



Installation instructions

Vigilon Compact Plus Network node (COMPACT-NODE)



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Preface

This is the first issue of the Data and Installation instructions for the Vigilon Compact Plus Network Node.

These instructions must be read in conjunction with BS 5839 : Part 1, which is the Code of Practice for design, installation, commissioning and maintenance of systems in non-domestic premises.

Associated Documents

- ▣ Vigilon Plus range of panels and Nodes based Fire Detection and Alarm system
 - Operating instructions
- ▣ Log book

Symbols on product



DANGER Electric shock hazard.



Protective Earth connection terminal.



The WEEE symbol. It indicates the product is to be recycled and not thrown away.



The CE compliance logo. This product is in conformity with the relevant European Union harmonisation legislation.

RoHS

The RoHS compliance logo. The RoHS directive restricts the use of certain hazardous substances commonly used in electrical and electronic equipment.

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

<i>ac</i>	<i>Alternating current</i>
<i>dc</i>	<i>Direct current</i>
<i>EOL</i>	<i>End of line</i>
<i>EP</i>	<i>Environmentally protected</i>
<i>ESD</i>	<i>Electrostatic discharge</i>
<i>FARE</i>	<i>Fire Alarm Routing Equipment</i>
<i>FPE</i>	<i>Fire Protection Equipment</i>
<i>I/F</i>	<i>Interface</i>
<i>IO or I/O</i>	<i>Input Output</i>
<i>IP</i>	<i>Ingress protection</i>
<i>LCD</i>	<i>Liquid crystal display</i>
<i>LED</i>	<i>Light emitting diode</i>
<i>LPCB</i>	<i>Loss prevention council certification board</i>
<i>MCB</i>	<i>Master control board (CARD 0)</i>
<i>MCP</i>	<i>Manual call point</i>
<i>MICC</i>	<i>Mineral insulated copper cable</i>
<i>N/C</i>	<i>Normally closed</i>
<i>N/O</i>	<i>Normally open</i>
<i>OC or O/C</i>	<i>Open circuit</i>
<i>PCB</i>	<i>Printed circuit board</i>
<i>PSU</i>	<i>Power supply unit</i>
<i>QB</i>	<i>Quick blow (fuse)</i>
<i>SC or S/C</i>	<i>Short circuit</i>
<i>T</i>	<i>Anti-surge (fuse)</i>

Vigilon Compact Plus Network Node



The Vigilant Compact Plus Network Node (COMPACT-NODE), also referred to as smaller Terminal node), which is supplied with a network card to allow connection to a secure Vigilant Plus network. The node has its own power supply with batteries that provides 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 and message display to be seen. There are two push button controls are located on the front door below the display that enable Fire messages to be scrolled in the event of multiple fires. The network node is designed for surface or semi flush mounting, with rear and top cable entry points.

Features

- Node has slots for optional cards, such as the Network card and IO Cards
- Two master alarm circuits
- RS485 (Port 0) to connect to repeat indicator panel(s)
- RS232 (Ports 1 and 2) to connect to external printer
- USB (Port 0) can be used to connect to a Commissioning computer
- SD card for configuration and events log.
- Two sets of auxiliary relay change over contacts configurable to operate with fire, fault or disablement event
- One set of clean voltage-free change over contacts that operate with master alarms
- Monitored input that actions a command build 250
- Standby supply to power the system via batteries for 24 hours plus 0.5 hour alarm load
- LCD with back light to display event information
- LED lights for event indication
- Local audible buzzer for event announcement
- Push buttons for essential controls and menu driven commands
- Fire Alarm Routing Active and Fault/Disable LED indications
- Four programmable control buttons U1 to U4.

Technical data**Control panel**

<i>Panel dimensions in mm</i>	height 403 x width 338 x depth 101
<i>Panel weight</i>	8.6Kg approximately without batteries 1 - 12V 12Ah battery - 4Kg (2 batteries are required)
<i>Storage temperature</i>	-10°C to +55°C
<i>Operating temperature</i>	0°C to +45°C
<i>Relative Humidity</i>	up to 90% (Non condensing) Temperature +5°C to +45°C
<i>Emission</i>	BS EN 6100-6-3 : 2001 Residential, Commercial & Light Industry Class B limits
<i>Immunity</i>	BS EN50130-4 : 1996 Alarm systems: Electromagnetic compatibility Product family standard: Immunity requirements for components of fire, intruder and social alarm systems
<i>Ingress Protection</i>	IP31
<i>Colour</i>	Door: HONEYWELL GREY 90 PMS BLACK C Backbox: HONEYWELL GREY 90 PMS BLACK C
<i>Plug in Card</i>	
<i>Card 1</i>	Not used
<i>Card 2</i>	Network card (supplied)
<i>Network Card</i>	Supports the connection of up to 31 panels in a secure loop copper network, to give 1.2Km maximum between panels
<i>Clean contacts</i>	1 set of voltage free change over contacts rated 1A @ 24Vdc, active with master alarms
<i>Auxiliary relays</i>	Voltage-free contacts rated 1A @ 24Vdc, 2 sets of change over contacts configured to operate immediately on a Fire event. The relay is normally de-energised
<i>Aux relay 1</i>	
<i>Aux relay 2</i>	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.
<i>Master alarm circuits voltage and current, protection fuses</i>	2 - (24 V nominal) 250 mA max. per circuit MA1 - FS1 T250mAH250V (20 x 5mm) on MCB board MA2 - FS2 T250mAH250V (20 x 5mm) on MCB board
<i>Monitored input</i>	A closed input triggers a command build number 250. The input is normally open.
<i>Ports</i>	
<i>Port 0 and fuse</i>	RS485 -Repeat indicator panel (PB15) (Mode: Repeat) Includes a 24V supply protected by FS3 Fuse 200mA TE5 on MCB
<i>Port 1 and 2</i>	RS232 -Printer (PB6) (Mode: Std , Printer, Universal or Ascom)
<i>Port 3</i>	USB - (P16) Commissioning tool
<i>Baud</i>	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.

