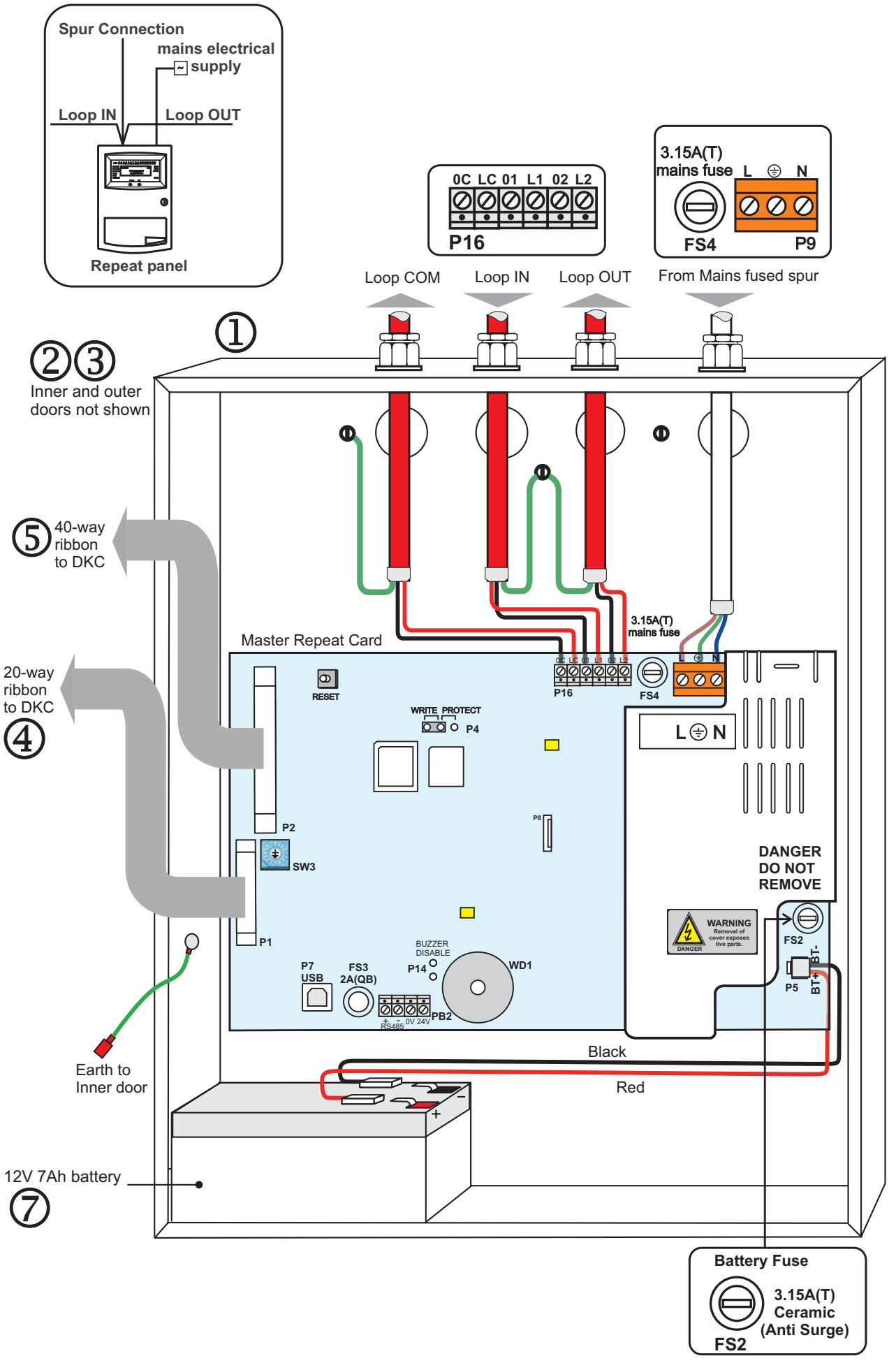
c. Wiring the panel:

Ensure the mains supply is completely powered down before wiring the mains cable ends.

- connect the mains cable to terminal block P9 on the Master Repeat Card.
- fit battery lead ⑥ supplied in the spares to connector P5 on Master Repeat Card.
- connect the loop cables to terminal block P16 on the Master Repeat Card.
- connect the 40 way ribbon cable ⑤ to the Master Repeat Card connector P2 and the other end to Display Key Card on the top right edge connector - P1.
- connect the 20 way ribbon cable ④ to the Master Repeat Card connector P1 and the other end to Display Key Card on the top right edge connector - P6.

d. Power-up the panel by switching ON the mains supply and then connect the battery leads to the battery and note:

- all the LEDs on the panel are lit for a short duration and a power up message displayed.
- the local buzzer sounds
- the display reads: **Main panel is off Line**
- the **Fault** and **System Fault** LEDs are lit.


Spur Connection
mains electrical supply
Loop IN
Loop OUT
Repeat panel
0C LC 01 L1 02 L2
P16
3.15A(T) mains fuse
L N
FS4
P9
Loop COM
Loop IN
Loop OUT
From Mains fused spur
①
②③
Inner and outer doors not shown
⑤ 40-way ribbon to DKC
20-way ribbon to DKC ④
Master Repeat Card
3.15A(T) mains fuse
RESET
WRITE PROTECT
P4
P16
FS4
L N
P2
SW3
P1
P8
DANGER DO NOT REMOVE
WARNING Removal of cover exposes live parts.
DANGER
FS2
BT-
BT+
P5
BUZZER DISABLE
P7 USB
FS3 2A(QB)
P14
WD1
PB2
RS485
0V 24V
Earth to Inner door
Black
Red
12V 7Ah battery ⑦
Battery Fuse
3.15A(T) Ceramic (Anti Surge)
FS2

Repeat Indicator panel

The repeat indicator panel provides messages and indications of system events and connects directly to the Vigilon fire panel.

Technical data

Dimensions in mm	height 177 x width 206 x depth 48.5
Full assembly weight	750g
Storage temperature	0 to 60ºC
Operating temperature	0 to 45ºC
Relative humidity (Non condensing)	up to 90% Temperature 5 - 45°C
Ingress protection	IP30 estimated
Colour	White
Indicators	Fire, Fault, Disablement, Power On, System fault, Sounder 2 line 20 character per line, back-lit, display.
Controls (with flap closed)	Test and Cancel buzzer
Controls (with flap open)	Fire, Fault, Disablement, Warning, Display Mode and Numeric keypad.

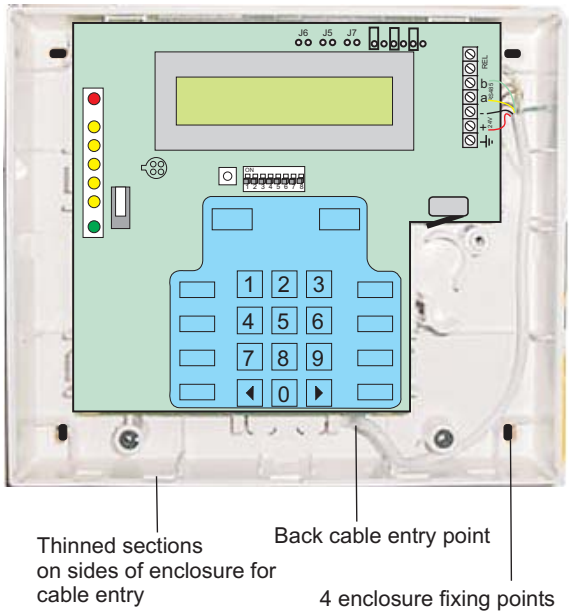
If only one repeat indicator panel is to be connected to the control panel then make use of the 24V supply at the panel, there is no need to use an external power supply

☐ Belden No. 9842 EIA RS485 Applications, O/A Beldfoil® Braid **1Km** maximum cable distance ***from the control panel to the last repeat indicator panel*** must have following characteristics:

- Two twisted pairs
- 24AWG (7 strands x 32 AWG) conductors

Installation

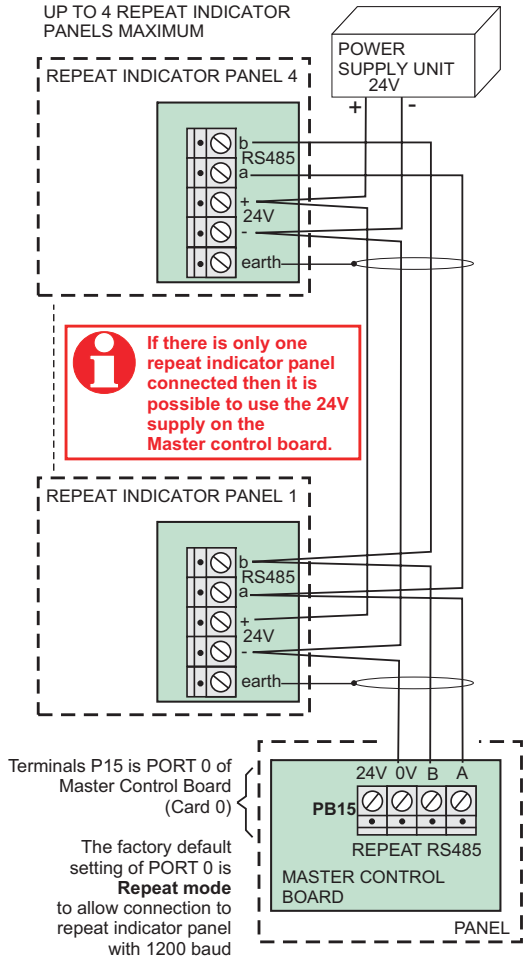
a. Open the outer cover.



b. Insert the external cable into the backbox assembly at the required entry point.

c. Mark the fixing points and secure the backbox to the wall.

d. Connect the cable to terminals.



e. Refit the front cover and flap.

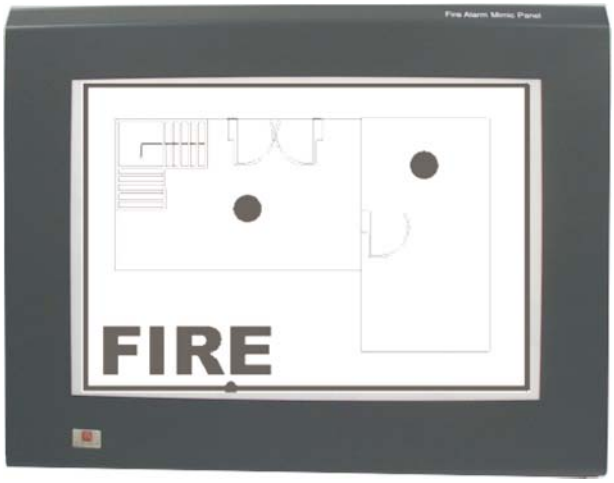
A2 Mimic and Zonal mimic Panel

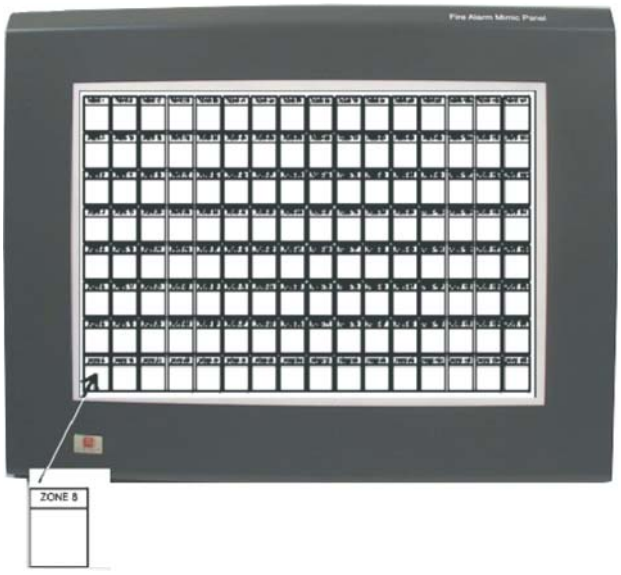
The A2 Mimic panel provides a pictorial representation of the building layout and the location of a fire.

An array of LEDs, covering an A2 area, may be programmed to illuminate in fire conditions. They may be illuminated individually or in groups.

Options facilitate the display of other text information. In its standby state it may display a digital clock.

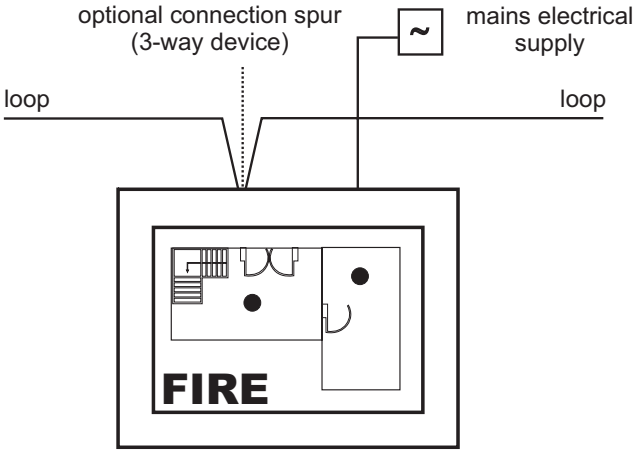
The A2 Zonal panel provides a traditional zone by zone indication of a fire. This is achieved using an array of LEDs behind a translucent film. The translucent film is supplied ready to identify zones 1 to 128.





