



**VESDA LaserCOMPACT™**

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## **INSTALLATION MANUAL**

**VLC-500 (Relays Only) Model**

**VLC-505 (VESDA*net*) Model**

**July 2002**

**Version 2.0**

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### **Publication history**

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## Codes and Standards Information

Vision Fire & Security strongly recommends that this guide is read in conjunction with the appropriate local codes and standards for smoke detection systems and electrical connections. This guide contains generic information and some sections may not comply fully with all local codes and standards. In these cases the local codes and standards must take precedence.

## FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorientate or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to a power outlet which is on a different power circuit from which the receiver is connected
- Consult the dealer or an experienced radio/television technician for help

## FM 3611 Hazardous Approval Warning

Exposure of some chemicals may degrade the sealing of relays used on the detector. Relays used on the detector are marked "TX2-5V" or "G6S-2-5V" or "EC2-5NU".

## UL Warning

The fire alarm threshold (signal) that initiates an evacuation procedure via the Fire Alarm Panel must not be set higher than 0.625%/ft. The COMPACT unit can send this signal either via the Fire Alarm Panel Output signal or the Pre-alarm output signal.

## Approvals and Standards

The product complies with the following standards.

<b>AS 1603.8</b>	<b>FCC Class B</b>
<b>AS/NZS 3548</b>	<b>AS2211</b>
<b>EN50081-1</b>	<b>21 CFR 1010.2</b>
<b>EN50130-4</b>	<b>21 CFR 1010.3</b>
	<b>EN 60950</b>

## Safety Label

The LaserCOMPACT incorporates a Laser device and is classified as a Class 1 Laser product which complies with FDA Regulations 21 CFR 1040.10 and 1040.11. The laser is housed in a sealed Detector chamber and contains no serviceable parts. This laser emits invisible light and can be hazardous if viewed with the naked eye. **Under no circumstances should this chamber be opened.** There is a safety label on the chamber as shown below.



Figure 1 The Laser Warning Label

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# 1. Introduction

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## Scope of this Manual

This manual is intended for installation technicians to be able to install, perform basic power and preliminary device checks for the LaserCOMPACT detector. It does not cover information for commissioning. All VESDA equipment is to be commissioned by personnel who have attended a VESDA accreditation course.

Use the checklist in Section 9 to verify that the installation has been correctly completed. Fill out the details in the checklist sheet for the site and submit it to the appropriate personnel.

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## CAUTION

- **The Detector must only be installed by VESDA accredited personnel.**
  - **The performance of the system depends on the pipe network that was designed for the site. Any alteration to the pipe network may alter the performance of the system. The ASPIRE™ design tool is to be used to verify the suitability of any pipe network design and subsequent alterations. ASPIRE™ is available from your distributor.**
  - **The IP rating for the LaserCOMPACT is IP 30. This rating indicates the device is not to be installed where there is the possibility of any water or liquid falling onto the device.**
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# 2. Cabling Requirements

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The terminals on the termination card in the LaserCOMPACT will accept wire sizes up to 2.5sq mm (12 AWG).

## 2.1 Power Cables

Use the power ratings for the detector to determine the required wire sizes. The power requirements for the detector to operate are as follows:-

<b>Operating voltage</b>	18 VDC to 30 VDC
<b>Current consumption</b>	225mA max. (No Alarm) 245mA max. (With Alarm)

## 2.2 Data Cables

The recommended RS 485 data cable for interconnecting to other detector units on the VESDA<sup>net</sup> loop is Belden 9841 (or equivalent). The cable characteristics are as follows:-

- 24 AWG, Twisted pair, Shielded, 120 ohms impedance

The maximum specified length for the RS485 cable between any two devices on the VESDA<sup>net</sup> network is 1300m (4000ft).

### 3. Product Specifications

Supply Voltage	18 to 30VDC
Power Consumption	5.4W quiescent, 5.9W with alarm
Current Consumption	225mA at 24VDC quiescent, 245mA with alarm
Fuse Rating	1.5A
Dimensions (WHD)	225mm x 225mm x 85mm (8 7/8in x 8 7/8in x 3 3/8in)
Weight	1.9kg (4.2lbs)
Operating Temperature	Detector Ambient -10° to 39°C (14°F to 103°F) Sampled Air: -20° to 60°C (-4° to 140°F) Humidity: 10-95% RH, non-condensing
Sampling Pipe Network	Maximum area of coverage 800sq m (8610sq.ft) Maximum Single Pipe Length 70m (max. 20 holes) Maximum branched (2) Pipe Lengths 50m each (max. 20 holes) Computer Design Tool: ASPIRE™ version 3.09.07
Pipe Size	ID: 15-21mm (9/16in – 7/8in) OD: 25mm (1in)
Relays	3 Relays rated 2A @ 30VDC Programmable to latching or non-latching states
Relays Default Configuration	Fire Pre-Alarm Alert/Fault (Maintenance and Isolate) Programmable 0 – 60 sec time delay for each relay
IP Rating	IP30
Cable Access	4 x 25mm (1in) cable entries
Cable Termination	Screw terminal blocks (0.2-2.5sq mm, 30-12 AWG)
Sensitivity Range	0.005 to 20.00% obs/m (0.0015 to 6.25% obs/ft)
Threshold Setting Range	Alert: 0.005 – 1.990% obs/m (0.0015 - 0.6218% obs/ft) Pre-Alarm: 0.010 – 1.995% obs/m (0.0031 - 0.6234% obs/ft) Fire: 0.015 – 20.00% obs/m (0.0046 – 6.25% obs/ft) ** ** Limited to 4% obs/ft for <b>UL approved projects</b>
Key Software Features	Event log: up to 12,000 events stored on FIFO basis Smoke level, alarms and faults with time and date stamp AutoLearn: Minimum 15 minutes, maximum 15 days. Recommended minimum period 14 days. During AutoLearn thresholds are NOT changed from pre-set values.