Technical data

<i>Display</i>	<i>Display - 8 lines by 40 character per line, back-lit, (Black characters on green background, liquid crystal display)</i>
<i>Internal buzzer</i>	<i>Announces Fire & Fault events, plus give key-press confirmation beep.</i>
<i>Indicators</i>	<i>Fire (red), Verify (amber), (Fire alarm routing FARE Active (red) and FARE Fault/Dis (amber)), Power (green), Fault (amber), Disablement (amber), System fault (amber), Power fault (amber), Sounder (amber), Test (amber) and Delay (amber)</i>
<i>Controls (with door closed) Access level 1</i>	<i>Next and Previous buttons operable during Fire condition only</i>
<i>Controls (with door open) Access level 2</i>	<i>Sound Alarms, Silence Alarms, Reset, Cancel Buzzer, Verify, F1-F4 keys, Menu On/Off key, Numeric keys, U1-U4 keys available if configured to perform site specific actions by triggering of CB251 and CB252</i>
<i>Access level 2a</i>	<i>Customer (Customer PIN)</i>
<i>Access level 3</i>	<i>Engineering (Engineers PIN)</i>
<i>Menus</i>	<i>[Control], [Setup], [Information] and [Test Engineering] menus.</i>
<i>Logs</i>	Active Logs: Fire, Fault and Disablement Historic log: All events Event logs: Fault, Disablement, Warning, Supervisory, Exceptions and Historic fires. (up to 255 events) Fire Log (up to 100 events)
<i>24V supply</i>	<i>FS3 T200mA (TE5) on MCB</i>

Power supply



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

Dispose of used batteries according to the manufacturer's instructions.

<i>Standard</i>	<i>Designed to EN54-4:1997 + A1:2002 and A2:2006</i>
<i>Mains supply voltage and fuses</i>	<i>230V -15% +10% 50Hz/60Hz protected by: FS3 T3.15AH250V Ceramic (20 x 5 mm) on PSU Input current - 0.6A</i>
<i>Nominal supply voltage for master alarm circuits</i>	<i>24V ± 4V</i>
<i>Battery circuit 'BAT1' fuse</i>	<i>FS1 T3.15A (TE5) on PSU board</i>
<i>PSU volts & fuses</i> 43V (quiescent) 24V	<i>On PSU board: FS6 T1A (TE5) FS4 T1A (TE5)</i>
<i>Battery</i>	<i>Batteries for the panel 2 x Powersonic 12V 12Ahr - (supplied) Model number: PS-12120 F1. The batteries provide 24 hours standby power and 30 minutes alarm</i>
<i>Lithium Battery</i>	<i>BATT3 on MCB. Type CR2032 3V cell. Replace only with the same or equivalent type battery.</i>
<i>Storage temperature</i>	<i>-10°C to +55°C</i>
<i>Operating temperature</i>	<i>0°C to +45°C</i>
<i>Relative Humidity</i>	<i>up to 90% (Non condensing) Temperature +5°C to +45°C</i>
<i>Indicators</i>	<i>LD1 - LD5 indicate RAM, ROM and EPROM status, error, checksum and communication.</i>
<i>Maximum current from battery without mains connected</i>	<i>3.15A</i>



After panel power down hazardous voltages may still be present even when the indicators are extinguished.

Notes

The power-up of the Vigilon Compact Plus Network Node and commissioning of the system is done by the Servicing organisation.

Installation

It is recommended that the installer follow the general requirements of *BS 5839 : Part 1 : 2013, which is the code of practice relating to fire detection and alarm systems for buildings*. The installer must follow the relevant parts of *BS7671 : 2008 Requirements for Electrical installations, IEE wiring regulations 17th edition* if installation is in the United Kingdom.

Second fix

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 and the panel power up is usually carried out during system commissioning.



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 *BS 5839 Part 1 : 2013*. The cables must be installed using cable manufacturers recommended fixing and accessories, see list of approved cables.

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.

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 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 removal of a card or disconnection of cable from the panel 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.

Cables

Requirements of cables

The British Standard BS 5839 Part 1 : 2013 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 & 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 830°C - 0+40°C 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 930°C - 0+40°C 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/assessed for EMC compliance with the system products.

Mains Supply cable

The mains supply cable must be a standard fire resisting type and should meet PH30 classification, such as standard or enhanced cable.



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.

- ☒ A cross bullet point mark show cable that may no longer be commercially available. Such a cable if installed in a building may be suitable for reuse where a site is being refurbished, consult with your electrical installer.

Network cables

Enhanced Network cables

Approved cables for network wiring
(EMC Compliant)

- Draka Firetuf FT120 Enhanced FTPLUS3EH1.5
(Previously Firetuf FT Plus)
1.2Km maximum Panel to Panel or Panel to Network node cable distance
 - 3 Cores, each having 1.5mm² cross section area
- ☒ Fireshield **Enhanced FSN G2000**
1.2Km maximum Panel to Panel or Panel to Network node cable distance
 - 3 Cores (1 pair + 1) and earth
 - each core having 1mm² cross section area
- **Mineral insulated copper cable**
800m maximum Panel to Panel or Panel to Network node cable distance.
 - BS6207: Part 1
 - 3 parallel cores
 - having continuous metal sheath encapsulating
 - each core having 1.5mm² cross section area
 - a red cover sheath (preferred for alarm applications)
- Prysmian (formally Pirelli) **FP Plus***
1.2Km maximum Panel to Panel or Panel to Network node cable distance
 - 3 Cores each having 1.5mm² cross section area

Standard Network cables

Approved cables for network wiring
(EMC Compliant)

- **Belden Armoured equivalent**
This cable being a two pair cable to BS5308:Part 1 (type 2) 0.5mm² (16/0.2mm).
600m maximum Panel to Panel or Panel to Network node cable distance.
- **Belden No 9729** (UL Style 2493)
1.2Km maximum Panel to Panel or Panel to Network node cable distance
 - 2 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 No. 9842** EIA RS485 Applications, O/A Beldfoil® Braid
1.2Km maximum Panel to Panel or Panel to Network node cable distance
Must have following characteristics:
 - 2 twisted pairs
 - 24AWG (7 strands x 32 AWG) conductors
 - Characteristic impedance - 120ohms
 - Capacitance between conductors - 42pF/m at 1kHz
 - Capacitance conductor to screen - 75.5pF/m at 1kHz
- **Belden TR No. 89729** (Teflon jacketed)
1.2Km maximum Panel to Panel or Panel to Network node cable distance
 - 2 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

- ☒ **Datwyler PYROFIL 8750-U/R***
 - 1.2Km maximum Panel to Panel or Panel to Network node cable distance
 - 4 cores
 - each core having 1.5mm² cross section area

- ☒ **Delta Crompton Firetuf FDZ1000***
 - 1.2Km maximum Panel to Panel or Panel to Network node cable distance
 - 3 cores

- ☐ **Doncaster Cables Firesure Plus***
 - 1.2Km maximum Panel to Panel or Panel to Network node cable distance
 - 4 Cores (2- pair plus earth)
 - each core having 1.5mm² cross section area

- ☐ **Huber & Schner Radox series FR** communication cable*
 - 1.2Km maximum Panel to Panel or Panel to Network node cable distance
 - 3 cores twisted triad screened
 - 1.5mm² (7/0.42 stranded) conductors
 - Nominal impedance 200 ohms (1KHz)
 - Capacitance - conductors 110pF/m (1KHz)
 - Capacitance - screen to core 210pF/m (1KHz)
 - Fire resistance tested to BS6387 category CWZ and IEC 331.

