CSIRO Verification Services
Clayton, Victoria, Australia
+61 13 0036 3400
https://activfire.csiro.au

Certificate of Conformity

Certificate num.	Registration date	Version Number	Version Issue date	Valid until
afp - 1083	23-May-1997	20	1-May-2023	30-Apr-2024

Product designation

VESDA®, aspirated smoke detector system

(Refer to the Schedule/enclosures for further specified details)

Agent/distributor

Xtralis Pty Ltd
4 North Drive, Virginia Park, 236-262 East Boundary Road, BENTLEIGH EAST, VIC, AUSTRALIA, 3165

Registrant

Xtralis Pty Ltd
4 North Drive, Virginia Park, 236-262 East Boundary Road, BENTLEIGH EAST, VIC, AUSTRALIA, 3165

Producer

Xtralis Pty Ltd
4 North Drive, Virginia Park, 236-262 East Boundary Road, BENTLEIGH EAST, VIC, AUSTRALIA, 3165

Conformance criteria and evaluation

The VESDA®, aspirated smoke detector system has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 1603.8-1996, 'Automatic fire detection and alarm systems - Multi-point aspirated smoke detectors'.

Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

Specified limitations/conditions, determined from the evaluation for conformity, include the following.

i. The components are to be installed in accordance with the manufacturer's instructions contained in the System Design Manual and subsequent addendums and amendments.

ii. The power source meets the requirements of the power supply specifications contained in the Installation Guide.

(Limitations/conditions of conformance continue)

This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices .and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

Issued by

Kai Loh
Executive Officer – ActivFire Scheme

© CSIRO Australia, 2023

This certificate remains the property of CSIRO and may be subject to amendment, suspension or withdrawal at any time.
The validity and authenticity of this certificate can be verified by the certification register located at https://activfire.csiro.au

iii. The Vision Systems VESDA® LaserPLUS™ Model VPS-101 Single Zone Intelligent Power Supply (with VESDA*net*);

- can only be installed with a shielded VESDA*net* cable Belden type 9841 (or equivalent) as specified in the cabling chapter of the VESDA® LaserPLUS™ System Design Manual V2.2.
- can only be installed adjacent to fault relay monitoring equipment and also adjacent to equipment being powered by 24 volts as the 24 volt power line and fault signal line were not tested in the frequency range 0.15-100 MHz.

Producer's description

The VESDA® Aspirated Smoke Detector System consists of the following components:

Model num.	Description
VLP-002	*LaserPLUS™ Aspirated Smoke Detector*
VLP-012	LaserPLUS™ Aspirated Smoke Detector
VLP-100	*LaserPLUS™ Aspirated Smoke Detector*
VLP-400	*LaserPLUS™ Aspirated Smoke Detector*
VLP-401	*LaserPLUS™ Aspirated Smoke Detector*
VLS-100	*LaserPLUS™ FD (Four Detector)*
VLS-204	*LaserPLUS™ FD (Four Detector)*
VLS-214	LaserPLUS™ FD (Four Detector), Scanner Aspirated Smoke Detector
VLS-304	*LaserPLUS™ FD (Four Detector)*
VLS-314	LaserPLUS™ FD (Four Detector), Scanner Aspirated Smoke Detector
VLS-500	*LaserPLUS™ FD (Four Detector)*
VLS-600	*LaserPLUS™ FD (Four Detector)*
VLS-601	*LaserPLUS™ FD (Four Detector)*
VLS-700	*LaserPLUS™ FD (Four Detector)*
VLS-701	*LaserPLUS™ FD (Four Detector)*
VRT-200	Remote Display with Relays
VRT-400	Remote Scanner Display with Relays
VRT-100	Remote Programmer
VRT-300	Remote VESDAnet Socket
VHH-100	Handheld Programmer
VSR-0231	19 inch Sub-rack
VHX-0100	PC-Link HLI
VLC-500	LaserCOMPACT™ Aspirating Smoke Detector - Relays only Version (RO)
VLC-505	LaserCOMPACT™ Aspirating Smoke Detector - VESDA*net* Version (VN)
VSW-202	*ASPIRE2™ System Design Tool, Version v 2.01.00 – 3835*

Model VLP-002
Model VLP-012, LaserPLUS™ Aspirated Smoke Detector
Model VLP-100
Model VLP-400
Model VLP-401

The VESDA® LaserPLUS™, Model VLP-012 Aspirated and smoke detector is modular designed, active smoke detection system that sample air from a fire zone for the presence of smoke. Air samples are drawn to the detector head from a sampling pipe network using an aspirator. The sampling pipe network consists of a series of PVC 25 mm OD pipes with sampling points and an end-cap.

A display module provides a visual representation of the smoke levels and alarms detected by the detector. The detector supports four levels of alarm, each of which is indicated by a high intensity red light and an audible sounder. These lights flash until acknowledged by a key-press, whereupon they become steady and the sounder is silenced. Detector faults and systems faults are indicated on the display by the flashing of appropriate amber lights and the sounding of an alarm.
A numerical display is provided to indicate the Fire 1 alarm threshold, smoke level (in %Obs/m), and the zone number of the detector. The default setting for the display is the Smoke Level. A twenty (20) segment bargraph indicates the current level of detected smoke. The scaling of the bargraph is dynamic in that Fire 1 threshold always corresponds to the top bargraph light. The Action and Alert levels are scaled proportionally.