## 4. Product Dimensions

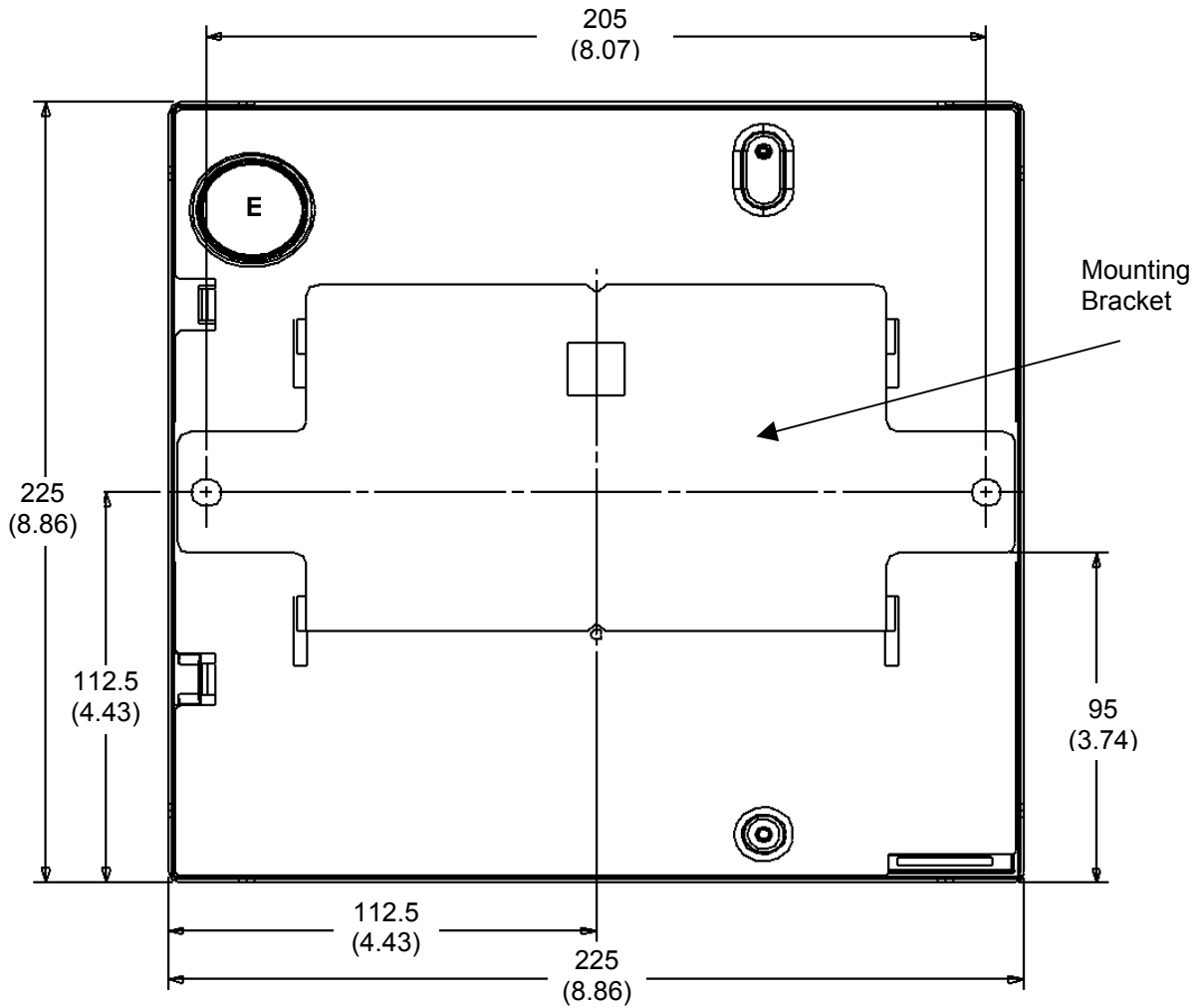


Figure 1 Dimensions in mm (inches) of LaserCOMPACT with mounting Bracket (Rear View)

E=Cable Entry Point on Rear of Enclosure

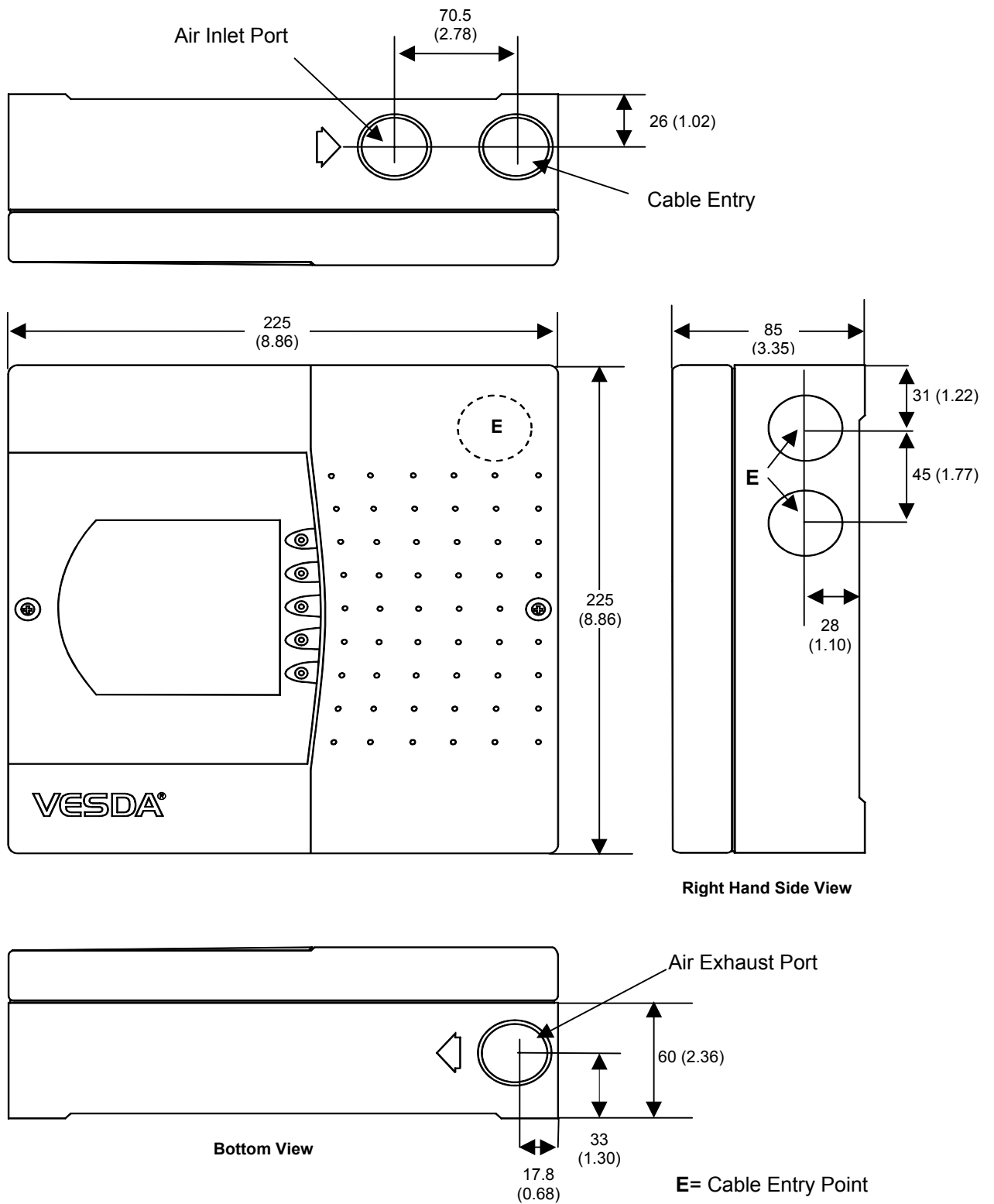


Figure 2 Dimensions in mm (inches) for the LaserCOMPACT

## 5. Battery Backup Calculations

The nominal battery voltage is **24 VDC**.