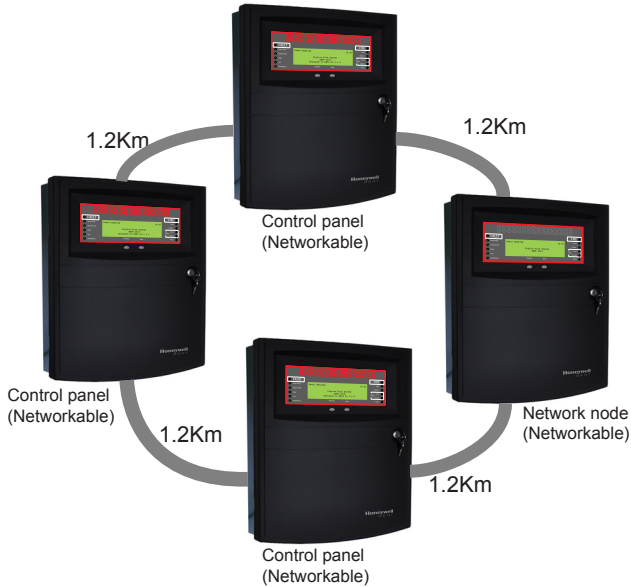
- ☐ **Prysmian (formally Pirelli) FP200 Flex***
 - 800m maximum Panel to Panel or Panel to Network node cable distance
 - 3 Cores, each having 1.5mm² cross section area

- ☐ **Prysmian (formally Pirelli) FP200 Gold***
 - 1.2Km maximum Panel to Panel or Panel to Network node cable distance
 - 3 Cores
 - each core having 1.5mm² cross section area

- ☐ **Prysmian (formally Pirelli) FP 400 Armoured**
 - 800m maximum Panel to Panel or Panel to Network node cable distance
 - 4 Cores, each stranded 1.5mm² cross section area

Vigilon Compact Plus Network








It is possible to network together up to 31 Vigilon Compact Plus panels and Vigilon Compact Plus Network Nodes, each fitted with a network card for network connections using an approved network cable. The cable distance between panels and nodes can be up to 1.2Km maximum. A Network node is a central point for information about the networked system.



Network node installation

The Vigilon Compact Plus Network node is supplied in parts, it is important to check the contents of each package:



- Back box assembly
- Inner door assembly
- Outer door assembly
- 2 x 12V 12Ah Batteries

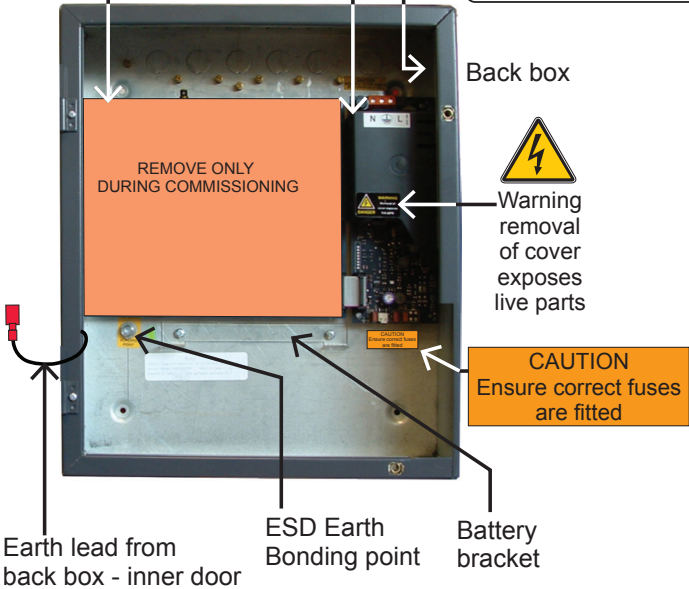
	Parts in the Spares pack	Qty
	Fuse T3.15AL250V 20mm x 5mm	1
	Fuse T3.15A (TE5)	2
	Fuse T1A (TE5)	2
	Fuse T200mA (TE5)	2
	10K Ohms Resistor	4
	Battery Link	1
	Battery Lead	1

Cardboard cover protecting the Master Control Board and Loop Card

Plastic cover protecting PSU

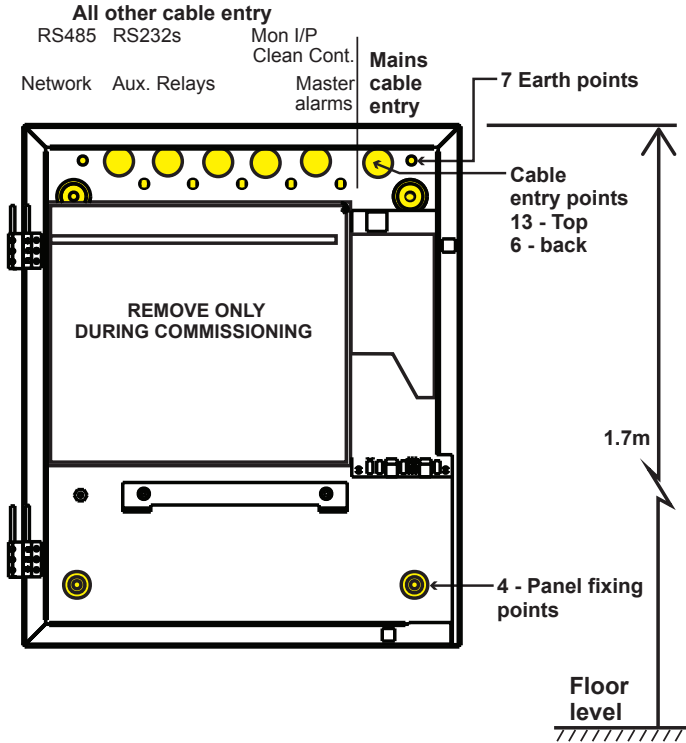
Product No: COMPACT-NODE
 Rated Voltage: 230V A.C.
 Rated Current: 0.6A
 Rated Frequency: 50Hz/60Hz
 Mains Fuse: FS1 T3.15AL250V
 Manufacture date: xx/xx/xx



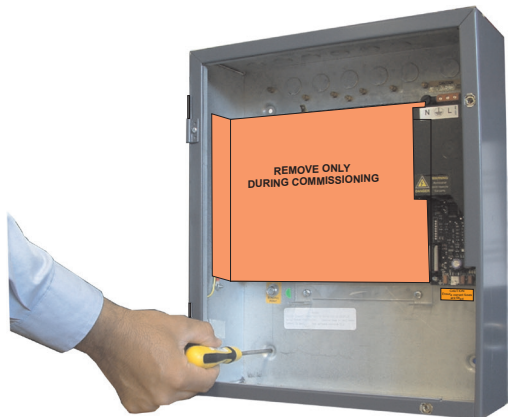
Mounting & cable entry points

Any unused knockouts that have been removed should not be left open.