Technical data

Panel dimensions in mm	height 650 x width 830 x depth 90
Full assembly weight	20Kg
Storage temperature	-10 to 55ºC
Operating temperature	0 to 45ºC
Relative Humidity (Non condensing)	Up to 90% Temperature 5 - 45°C
Mains operating voltage	230V 50Hz +10% -6%
Emission	BS EN50081-1:1992 Part 1 Residential, Commercial & Light Industry **Class B limits**.
Immunity	BS EN50130-4: 1996: Part 4 Alarm systems: *Electromagnetic compatibility* Product family standard: *Immunity requirements for components of fire, intruder and social alarm systems.*
Ingress protection	IP31 estimated.
Colour	Graphite grey (RAL 7024).
Display	Area - A2 landscape.
LEDs	1536, high intensity RED, a maximum of 256 may be illuminated at a time.
Battery	12V 7Ah seal lead acid.
Standby power supply	The integral battery-backed supply will provide power for 24 hours in standby and a further 30 minutes in alarm.



Installation

Fuses	Rating	Location
Mains	1A HRC	Top right- back box
FS1	2.5A QB 20mm x 5mm	Master repeat board
FS2	2.5A QB 20mm x 5mm	Master repeat board

a. Identify the A2 Mimic or A2 Zonal mimic packages, check that it contains the following parts.

Component	Quantity
Panel	1
12V 7Ah Battery	1
Lock Key	2 Pairs
Switch Key	2
1A Mains Fuse (Spare)	1
2.5A Quick Blow Fuse (Spare)	1

Care must be taken to when opening the inner door as damage can occur if the door is forced opened beyond its opening limit.

b. Using the keys provided unlock and unhook the mimic panel **front cover.**

c. Open the **inner door** by removing six retaining screws, two on the side and four in the back box.

d. Remove the cover over the mains terminals by removing the two fixing screws.

e. Knock out the required cable entry points from the **back box.**

f. Mark out the 4-back box fixing positions on the wall to which the panel is to be mounted and secure it with suitable fixings.

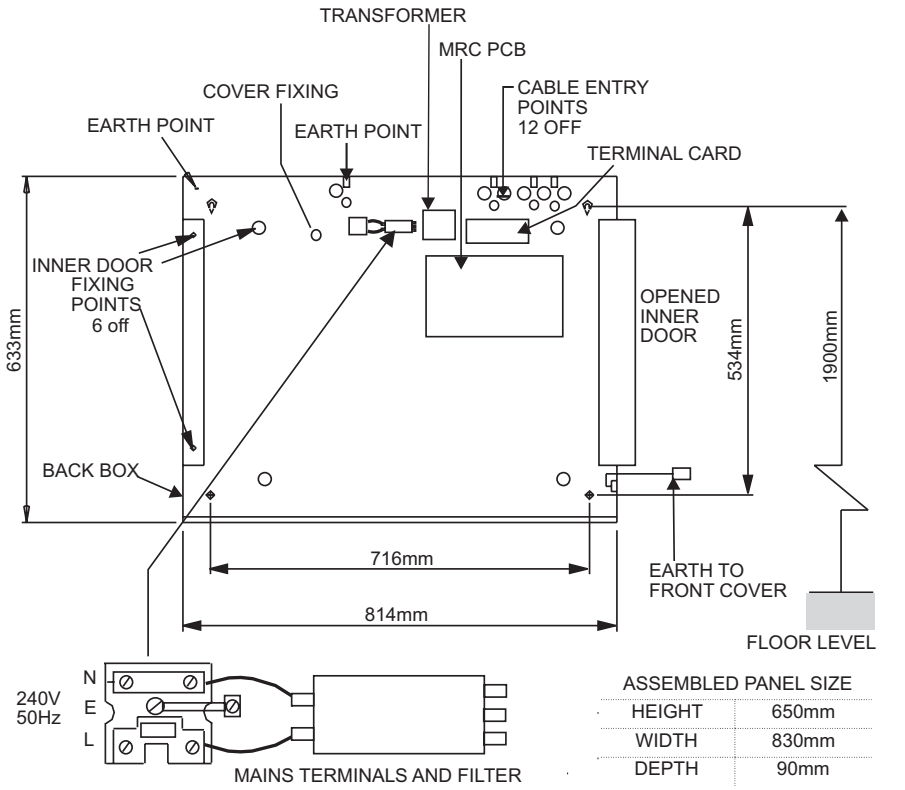
g. Terminate the loop and mains cables at the entry points and connect to the appropriate terminals.

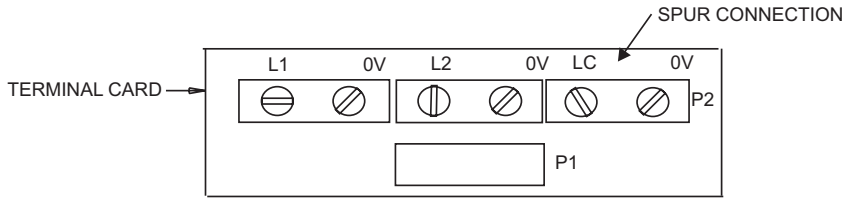
h. Refit the cover over the mains terminal block.

i. Close the inner door and secure it with the 6 retaining screws and washers.

j. Hook and lock the **front cover** onto the **back box** using the keys provided.

If the Panel needs to be *semi-flush,* then the *back box* can be semi-flushed by up to *40mm* of its total depth. There is no provision for a flush shroud for use with this product, it is intended that the overlap of the panel lid should cover the recess.





S-Quad Sensors

This following is information on the S-Quad product range. The S-Quad product integrates dual angle smoke, heat and carbon monoxide gas detection with electronic sounder, speech and LED flasher (Strobe) in one assembly.

General specification

Operating voltage	35V - 41V
Weight	110g with base - 170g
Dimensions	117mm diameter by 49.6mm height With base the height increases to 63.8mm
IP rating	IP30 IP20 when mounted on a metal back box
Enclosure	ABS
Colour	RAL 9010
Approval	LPCB approved
Storage Temperature	-20°C to 70°C (for S-Quad with CO -20°C to 50°C)
Ambient operating temperature	-10°C to 50°C
Relative Humidity	95% non condensing (5°C to 45°C)
Heat (H) Standard	EN54 : Part 5
Optical (O) Standard	EN54 : Part 7
Dual Optical (O^2) Standard	EN54 : Part 7
Sounder (S) Standard	EN54 : Part 3
Gas (CO) Standard *	LPS 1274
Multi sensor standard	CEA 4012

* The 'Gas' sensing is designed to meet the requirements of LPS 1274

Information on minimum sound output levels to include polar dispersion is covered in a technical note TECH7018.033, available on request from manufacturer. Information on minimum sound output levels to include polar dispersion is covered in a technical note TECH7018.033, available on request from manufacturer.

Base

The base has terminals for external cables to allow it to be electrically connected to the panel loop circuit and to the monitored input or output circuit. Any S-Quad device can be plugged into an S-Quad base.

Base Gasket

The optional foam rubber base gasket S4-BASE-GASKET can be fitted to the base to prevent water damage from dripping water from the ceiling.

Base labels

An optional label S4-BASE-LABEL can be fitted to the base. The label can be marked up with device location information.

Indicators

The S-Quad has a red LED that gives an indication in the event of a fire. The LED can be configured to flash periodically, as an 'in operation' confirmation, this indication is given system-wide at all S-Quads. The S-Quad with a CO sensor also has a blue LED to indicate when a fire signal senses the presence of CO.

Do's and Don't

DO NOT locate smoke detectors where products of combustion may be present such as kitchens, garages, furnace rooms, welding shops etc.

DO NOT locate heat detectors above boilers or heaters or where the temperature is normally very high or liable to sudden fluctuations.

DO NOT locate smoke or heat detectors: -

- **In dusty or dirty environment.**
- **Near heating or air-conditioning grilles.**
- **Outdoors in stables, sheds etc.**
- **In excessively damp areas.**
- **In dead air spaces at the junctions of ceilings and walls.**
- **At ceiling locations where a 'thermal barrier' may exist.**

DO NOT locate a CO detector: -

- **In buildings where farm animals are kept.**
- **In excessive damp areas.**
- **In battery room where non sealed battery are kept.**
- **In a Car park where exhaust fumes will be present.**

Follow recommendations detailed in section 22 of BS5839 : Part 1 : 2002

Dust Cover

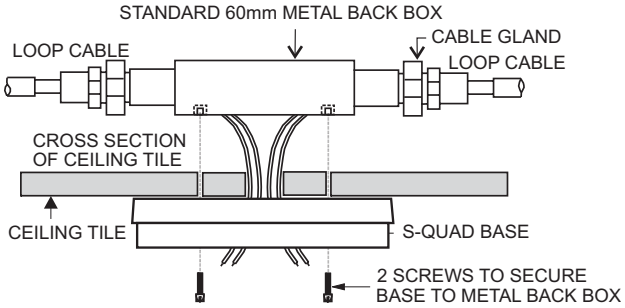
A dust cover is supplied with the S-Quad, to prevent dust from building work contaminating the sensor. The cover is removed prior to the commissioning of the fire alarm system.

Siting

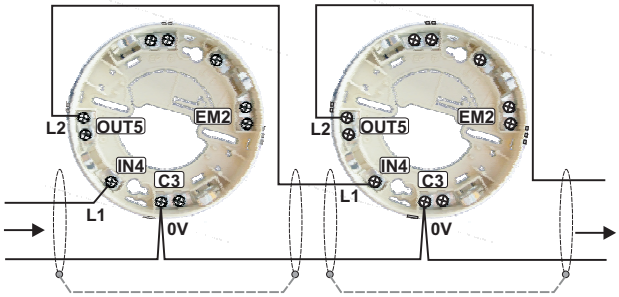
A S-Quad device plugs into a dedicated Base that is installed in the protected premises. The Bases should be sited in locations as defined by the project plans and by BS5839 : Part 1 : 2002.

Metal back box

A metal back box must be used for base or semi-flush mounting. The earth continuity must be maintained throughout the whole loop. The earth must be securely connected to the back box.



In - Out wiring to S-Quad bases

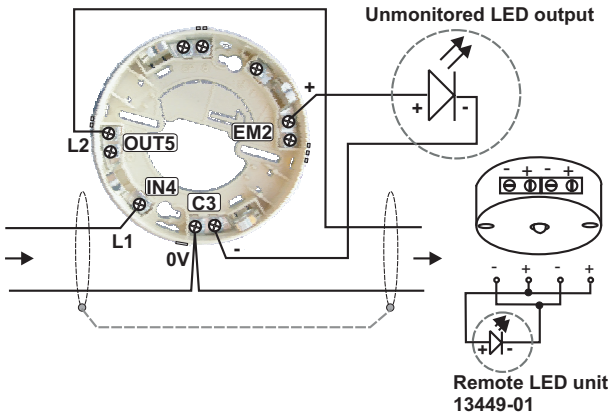


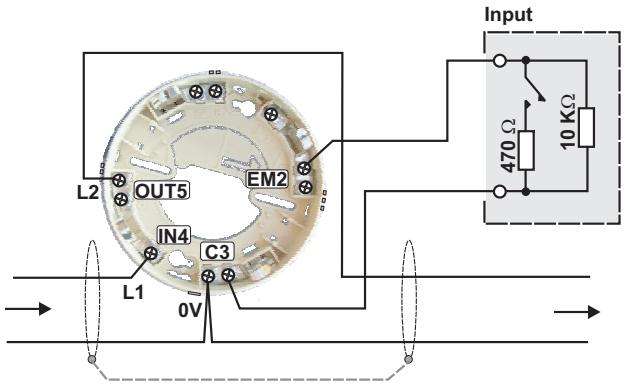
Programmable input/output

The 34703 Slave Relay unit and 34703 Slave LED indicator unit are NOT supported for use with S-Quad fire sensors. The Slave units are only compatible with 34xxx range of fire sensors.

All S-Quad devices can be configured as either monitored input or unmonitored output. The factory setting of the programmable input / output is unmonitored output, to drive an external repeat LED without a series resistor.

There is a maximum cable length limit of 15 metres from the S-Quad base to the external I/O Unit.





The input can accept signals such as fire, non fire or fault, these are configured during commissioning. As a fire input it is possible to connect a conventional Manual Call Point (non UK application only) with a series resistor of value 470 Ohms coupled with an end-of-line 10Kohms resistor. In this case the fire input is fully monitored for open or short circuit faults.

The input can be setup as a non-fire or fault input using a similar arrangement with series and parallel resistors as shown. It is possible for such an input to trigger a command that is configured to action an output elsewhere in the system to control plant equipment such as the ventilation system.

Tools for S-Quad

An extractor tool allows removal and fitting of the S-Quad device head into the base. By fitting a screw-on adaptor, the tool can be used to remove the sensor dust cover.

To remove an S-Quad

Fit the tool onto the S-Quad. Turn S-Quad anticlockwise until it stops and remove the S-Quad from the base.

To fit an S-Quad

Fit the S-Quad on to the tool. Offer S-Quad to base and rotate clockwise until it moves upwards on to the base and rotate it again until it clicks and goes no further, the lines on the base and S-Quad will align.

To fit a dust cover

Place the dust cover onto the tool inside the cradle. Offer the cover to the S-Quad, locate and push to fit it onto the assembly. Withdraw the tool when the dust cover is in place.

To remove a dust cover

A dust cover remover tool must be fitted to the main tool to extract the dust cover. Press the pad of the dust cover remover tool onto the dust cover, this creates an air tight grip, to allow the cover to be pulled off from the S-Quad.