Use Table 1 to calculate and to determine the battery backup requirements for your fire detection system.

EQUIPMENT	NORMAL LOAD @ 24 V DC			FULL ALARM LOAD @ 24 VDC		
	LOAD (mA)	QTY	TOTAL (ma)	LOAD (mA)	QTY	TOTAL (ma)
LaserCOMPACT	225			245		
Remote Display						
Other 24V loads						
	<b>TOTAL (mA)</b>			<b>TOTAL (mA)</b>		
			X			X
	<b>STANDBY HOURS</b>			<b>ALARM HOURS</b>		
			=			X 1.06
<b>STANDBY CAPACITY (mAHr)</b>				<b>ALARM CAPACITY (mAHr)</b>		
				<b>TOTAL CAPACITY = STANDBY + ALARM (mAHr)</b>		
				<b>DIVIDE BY 1000</b>		
				<b>MULTIPLY BY BATTERY FACTOR 1.25</b>		<b>AHr</b>

Table 1. Calculations to determine the battery backup requirements

## 6. Installation

### 6.1 Check Procedure Before Installation

- (a) Do not install your LaserCOMPACT if there are any signs of shipping damage to the product. Inform your distributor if there is any damage.
- (b) Check the model of the LaserCOMPACT is correct as per the design specifications for the site. Refer to the model number located on the bottom of the detector enclosure.
- (c) Identify the location where the detector is to be mounted. The LaserCOMPACT can be mounted on a wall or a suitable secure surface. There are two allowable mounting positions for the LaserCOMPACT as shown in Figure 3 and listed below.
  - Mounting the device with the **air inlet pipe on the top** of the box and with the air exhaust pipe at the bottom. (Normal Orientation)
  - Mounting the device with the **air inlet pipe at the bottom** of the box and with the air exhaust pipe on the top. (Inverted Orientation)
- (d) Verify that the selected mounting location is suitable to fit the detector by test fitting the LaserCOMPACT onto the actual mounting position. Ensure there is 150mm of clear space around the air inlet pipe and cable entry points to allow for pipe and conduit entry.
- (e) Verify that the cable entry points and the sampling air pipes are at the correct locations.
- (f) Determine the type of fasteners required to attach the mounting bracket onto the mounting surface. The size of the screw holes on the mounting plate is 8mm.

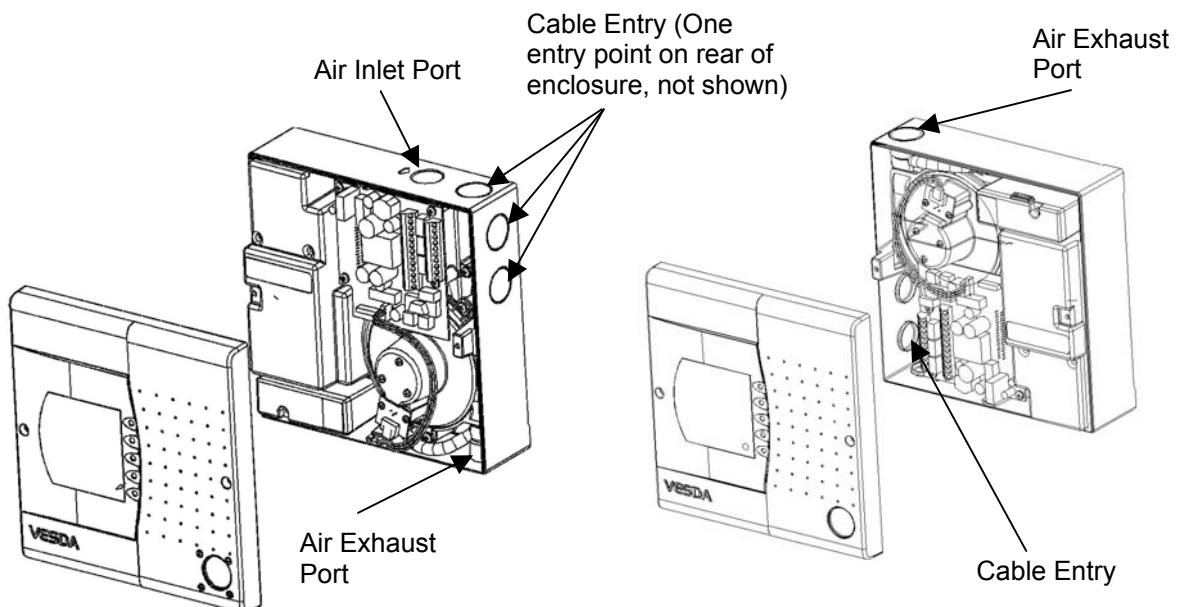


Figure 3 LaserCOMPACT Orientation, Normal (left), Inverted (right)

## 6.2 Removal of Front Cover

- (a) Unscrew the two Philips head screws located on the left and right hand sides of the front cover.
- (b) Remove the cover. The front cover is held to the main enclosure with a plastic tie. There is a cable loom labelled **LED CARD** that connects the termination card in the enclosure to the LED card located behind the front cover. If you need to separate the front cover from the main enclosure perform steps (c) to (d), otherwise go to step 6.3.
- (c) Remove the LED CARD cable connector from its socket on the termination card.
- (d) Twist the plastic tie by 90 degrees on the cover side and slip the tie out through the slot.