How to surface mount the panel

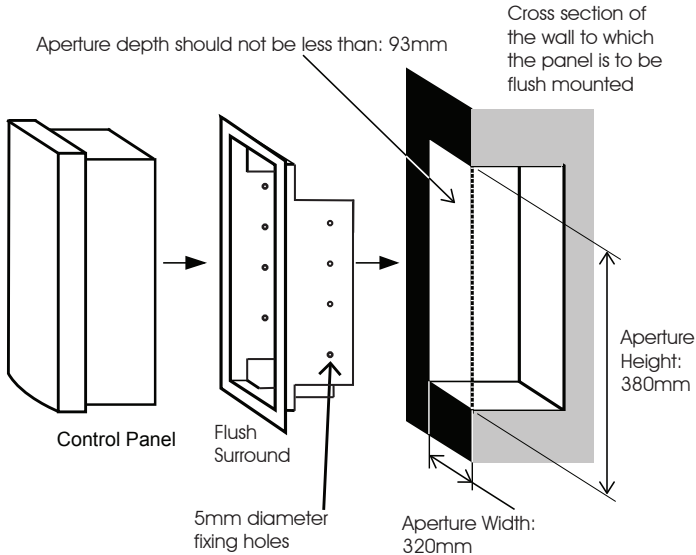
Using the four fixing points mount the backbox onto a flat wall using suitable fixings.



How to semi-flush mount the control panel

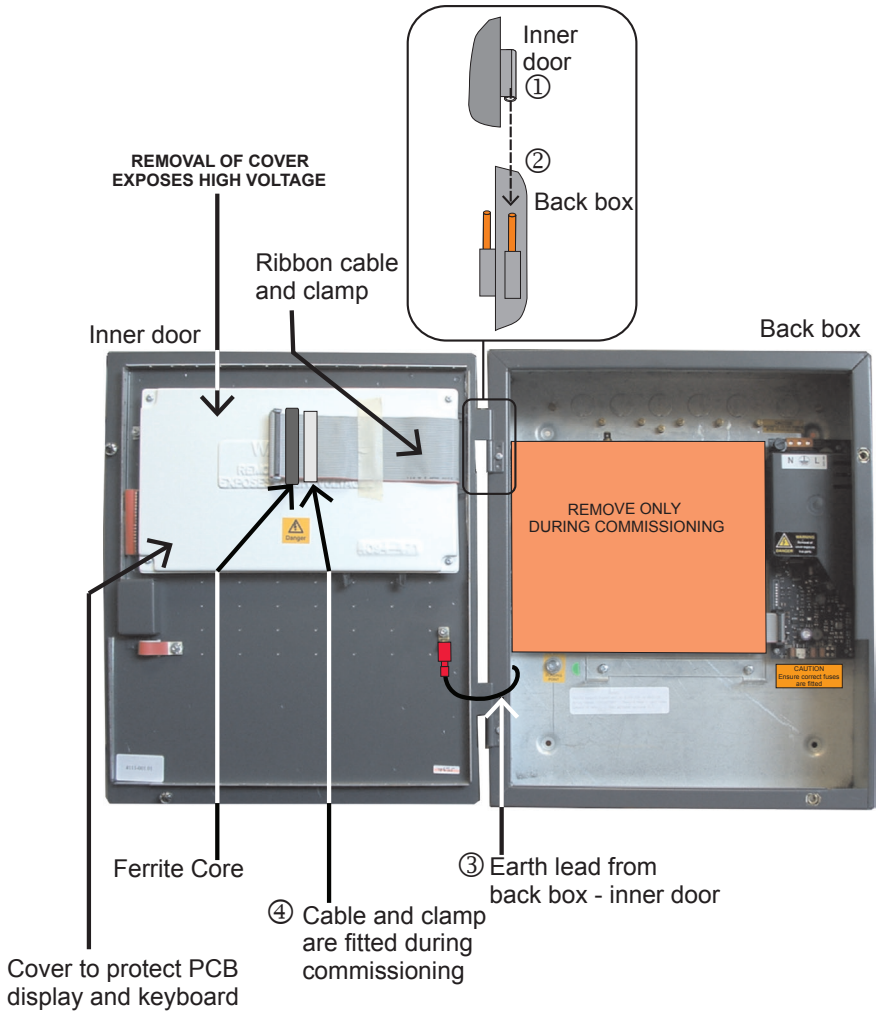
The Vigilon Network node may be semi-flush mounted using a flush surround (COMPACT-FLUSH).

A stainless steel flush surround is available as an option (COMPACT-FLUSH-SS) and if fitted it requires a stainless steel door (VIG-RPT-DOOR-SS).

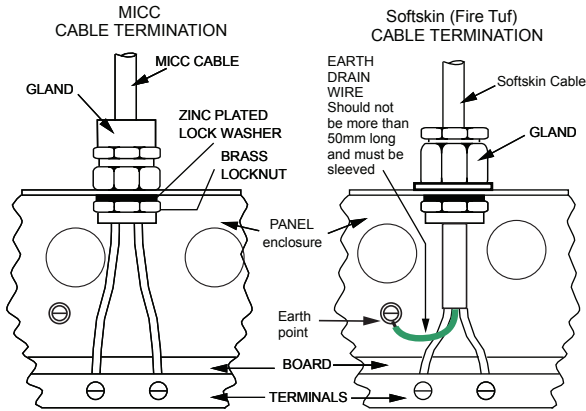


- Cut out an aperture in the wall to allow the flush surround to be fitted, see diagram for dimension of the aperture.
- Using the fixing holes on the flush surround, secure it into the aperture side walls.
- Knock out the appropriate top or rear cable points on the panel enclosure.
- Route the cables through the cable entry points into the panel and at the same time insert the panel into the flush surround.
- Fit the panel back box to the flush surround using the 4-off 5mm screws supplied with the flush surround.

Fitting the inner door

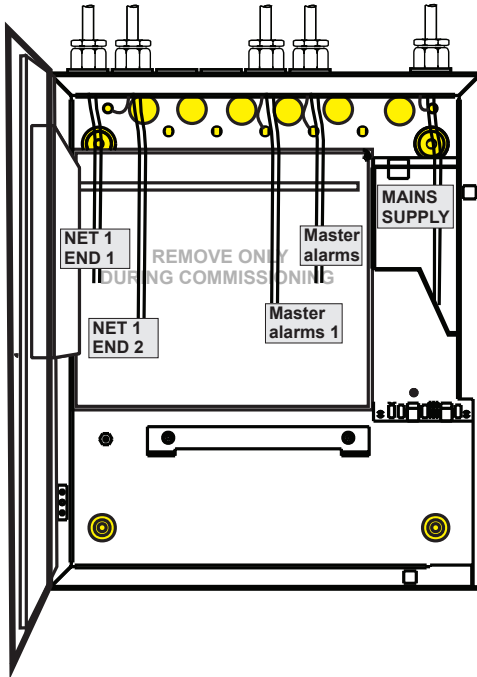


Cable termination on enclosure



The wire length between the cable termination and point of connection must be as short as possible. Cable earth drain wire, where applicable, must be connected to the nearest earth point.