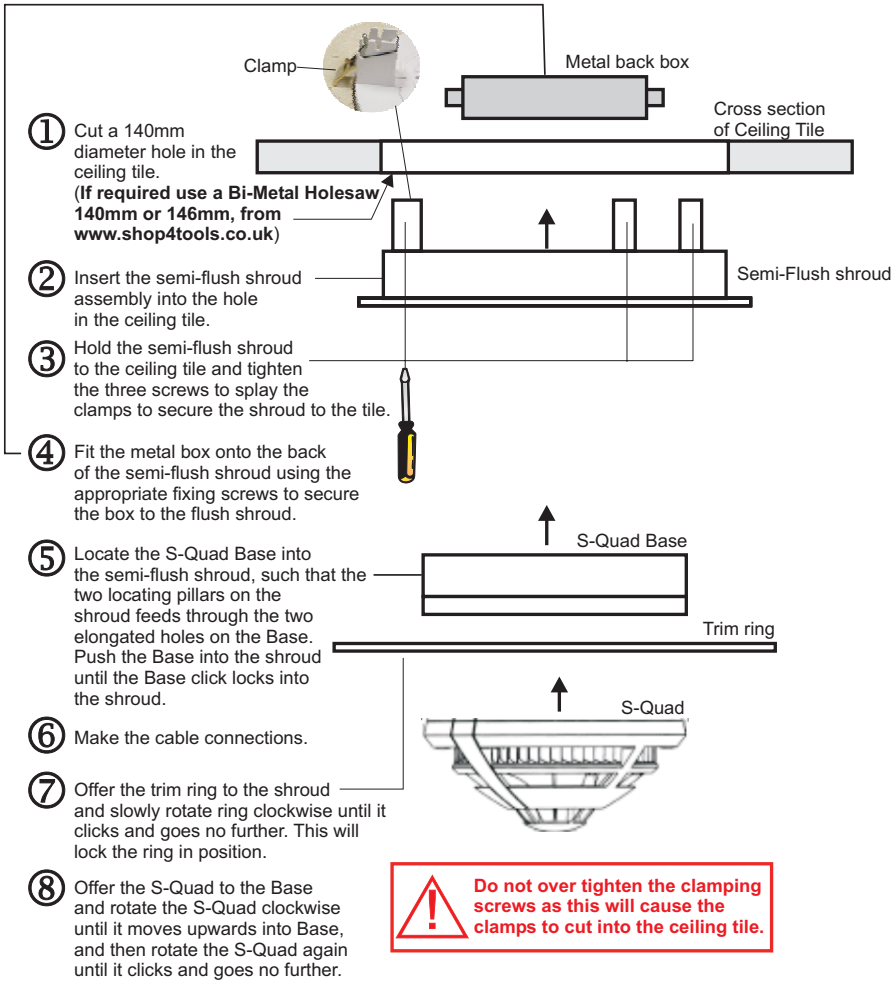
S-Quad Semi-flush fixing kit (S4-FLUSH)

An S-Quad device can be semi-flush mounted to a ceiling tile to a depth of the approximate 20mm, which is slightly deeper than the base assembly. To semi-flush mount a special housing must be used, which consists of a main assembly and a trim ring.

There is an enhanced volume output of sound and speech from a semi flush mounted S-Quad.

Technical data

Weight	164g with trim ring
Dimensions	174mm diameter by 50mm depth
Enclosure	ABS
Colour	RAL 9010
Storage Temperature	-20°C to 70°C
Ambient temperature	-10°C to 50°C
Relative Humidity	95% non condensing (5 to 45°C)



① Cut a 140mm diameter hole in the ceiling tile. (**If required use a Bi-Metal Holesaw 140mm or 146mm, from www.shop4tools.co.uk**)

② Insert the semi-flush shroud assembly into the hole in the ceiling tile.

③ Hold the semi-flush shroud to the ceiling tile and tighten the three screws to splay the clamps to secure the shroud to the tile.

④ Fit the metal box onto the back of the semi-flush shroud using the appropriate fixing screws to secure the box to the flush shroud.

⑤ Locate the S-Quad Base into the semi-flush shroud, such that the two locating pillars on the shroud feeds through the two elongated holes on the Base. Push the Base into the shroud until the Base click locks into the shroud.

⑥ Make the cable connections.

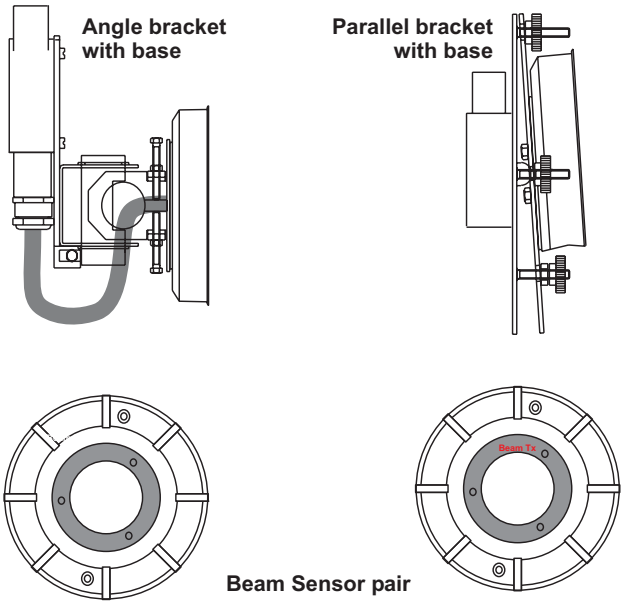
⑦ Offer the trim ring to the shroud and slowly rotate ring clockwise until it clicks and goes no further. This will lock the ring in position.

⑧ Offer the S-Quad to the Base and rotate the S-Quad clockwise until it moves upwards into Base, and then rotate the S-Quad again until it clicks and goes no further.

Do not over tighten the clamping screws as this will cause the clamps to cut into the ceiling tile.

Beam sensor

The beam sensor allows detection of smoke over distances up to 100 metres. The beam sensor comprise 2 parts a transmitter head and a receiver head, each must be mounted on a base fixed to a beam sensor bracket.



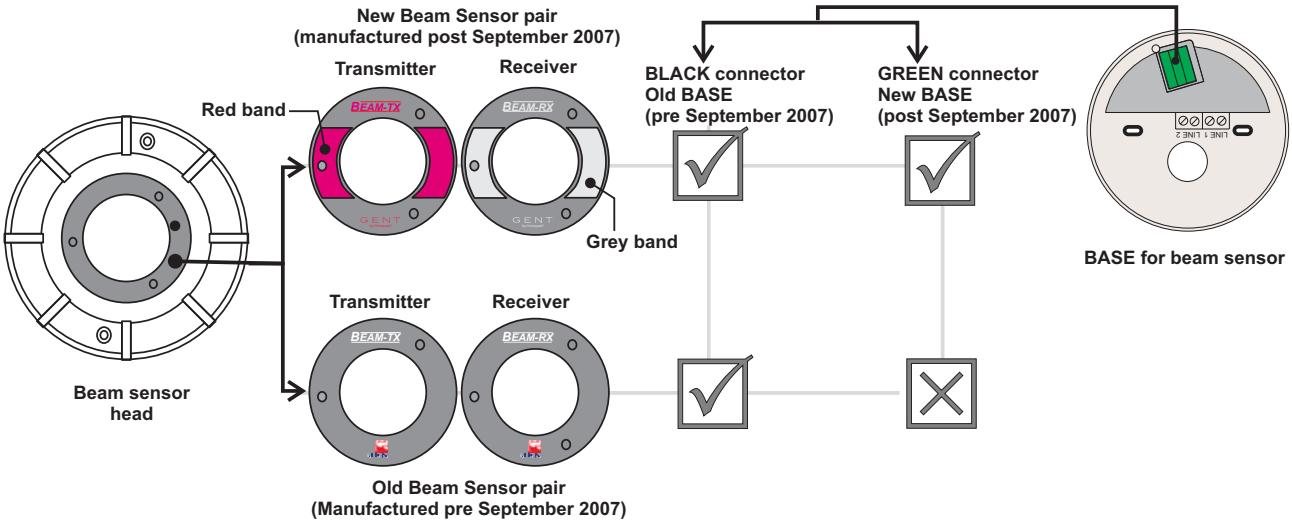
Options

- ☐ Beam sensor pair on Angle bracket with base for applications from **2m to 100m.**
- ☐ Parallel bracket with base version is intended for use with short paths of up to **10m**.

Technical Data

Standard - Smoke	BS5839 : Part 5
Dimensions in mm	Angle bracket and sensor: height 145 x width 106 x depth 130
Full Assembly weight	Angle bracket and sensor: 660g (800g with head)
Storage temperature	-30 to 70ºC
Operating temperature	0 to 50°C
Relative Humidity (Non condensing)	up to 95% Temperature 5 - 45°C
Emission	BS EN50081-1:1992 Part 1 Residential, Commercial & Light Industry **Class B limits.**
Immunity	BS EN50130-4: 1996: Part 4 Alarm systems
Ingress Protection	IP42 estimated
Colour	White
Operating voltage	20-50V
Indicators	Two Red LEDs visible at 500LUX ambient light levels 3m

Compatibility of old and new Beam Sensor heads and Bases



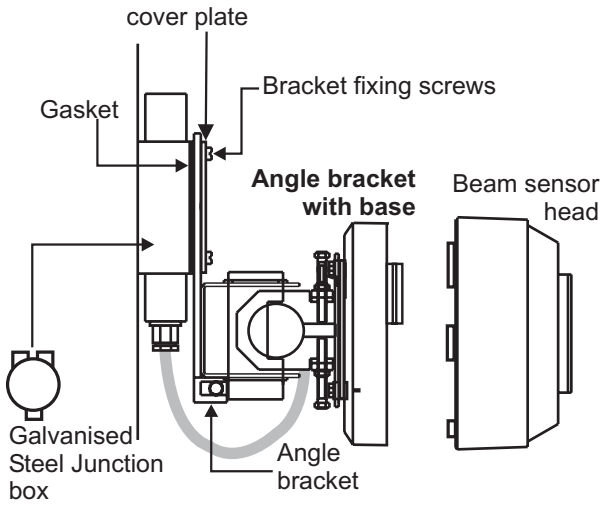
Installation

The **beam sensor pair** consist of two heads a receiver head and a transmitter head, each head is designed to fit into a **bracket having a base**.

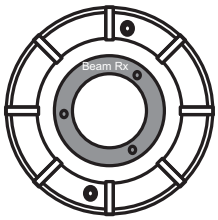
The beam sensor TRANSMITTER head and RECEIVER head should be installed on the same loop facing each other for alignment purposes.

a. Check the contents of the bracket and base package:

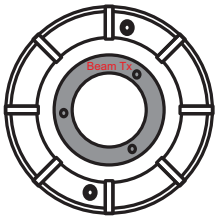
Component	Quantity
Bracket + base assembly	1
Screws	2
Terminal Block	1
Gasket	1

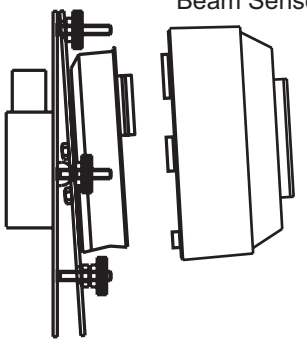


Beam Receiver head

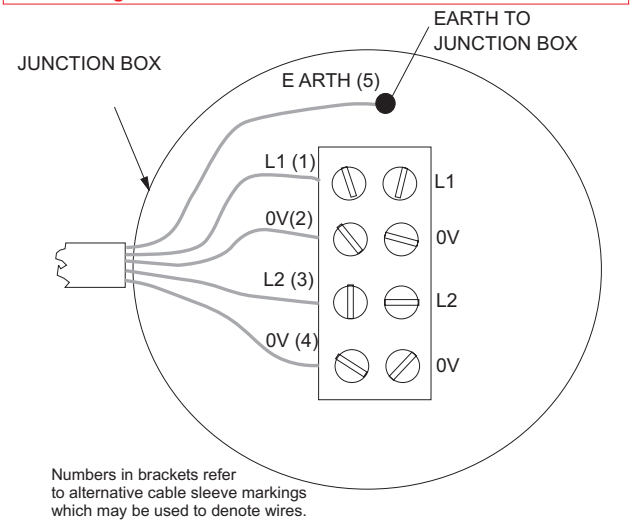


Beam Transmitter head





The junction box used for mounting the bracket must be of the galvanised type. The 2-way base can be recognised by the black plastic PCB cover moulding.



Numbers in brackets refer to alternative cable sleeve markings which may be used to denote wires.

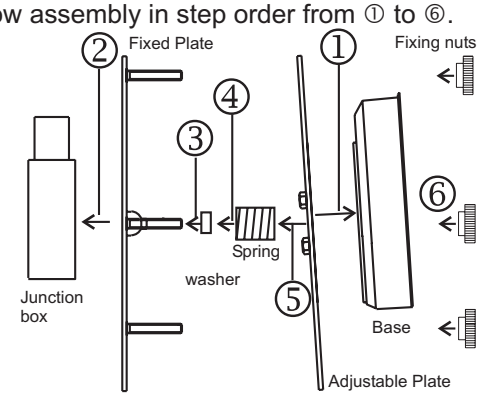
b. Fit the **terminal block** supplied into the junction box and make the loop cable connection. Ensure the cable earth connects to an earth point in the junction box.

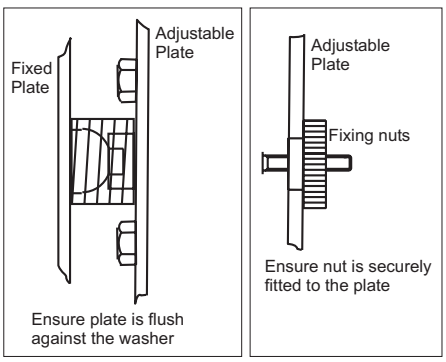
c. Secure the **angle bracket** assembly onto the junction box using the gasket and **angle bracket** fixings.

d. The applicable **sensor head** may now be fitted to the base assembly by twist and lock action.