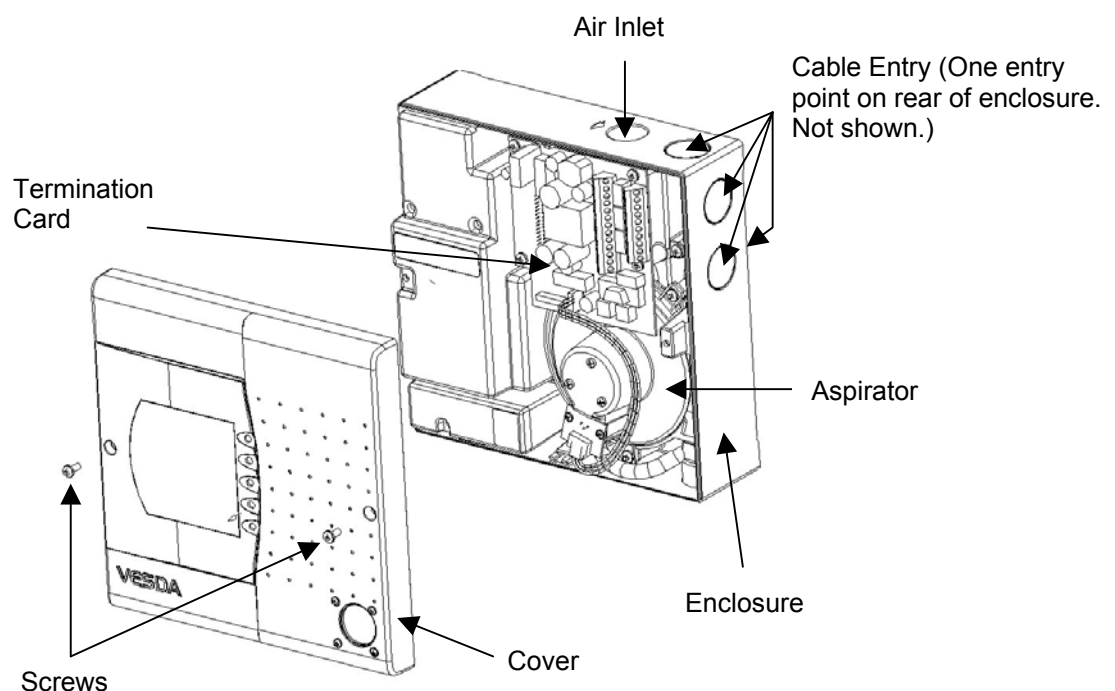


Figure 4 LaserCOMPACT with Front Cover removed. (Normal Orientation).

## 6.3 Removal of Plastic Plugs for Cable Entry

- (a) Determine the cable entry holes to be used. Refer to Figure 4.
- (b) Use your thumb to push out the hole plugs from inside the enclosure.

## 6.4 Securing the Mounting Bracket

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**Warning** Make sure that there are no electrical wires or plumbing behind the mounting position before drilling. Ensure the mounting position is flat.

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- (a) Place the mounting bracket onto the surface and mark out the two mounting screw holes. Refer to Figure 5 for dimensions. Use a spirit level to ensure the bracket is level.
- (b) Use the appropriate fasteners to suit the mounting surface. Secure the bracket to the surface.

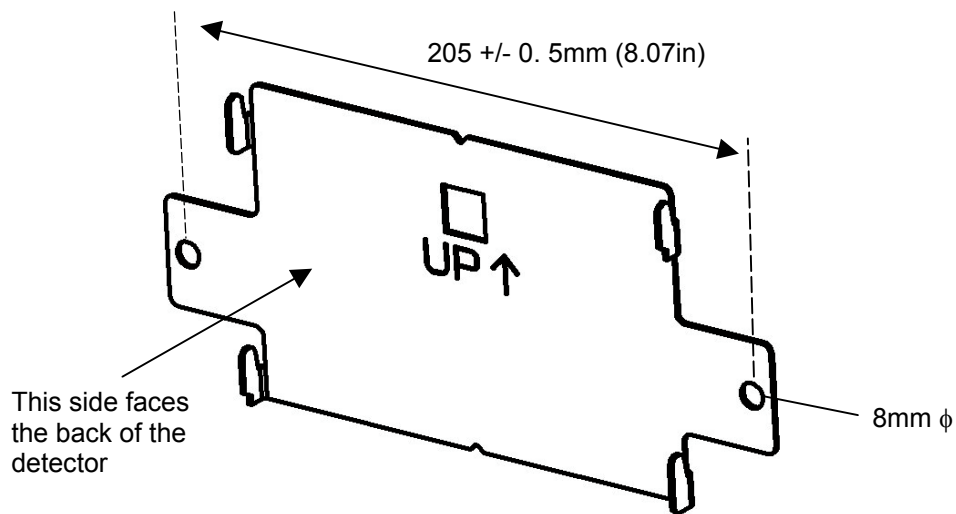


Figure 5 Hole Dimensions and Orientation of Mounting Bracket

## 6.5 Attaching the Detector onto the Bracket

- Determine the required orientation for the LaserCOMPACT.
- Mount the detector onto the bracket by placing the four rectangular slots located on the rear of the detector onto the four bracket tabs. Refer to Figure 6.
- Slide the device downwards until it locks onto the tabs and screw in the anti tamper screw. Refer to figure 7 for screw location.
- Check the unit does not slide off its bracket.