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



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

Wiring test



DO NOT 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

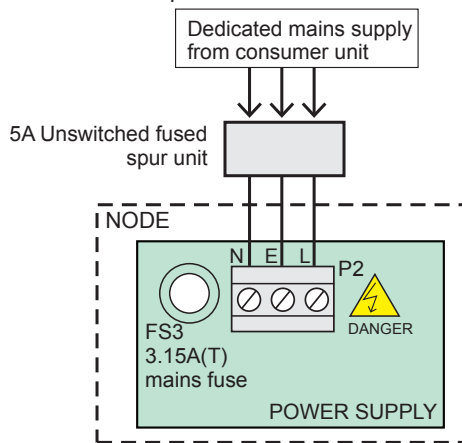


Ensure that the mains supply cable enters the panel through a dedicated cable entry, located adjacent to the mains terminal block and also ensure it is segregated from the loop wiring.



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

All mains powered equipment must be earthed. The mains supply to the Network Node 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 the 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

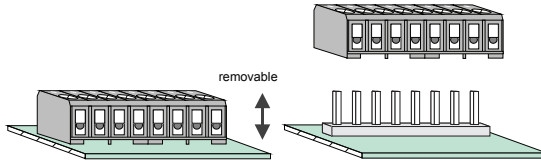
The mains and battery supply cables must be installed to the stage to facilitate the power up for commissioning, which is carried out by the Servicing organisation.



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.

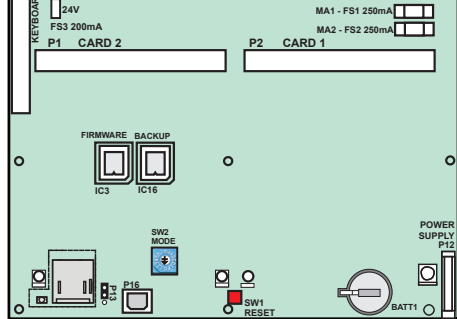
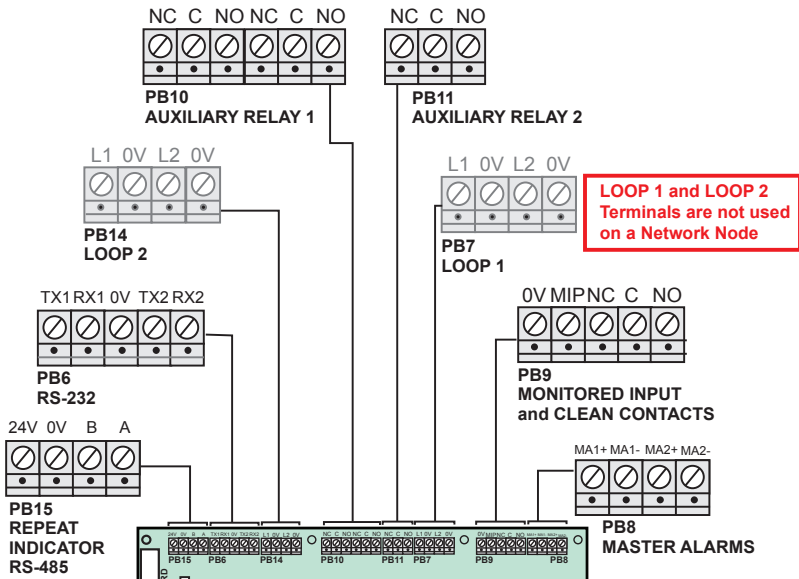
Removable terminal block

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

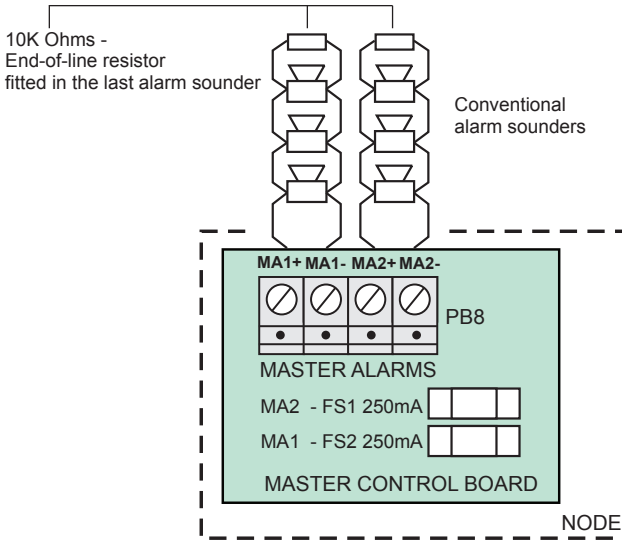
The Master Control Board (MCB) holds all the terminals for the connection of Network node, these include master alarms, auxiliary relays, clean contacts, repeat indicator panel and monitored input.



Master Control Board

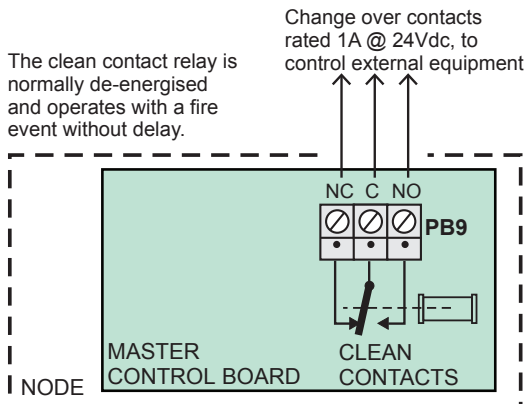
Master alarm circuits

The two master alarm circuits accept the connection of conventional alarm sounders, such as the conventional alarm products.



Clean contacts

The Network node operates the clean contacts relay when a fire event is received from the system. The clean contacts can be used to switch plant equipment, such as lift control system. If required the contacts should be powered from an independent power supply, where required.