Parallel bracket assembly

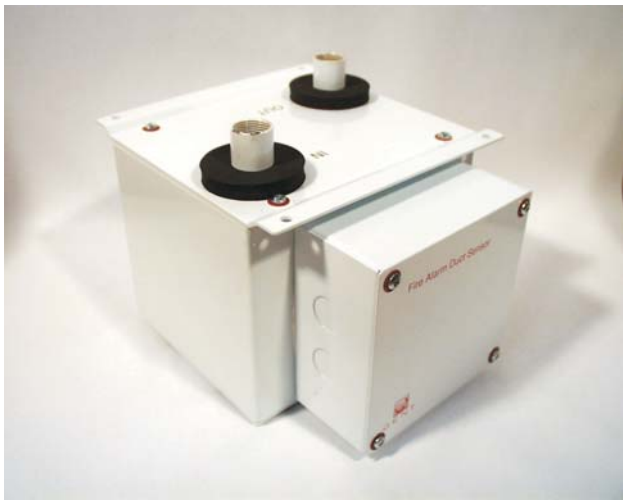
Follow assembly in step order from ① to ⑥.

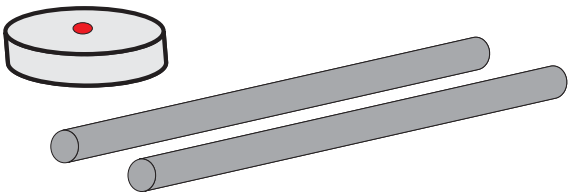




Duct Sensor

The duct sensor uses probes to sample the air in ducts. If smoke is detected in the duct then the system can action a shut-down of the air-conditioning or ventilation system to prevent the spread of smoke.





Technical Data

Dimensions in mm Housing	height 160 x width 180 depth x 170
Probes	The probes are 0.92 metres long, but may be cut down to suit. An extension kit allowing probes to be extended by a further 0.92 metres is available *(part no 17908-06)*.
Full Assembly weight	3.3Kg
Storage temperature	-30ºC to 70ºC
Operating temperature	0ºC to 50°C
Relative Humidity (Non condensing) Temperature 5ºC - 45°C	up to 90%
Emission	BS EN 61000-6-3:2001 Residential, Commercial & Light Industry **Class B limits.**
Immunity	BS EN50130-4: 1996: Part 4 Alarm systems: *Electromagnetic compatibility* Product family standard: *Immunity requirements for components of fire, intruder and social alarm systems.*
Ingress Protection	IP55 estimated
Air flow in installed environment	10m/s gusting for up to 30 minutes 5m/s continuous.
Colour	White
Operating voltage	20-50V
Indicators	none, use the supplied slave LED *(part no 34702)*

Installation

The duct sensor consists of a housing assembly and probes for installation on to a ventilation duct.

a. Check contents of the DUCT SENSOR and PROBES package:

Component	Quantity
Duct Housing	1
Plastic Bungs	2
Lock Nuts	2
Inlet Probe	1
Exhaust Probe	1
Slave LED unit	1

b. Mark out the position of the two probe hole centres on the duct.

It is important to take into account the direction of the air flow in the duct and probe orientations.

c. Drill or punch the two probe holes 35mm diameter in the duct.

d. Fit the **lock nut** onto the threaded end of each **probe** and fit the respective probe into its coupling on the **duct housing**. Rotate each probe to face the required direction in the duct and secure the lock nuts to prevent probe from rotating.

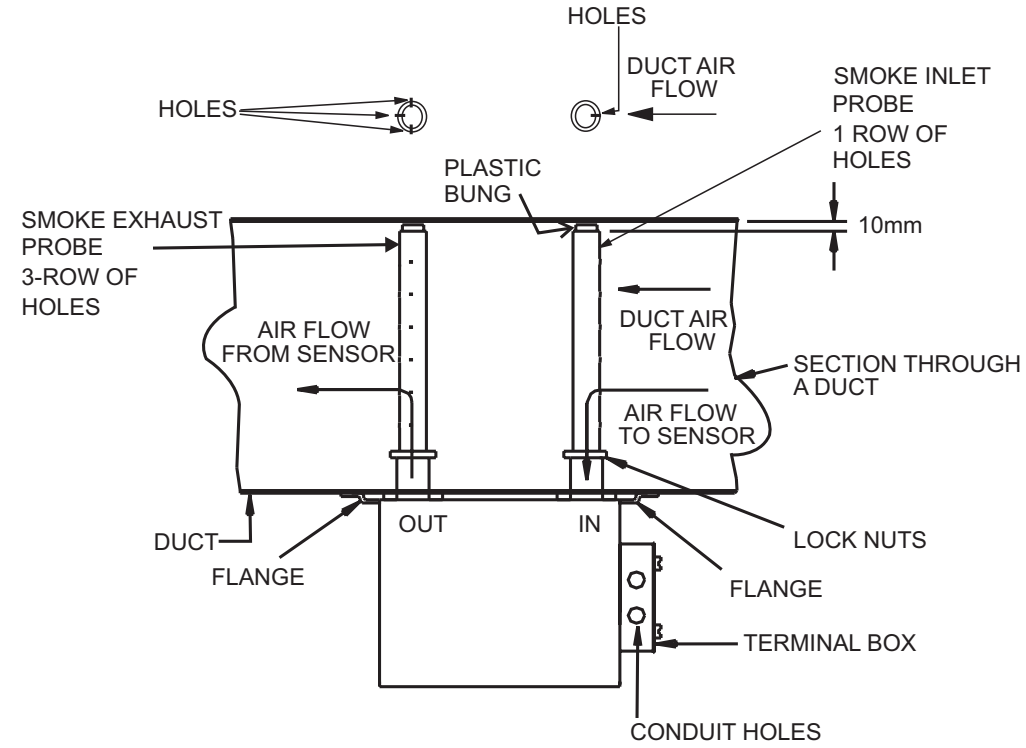
e. Insert the probes into the duct until they reach the opposite wall and measure the gap between the duct housing flange and the duct wall.

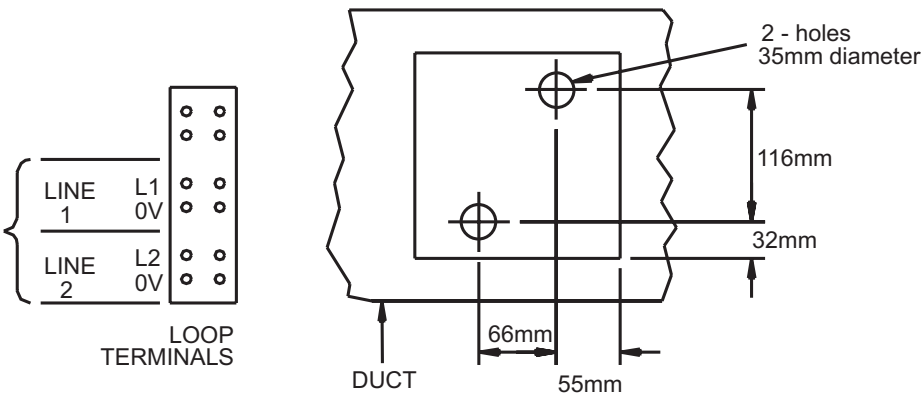
f. Remove the probes from the duct and cut the probe ends by the measured gap + 10mm.

g. Fit the **plastic bungs** into the probe ends.

h. Insert the probes into the duct and secure the duct housing using the fixing holes on the flange.

i. Terminate each cable at the entry and connect the appropriate cable ends to the terminal block.





S³ Speech, Sounder Strobe mark II

The low power addressable **Voice Enhanced Sounder** and **combined Strobe** products provide audible and visual alarm signals, and are designed for use in **Gent** analogue and addressable fire alarm systems.

The S³ devices are supplied with standard speech messages along with sounder and strobe option. The devices are configured during commissioning to operate to site specific requirements. The devices are supplied with either a deep base (40mm) or a shallow base (25mm), offering IP55C and IP31C ratings respectively, with the exception of the system range (see diagram below) which is available with deep base only.

The S³ product range incorporates innovative design features protected by Patents GB2388994, GB2388995 and GB2388916. The product design has also been registered.

Low profile S³
Available in deep or shallow base

System S³
Available in deep base only

If you have a speech/sounder only product then ignore the strobe information given.

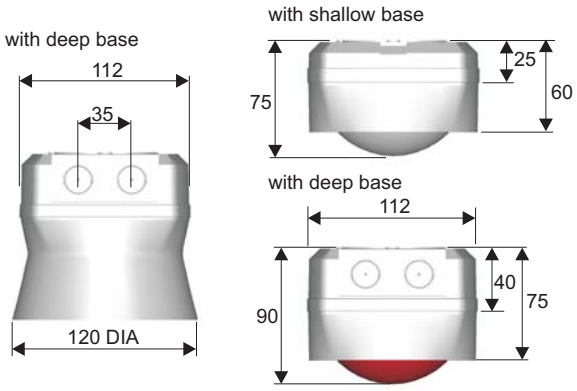
Speech messages

Message No	Speech message
Message 2	*Attention please this is an emergency please leave the building by the nearest available exit.* (female voice).
Message 3	*An incident has been reported in this building please await further instructions.* (female voice).
Message 4	*This is a test message no action is required.* (female voice).
Message 5	*This is a fire alarm! Please leave the building immediately by the nearest available exit.* (male voice).

Tone No.	Description of tone.
Message 1	**Alarm Bell** (equivalent to 8" Solenoid Bell) **106dBA @ 1m.**

The addressable S³ products are fully synchronised on the same fire panel.

Technical data



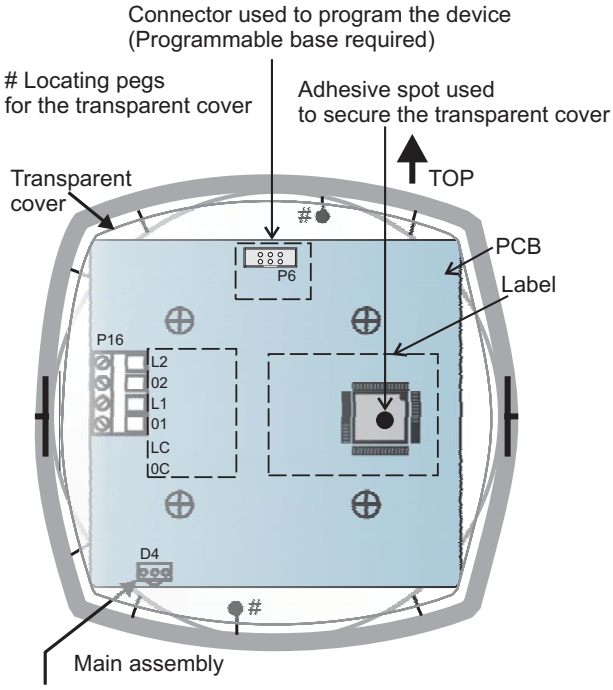
Sound output for standard tone (levels given are **typical values** with measurement taken at 90° anechoic - fast response)	Low profile S³ - 100dBA +/-3dBA System S³ - 103dBA +/-3dBA
Standard (sounder only)	EN54 : Part 3
Messages, Tones and Strobe flash rate	see instructions supplied with the product
Strobe light output with red lens	equivalent to 3W Xenon flasher
Operating voltage	range 35V - 41V
Terminal size	2.5mm² maximum
IP rating with deep base with shallow base	IP55C IP31C
Enclosure colour	White and Red (with red translucent lens cover fitted to unit with Strobe).
Enclosure material	Flame retardant ABS (Strobe cover is polycarbonate) The plastic enclosures meet the flammability requirements of ISO 1210:1992 Class FH-2.
Weight	0.3Kg (approximate).
Operating temperature	-10°C to 50°C
Storage temperature	-20°C to 70°C
Relative humidity (non condensing)	up to 90%
IR operating distance (to select volume level)	3m
Message and attention Tone period	10 seconds default Configurable up to 60seconds

Installation

a. Drill or knockout the required cable entry points on the **base**.

b. If using the deep **base** option and IP55C protection is required, then stick the circular **wall gasket** on to the centre back of the **base.**

c. Secure the **base** to the wall whilst ensuring Top of the base is in correct orientation.



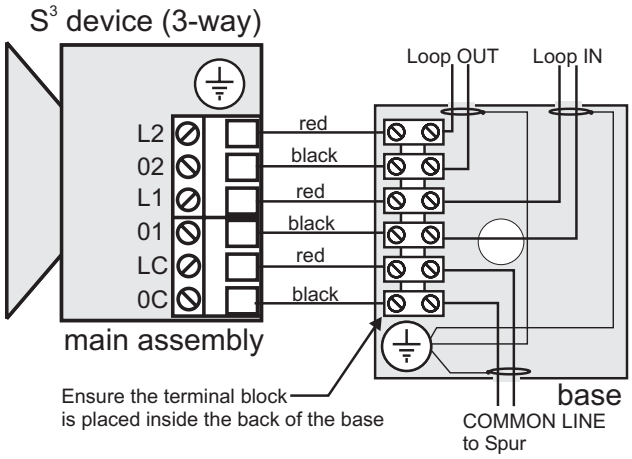
d. Terminate the cable at the entry point leaving no more than 10cm (4") tail wire length for connection.

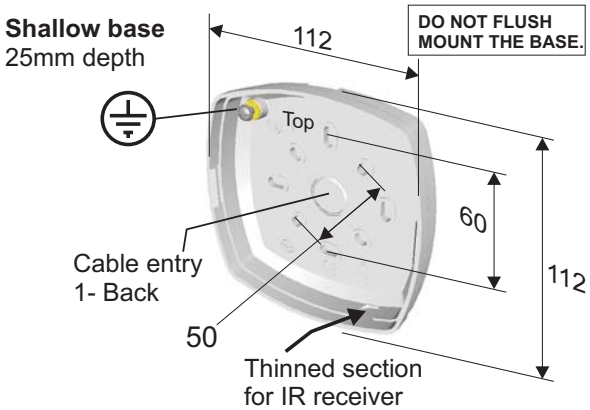
e. Ensure the **transparent cover** is in place over the **PCB**. Connect the wires to the terminal block.