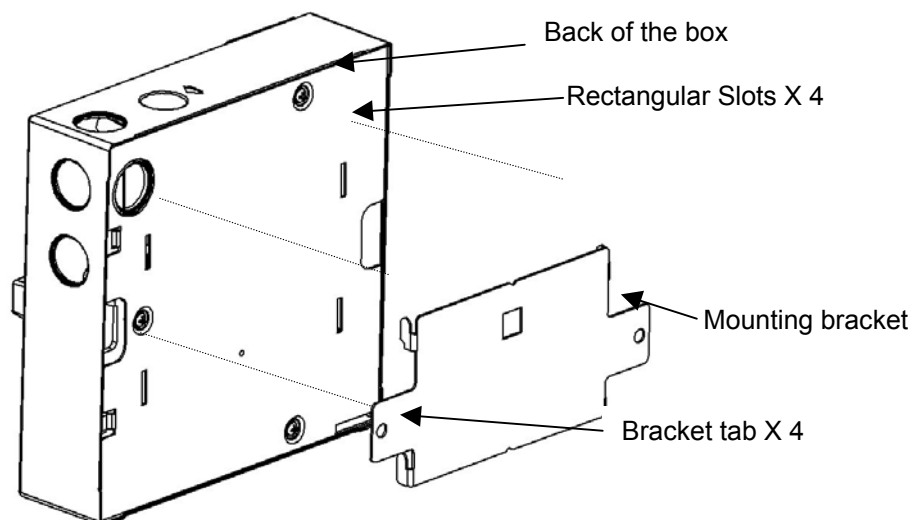


Figure 6 Mounting the Detector onto the Mounting Bracket

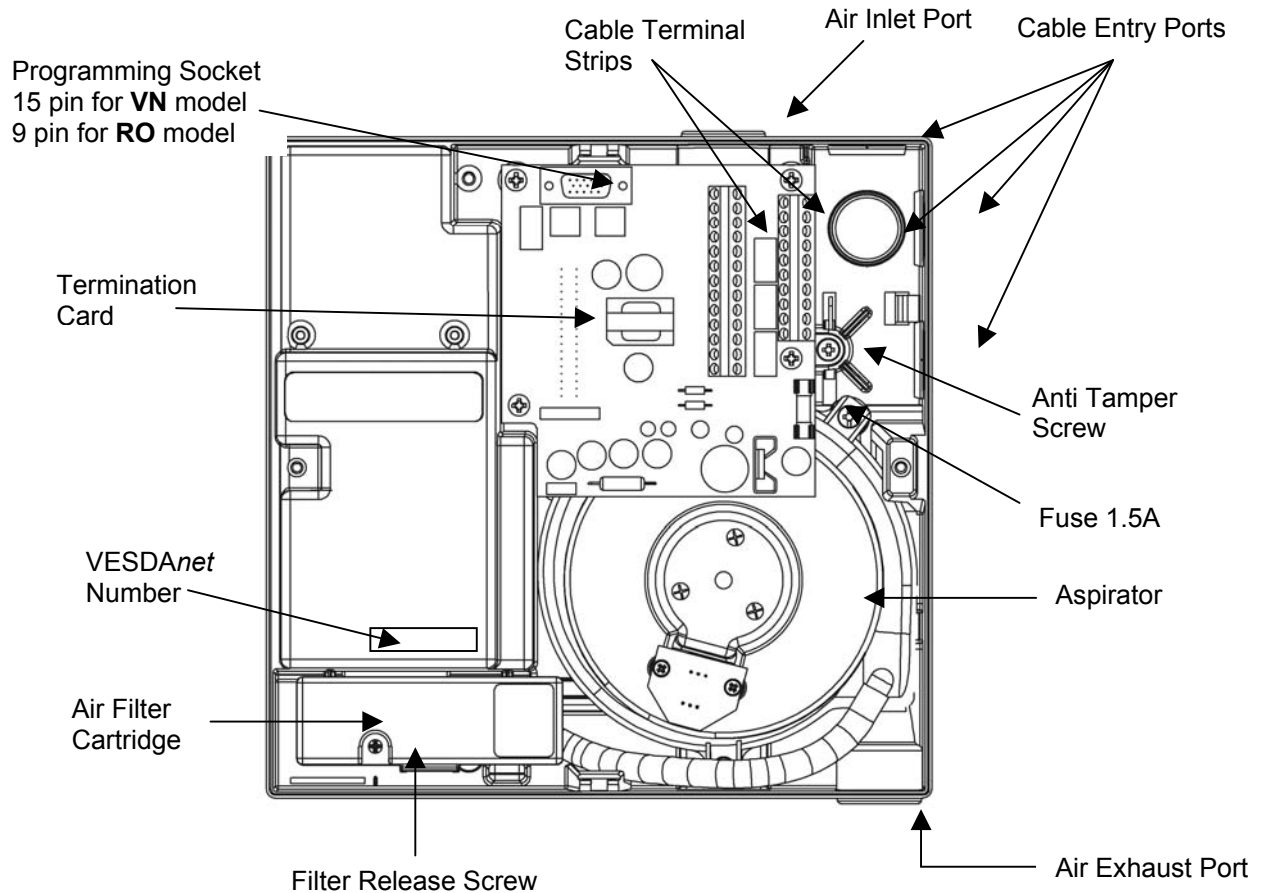


Figure 7 Location of Anti Tamper Screw and other Components inside the Enclosure

## 6.6 Connecting the Air Sampling Pipe

The air inlet port is designed to fit a standard pipe of 25mm (1in) OD. A tapering of the air inlet port prevents the pipe from being inserted beyond 15mm (5/8in).

**Note** Where it is common practice to use  $\frac{3}{4}$  inch pipe which has a  $1 \frac{1}{16}$  inch OD, a suitable adaptor should be used to connect the pipe to the inlet manifold. Such an adaptor is supplied with the LaserCOMPACT in the appropriate territories.

- a) De-burr and square off the end of the sampling air pipe. Ensure the pipe is free from swarf.
- b) Remove the plugs from the inlet and exhaust ports.
- c) Insert the pipe into the inlet port ensuring a firm fit. DO NOT glue this connection.
- d) Pipe the exhaust when necessary.

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**Caution** DO NOT GLUE THE AIR INLET AND EXHAUST PIPE CONNECTION  
 Glued connection makes disconnecting the sampling air pipe from the LaserCOMPACT for maintenance extremely difficult and will result in damage to the equipment.

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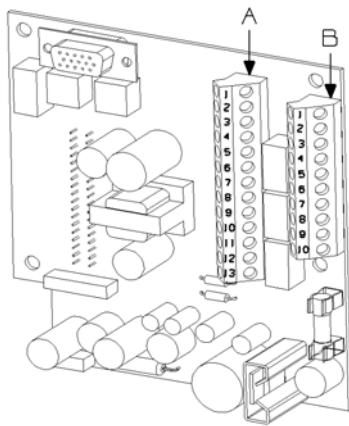
## 6.7 Cabling Using Glands and Conduits

### 6.7.1 Using Glands

- (a) If using cable glands, use the correct gland size to fit the 25mmØ cable entry hole.
- (b) Run the wires through the glands and into the LaserCOMPACT enclosure. Use your local codes and electrical standards for cabling.

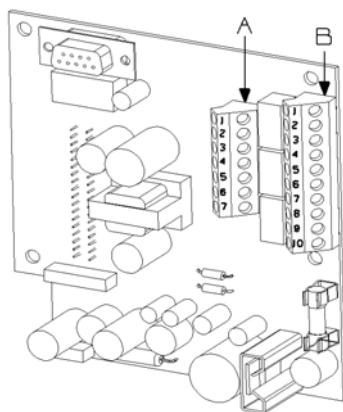
### 6.7.2 Using Conduits

- (a) Terminate the conduits at the cable entry holes on the sides of the box using the appropriate conduit connectors.
- (b) Run the wires through the conduits and into the LaserCOMPACT enclosure. Use your local codes and electrical standards for cabling.



Terminal A		Terminal B	
1	Bias (-) (GND)	1	Shield
2	Reset (-)	2	VESDAnet A (-)
3	Reset (+)	3	VESDAnet A (+)
4	Bias (+)	4	Shield
5	LED (-) (GND)	5	VESDAnet B (-)
6	LED (+)	6	VESDAnet B (+)
7	FIRE (NO)	7	Power (-)
8	FIRE (C)	8	Power (+)
9	PRE-ALARM (NO)	9	Power (-)
10	PRE-ALARM (C)	10	Power (+)
11	FAULT (NO)		
12	FAULT (C)		
13	FAULT (NC)		

Figure 8 Terminal Pins Location on Termination Card for VN model



Terminal A		Terminal B	
1	FIRE (NO)	1	Bias (-) (GND)
2	FIRE (C)	2	Reset (-)
3	PRE-ALARM (NO)	3	Reset (+)
4	PRE-ALARM (C)	4	Bias (+)
5	FAULT (NO)	5	LED (-) (GND)
6	FAULT (C)	6	LED (+)
7	FAULT (NC)	7	Power (-)
		8	Power (+)
		9	Power (-)
		10	Power (+)

**NC = Normally Close**  
**NO = Normally Open**  
**C = Common**

Figure 9 Terminal Pins Location on Termination Card for RO Model

## 6.8 Procedure to Terminate Wires to the Termination Card

Use the appropriate wiring standards for your country or use the following suggested procedure listed below.