Buttons are provided in the display module front panel to check but not configure the system functions. These buttons can be configured as lock-out to prevent unauthorised operation. The Mode/Test button either switches the numerical display reading or activates the test mode. The Silence button will silence any alarm or fault beeps sounding from the display and

any flashing alarm or fault LEDs will change to a steady illuminated condition. The Reset button will reset any alarm or fault conditions and return relays to their normal state. Any beepers or flashing lights will be turned off. The Isolate button isolates the zone from external devices. An Isolate indicator light will illuminate and a reminder beep will sound.

The LCD Programmer module allows the user to adjust the alarm thresholds, smoke confirmation delay times and relay configuration of the modules in the VESDA® LaserPLUS™ system. Access is PIN protected. A list of programmable functions is shown in the Supplementary Information. The VESDA® LaserPLUS™ aspirating smoke detector is powered from an external dc source that can vary between 18 Vdc and 30 Vdc. Guidance is provided by the manufacturer on the selection of wire size depending on source voltage and length of wire. The VESDA® LaserPLUS™ aspirating smoke detectors are not claimed to be waterproof.

Model VLS-100
Model VLS-204
Model VLS-214, FD (Four Detector), LaserPLUS™ Scanner Aspirated Smoke Detector
Model VLS-304
Model VLS-314, FD (Four Detector), LaserPLUS™ Scanner Aspirated Smoke Detector
Model VLS-500
Model VLS-600
Model VLS-601
Model VLS-700

The display module provides a visual representation of the smoke levels, scanning action, the first alarm sector (FAS) and any alarms detected by the detector. Detector faults and systems faults are indicated on the display by the flashing of appropriate amber lights and the sounding of an alarm.

A numerical display is provided to indicate the Fire 1 alarm threshold, smoke level (in %Obs/m), the zone number, the scanning function (**Sc**), and either the first alarm sector (FAS) or highest alarm sector (HAS) of the detector. If an alarm has been detected the FAS is displayed. The numeric display will indicate the (HAS) if this sector is different from the FAS. The commencement of the rapid scanning function is displayed as **Sc**. A twenty (20) segment bargraph indicates the current level of detected smoke. The scaling of the bargraph is dynamic in that Fire 1 threshold always corresponds to the top bargraph light. The Action and Alert levels are scaled proportionally. The default setting for the display is the Smoke Level.

Buttons are provided in the display module front panel to check but not configure the system functions. The Mode/Test button either switches the numerical display reading or activates the test mode. The Silence button will silence any alarm or fault beeps sounding from the display and any flashing alarm or fault LEDs will change to a steady illuminated condition, or if held depressed for longer than 2 seconds will initiate a manual scan operation. The Reset button will reset any alarm or fault conditions and return relays to their normal state. Any beepers or flashing lights will be turned off. The Isolate button isolates the zone from external devices. An Isolate indicator light will illuminate and a reminder beep will sound.

The LCD Programmer module allows the user to adjust the alarm thresholds, smoke confirmation delay times and relay configuration of the modules in the VESDA® LaserPLUS™ system. Access is PIN protected. A list of programmable functions is provided in Appendix C of the VESDA® System Design Manual. If a user is not logged on to the LCD Programmer, the display will automatically provide a textual scanner status screen when a scan cycle commences. A typical textual display is shown in Figure 1.

Zone 01 Basement →			
Alarm		Level	
P1	None	0.034 %/m	
P2	Alert	0.056 %/m	
P3	**Fire 1**	**1.154** %/m	
P4	Action	0.083 %/m	
First Alarm Sector		P3	
Scanning			**Login**

Scanner status screen

A detailed description of the LCD Programmer and its functions can be can be found in the VESDA® System Design Manual.

A twelve (12) relay termination card, LPV-PCA-021 -OOA, is supported by the detector and display. The FD Scanner software will support the original seven (7) relay termination card but only when configured for that type of relay termination card. The default configuration for the seven (7) and twelve (12) relay cards is shown in the following table.

Relay No.	7 Relay Termination Card	12 Relay Termination Card
1	Isolate	Isolate
2	Minor fault (normally energised)	Minor fault (normally energised)
3	Urgent fault (normally energised)	Urgent fault (normally energised)
4	Alert (any sector)	Alert (any sector)
5	Action (any sector)	Action (any sector)
6	Fire 1 (any sector)	Fire 1 (any sector)
7	Fire 2 (any sector)	Fire 2 (any sector)
8	-	FAS Sector 1
9	-	FAS Sector 2
10	-	FAS Sector 3
11	-	FAS Sector 4
12	-	Scanning

Default relay configuration table

The VESDA® LaserPLUS™ model VLS-314 FD Scanner is powered from an external dc source that can vary between 18 Vdc and 30 Vdc. Guidance is provided by the manufacturer on the selection of wire size depending on source voltage and length of wire.

The VESDA® LaserPLUS™ model VLS-314 FD Scanner is not claimed to be waterproof.