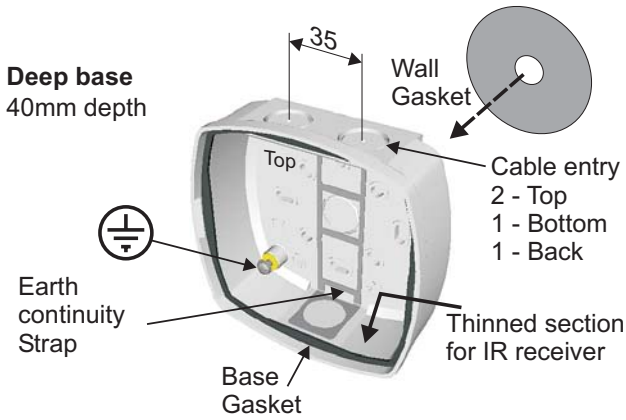
f. Close the **main assembly** to the base.

Retrofitting a System S^3 device

A system S^3 Mark I device can be retrofitted to an alarm sounder base. The existing base having a terminal block to which loop cables are connected.







Environmentally protected MCP

This unis has **IP55** rating as specified in the *British Standard* BS 5490:1977 which is the *specification for classification of degree of protection provided by enclosures*.

Environmentally protected MCP

a. Remove the front cover of the unit disconnecting any flying leads attached to the terminal block.

b. Place the unit in the desired position and mark the four fixing holes. When the product is mounted ensure the pre-machined cable entries are at the bottom.

c. Drill the four fixing holes and mount the unit.

When using PYROTENAX cable, the cables MUST be terminated using PYROTENAX glands (Code No. RGM 2L1.5), screw-on seals (Code No. RPS 2L1.5) or equivalent and a standard M20 locknut.

d. Feed the cables into the unit. Ensure that the sealing washer supplied is fitted between the cable gland and the unit (rubber part of the washer against the unit). Use the earth continuity straps provided to maintain loop cable earth continuity.

e. Connect the earth tails into the earth termination point.

f. Terminate the cable at the entry point and connect ends into the appropriate terminals on the sealed printed circuit board module.

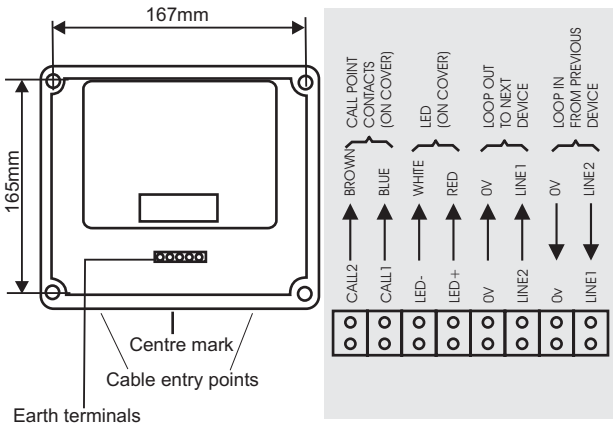
Failure to promptly replace the cover will result in environmental damage.

g. Reconnect the flying leads from the cover into the appropriate terminals on the sealed printed circuit board module. Refit the cover to the unit. For maximum protection ensure that the cover screws are tight and secure.

Forcing the cover to fit the wrong way round will damage the unit.

Technical data

Standard	EN54 Part 11 (break glass type).
Dimensions	height 180 mm x width 180 mm x depth 130 mm.
Full assembly weight	3.5Kg
Storage temperature	-30 to 70ºC
Operating temperature	0 to 50°C
Emission	BS EN50081-1:1992 Part 1 Residential, Commercial & Light Industry **Class B limits.**
Immunity	BS EN50130-4: 1996: Part 4 Alarm systems: *Electromagnetic compatibility* Product family standard: *Immunity requirements for components of fire, intruder and social alarm systems.*
Ingress Protection	IP55 estimated
Colour	Red
Case	ABS engineering plastic.
Indication	Red LED that illuminates when the MCP is operated.
Testing	The operation of the MCP is tested by using a test key.
Operating voltage	20-50V



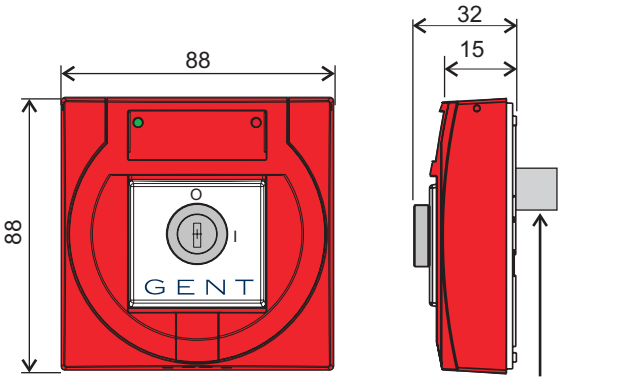
Test

Push the **test key** through the hole on the underside of the call point to engage the test cam mechanism. Push to operate the cam mechanism. At this point the test key is retained in the call point. Pulling the test key out will reset the glass.

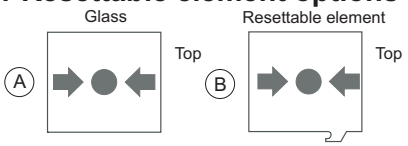
new Manual Call Points

Options

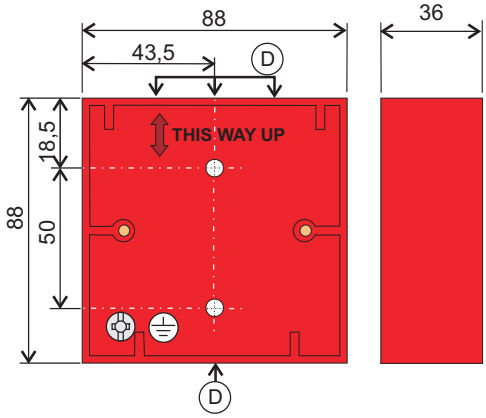
- ☐ Manual Call Point (Glass)
- ☐ Manual Call Point (Glass) with Protective cover
- ☐ Manual Call Point (Resettable element)
- ☐ Manual Call Point (Resettable element) with Protective cover



Glass or Resettable element options



Optional Back box



The optional back box has recessed centres 'D', 3 at the top and 1 at the bottom, a maximum of 2 are usable.

Technical data

Standard	EN54: Part 11: 2001
Dimensions	height 88 mm x width 88 mm depth 21 mm or 57 mm when surface mounted
Full assembly weight	110g - approximate
Storage temperature	-30 to 70ºC
Operating temperature	-25 to 70°C
Relative Humidity (Non condensing) Temperature 25-55°C	up to 95%
Emission	BS EN61000-6-3:2001 Residential, Commercial & Light Industry **Class B limits**
Immunity	BS EN50130-4: Part 4 :1996
Ingress Protection	IP43 estimated standard type IP55 estimated with protective cover and back box
Colour	Red (similar to RAL3020)
Case	ABS engineering plastic
Indicators	
Normal	Green LED for status and find device application
Active	Red LED and Yellow tab for active or Fire indication
Testing	The operation of the MCP is tested by using a test key
Terminals	2.5mm^2 maximum
LPCB Approval	S4-34842 and S4-34800
Operating voltage	35V to 41V

Installation

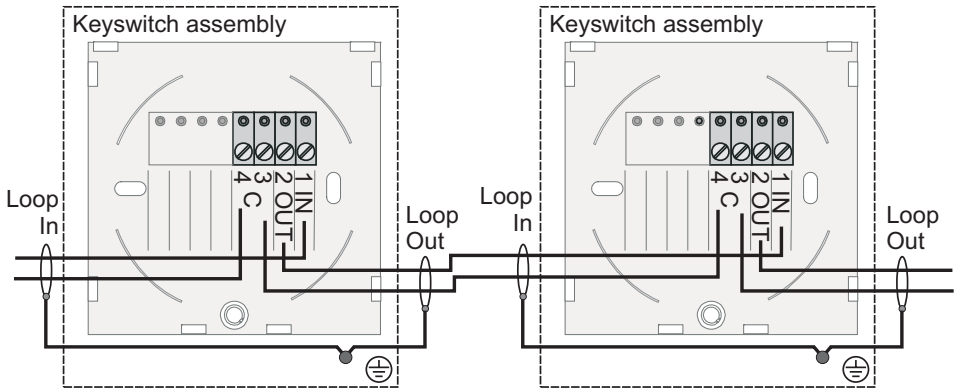
a. Check the contents of the package:

	Component	Quantity
	Call point assembly	1
	Earth Strap	1
	Test Key	1
	Long Screw	2

b. The call point assembly may be mounted on a standard electrical box or on the optional red back box S4-34895.

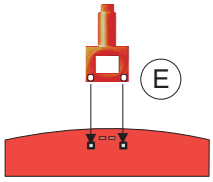
c. Feed the fire rated cables through the entry holes and mount an electrical box or the red optional back box to an even wall surface using suitable fixing.

When semi flush fixing the call point assembly a standard electrical box must first be flushed into the wall before the call point assembly is fitted.



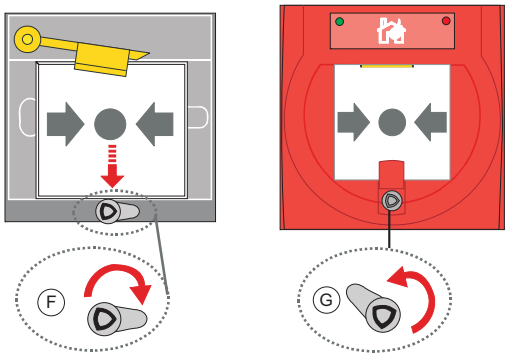
d. Terminate each cable entry at the back box. Use the *earth strap* or the *earth point* in the back box to maintain loop cable earth continuity. Connect the loop cable to the terminals.

e. Disengage front cover from the call point assembly using the end of the test key 'E' and lift out the cover from the bottom edge.



f. Secure the call point assembly to the back box using the 2 long screws supplied.

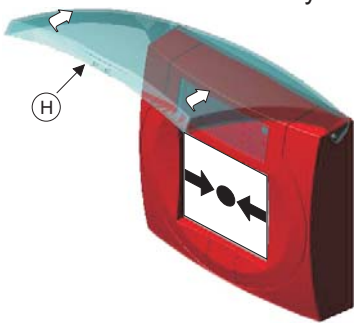
g. To re-assemble the glass or resettable element, using the test key turn the tab to position 'F' and insert the glass 'A' or optional resettable element 'B'.



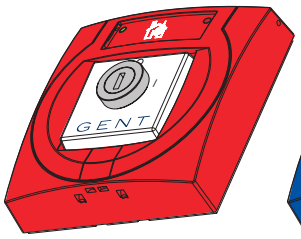
h. Hook the front cover onto the top edge of the call point assembly and then push the bottom edge down until it click shut. Check both hooks on the top of the front cover are locked onto the call point assembly.

i. Turn the test key anticlockwise to position 'G' (not visible) such that the glass or optional resettable element is held under the yellow arm.

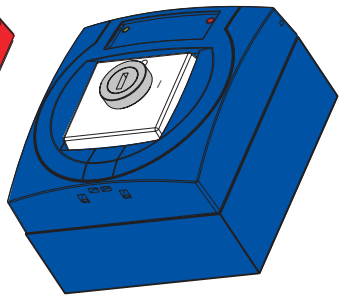
j. Where applicable, ensure the protective cover 'H' is securely fitted to the call point assembly.



Keyswitch Interface / MCP



Red enclosure
for Fire applications
(backbox optional)

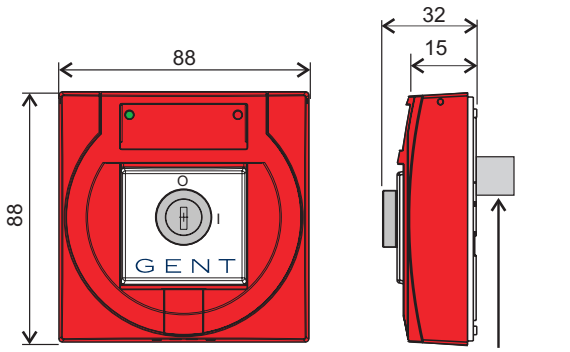


Blue enclosure
for Plant interface applications
(supplied with backbox)

The keyswitch units covered in this leaflet are suitable for installation in GENT analogue addressable fire alarm system. The product range covered here include:

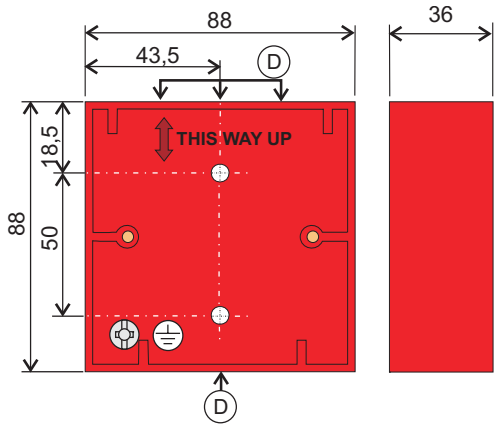
- ☐ S4-34807 Keyswitch MCP (Red)
- ☐ S4-34418 Keyswitch Interface (Blue)
- ☐ S4-34499 Spare Keys (Pack of 2)
- ☐ S4-34895 Surface Back Box for Interface Red Plastic (Pack of 10)

Keyswitch assembly



Removable
Terminal block

Back box



The back box has recessed centres 'D', 3 at the top and 1- at the bottom, a maximum of 2 are usable.