- Strip off 5 to 10mm of outer insulation from each wire.
- Twist wire strands together for multi-stranded wire only.
- Insert wire into terminal.
- Tighten terminal screw.
- Check the wire is firmly attached to the terminal.
- Ensure no bare wires are exposed at the terminals. The wire insulation must reach to the end of the terminal.
- Check the terminations are correct by referring to the appropriate circuit diagrams in this manual.

## 6.9 Terminating the Power Wires to the Termination Card

- Refer to Figure 8 or 9 for the power terminals location on the termination card.
- Connect the power wires to the Power terminals as shown in Figure 10.

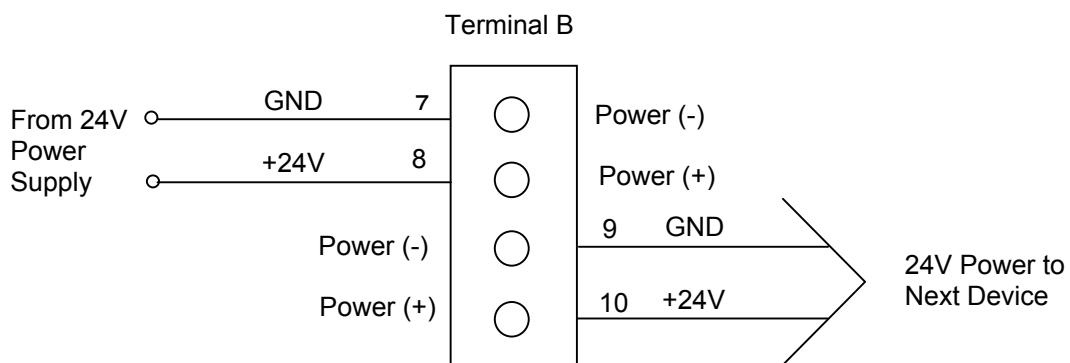


Figure 10 Wire Connection Details for Power

## 6.10 Connecting the VESDA<sub>net</sub> Wires to the Termination Card (VN model only)

- Refer to Figure 8 for the network terminals location on the termination card.
- Connect the VESDA<sub>net</sub> wires as shown in Figure 11. This diagram is only an example for five detectors. This wiring method is similar for two or more detectors.
- Maintain the wiring polarity throughout the network and **do not leave any VESDA<sub>net</sub> terminals unconnected.**

**NOTE:** While an Open Loop configuration is possible (refer to System Design Manual), it is strongly recommended that the Closed Loop configuration be installed to achieve a fault tolerant loop

**NOTE:** When a VN model detector is not used in a VESDA<sub>net</sub> loop and is to be used as a stand-alone detector the VESDA<sub>net</sub> terminals must be wired as per Figure 12.

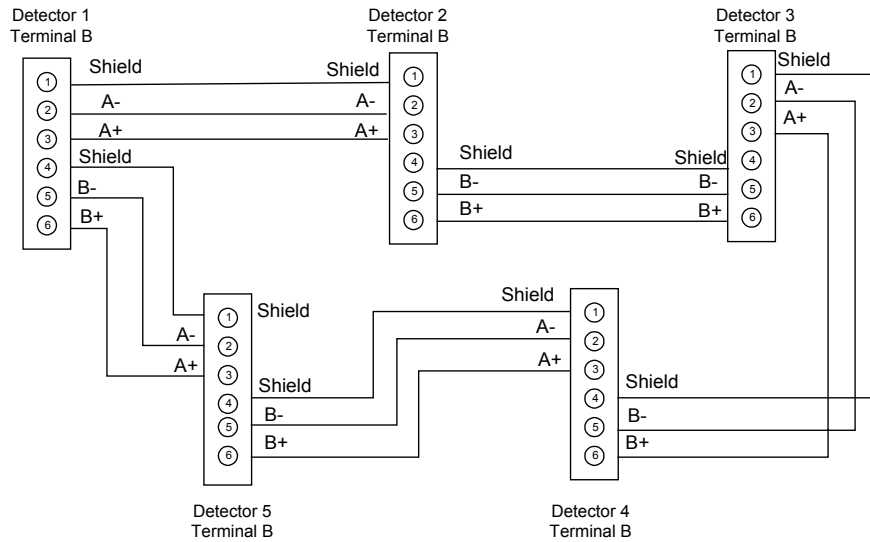


Figure 11 Wire Connection Details for VESDAnet

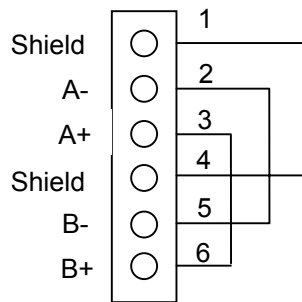
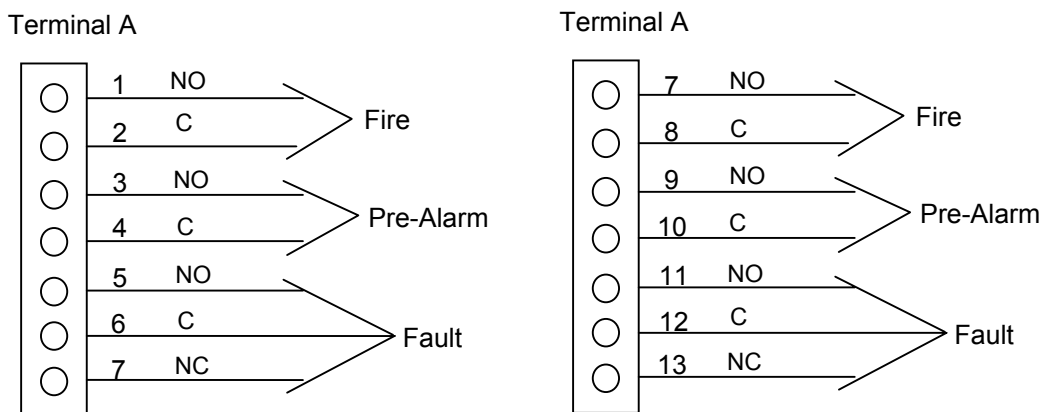


Figure 12 Wire Connection Details for VESDAnet Loop

### 6.11 Terminating the Relay Wires to the Termination Card

- a) Refer to Figure 8 or 9 for the relay terminals location on the termination card.
- b) Connect the relay wires to the terminals as per Figure 13 and your site requirements.