Comparison table:

Feature / Function	VLP-012 Detector	VLS-214 VLS-314 FD (Four Detector) Scanner
Aspirated Smoke Detection	Yes	Yes
Standard Laser Chamber Detector	Yes	Yes
Smoke Sensitivity	0.005 to 20% obscuration/m	0.005 to 20% obscuration/m
Area covered	2000 m^2	2000 m^2
Number of Pipe Inlets	4	4
Pipe ID	19 to 25mm (preferred OD 25mm)	1 9 to 25mm (preferred OD 25mm)
Can measure smoke level per pipe	No	Yes
Automatic Fortnightly Valve Test	No	Yes
Standard Aspirator	Yes	Yes
Standard Filter Module	Yes	Yes
Modelling Tool Used	ASPIRE	ASPIRE
Supply Voltage	18 - 30 Vdc	18 - 30 Vdc
Dimensions (W x H x D) mm	350 x 225 x 125	350 x 225 x 125
Weight	4.0 kg	4.0 kq
Operating Temperature	0 to 39 DegC	0 to 39 DegC
Sampled Air Temperature	-20 to 60 DegC	-20 to 60 DegC
Humidity	10 to 95 % RH, non-condensing	10 to 95 % RH, non-condensing
IP Rating	IP30	IP30
Relay Alarm Outputs (factory default configuration) (FIRE 1 and URGENT relay functions are fixed)	7-relays • Isolate • Minor Fault • Urgent Fault • Alert (any sector) • Action (any • sector) • Fire 1 (any sector) • Fire 2 (any sector)	12-relays (VLS-314) • Isolate • Minor Fault • Urgent Fault • Alert (any sector) • Action (any sector) • Fire 1 (any sector) • Fire 2 (any sector) • FAS Sector 1 • FAS Sector 2

Feature / Function	VLP-012 Detector	VLS-214 VLS-314 FD (Four Detector) Scanner
		• FAS Sector 3 • FAS Sector 4 7-relays (VLS-214) • Isolate • Minor Fault • Urgent Fault • Alert (any sector) • Action (any sector) • Fire 1 (any sector) Fire 2 (any sector)

VRT-200 Remote Display with Relays

VRT-400 Remote Scanner Display with Relays

The VESDA® LaserPLUS™ model VRT-200 remote and model VRT-400 remote scanner display with relays are a duplication of the display modules normally mounted in the VESDA® LaserPLUS™ aspirated and scanner aspirated detectors. The VESDA® LaserPLUS™ remote displays with relays are mounted in a metal case with a remote termination card that provides interconnection for supply power and VESDA*net*.

The remote displays can be programmed to monitor a single detector using either the programmer or a PC. The model VRT-200 remote display will only monitor the detector in a non scanning model VESDA® LaserPLUS™ aspirating detector. A display can only monitor one (1) detector.

VRT-100 Remote Programmer

The VESDA® LaserPLUS™ model VRT-100 remote programmer is a duplication of the programmer module mounted in the VESDA® LaserPLUS™ detector. The VESDA® LaserPLUS™ remote programmer is mounted in a metal case with a remote termination card without relays that provides interconnection for supply power and VESDA*net*. The remote programmer can be used to monitor the status of all components connected in the VESDAnet loop.

Note: In the VRT-100 remote programmer, the relays are not provided, and hence no relay outputs are supported in the remote programmer.

VRT-300 Remote VESDA*net* Socket

The VESDA® LaserPLUS™ model VRT-300 remote VESDA*net* socket has a fifteen (15) pin high density female `D' type connector mounted in a blank plate. This socket is a duplicate of the socket mounted on the head termination card, LPV-PCA-010-00, in the VLP-012 aspirating detector. A Hand held programmer or PC-Link HLI can be connected to the VESDA*net* via the socket. The `D' socket provides a nominal 24 Vdc power supply and VESDA*net* connections to the hand held programmer or PC-Link HLI.

VHH-100 Hand held programmer

The VESDA® LaserPLUS™ model VHH-100 hand held programmer is a portable device which provides the same functionality as that of the programmer module mounted in the VESDA® LaserPLUS™ detector. It physically consists of a programmer interface card, LPV-PCB-014-00, and a programmer processor card, LPV-PCB-009-00A. Connection to the VESDA*net* is made through a cable connecting the fifteen (15) pin high density male `D' type connector to the fifteen (15) pin high density female 'D' type in the remote VESDA*net* socket or the head termination card, LPV-PCA-010-00, in the VLP-012 aspirating detector. The female `D' socket provides a nominal 24 Vdc power supply and VESDA*net* connections to the hand held programmer.

VSR-0231 19" sub-rack

The VESDA® LaserPLUS™ model VSR-0231 19 inch sub-rack is a configured example of a mounting facility for a maximum combination of four (4) modules consisting of display(s), programmer, VESDA*net* socket, and blank plate(s). The Rack unit

consists of the 19 inch sub-rack, a rear shield, and a 19 inch rack mounting. The termination cards and front modules are mounted as required.

VHX-0100 PC-Link HLI

The VESDA® LaserPLUS™ VHX-0100 PC-Link HLI is an interface between the female 'D' socket of a VLP-012 aspirating detector, or remote VESDA*net* socket and a PC. The VESDA® LaserPLUS™ VHX-0100 PC-Link HLI requires two cables to effect communication between the PC and the VESDA® LaserPLUS™ network. It enables communication with modules over the VESDA*net* by using a variety of VESDA® LaserPLUS™ PC software.

VPS-101 Single Zone Intelligent Power Supply (with VESDA*net*)

The Vision Systems VESDA® LaserPLUS™ Model VPS-101 Single Zone Intelligent Power Supply (with VESDA*net*) is a single-zone 24 Vdc power supply referenced to mains earth potential and capable of providing power with battery backup and temperature compensated charging for a single LaserPLUS™ detector head fitted with display and programmer. The VESDA® LaserPLUS™ Model VPS-101 power supply has the added ability to supply low voltage power to other devices on the system and has built in diagnostic and fault reporting functions which include a fault indicator and fault relay output. The Vision Systems VESDA® LaserPLUS™ Model VPS-101 Single Zone Intelligent Power Supply (with VESDA*net*) is also provided with a VESDA*net* communications interface which reports detectable fault conditions and status information to the intelligent devices powered by it.