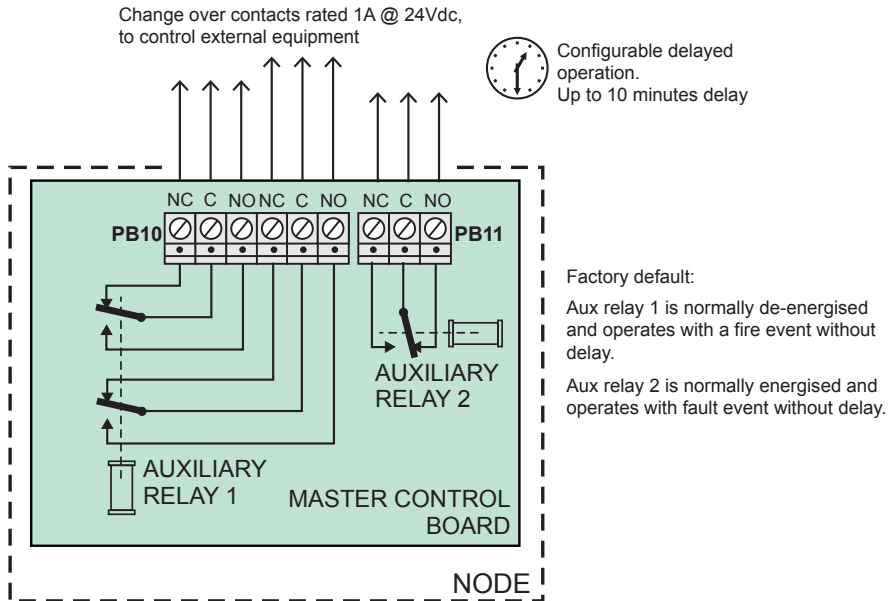


Auxiliary relay circuits

The Network node operates the auxiliary contacts when the configured event is received from the system.

The auxiliary relays 1 and 2 contacts can be used to control external equipment, such as an automatic dialer 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.

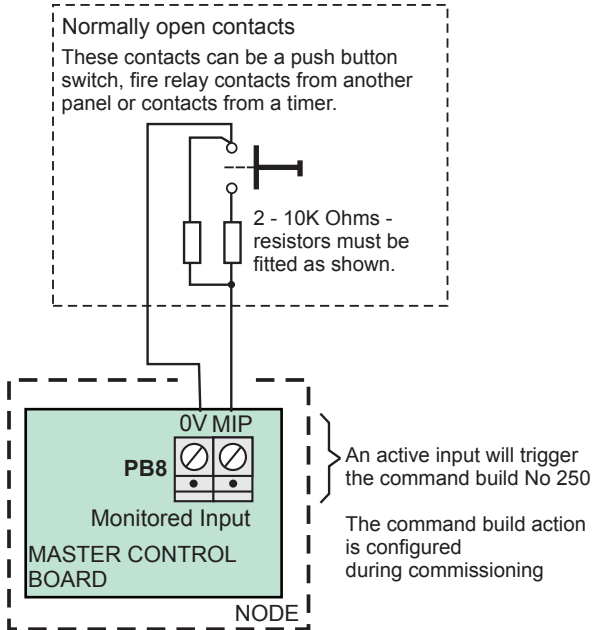
The relay operation can also be delayed by up to 10 minutes and can be set up to operate in a normally energised or de-energised state. The contacts should be powered from an independent power supply, where required.



Monitored input circuit

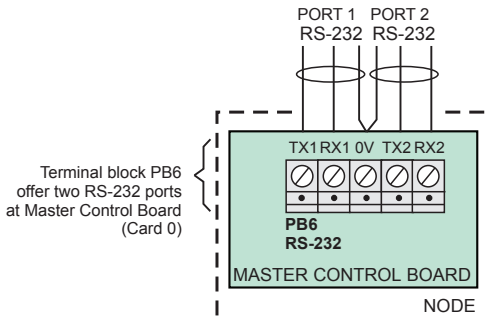
This may be used for class change application in schools. The monitored input at the fire panel is activated by an external switch installed a maximum of up to 100m cable distance away from the panel.

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

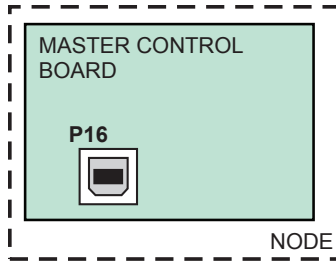
The ports 1 and 2 of the fire panel offer RS232 communication, having configurable modes of operation and baud rate which are set during the commissioning of the system. The configurable modes include, standard (default), printer, universal or Ascom. The ports can be used to connect an external printer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



USB Port

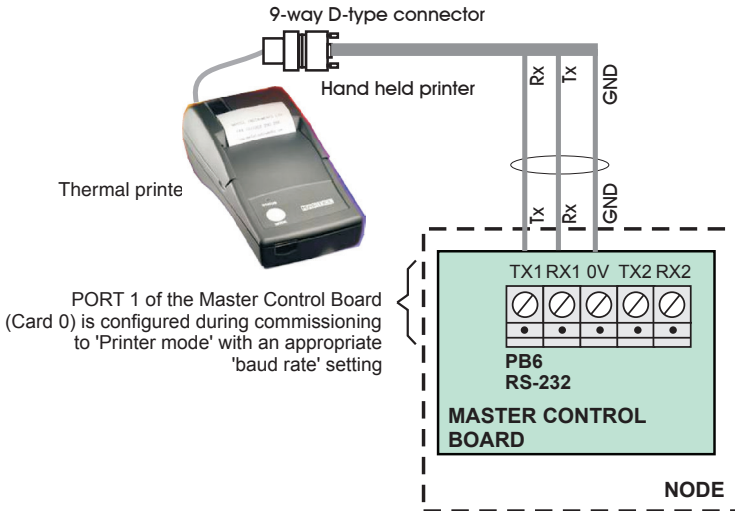
The Port 3 is a USB port that is used to connect to the commissioning tool. This tool allows ease of configuring the node.

PORT 3 is the USB port that can be accessed through connector P16 of the Master Control Board (Card 0)



Connecting a thermal printer

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

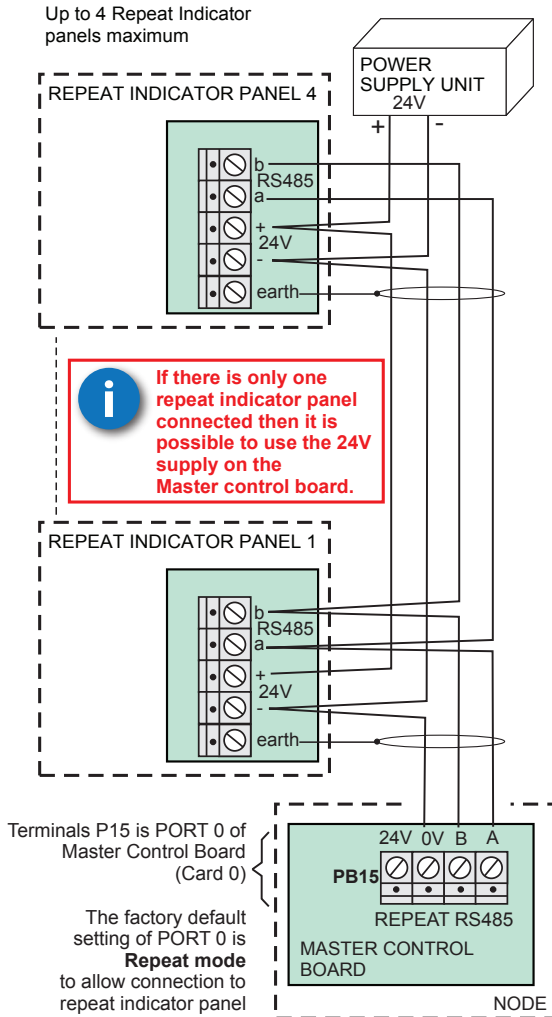


Repeat indicator panel

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 Network node's Port 0 is configured for Repeat mode and is set up for RS485 communication and the baud rate is selected during the commissioning stage.