Terminal pin location for **RO**

Terminal pin location for **VN** model

Figure 13 Wire Connections Details for Relays

## 6.12 Terminating the Auxiliary Wires to the Termination Card

- a) Refer to Figure 8 or 9 for the Reset, LED and Bias terminals on the termination card for the **RO** or **VN** model.
- b) The function for these outputs are as follows:-
  - LED +/-** This output terminal provides a maximum of 5V , 15mA via a 220 ohm resistor to power a remote LED.
  - Bias +/-** This output provides a 10V supply via a 1K resistor to power the remote Reset/Isolate switch when connected as per Figure 14.
  - Reset +/-** This input terminal has three functions, (Mains OK, Standby and Reset) and requires an input voltage supply between 5V to 24VDC to operate.
- c) Terminate the RESET, LED and Bias wires as per your site requirements or with reference to Figure 14

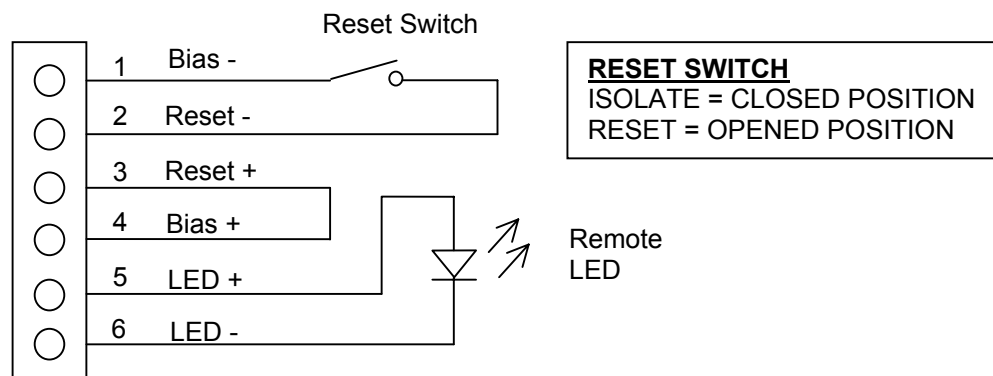


Figure 14 Wire Connection Details for Auxiliaries

## 6.13 Closing Up the LaserCOMPACT

- a) Tie all wires together into neat looms using cable ties.
- b) Reattach the front cover to the plastic tie and connect the **LED CARD** connector to the socket on the termination card if you have removed the cover and the connector.
- c) Perform the power up as per section 7 and preliminary checks as per section 8.
- d) Close up the LaserCOMPACT and secure the cover with the two screws.

## 6.14 Pipe Bonding Check

- a) Check all the plastic pipe connecting joints are fully sealed and bonded with glue to eliminate unwanted air leaks. If applicable, check all metal pipe joints are sealed to eliminate unwanted air leaks.
- b) Check the pipe joint at the air inlet to the LaserCOMPACT is not bonded and fits firmly into the air inlet socket.
- c) Check all pipes are securely attached to a mounting surface with the proper fasteners.
- d) Check the number and sizes of the sampling air holes on the pipes are correct.
- e) Check the routing of the pipes is correct with reference to the site plan.

## 7. Power Up

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**Caution Powering up the system must be done by VESDA accredited personnel.**

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### 7.1 Power Up the System

- (a) Remove the 1.5A fuse on the termination card.
- (b) Turn on the power to the detector.
- (c) Check the DC voltage at the **Power** terminals on the termination card is between **18 VDC to 30 VDC**. Disconnect the power immediately if the supply voltage is above **30VDC** or less than **18VDC** and troubleshoot the fault.
- (d) Replace the fuse when the measured voltage is OK. The system takes approximately 15 seconds to power up during which time an LED test sequence is performed.
- (e) If the system fails to power up:-
  - Check all the power wires are securely connected to the Power terminals.
  - Check the polarities of the power wires are correctly terminated.
  - Check for a blown fuse on the termination card. Refer to Figure 7 for the fuse location.

**Note:** The detector may show faults immediately after power up and this is normal. Reset the unit by pressing the RESET switch on the front cover of the detector to unlatch the relays and fault lights. The fault light on the front cover will light up and this is normal. Proceed to section 8.

## 8. Preliminary System Checks

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Perform the following preliminary system checks before commissioning.

- (a) Logging onto the system with a PC or a LCD Programmer. See section 8.1.
- (b) Normalise the airflow. See section 8.2
- (c) VESDA<sup>net</sup> communication checks for VN models only. See section 8.3
- (d) Basic pass/fail smoke test. See section 8.4

### 8.1 Logging On to the System

Check with your distributor for the User level and PIN number to log on to the system.

#### 8.1.1 Logging On with a PC

➤ **To program the LaserCOMPACT (RO) detector with a PC**

- a) Connect the RS232 data cable from the PC output port to the 9 pin programming socket on the termination card in the detector.
- b) Run the VConfig Pro or VConfig Basic programs from the PC.
- c) Enter your User level and PIN number.

➤ **To program the LaserCOMPACT (VN) detector with a PC**

- a) A **PC-LINK HLI** device must be connected between the PC and the 15 pin VESDA<sup>net</sup> socket to program the VN model detector.
- b) Connect the RS232 data cable from the PC output port to the 9 pin socket on the PC-Link HLI device.
- c) Connect the 15 pin output port of the PC-LINK HLI device to the 15 pin VESDA<sup>net</sup> socket on the termination card in the detector or to any remote VESDA<sup>net</sup> sockets if wired to the detector.
- d) Run the VConfig Pro or VConfig Basic programs from the PC.
- e) Enter your User level and PIN number.

#### 8.1.2 Logging On with a LCD Programmer (For VN Model Only)

Connect the programmer lead to either one of the following sockets.

- To the 15 pin, programming socket on the termination card

**OR**

- To a remote VESDA<sup>net</sup> socket within the VESDA<sup>net</sup> loop

Wait for the programmer to power up. Log in your User level and PIN number into the programmer.

## 8.2 Normalise the Air Flow and Clearing Air Flow Faults

- a) List all the VESDA<sup>net</sup> number for all detectors to be normalised.
- b) Go to section 8.2.1 for LCD programming or section 8.2.2 for PC programming.
- c) It takes approximately 11 minutes for the system to normalise during which time the Green OK LED flashes twice every second to indicate that normalisation is in progress.
- d) Check the airflow level is approximately 100% when normalisation is completed.
- e) Press the Reset/Isolate button on the front cover to reset the detector after Normalisation. All the fault lights should go off. If any of the fault lights are lit consult the Status menu on the programmer or the Active Event List on the VConfig program to determine the faults and consult your system design manual to rectify.
- f) If the unit fails to normalise it is because the measured airflow may be too low. Check for blockages in the sampling air pipe and check that the exhaust plug has been removed.