VLC-505 (VN) LaserCOMPACT™ Detector

VLC-500 (RO) LaserCOMPACT™ Detector

The LaserCOMPACT™ is made up of two parts. The main enclosure houses all the key components of the detector. All non-serviceable items like the main processor board and detector chamber are mounted away from the general access area, protecting them during installation and service. The main enclosure includes:

- The Laser Detection Chamber,
- Main processing board with integrated flow sensor,
- Single-port entry with air flow monitoring,
- Termination card supporting three relays
  - Fire, Pre-Alarm, Alert / Fault (including service and isolate)
  - Power and connections and VESDAnet communication connection on VN version
- LaserCOMPACT™ aspirator
- Dual stage filter cartridge
- Exhaust port.

The front cover supports five LEDs, Fire, Pre-Alarm/Alert, Fault, Reset/Isolate. The Reset/Isolate push button operates as a press to reset and press and hold to isolate.

Technical specification

The following details are a representative extract of the technical specification for the VESDA®, aspirated smoke detector system and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Manufacturer's system specifications:
The following information is extracted from Vision Systems Products Division marketing specification document: - VESDA® LaserPLUS™ Product Numbering Specification MKT-SPC-003-00
BUNDLE NUMBERS
The bundle number represents the physical configuration of a LaserPLUS™ product. It does not include the software (VESDAnet) version information in this release.

1. General format

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Digits	1	2		1	5					1	3		
values	V	LP	LaserPLUS	-						-			
		PS	PSL		(See definitions below)						(See Variations Table)		
		LS	LaserScanner										
		SW	Software Pkg										
		RT	Remote										
		HH	Hand Held										
		SR	19" sub-rack										
		HX	HLI										
		All non specified characters are reserved for future use											

2. For Box type LP (VLP Detector)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	LP		-	0..9					-	A..Z, 0..9		

Field	5		6		7		8		9	
Use	Position 1		Position 2		Position 3		Mounting		Standard/Custom	
Values	0	Blank plate, non-	0	Blank plate	0	Blank plate	0	Normal	0	Standard
		EMC, with	1	Programmer	1	Programmer	1	Inverted	1	[Custom]
		VESDA logo &	2	Display	2	Display				
		7-relay HTC7	3	<not used>	3	<not used>				
	1	<not used>	4	Scanner Display	4	Scanner Display				
	2	<not used>								
	3	<not used>								
	4	Blank plate, non-								
		EMC, with								
		VESDA logo &								
		FOK LEDs &								
		7-relay HTC7								
	5	<not used>								
	6	<not used>								
	7	<not used>								

Notes:
HTC is Head Termination Card, FOK LEDs is Fire 1 Alarm & OK LEDs.
Items marked in brackets eg. [Custom] are proposed and not yet available.
Eg. VLP-01200-G00 is a LaserPLUS™ Detector with blank plate in left hand position, programmer in centre position, and display in right most position, set up for Generic with English language display.
Position 1, 2, 3 (fields 5,6 & 7) refers to the left most, centre, and right most panel locations of the front cover of the LaserPLUS™ unit.
The mounting options are normal mounted or inverted mounted. The recessed mounting kit is available as part VSP-01100-G00.
Eg. VLP-012 is a LaserPLUS™ Detector with blank plate in left hand position, programmer in centre position, and display in right most position, set up for Generic with English language display. (truncated format)
Eg. VLP-410 is a LaserPLUS™ Detector with blank plate in left hand position with Fire 1 & OK LEDs, programmer in centre position, and blank plate in right most position, set up for Generic with English language display. (truncated format)
Housing more than one display or programmer in a detector is NOT allowed, to prevent confusion with end users

3. For Box type LS (VLS Scanner)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
Values	V	LS		-	0..9					-	A..Z, 0..9		

Field	5		6		7		8		9	
Use	Position 1		Position 2		Position 3		Mounting		Standard/Custom	
values	0	Blank plate,	0	Blank plate	0	Blank plate	0	Normal	0	Standard
		non-EMC, with	1	Programmer	1	Programmer	1	Inverted	1	[Custom]
		VESDA logo plus:	2	Display	2	Display				
		FAS 7-relay HTC7	3	<not used>	3	<not used>				
	1	<reserved>	4	Scanner Display	4	Scanner Display				
	2	FD 7-relay HTC7								
	3	FD 12-relay HTC12 or Blank plate, non-EMC, with VESDA logo & FOK LEDs plus:								
	4	FAS 7-relay HTC7								
	5	<reserved>								
	6	FD 7-relay HTC7								
	7	FD 12-relay HTC12								

Notes:
FAS is First Alarm Sector Scanner, FD is Four-in-one Detector Scanner
HTC is Head Termination Card, FOK LEDs is Fire 1 Alarm & OK LEDs
Items marked in brackets eg. [Custom] are proposed and not yet available.
Eg. VLS-30401-G00 is a LaserPLUS™ FD Scanner with blank plate in left hand position with 12-relay HTC, blank plate in centre position, and scanner display in right most position, set up for Generic use with English language display, and incorporating some customised features specific to that customer order. Details of the customisation would be found in file notes associated with the customer order.
Position 1, 2, 3 (fields 5,6 & 7) refers to the left most, centre, and right most panel locations of the front cover of the LaserPLUS™ unit.
The mounting options are normal mounted or inverted mounted The recessed mounting kit is available as part VSP-017.
Eg. VLS-610 is a LaserPLUS™ FD Scanner with blank plate with Fire 1 & OK LEDs in left hand position with 7-relay HTC, programmer in centre position, and blank plate in right most position, set up for Generic with English language display. (truncated format)
Housing more than one display or programmer in a detector is NOT allowed, to prevent confusion with end users.