Technical data

Standard	EN54: Part 17 EN54: Part 18
Dimensions	height 88 mm x width 88 mm depth 32mm or 66mm when surface mounted
Full assembly weight	128g - without backbox 192g - with backbox
Storage temperature	-30 to 70ºC
Operating temperature	-25 to 70°C
Relative Humidity (Non condensing) Temperature 25 - 55°C	up to 95%
Emission	BS EN61000-6-3:2001 Residential, Commercial & Light Industry **Class B limits**
Immunity	BS EN50130-4: Part 4 :1996
Ingress Protection	IP43 estimated standard type
Colour	Red (similar to RAL3020) Blue (similar to RAL5015)
Case	ABS engineering plastic
Indicators Normal	Green LED for status and find device application
Active	Red LED for active or Fire indication
Terminals	2.5mm^2 maximum
LPCB Approved	-
Operating voltage	35V to 41V
EN54-17 data	V_{max} 42V V_{nom} 40V V_{min} 24V $V_{SO\ max}$ 14V $V_{SO\ min}$ 10V $I_{C\ max}$ 0.4A $I_{S\ max}$ 1A $I_{L\ max}$ 20µA $Z_{C\ max}$ 0.1Ω

Installation

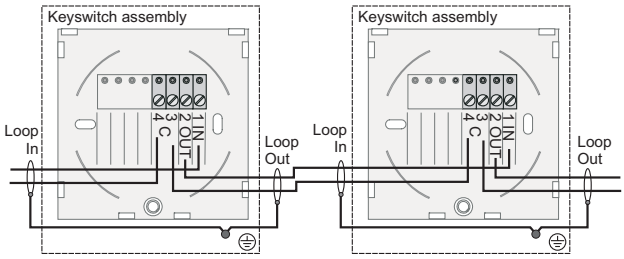
a) Check the contents of the package:

	Component	Quantity
	Keyswitch Interface assembly (red / blue)	1
	Earth Strap	1
	Operating Key	2
	Opening Key	1
	Long Screw	2
	Instruction leaflet	1
	Blue Back box supplied with Blue keyswitch interface assembly	1

b) The keyswitch assembly may be mounted on a standard electrical box or on the backbox.

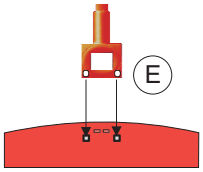
c) Feed the fire rated cables through the entry holes and mount an electrical box or the red/blue back box to an even wall surface using suitable fixing.

When semi flush fixing the keyswitch assembly a standard electrical box must first be flushed into the wall before the keyswitch assembly is fitted.



d) Terminate each cable entry at the back box. Use the *earth strap* or the *earth point* in the back box to maintain loop cable earth continuity. Connect the loop cable to the terminals.

e) Disengage front cover from the keyswitch assembly using the end of the opening key 'E' and lift out the cover from the bottom edge.



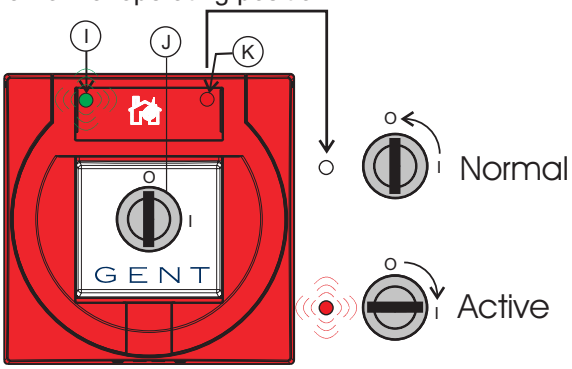
f) Secure the keyswitch assembly to the back box using the 2 long screws supplied.

g) Hook the front cover onto the top edge of the keyswitch unit and then push the bottom edge down until it click shut. Check both hooks on the top of the front cover are locked onto the keyswitch assembly.

Operation

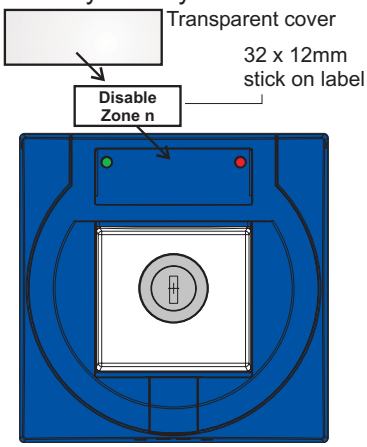
To operate the keyswitch insert the operating key into the keyhole 'J' and turn clockwise to the stop position, the red LED 'K' is flashing. The green LED 'I' gives an operating indication.

Apply the reverse procedure to return the keyswitch to a normal operating position.



Label

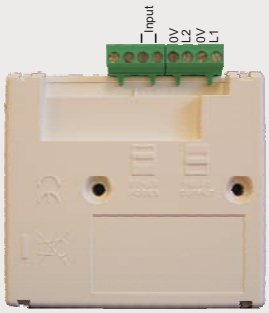
When using the blue keyswitch interface to control plant ensure the unit is labelled to describe what is being controlled by the keyswitch.



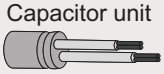
It is suggested that an A4 sheet white paper label 32 x 12mm is used, such as the one from RS, part number RS495 385. The required text can be printed onto the label. The label is stuck centrally inside the aperture behind the transparent cover. Ensure LEDs remain visible and are not covered by the label.

Interface Modules for Vigilon - Low voltage (LV) Input/Output

S4-34410
S4 1-Input Interface Module (low voltage)

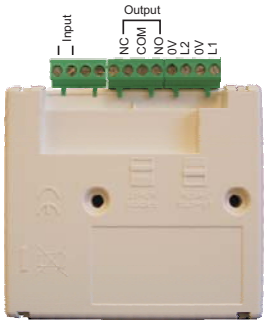


1- End-of-line Capacitor unit



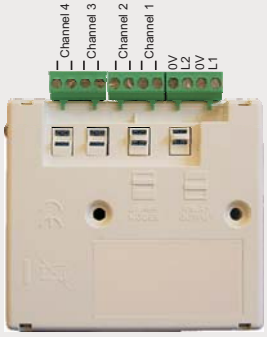
2- 10K Resistors

S4-34420
S4 1-Output & 1-Input Interface Module (low voltage)

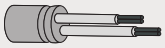


2- 10K Resistors

S4-34450
S4 4-Input / Output Interface Module (low voltage)



1- End-of-line Capacitor unit



8- 10K Resistors

Now supplied fully assembled

S4-34490
Plastic box

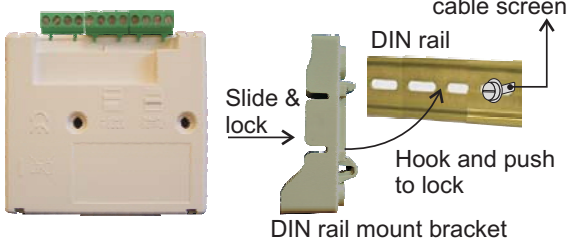
1- Allen key
2 - M4 Screws
2 - M4 Posi Pan Screws
7 - Hole plugs

ole termination points on the

S4-34492
Metal box

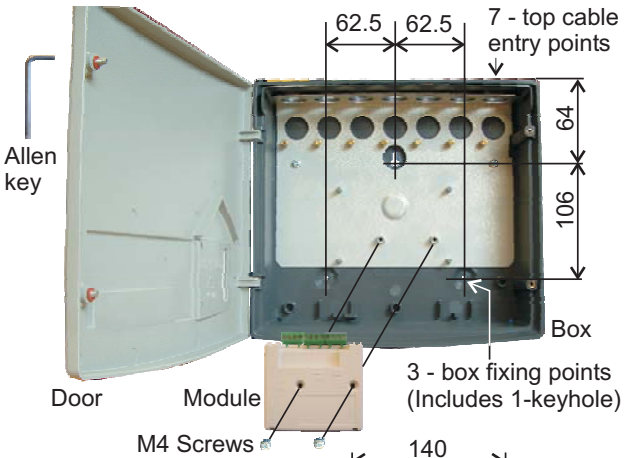
S4-34491
DIN rail mount bracket

These instructions cover the above interface modules and accessories. The S4 interface modules are designed for use with any Vigilon fire alarm control panel. Each module includes a loop isolator for device isolation. Each module use one of 200 available device addresses on a loop and responds to regular polls from the control panel reporting the type of device and the status (open/normal/short) of its supervised input circuit(s).



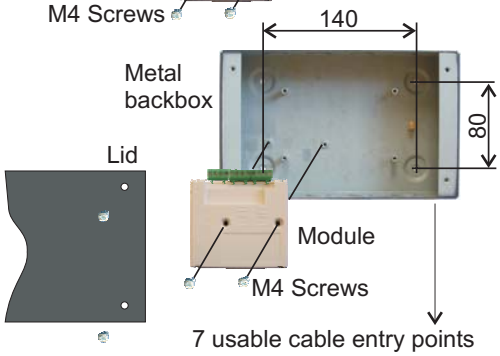
Features

- ☐ Analogue addressable communications
- ☐ Built-in type identification automatically identifies these devices to the control panel
- ☐ Reliable communication technique with high noise immunity
- ☐ Soft or SAFE addressing
- ☐ Common mounting options including surface mount, panel mount and DIN rail mount
- ☐ Dual-colour LEDs
- ☐ Plug-in terminal connections for ease of wiring
- ☐ EN54-17:2005 and EN54-18:2005 (Pending approval)



Cables

The cables recommended for wiring the input / output lines are the same as those used for loop wiring, see instructions supplied with the fire control panel.



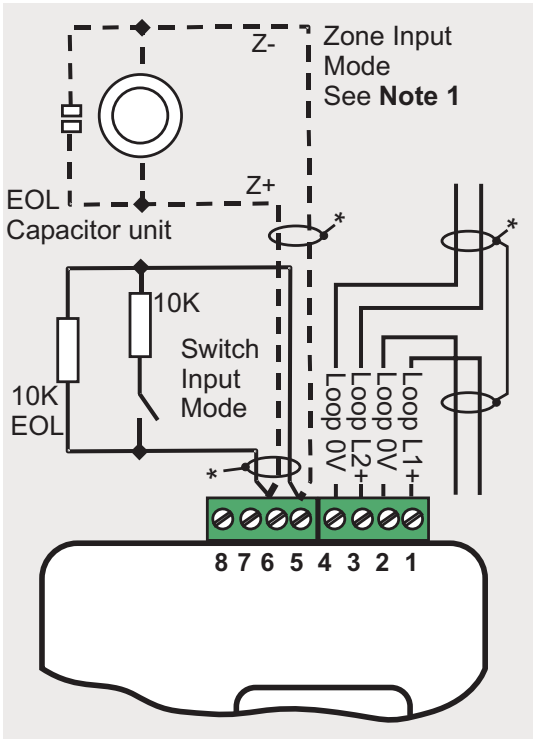
Installation

The S4 interface modules can be mounted in other equipment housings using the DIN rail mount brackets (S4-34491). A module can also be fitted into a plastic box (S4-34490) or metal box (S4-34492).

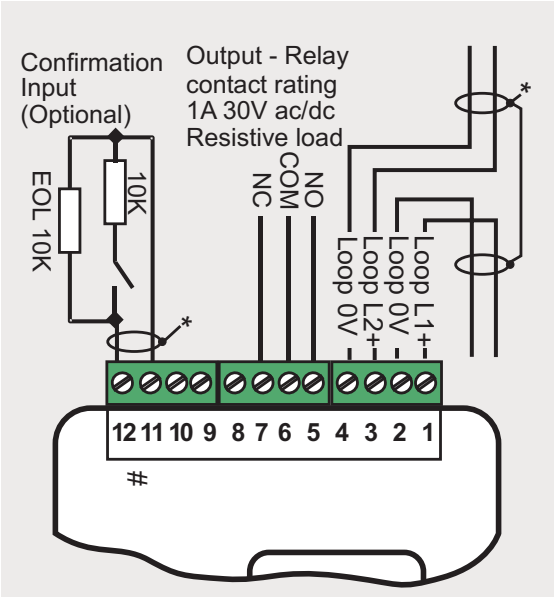
Wiring diagrams

The loop cable screen must be continued through each interface module. The loop, switch input, zone input and LED output cable screens where used must connect to an earth terminal.

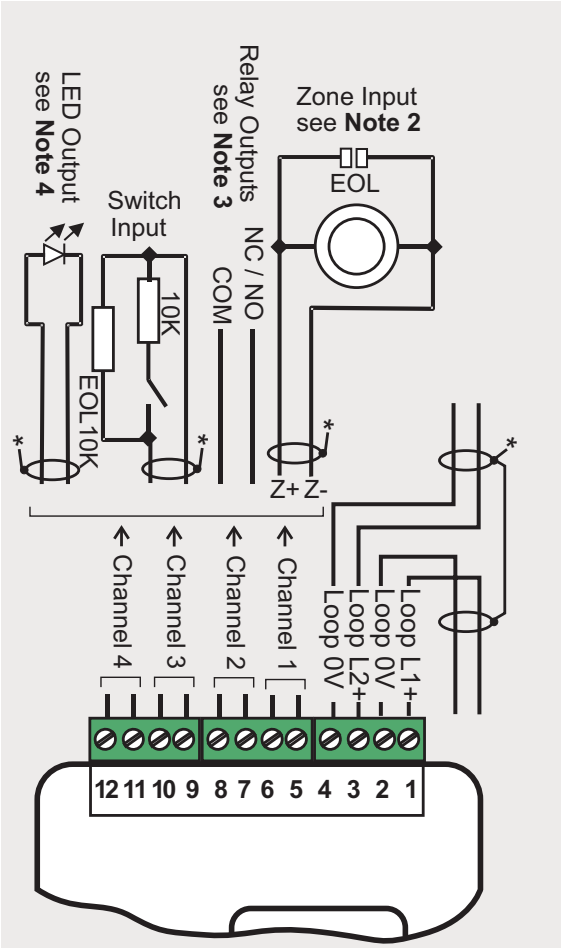
S4 1-Input module connection details



S4 1-Output & 1-input module connection details



S4 4-Input/Output module connection details



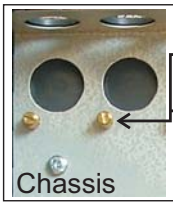
Note 1 - When the input is configured as a Zone input it is possible to attach conventional detectors and MCPs (with 470 Ohms or 3V9 zener diode in series with normally open contacts), maximum load is 2mA @ 24V nominal (18V minimum) with End-of-line capacitor.