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**.

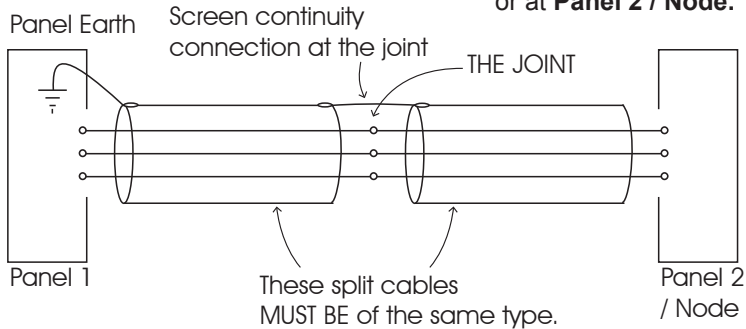
Network cable screen continuity

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.

NOTE: The cable screens are not connected to earth at the joint or at **Panel 2 / Node**.



How to minimise cross talk



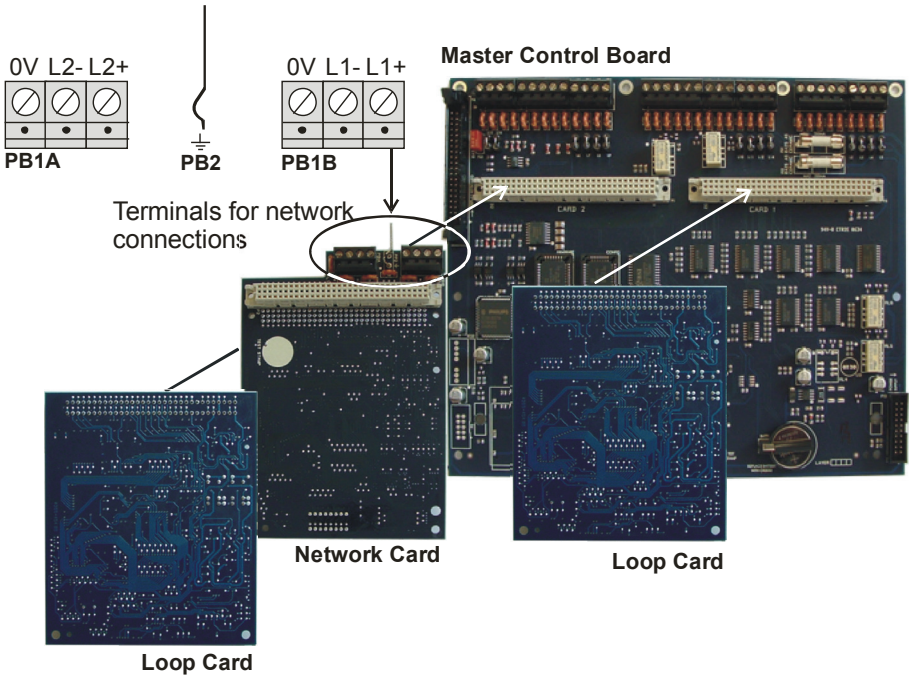
When using standard MICC cable in a network, the different legs of the cable must not be closely placed together, as this will cause signal crosstalk which results in communication failure.

There are three practical ways 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 connections

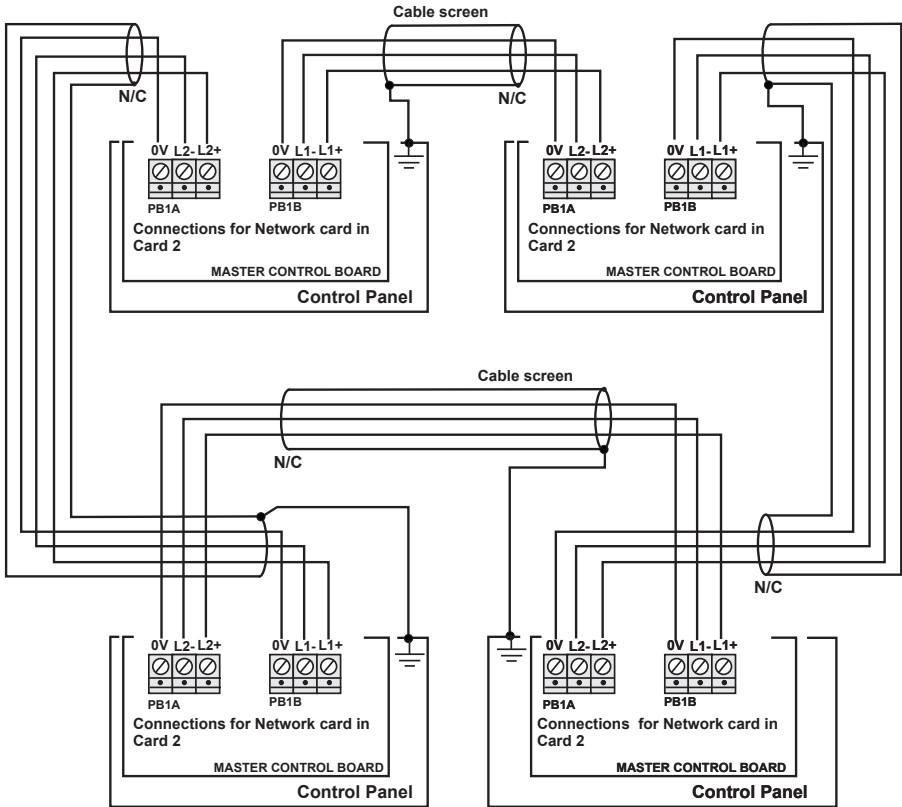
The Network card has the terminals for network cable connection. The Network card is fitted during system commissioning.



Network wiring

A secure network can consist of up to 31 control panels and network nodes connected in a loop, communicating on Vigilon 3217 protocol.

N/C = No connection



The cable screen must be connected to an earth terminal in the backbox as shown.