4. For Box Type PS (PSL Power Supply)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	PS		-	0..9					-	A..Z, 0..9		

Field	5		6		7		8		9	
Use	Zones		Supply Type		Network		Mounting		Standard/Custom	
Values	0	<not used>	0	85-265 Vac Mains	0	No VESDAnet	0	Surface (Norm)	0	Standard
	1	Single Zone	1	<reserved>	1	VESDAnet	1	<not allowed>	1	[Custom]
	2	<not used>					2	<not allowed>		
	3	<not used>					3	<not allowed>		
	4	<reserved>								

Notes:
Eg. VPS-10100-G00 is a LaserPLUS™ Intelligent Power Supply, AC Mains input (85-265 Vac), with VESDAnet capability, capable of supporting a single zone (detector) of type Generic English.
Eg. VPS-100 is a LaserPLUS™ Intelligent Power Supply, AC Mains input (85-265 Vac), without VESDAnet capability, capable of supporting a single zone (detector) of type Generic English. (truncated format)

5. For Box type HH (Hand-Held)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	HH		-	0..9					-	A..Z, 0..9		

Field	5		6		7		8		9	
Use	Remote Type		Reserved		Reserved		Reserved		Standard/Custom	
values	0	<not used>	0	always	0	always	0	always	0	Standard
	1	Programmer							1	[Custom]
	2	<not used>								
	3	<not used>								

Notes:
Items marked in brackets eg. [Custom] are proposed and not yet available.
Eg. VHH-10000-G00 is a Hand Held Programmer module, Generic English
Eg. VHH-100 is a Hand Held Programmer module, Generic English (truncated format)

6. For Box type RT (Remote mounting)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	3					1	3		
values	V	RT		-	0..9					-	A..Z, 0..9		

Field	5		6		7		8		9	
Use	Remote Type		Reserved		Reserved		Mounting		Standard/Custom	
values	0	Empty box with no	0	always	0	always	0	Normal	0	Standard
		Blank plate					1	<not used>	1	[Custon]
	1	Programmer with					2	<not used>		
		RTC0 (no relays)					3	<not used>		
	2	Display with RTC7								
	3	Socket plate								
	4	Scanner Display with RTC7								
	5	RTC7 & DRP only (7-relays only)								
	6	Display with RTC0 (no relays)								
	7	Scanner Display with RTC0 (no relays)								
	8	Scanner Display with RTC12								
	9	RTC12 & DRP only (12-relays only)								

Notes:
RTC is the Remote Termination Card
DRP is the Display & Relay Processor Card
Items marked in brackets eg. [Custom] are proposed and not yet available.
Eg. VRT-40000-G00 is a Scanner Display with relays (7-relay RTC) configured for normal mounting, Generic English.
Eg. VRT-10000-G00 is a Programmer without relays configured for normal mounting, Generic English.
Eg. VRT-10001-G00 is a Programmer without relays configured for normal mounting, Generic English, with some customer specific customised features.
Eg. VRT-51000-G00 is a remote relay box (12-relay RTC) with relays
Eg. VRT-000 is an empty remote box with cover, but no blank plate (truncated version)
Although the remote mounting box can only be ordered in normal orientation ONLY, inverted orientation is available at the time of installation, since cover must be removed to install mounting box. The recess mounted kit is available as Part No. VSP-01200-G00.
Eg. VRT-400 is a Scanner Display with relays (7-relay RTC) configured for normal mounting, Generic English. (truncated format)
Eg. VRT-210 is a Display with relays (12-relay RTC) configured for normal mounting, Generic English. (truncated format)

7. For Box type SR (19" sub rack)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	SR		-	0..9					-	A..Z, 0..9		

Field	5		6		7		8		9	
Use	Position 1		Position 2		Position 3		Position 4		Standard/ Custom	
values	0	EMC Blank plate	0	EMC Blank plate	0	EMC Blank plate	0	EMC Blank plate	0	19" Standard
	1	Programmer with RTC0 (no relays)	1	Programmer with RTC0 (no relays)	1	Programmer with RTC0 (no relays)	1	Programmer with RTC0 (no relays)	1	[Custom]
	2	Display with RTC7	2	Display with RTC7	2	Display with RTC7	2	Display with RTC7		
	3	Socket plate	3	Socket plate	3	Socket plate	3	Socket plate		
	4	Scanner Display with RTC7	4	Scanner Display with RTC7	4	Scanner Display with RTC7	4	Scanner Display with RTC7		
	5	RTC7 & DRP only (7-relays only)	5	RTC7 & DRP only (7-relays only)	5	RTC7 & DRP only (7-relays only)	5	RTC7 & DRP only (7-relays only)		
	6	Display with RTC0 (no relays)	6	Display with RTC0 (no relays)	6	Display with RTC0 (no relays)	6	Display with RTC0 (no relays)		
	7	Scanner Display with RTC0 (no relays)	7	Scanner Display with RTC0 (no relays)	7	Scanner Display with RTC0 (no relays)	7	Scanner Display with RTC0 (no relays)		
	8	Scanner Display with RTC12]	8	Scanner Display with RTC12]	8	Scanner Display with RTC12]	8	Scanner Display with RTC12]		
	9	RTC12 & DRP only (12-relays only)	9	RTC12 & DRP only (12-relays only)	9	RTC12 & DRP only (12-relays only)	9	RTC12 & DRP only (12-relays only)		
	A	Programmer with no RTC (Sharing)	A	Programmer with no RTC (Sharing)	A	Programmer with no RTC (Sharing)	A	Programmer with no RTC (Sharing)		
	B	Display with no RTC (Sharing)	B	Display with no RTC (Sharing)	B	Display with no RTC (Sharing)	B	Display with no RTC (Sharing)		
	C	Scanner Display, no RTC (Sharing)	C	Scanner Display, no RTC (Sharing)	C	Scanner Display, no RTC (Sharing)	C	Scanner Display, no RTC (Sharing)		
	D	<reserved>	D	<reserved>	D	<reserved>	D	<reserved>		
	E	<reserved>	E	<reserved>	E	<reserved>	E	<reserved>		
	F	<reserved>	F	<reserved>	F	<reserved>	F	<reserved>		