Note 2 - Only channel 1 (terminals 5 & 6) can be configured as an zone input.

Note 3 - Contact rating 1A 30V ac/dc Resistive load.

Note 4 - Output is 1.5mA @ 24V dc.

Can be configured as LED output

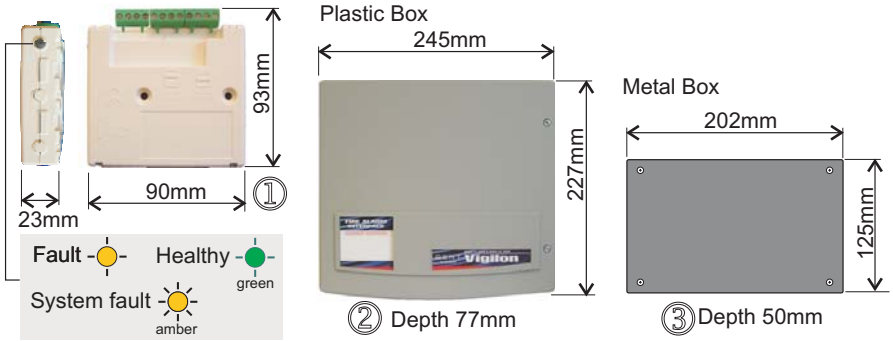


* The cable screens must be connected to an **earth terminal** on the chassis or in the metal box.

If a module is mounted on a **DIN rail** then the DIN rail must electrically connected to the **loop cable screen via the earth terminal.**

Technical data

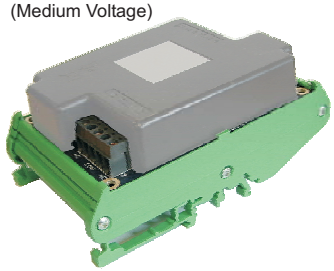
	S4-34410 S4 1- Input	**S4-34450** S4 4-Input /Output	**S4-34420** S4 1-Output & 1-Input
Approval	EN54-17:2005 and EN54-18:2005 (Approval pending)		
Weight-dimen. module module in plastic box module in metal box	92g ① 1047g ② 782g③	100g ① 1055g ② 790g ③	100g ① 1055g ② 790g ③
Storage temperature	-30ºC to 70ºC		
Operating temperature	-10ºC to 60ºC		
Relative Humidity	Up to 95% - Temperature 5ºC to 45°C (Non condensing)		
Emission	BS EN 61000-6-3:2001 Residential, Commercial & Light Industry **Class B limits**		
Immunity	BS EN50130-4: 1996: Part 4		
LVD	BS EN 60950-2002		
Ingress Protection	IP31 for plastic box S4-34490 & IP40 estimated for metal box S4-34492		
Colour	Module-white / Plastic box-dark grey (Lid-light grey) / Metal box-dark grey		
Input mode	Input channel-1 only can be configured as a zone input to accept conventional devices, with a load of 2mA quiescent and 9mA alarm maximum at 24V nominal (18V minimum). With configurable 2s to 5s reset period and 5s to 40s alarm validation delay.		
Switch input can work with or without a delay.	Input channel can be configured as a **switch input** of Fire*, Fault*, Supervisory* (non fire) or Confirmation# signal. * with input acceptance delay of up to 10 seconds for a Fire input and up to 300s for Fault or Supervisory input. # A fault is generated if confirmation input is not seen within predefined period of the output action (Confirmation function is not a feature of the single input module).		
Output mode	-	A relay output of either NO or NC set of contacts rated 1A - 30Vac/dc resistive load.	A relay output of change over contacts NC, COM and NO rated 1A - 30Vac/dc resistive load.
LED output	1.5mA at 24Vdc (Normally On or Normally Off)		
Load Factor	1-4 switch inputs = **1** (maximum 200 per loop) 1-4 relay outputs = **2** (maximum 200 per loop only 8 individually sectored) Zone Input = **26** (maximum 30 per loop) Every LED output = **+5** (maximum 100 LED outputs per loop)		
EN54-17 data	**Vmax** Vnom **Vmin** VSO max **VSO min** *I*C max ***I*S max** *I*L max **ZC max** **42V** 40V **24V** 14V **10V** 0.4A **1A** 20µA **0.1OΩ**		
Panel compatibility	Fully compatible with LPC = V3.93 / V4.35 & MCC/MCB = V3.94 / V4.37. For further information on upgrade requirements contact Gent by Honeywell		



Interface Module for Vigilon Medium Voltage (MV) Output

These instructions cover the above interface options and accessories.

S4-34411
Single Output Interface Module
DIN rail mountable
(Medium Voltage)



S4-34415
Single Output Interface PCB with cover
(Medium Voltage) in a metal box

These S4 Single Output Interfaces are designed for use with any Vigilon fire alarm control panel. Each module includes loop isolators for device isolation.

The S4 Single Output Interfaces are suitable for mains switching, they provide normally closed and normally open contacts rated at 13A 250Vac (nominal 230Vac) resistive load.

The S4 interfaces use one of 200 available device addresses on a loop and respond to regular polls from the control panel reporting the type of device.

Features

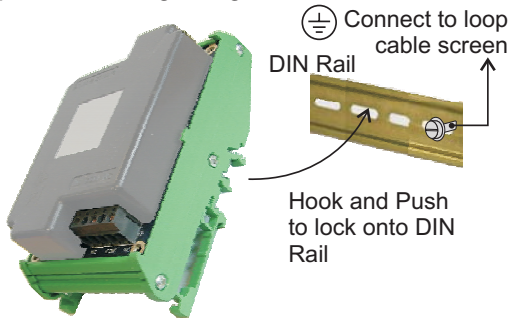
- ☐ Analogue addressable communications
- ☐ Built-in type identification automatically identifies these devices to the control panel
- ☐ Reliable communication technique with high noise immunity
- ☐ Soft or SAFE addressing
- ☐ Common mounting options including surface mount and DIN rail mount
- ☐ EN54-17:2005 and EN54-18:2005 (Pending approval)

Cables

Any suitably rated cable may be used for wiring the output lines to drive the required load. For information on cables recommended for wiring the loop circuits see instructions supplied with the fire control panel.

Installation

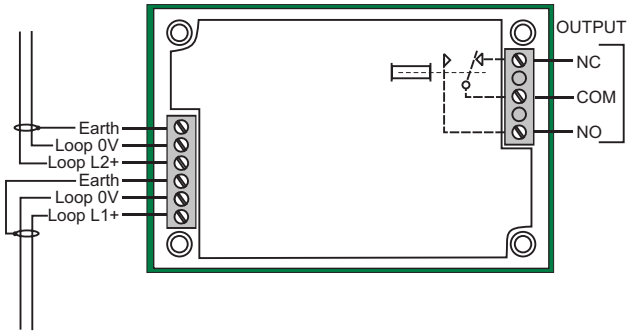
The S4 Single Output Interface module - DIN rail mountable (S4-34411) can be mounted in other equipment housing using a DIN rail.



The S4 Single Output Interface is available in a metal box (S4-34415). The box provides cable termination points on the enclosure.

Wiring

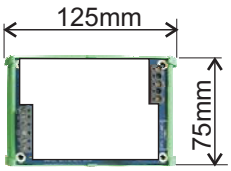
The loop cable screen must be continued through each interface module.
If a module is mounted on a DIN rail, then the DIN rail must be electrically connected to the loop cable screen.



The output contacts are rated at 13A 230V ac resistive load. In order to meet the requirements of European Safety Standards, ensure that all cables carrying voltages in excess of 48V (Live and Neutral) are suitably fused.

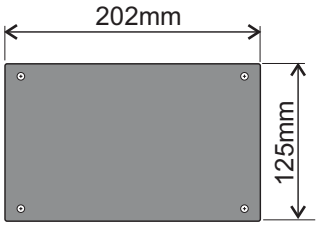
Technical data

Approval	EN54-17:2005 & EN54-18:2005 (Pending Approval)
Dimensions in mm	See illustrations
Weight	DIN mountable:138g PCB with cover in metal box:800g
Storage temperature	-30ºC to 70ºC
Operating temperature	-10ºC to 60ºC
Relative Humidity	Up to 95% - Temperature 5ºC to 45°C(Non condensing)
Emission	BS EN 61000-6-3:2001 Residential, Commercial & Light Industry **Class B limits**
Immunity	BS EN50130-4: 1996: Part 4
LVD	BS EN 60950-2002
Ingress Protection	Metal box - IP40 estimated
Colour - Metal Box	Dark Grey
Output Contact ratings Type Cycle	Single pole change over contacts rated at 13A 230V ac Resistive load. 1hp @ 240V ac, 1/2hp @ 120V ac (UL508) $6x10^3$
Terminals	$2.5mm^2$
Load Factor	5 (maximum 200 devices per loop)
EN54-17 data	V_{max} 42V V_{nom} 40V V_{min} 24V $V_{SO\ max}$ 14V $V_{SO\ min}$ 10V $I_{C\ max}$ 0.4A $I_{S\ max}$ 1A $I_{L\ max}$ 20µA $Z_{C\ max}$ 0.1Ω
Panel compatibility	Compatible with LPC = V3.92 / V4.33 & MCC = V3.90 / V4.31.



Depth 48mm

PCB on DIN rail mountable module



Depth 50mm

PCB in metal box

Mains powered interface unit

This interface unit operates from mains power and incorporates its own battery-backed power supply. It has 4 channels, each may be configured as input or output and are configured as conventional zone and sector circuits respectively.

Technical data

Dimensions in mm	height 305 x width 504 x depth 98
Full assembly weight	8.6Kg
Storage temperature	-30 to 70ºC
Operating temperature	0 to 45ºC
Relative Humidity (Non condensing)	up to 90% Temperature 5 - 45°C
Mains Operating voltage	230V 50Hz +10% -6%
Emission	BS EN50081-1:1992 Part 1 Residential, Commercial & Light Industry **Class B limits**
Immunity	BS EN50130-4: 1996: Part 4 Alarm systems: *Electromagnetic compatibility* Product family standard: *Immunity requirements for components of fire, intruder and social alarm systems*
Ingress Protection	IP40 estimated
Colour	Grey and Black
Number of channels	4 channels, (each configurable as input or output)
Batteries	2 - 12V 2.1Ah sealed lead acid batteries

Input (zone) channels	2-wire inputs for conventional zone circuits. Circuits are monitored for: ☐ Detector fire ☐ MCP fire ☐ Wiring open circuit fault ☐ Wiring short circuit fault Monitoring conforms to BS5839 by detecting a MCP activation if a detector is removed providing detector heads are fitted to diode bases. Maximum detector load: 2mA. End-of-line capacitor/diode (supplied) must be used. The input circuits may be configured to operate with various manufacturers detectors and MCP's: Gent, Apollo, Hochiki, Menvier, Nittan, Notifier and Thorn On certain sites where older type detectors and MCPs are used that give a short circuit fire, set rotary switch to position ‘F’.
Output (sector) channels	Output (sector) channel will operate conventional equipment such as sounders / bells and door holders. A maximum current of 500mA is allowed and can be shared between the output channels (each fused at 800 mA). Sectors are monitored for: ☐ wiring open circuit fault ☐ wiring short circuit fault End-of-line 22K resistor (supplied) must be used. Optional up to 4 Octal relays with diode packs may be fitted within the enclosure. These provide DPCO voltage-free contacts rated at 10 amps, 240 Vac, resistive load.

Installation

Fuse	Rating	Location
Mains	1.6A HRC - 20x5 mm	Top left -back box
FS1	800mA - 20mm x 5mm	Board
FS2	800mA - 20mm x 5mm	Board
FS3	800mA - 20mm x 5mm	Board
FS4	800mA - 20mm x 5mm	Board
FS5	2.5A - 20mm x 5mm	Board
FS6	250mA - 20mm x 5mm	Board

a. Check the package contents, open the door using the **key** and check all components.

Component	Quantity
Unit	1
Interface Board#	1
Screws (for board)#	7
12V 2.1Ah Battery	2
Key	1
Battery Link	1
Battery lead assembly	1
250mA Aux Fuse (Spare)	1
1.6A Mains Fuse (Spare)	1
2.5A Battery Fuse (Spare)	1
800mA Quick Blow Fuse (Spare)	4
Capacitor Unit (EOL)	4
EOL Label	5
22k Resistor (EOL)	4

components are packaged separately.

b. If necessary, remove the door on the unit to ease installation and remove the covers fitted over the **mains terminal**.

c. Knockout the required cable entry points from the back box.

d. Mark the 3 fixing positions on the wall to which the unit is to be mounted and secure the unit to the wall with suitable fixings.

If the unit is to switch heavy *non-mains loads*, then optional POWER RELAYS 19104-52 must be used. The relays may be installed on the DIN rail inside the unit. The relay unit must include a diode unit.

e. Terminate each cable at the entry point.

f. Fit the **interface board** inside the back box using the **screws** provided.

g. Connect the incoming cable ends to the appropriate terminals.

h. Connect the transformer secondary wires to terminal block P7 on the interface board.

i. Place the batteries inside the back box, however **do not make the connection,** this is done during commissioning.

j. Fit the cover over the **mains terminal** and **battery restraint bracket**.