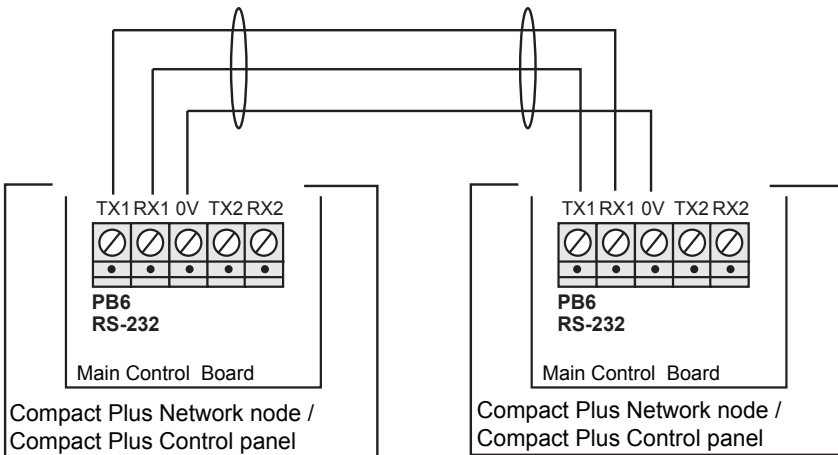
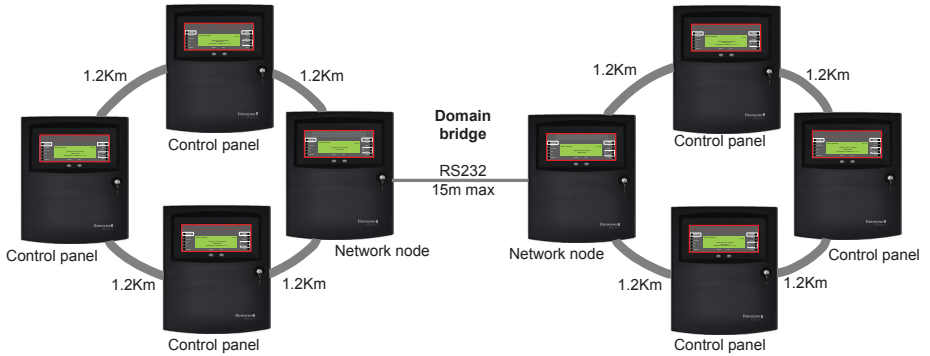
Where a multicore cable is being used ensure the unused cores (cores without signal) are connected to 0V.



When using a cable having 2 pair with screen, use 1 pair for 0V and use the other pair for L - and L+ connections.

Domain Bridge across Networks

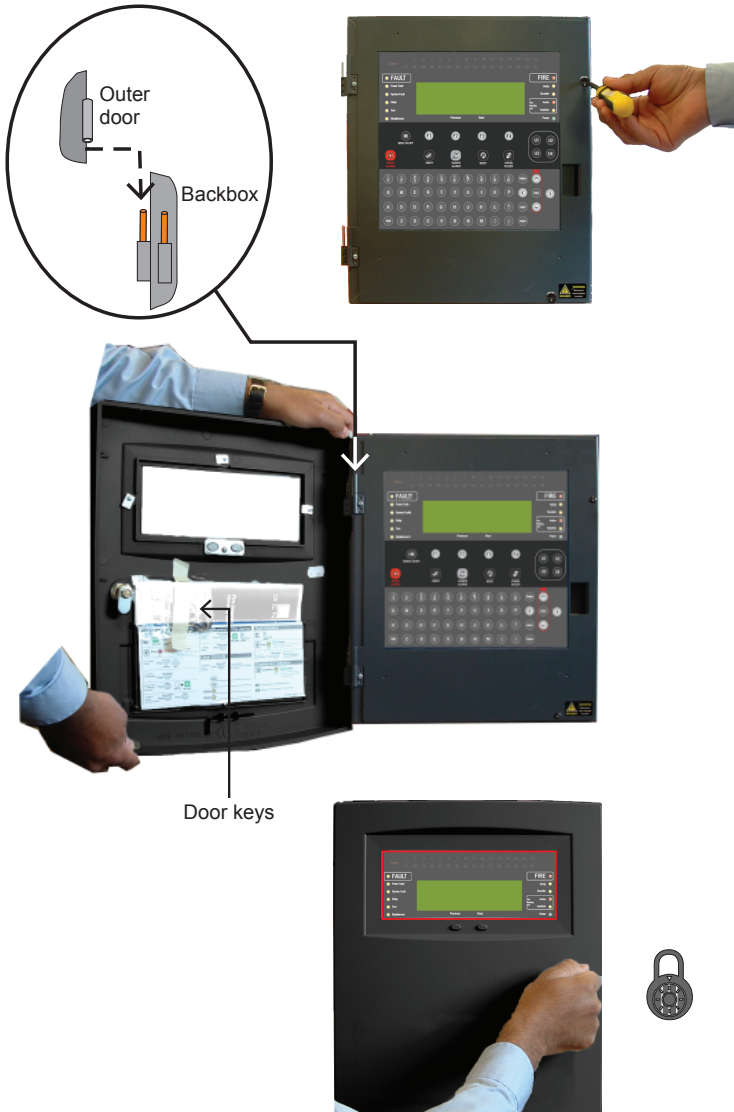
It is possible to connect two or more Vigilon networks together by means of domain bridge. To domain bridge two networks use the RS232 terminals in the Network nodes.



On completion

On completion of installation wiring ensure the earth lead between the backbox and inner door is fitted.

- a. Close the inner door using a screw driver.
- b. Fit the outer door on to the main enclosure.
- c. Close and lock the outer door.



Vigilon Compact Plus Network Node parts

This section lists parts associated with the Vigilon Compact Plus Network node. For further information on the availability of these parts contact your supplier.

Network node

COMPACT-NODE	Vigilon Compact Plus Network Node c/w 1 - Network card (2-12V 12Ah batteries for 24hr standby - not supplied)
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Accessories

COMPACT-NC	Network card (for Vigilon Compact panel and node)
COMPACT-FLUSH	Flush surround (for Vigilon Compact panel and node)
COMPACT-FLUSH-SS	Flush surround stainless steel (for Vigilon Compact panel and node)
VIG-RPT-DOOR-SS	Stainless steel door (for Vigilon Compact panel and node)
VCS-ODOOR-PLUS	Vigilon Compact Plus Outer door assembly
VCS-IDOOR-PLUS	Vigilon Compact Plus Inner door assembly
4015-514-Y	12V 12Ahr Battery
VCS-PSU-N	PSU (for Vigilon Compact panel and node)
VCS-MCB-PLUS	Master Control Board

Printer

PRINTER-HAND	Handheld serial thermal printer
PRINTER-H-PAPER	Thermal paper for handheld printer

Manuals

4188-1027	Vigilon Plus & Compact Plus panels & Plus Network Node Operating instructions
4188-749	Log book