Notes:
Definitions as follows:
RTC = Relay Termination Card
RTC0 = Relay Termination Card with no relays fitted
RTC7 = 7-Relay Relay Termination Card
RTC12 = 12-Relay Relay Termination Card
DRP = Display & Relay Processor Card
Sharing = Module in this position shares adjacent RTC by daisy-chain connection (if possible).
Use of any kind of RTC (RTC0, RTC7 and RTC12) requires connection to DRP either by itself or part of Display or Scanner Display. The DRP provides the intelligence & VESDAnet addressing.
Items marked in brackets eg. [Custom] are proposed and not yet available.
The 19" sub-rack can be fitted with 4 modules. The left most is position 1, & the right most is position 4.

Eg. VSR-01260-G00 is a 19" sub rack fitted with Blank plate in position 1, Programmer in position 2, Display with relays in position 3, and Display without relays in position 4, all with Generic English display coding.
Eg. VSR-0126 is a 19" sub rack fitted with Blank plate in position 1, Programmer in position 2, Display with relays in position 3, and Display without relays in position 4, all with Generic English display coding. (truncated format)

8. For Box type HX (HLI)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	HX		-	0..9					-	A..Z, 0..9		

Field	5		6	7		8		9	
Use	Protocol Stack			Custom ID		Physical Interface		Custom ID	
values	Access Port			0	Standard / NP	Access Port		0	Standard
	Protocol Stack			1	Even Parity	Physical Interface		1..9 [Custom ID]	
	00	No Protocol (Accessory item)		2 .. 9 [Custom ID]		0	PCLink RS232		
	01	PCLink HLI Stop'n'Go				1..8 Reserved for future			
	02	PCLink HLI Sliding Windows				9	Modem Cable		
	03..99 Reserved for future								

Notes:
Items marked in brackets eg. [Open Protocol] are proposed and not yet available.
Eg. VHX-01000-G00 is a HLI box loaded with PCLink HLI Stop'n'Go protocol with No Parity, and RS232 Asynchronous Serial interface on the Access port side, configured for Generic English.
Eg. VHX-02000 is a HLI box loaded with PCLink HLI Sliding Windows protocol with No Parity, and RS232 Asynchronous Serial interface on the Access port side, configured for Generic English.
Eg. VHX-00090 is a standard modem cable only.

9. For Box type LC (LaserCOMPACT™ Detector)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	LC		-	0..9					-	A..Z, 0..9		

Field	5		6	7	8		9	
Use	Position 1		Position 2	Position 3	Mounting		Standard/Custom	
values	100	OEM EMC2			0	Normal	0	Standard
	200	<reserved for future use>			1	inverted	1	[Custom]
	300	<reserved for future use>						
	400	<reserved for future use>						
	500	RO Relays Only 500 m2						
	505	VN VESDAnet 500 m2						
	600	<reserved for future use>						
	700	<reserved for future use>						
	800	Rx 200 m2						
	805	Rx 500 m2						
	900	E700R 2000 m2						

Notes:
Items marked in brackets eg. [Custom] are proposed an not yet available
Eg. VLC-100 is an EMC2 OEM variant of the LaserCOMPACT™ Detector
Eg. VLC-50000-G00 is a LaserCOMPACT Detector, Relays only outputs, set up for Generic English.
The mounting options are normal mounted or inverted mounted.
The LaserCOMPACT™ recessed mounting kit is available as part VSP-010
Eg. VLC-505 is a LaserCOMPACT™ Detector, with VESDAnet interface, and set up for Generic English. (truncated format)
Eg. VLC-90001-133 is an E700R variant of the LaserCOMPACT™ Detector, with customisation as specified in Variations Specifications #133.

10. For Box type SW (Software Package)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	SW		-	0..9					-	A..Z, 0..9		

Field	5		6	7	8		9
Use	Software				Custom Unique ID		
values	001	ASPIRE - DOS 1.95 (superseded by VSW-002)			00	Standard	
	002	ASPIRE - WIN (Win-95 & 3.11 (superseded by VSW-202)			[01..99]	Custom Software	
	003	VConfig Basic (Win-3.1) {formerly free PC-configurator}				Unique Identifier	
	004	VConfig Basic (Win-95) {formerly free PC-configurator}					
	005	VConfig Pro (Win-95) {enhanced & licensed software}					
	006	<reserved>					
	007	VSM III (Win-95)					
	008	<reserved>					
	009	<reserved>					
	010	<reserved>					
	011	Demo Disk (AUS)					
	012 .. 999	Reserved for future use					

Notes:
Items marked in brackets eg. [VesdaCAD] are proposed and not yet available.
Eg. VSW-00100-G00 is ASPIRE for DOS software, Generic English (latest version).
Eg. VSW-00732-G00 is a Special custom VSM III software package number 32, Generic English.
Eg. VSW-00500-G00 is a Downloader software package, Generic English.
Eg. VSW-00501-G00 is a VConfig Pro (Win-95) package number 01, Generic English.
Eg. VSW-002 is ASPIRE for Win-95/3.11 software, Generic English (latest version, truncated format).
Eg. VSW-00200-B is ASPIRE for Win-95/3.11 software (Beta version), Generic English (latest version).
Eg. VSW-00700-A is VSM III for Win-95 (Alpha version) software, Generic English (latest version).