### 8.2.1 Using a LCD Programmer (For VN Model only)

- a) Refer to the LCD menu tree supplied with each LaserCOMPACT (VN) detector.
- b) Select the detector to be normalised from the displayed list of devices.
- c) Select Setup by Zone/Type menu ↵ Normalise ↵ Start ↵ (↵ = Enter Key).
- d) To check the airflow level, go to the Normalise or Status menu after normalising.

### 8.2.2 Using a PC

- a) From the View menu select Device List.
- b) Select the detector to be normalised from the displayed list of devices.
- c) From the Device menu, select Normalise Air Flow and press Y to start the function.
- d) To check the airflow level, select the Current Flow command under Device menu after normalising.

## 8.3 VESDA<sup>net</sup> Communication Check (For VN Model only)

**Note:** This test verifies the VESDA<sup>net</sup> system is functioning and all devices connected on VESDA<sup>net</sup> are communicating.

- a) List all VESDA<sup>net</sup> number for all devices connected onto the communication loop.
- b) Go to section 8.3.1 for LCD programming or section 8.3.2 for PC programming.
- c) Verify the VESDA<sup>net</sup> number for each device on the network is shown on the list.
- d) If there are some devices not found on the display list check the VESDA<sup>net</sup> cabling to all the devices are correct.

### 8.3.1 Using LCD Programmer

- a) Go to Show Wiring Order menu and press ↵.
- b) Check the displayed list shows all the connected devices and the *VESDA*net number for each device is correct.
- c) Check for any devices not connected and troubleshoot if necessary.

### 8.3.2 Using a PC

- a) Select Device list from the View menu.
- b) Check the displayed list shows all the connected devices and the *VESDA*net number for each device is correct.
- c) Check for any devices not connected and troubleshoot if necessary.

## 8.4 Basic Pass/Fail Smoke Test

**Note:** This test verifies the detector will sense smoke. It does not replace any appropriate commissioning test.

- (a) Isolate the detector by pressing the Reset key for more than 2 seconds.
- (b) Check the Reset/Isolate LED lights up.
- (c) Inject smoke into any sampling air hole.
- (d) Wait for one of the red LEDs on the front panel to light up.
- (e) If the LED does not light up contact a fully trained accredited VESDA engineer.
- (f) Reset the detector by pressing the Reset switch once when the smoke test passes.

## 9. Installation Checklist

**Site Name:** .....

**Zone:** .....

**Detector Serial Number/s:** .....

Perform the following checks listed below to ensure that all the necessary items are completed before handing over to a commissioning engineer.

INSTALLATION CHECKS	Yes	No
1. Was the LaserCOMPACT detector intact in the box?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the LaserCOMPACT securely locked onto its mounting bracket?	<input type="checkbox"/>	<input type="checkbox"/>
3. Are the sampling air pipe connected to the air inlet manifold and is not glued?	<input type="checkbox"/>	<input type="checkbox"/>
4. Have the power wires been connected to the correct terminals on the termination card?	<input type="checkbox"/>	<input type="checkbox"/>
5. Have the alarm signalling cables been terminated to the correct terminals on the termination card?	<input type="checkbox"/>	<input type="checkbox"/>
6. Have the VESDA <sub>net</sub> cables been connected to the correct terminals on the termination card? (If Applicable)	<input type="checkbox"/>	<input type="checkbox"/>
7. Has the plug at the inlet and exhaust port been removed and the exhaust pipe (if fitted) not glued?	<input type="checkbox"/>	<input type="checkbox"/>
8. Has the cover been replaced correctly?	<input type="checkbox"/>	<input type="checkbox"/>
9. Has the GO/No Go test been performed?	<input type="checkbox"/>	<input type="checkbox"/>
10. Is the air sampling pipework installed and checked as per the site plans?	<input type="checkbox"/>	<input type="checkbox"/>

Installation of your LaserCOMPACT is now complete.

**Name of Installer:** .....

**Signature:** .....

**Date:** .....

## **Summary of VESDA® Product Warranty Conditions**

**Capitalised terms below are defined in the General Terms and Conditions. You acknowledge that this is a summary of warranties and you have read and agree to the General Terms and Conditions.**

Vision Fire & Security warrants that the VESDA® Product will conform to its Specifications and perform its designed function during the Warranty Period.

Vision Fire & Security also warrants that any component part of the VESDA® Product serviced or repaired by its authorised service department will remain in good working order for a period of 24 (twenty-four) months from the date of service. This warranty is only available on component parts of the VESDA® Product while the VESDA® Product is less than 7 (seven) years old commencing on the start of the Warranty Period and only covers those component parts of VESDA® Product serviced, repaired or replaced.

If you notify Vision Fire & Security that the VESDA® Product, or component part of the VESDA® Product, under the warranty provided in clause 1.1 or 1.2 of these Conditions of use for the VESDA® Product, do not meet the Specification or perform its designed function respectively, Vision Fire & Security will, at its option, either repair or replace the VESDA® Product or its component parts at no additional charge.

Component parts and replacement VESDA® Products will be furnished on an exchange basis and will, at the option of Vision Fire & Security either be new, equivalent to new or reconditioned. All replaced component parts and VESDA® Products become the property of Vision Fire & Security.

Vision Fire & Security does not warrant, guarantee or make any representations, either expressly or implied, regarding the current or future use, or the results of the use, of the VESDA® System, with respect to its correctness, accuracy, reliability, completeness, interworking, functionality, currentness or otherwise resulting from the configuration of the VESDA® System.

You acknowledge that no oral or written information, representation or advice given by or on behalf of Vision Fire & Security or its representatives, other than as contained in the General Terms and Conditions, creates a warranty or in any way increases the scope of these General Terms and Conditions, and you agree that you have not relied on any such information, representation or advice.

The warranties contained in the General Terms and Conditions do not cover and, to the extent permitted by law, Vision Fire & Security has no liability with respect to damage to or arising out of, or the condition or performance of, the VESDA® System resulting from negligence or improper use, storage, installation, configuration or handling of the VESDA® System (where 'improper' includes treatment other than in accordance with the VESDA Manual, these terms and conditions or the information provided at a training session); or accident, unforeseeable circumstances or disaster; or modifications to the VESDA® System other than in accordance with Vision Fire & Security' instructions; or attachment of or interoperation with features, software or products not approved by Vision Fire & Security in writing; or where the VESDA® System has been serviced by persons not authorized by Vision Fire & Security in writing to service the VESDA® System.



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