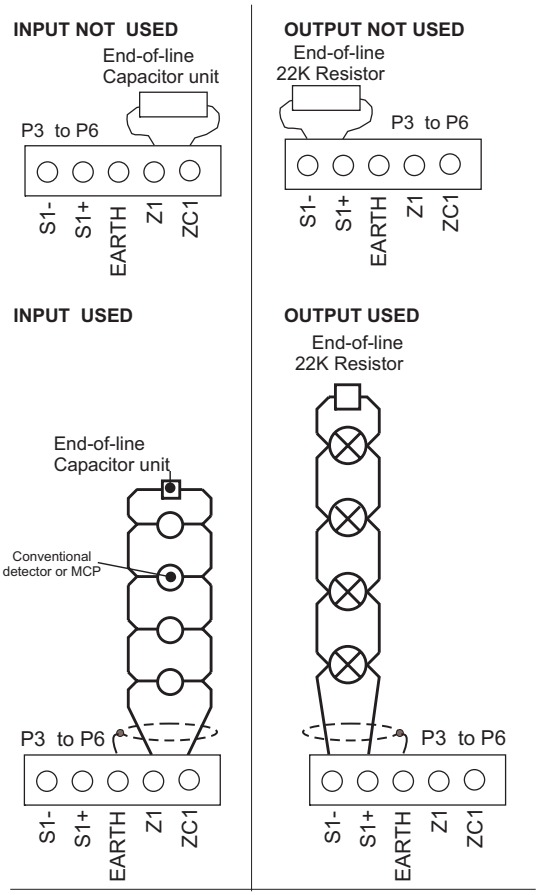
k. If removed, re-fit the door and earth lead.

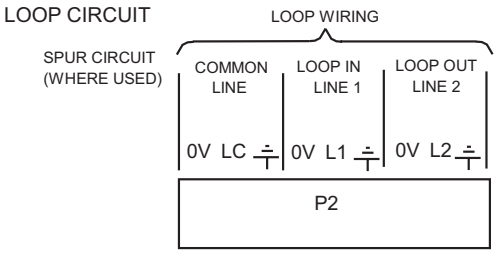
The *capacitor unit* and the *22k Resistor* must be fitted to the (EOL of each circuit. Also stick an *EOL label* on the last device in which the EOL unit is fitted.

l. Close the door on the Unit using the Key.

m. Leave all outstanding parts and installation work to the Servicing organisation.

External circuits

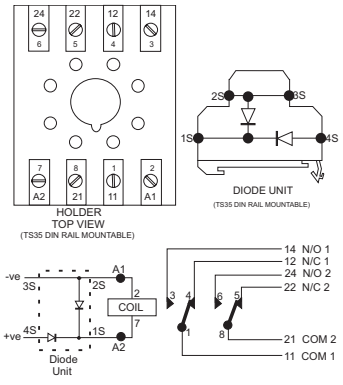




Power relay

Up to 4 relays can be fitted inside the interface unit on the DIN rail.

- ☐ Octal relay operates from a 24V supply
- ☐ DIN rail mountable
- ☐ Relay coil resistance 470R
- ☐ Contacts rated 10A at 230Vac



Vigilon Compact Voice Alarm system parts

This section lists parts that can be used in the Vigilon Compact Voice Alarm system. For further details on the availability of the parts, contact your supplier.

Control Panels

The panel is supplied as first and second fix assemblies in separate packages.

COMPACT-VA	Control panel (EN54) c/w 1 - Loop card with 2-12V 12Ah batteries for 24hr standby

Accessories

COMPACT-NC	Network Card for COMPACT-VA
VIG-24-FLUSH	Flush Surround
VIG-FLUSH-SS	Stainless steel Flush Surround
CVS-IDOOR	Inner door assembly
CVS-ODOOR	Outer door assembly
VCS-BATT	2 x 12V 12Ahr Battery
COMPACT-LPC	Loop Card (EN54)
VCS-MCB-N	Master Control board (Compact-24)
CVS-ACU	Audio Control Card sub-assembly (with message card fitted)
	PSU (Compact-VA)

Printer

PRINTER-DESK	Desktop serial thermal printer
PRINTER-HAND	Handheld serial thermal printer

Spares

PRINTER-H-PAPER	Thermal paper for handheld printer
PRINTER-D-PAPER	Thermal paper for desktop printer

micro Distributed Amplifier Unit

COMPACT-DAU	micro Distributed Amplifier Unit

Accessories

CVS-DAU	micro DAU PCB assembly (with amplifier and message card fitted)

Speakers

COMPACT-RCS	Ceiling Speaker
COMPACT-CAB	Metal Cabinet Speaker
COMPACT-BDCAB	Bi-Directional Speaker

Microphone

DPM102	Public Address paging microphone

Repeat panels

VIG-RPT	Vigilon Repeat panel (loop connectable)
COMPACT-RPT	Repeat indicator panel (connects directly to the panel)

Mimic panels

VIG-MIM	A2 Mimic panel c/w drawing (EN54)
VIG-ZONE	A2 Zonal mimic panel (EN54)
VIG-BATT-RPT	Battery pack for repeat/mimic panel

Supported Mimics panels

VIG-MIM-A4	A4 Mimic Panel (EN54)
VIG-ZONE-A4	A4 Zonal Mimic Panel (EN54)

S-Quad

S4-720	Heat Sensor (H)
S4-780	Heat Sensor Sounder (HS)
S4-711	Dual Optical Heat Sensor (O^2H)
S4-711-ST	Dual Optical Heat Sensor Strobe (O^2HSt)
S4-771	Dual Optical Heat Sensor Sounder (O^2HS)
S4-711-ST-VO	Dual Optical Heat Sensor Speech Strobe (O^2HSpSt)
S4-911	Dual Optical Heat CO Sensor (O^2HCO)
S4-911-ST-VO	Dual Optical Heat CO Sensor Speech Strobe ($O^2HCOSpSt$)

Associated products

S4-700	S-Quad Base
S4-FLUSH	Semi-Flush fixing kit
S4-COVER-DUST	Sensor dust cover (50 pack)
S4-COVER-BASE	Base dust cover (50 Pack)
S4-EXTRACTOR	Removal tool
S4-COVER-REMOVER	Dust cover remover tool (spare adaptor)
S4-BASE-LABEL	Label plate (50 pack)
S4-BASE-GASKET	Base IP Gasket (50 pack)

T Breaker and Slaves

34701	T breaker Unit

Supported slave units

34702	Slave LED unit
34703	Slave Relay unit

34000 Sensors (SUPPORTED)

COMPACT-O	Optical sensor
34710	Optical heat sensor
34710-RL	Optical heat sensor for remote LED
13449-01	Remote LED
34710-ML	Optical heat sensor with MCP connection (Chinese market only)
34770	Optical heat sensor sounder
34780	Heat sounder
34720	Heat sensor
34729	Environmentally protected Heat sensor

Spares

19271-01	Replacement Optical chamber
19271-01	Replacement Optical chamber
19274-01	Replacement heat sounder chamber
19272-01	Replacement heat chamber

Terminal Plate

34700	3-way terminal plate
34704	4-way terminal plate
19279-01	Semi-flush sensor mounting kit
19279-10	Sensor trim ring (10 pack)
19270-50	Sensor dust cover (50 pack)

Tools

17918-22	Sensor chamber Extractor cup
17918-23	Optical chamber electronics module removal tool
17918-24	Ionisation chamber electronics module removal tool
17918-25	Heat sensor electronics module removal tool
17918-26	Sensor removal tool kit

Beam Sensors

34740	Beam sensor pair
34741-01	Angle bracket with base
34741-03	Parallel bracket with base
34741-99	Light shield for beams

Duct Sensor

34760	Duct sensor (inc 17908-05 Probes & 34702 Slave LED unit)

Alarm sounders

34777	Repeat sounder (34700 Terminal plate required)
34213	Environmentally protected Sounder T-breaker

new Manual call points

S4-34800	Manual Call Point (Glass)
S4-34842	Manual Call Point (Glass) with Protective cover
S4-34805	Manual Call Point with resettable element
S4-34805	Manual Call Point with resettable element and protective cover
S4-34890	Resettable Element for MCP (Pack of 10)
S4-34891	Glass for MCP (Pack of 10)
S4-34892	Protective cover for MCP (Pack of 10)
S4-34895	Surface Back Box for MCP red plastic - (Pack of 10)
S4-34898	Manual Call Point weather resistant kit
S4-34899	Test Key (Pack of 10)

Environmentally protected MCP

34829-EN	Environmentally protected surface mounted MCP

Keyswitch Interface / MCP

S4-34807	Keyswitch MCP (Red)
S4-34418	Keyswitch Interface (Blue)
S4-34499	Spare Keys (Pack of 2)
S4-34895	Surface Back Box for Interface Red Plastic (Pack of 10)

Manual call points (MCP) (SUPPORTED)

34800-EN	Surface mounted MCP
34807	Surface mounted keyswitch MCP
34842-EN	Surface mounted MCP with cover
34812-EN	Surface mounted water resistant MCP
19289-01	MCP flush fixing plate
34852-EN	Surface mounted water resistant MCP with cover
14112-09EN	Spare MCP glasses 10 pack non LPCB approved

S³ Addressable Speech, Sounder Strobe

Strobe

Low profile range		
Body	Strobe - Deep base	
White	S2IP-ST-WR (red lens)	S2IP-ST-WA (amber lens)
Red	S2IP-ST-RR (red lens)	S2IP-ST-RW (white lens)

Sounder Strobe

Low profile range				
	Sounder		Sounder Strobe (red lens)	
Body	Deep base	Shallow base	Deep base	Shallow base
White	S3IP-SN-W	S3-SN-W	S3IP-SN-ST-WR	S3-SN-ST-WR
Red	S3IP-SN-R	S3-SN-R	S3IP-SN-ST-RR	S3-SN-ST-RR

Low profile variants	
	Sounder Strobe
Red	S3IP-SN-ST-RW (white lens)
White	S3IP-SN-ST-WA (amber lens)

System range		
	Sounder	
Red	S2IP-SN-R (2-way)	S2IP-SN-R3 (3-way)
White	S2IP-SN-W (2-way)	S2IP-SN-W3 (3-way)

The S2IP-SN-R3 and S2IP-SN-W3 products are suitable for retrofitting and are supplied with a 6-way terminal block to ease cable connection.

Note: The system range of products do not support strobe options.

Speech Sounder Strobe

Low profile range				
	Speech Sounder		Speech Sounder Strobe (red lens)	
	Deep base	Shallow base	Deep base	Shallow base
White	S3IP-VO-W S3IP-VP-W	S3-VO-W S3-VP-W	S3IP-VO-ST-WR S3IP-VP-ST-WR	S3-VO-ST-WR S3-VP-ST-WR
Red	S3IP-VO-R S3IP-VP-R	S3-VO-R S3-VP-R	S3IP-VO-ST-RR S3IP-VP-ST-RR	S3-VO-ST-RR S3-VP-ST-RR

System range	
	Speech Sounder
	Deep base
White	S2IP-VO-W & S2IP-VP-W
Red	S2IP-VO-R & S2IP-VP-R

Note: The system range of products do not support strobe options.

Remote Control

S3-CONTROL Remote control for the S³

New Interfaces

Low voltage range

S4-34410	S4 1-Input Interface module (low voltage)
S4-34420	S4 1-Output & 1-Input Interface module (low voltage)
S4-34450	S4 4-Input / Output Interface module (low voltage)

The above interface modules can be mounted in any of the following optional enclosure or DIN rail mount bracket.

Options

S4-34490	Plastic box
S4-34492	Metal box
S4-34491	DIN rail mount bracket

Medium voltage range

S4-34411	Single Output Interface Module DIN rail mountable (Medium Voltage)
S4-34415	Single Output Interface PCB with cover (Medium Voltage) in a metal box

Mains powered interface unit

4- Channel mains powered interface

34440	Mains powered fire alarm interface
19104-52	Power relay (for mains powered interface) (up to 4 maximum can be fitted inside the interface - supplied with base and diode unit)

Old Interfaces (SUPPORTED)

4- Channel loop powered interface

34450	4 - Channel loop powered fire alarm interface
19245-05	Interface line module -up to 4 can be fitted in a 4 channel loop powered fire alarm interface
34454	4 way keyswitch door for 4-channel loop powered interface
19245-02	2 position keyswitch assembly (for use with optional interface doors)
19245-03	3-position keyswitch assembly (for use with optional interface doors)

Power supply unit

19245-06	Power supply unit with 1 relay (for use with loop powered interface unit)
19245-07	Mains relay (up to 4 for use with 19245-06 unit)

1- Channel loop powered interface

34410	Loop powered zone module
34415	Single Channel loop powered interface
19245-05	Interface line module

Surge protection

5530440	1 x Mains, 1 x Loop & 1 x Zone/Sector suppression (enclosure has space for 1 extra loop (2 x 2817958)
5530478	1 x Mains suppressor
2817958	1 x Additional Loop suppressor (module only)

Replacement Plug ins

2798844	Mains suppressor
2839648	Loop suppressor
2838351	Zone / Sector suppressor

Manuals

4188-769.02	Vigilon Compact Voice Alarm system Operating instructions
4188-749	Log book

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At the end of their useful life, the packaging, product and batteries should be disposed of via a suitable recycling centre and in accordance with national or local legislation.

WEEE Directive:
At the end of their useful life, the packaging, product and batteries should be disposed of via a suitable recycling centre.
Do not dispose of with your normal household waste.
Do not burn.

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