11. Truncating

Where specialised or customised VLP components are not required the variation MAY be omitted. Fields which may be truncated MUST have their default value or zero and lie between Field 8 and Field 13. Specification of fields 1 through 7 is mandatory.

For example:

VLP-012	is translated as VLP-01200-G00
VLP-01200	is also translated as VLP-01200-G00
VLP-0121	is translated at the generic version inverted
VLP-01201	is a standard unit with specific instructions FOR THIS ORDER ONLY
VLP-01200-B03	is a customised version with specific badging
VLP-01201-B03	is the same customised version with additional requirements

VPS-101 is a standard PSL i.e. VPS-10100-G00
VRT-201 is the standard remote display - VRT-20100-G00
VSP-011 is the LaserPLUS™ Recess Mounting Kit ie. VSP-01100-G00

12. Software version

The software version refers to the Version and update number for VESDAnet. This number consists of three parts, the major and minor numbers, and the patch level. In general two LaserPLUS™ units linked together with differing minor numbers will operate without error. Two LaserPLUS™ units linked together with differing major numbers will generate a system fault.
Software version is always represented as three groups of 2 digit numbers separated by dots:
<2 major number digits>.<2 minor number digits>.<2 patch level digits>

Manufacturer's system specifications:

The following information is extracted from Vision Systems Products Division marketing specification document: - VESDA® LaserPLUS™ Product Numbering Specification MKT-SPC-003-00

BUNDLE NUMBERS

The bundle number represents the physical configuration of a LaserPLUS™ product. It does not include the software (VESDA*net*) version information in this release.

1. General format

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Digits	1	2		1	5					1	3		
values	V	**LP**	LaserPLUS	-						-			
		PS	PSL		(See definitions below)						(See Variations Table)		
		LS	LaserScanner										
		SW	Software Pkg										
		RT	Remote										
		HH	Hand Held										
		SR	19" sub-rack										
		HX	HLI										
		All non specified characters are reserved for future use											

2. For Box type LP (VLP Detector)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	LP		-	0..9					-	A..Z, 0..9		

Field	5		6		7		8		9	
Use	Position 1		Position 2		Position 3		Mounting		Standard/Custom	
values	0	Blank plate, non-EMC, with VESDA logo & 7-relay HTC7	0	Blank plate	0	Blank plate	0	Normal	0	Standard
			1	Programmer	1	Programmer	1	Inverted	1	[Custom]
			2	Display	2	Display				
			3	<not used>	3	<not used>				
	1	<not used>	4	Scanner Display	4	Scanner Display				
	2	<not used>								
	3	<not used>								
	4	Blank plate, non-EMC, with VESDA logo & **FOK LEDs** & 7-relay HTC7								
	5	<not used>								
	6	<not used>								
	7	<not used>								

Notes:

- HTC is Head Termination Card, FOK LEDs is Fire 1 Alarm & OK LEDs.
- Items marked in brackets eg. [Custom] are proposed and not yet available.
- Eg. VLP-01200-G00 is a LaserPLUS™ Detector with blank plate in left hand position, programmer in centre position, and display in right most position, set up for Generic with English language display.
- Position 1, 2, 3 (fields 5,6 & 7) refers to the left most, centre, and right most panel locations of the front cover of the LaserPLUS™ unit.
- The mounting options are normal mounted or inverted mounted. The recessed mounting kit is available as part VSP-01100-G00.
- Eg. VLP-012 is a LaserPLUS™ Detector with blank plate in left hand position, programmer in centre position, and display in right most position, set up for Generic with English language display. (truncated format)
- Eg. VLP-410 is a LaserPLUS™ Detector with blank plate in left hand position with Fire 1 & OK LEDs, programmer in centre position, and blank plate in right most position, set up for Generic with English language display. (truncated format)
- Housing more than one display or programmer in a detector is NOT allowed, to prevent confusion with end users

3. For Box type LS (VLS Scanner)

Field	1	2 3	4	5 6 7 8 9	10	11 12 13
Use	Series	Box type	Dash	Dependant on Box type	Dash	Variations
Chars	1	2	1	5	1	3
values	V	LS	-	0..9	-	A..Z, 0..9

Field	5		6		7		8		9	
Use	Position 1		Position 2		Position 3		Mounting		Standard/Custom	
values	0	Blank plate,	0	Blank plate	0	Blank plate	0	Normal	0	Standard
		non-EMC, with	1	Programmer	1	Programmer	1	Inverted	1	[Custom]
		VESDA logo plus:	2	Display	2	Display				
		FAS 7-relay HTC7	3	<not used>	3	<not used>				
	1	<reserved>	4	Scanner Display	4	Scanner Display				
	2	FD 7-relay HTC7								
	3	FD 12-relay HTC12 or Blank plate, non-EMC, with VESDA logo & FOK LEDs plus:								
	4	FAS 7-relay HTC7								
	5	<reserved>								
	6	FD 7-relay HTC7								
	7	FD 12-relay HTC12								

Notes:

- FAS is First Alarm Sector Scanner, FD is Four-in-one Detector Scanner
- HTC is Head Termination Card, FOK LEDs is Fire 1 Alarm & OK LEDs
- Items marked in brackets eg. [Custom] are proposed and not yet available.
- Eg. VLS-30401-G00 is a LaserPLUS™ FD Scanner with blank plate in left hand position with 12-relay HTC, blank plate in centre position, and scanner display in right most position, set up for Generic use with English language display, and incorporating some customised features specific to that customer order. Details of the customisation would be found in file notes associated with the customer order.
- Position 1, 2, 3 (fields 5,6 & 7) refers to the left most, centre, and right most panel locations of the front cover of the LaserPLUS™ unit.
- The mounting options are normal mounted or inverted mounted The recessed mounting kit is available as part VSP-017.
- Eg. VLS-610 is a LaserPLUS™ FD Scanner with blank plate with Fire 1 & OK LEDs in left hand position with 7-relay HTC, programmer in centre position, and blank plate in right most position, set up for Generic with English language display. (truncated format)
- Housing more than one display or programmer in a detector is NOT allowed, to prevent confusion with end users.

4. For Box Type PS (PSL Power Supply)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	PS		-	0..9					-	A..Z, 0..9		

Field	5		6		7		8		9	
Use	Zones		Supply Type		Network		Mounting		Standard/Custom	
values	0	<not used>	0	85-265 Vac Mains	0	No VESDAnet	0	Surface (Norm)	0	Standard
	1	Single Zone	1	<reserved>	1	VESDAnet	1	<not allowed>	1	[Custom]
	2	<not used>					2	<not allowed>		
	3	<not used>					3	<not allowed>		
	4	<reserved>								

Notes:

- Eg. VPS-10100-G00 is a LaserPLUS™ Intelligent Power Supply, AC Mains input (85-265 Vac), with VESDAnet capability, capable of supporting a single zone (detector) of type Generic English.
- Eg. VPS-100 is a LaserPLUS™ Intelligent Power Supply, AC Mains input (85-265 Vac), without VESDAnet capability, capable of supporting a single zone (detector) of type Generic English. (truncated format)

5. For Box type HH (Hand-Held)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	HH		-	0..9					-	A..Z, 0..9		

Field	5		6		7		8		9	
Use	Remote Type		Reserved		Reserved		Reserved		Standard/Custom	
values	0	<not used>	0	always	0	always	0	always	0	Standard
	1	Programmer							1	[Custom]
	2	<not used>								
	3	<not used>								

Notes:

- Items marked in brackets eg. [Custom] are proposed and not yet available.
- Eg. VHH-10000-G00 is a Hand Held Programmer module, Generic English
- Eg. VHH-100 is a Hand Held Programmer module, Generic English (truncated format)

6. For Box type RT (Remote mounting)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	3					1	3		
values	V	RT		-	0..9					-	A..Z, 0..9		

Field	5		6		7		8		9	
Use	Remote Type		Reserved		Reserved		Mounting		Standard/Custom	
values	0	Empty box with no	0	always	0	always	0	Normal	0	Standard
		Blank plate					1	<not used>	1	[Custon]
	1	Programmer with					2	<not used>		
		RTC0 (no relays)					3	<not used>		
	2	Display with RTC7								
	3	Socket plate								
	4	Scanner Display with RTC7								
	5	RTC7 & DRP only (7-relays only)								
	6	Display with RTC0 (no relays)								
	7	Scanner Display with RTC0 (no relays)								
	8	Scanner Display with RTC12								
	9	RTC12 & DRP only (12-relays only)								

Notes:

- RTC is the Remote Termination Card
- DRP is the Display & Relay Processor Card
- Items marked in brackets eg. [Custom] are proposed and not yet available.
- Eg. VRT-40000-G00 is a Scanner Display with relays (7-relay RTC) configured for normal mounting, Generic English.
- Eg. VRT-10000-G00 is a Programmer without relays configured for normal mounting, Generic English.
- Eg. VRT-10001-G00 is a Programmer without relays configured for normal mounting, Generic English, with some customer specific customised features.
- Eg. VRT-51000-G00 is a remote relay box (12-relay RTC) with relays
- Eg. VRT-000 is an empty remote box with cover, but no blank plate (truncated version)
- Although the remote mounting box can only be ordered in normal orientation ONLY, inverted orientation is available at the time of installation, since cover must be removed to install mounting box. The recess mounted kit is available as Part No. VSP-01200-G00.
- Eg. VRT-400 is a Scanner Display with relays (7-relay RTC) configured for normal mounting, Generic English. (truncated format)
- Eg. VRT-210 is a Display with relays (12-relay RTC) configured for normal mounting, Generic English. (truncated format)

7. For Box type SR (19" sub rack)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	SR		-	0..9					-	A..Z, 0..9		

Field	5		6		7		8		9	
Use	Position 1		Position 2		Position 3		Position 4		Standard/ Custom	
values	0	EMC Blank plate	0	EMC Blank plate	0	EMC Blank plate	0	EMC Blank plate	0	19" Standard
	1	Programmer with RTC0 (no relays)	1	Programmer with RTC0 (no relays)	1	Programmer with RTC0 (no relays)	1	Programmer with RTC0 (no relays)	1	[Custom]
	2	Display with RTC7	2	Display with RTC7	2	Display with RTC7	2	Display with RTC7		
	3	Socket plate	3	Socket plate	3	Socket plate	3	Socket plate		
	4	Scanner Display with RTC7	4	Scanner Display with RTC7	4	Scanner Display with RTC7	4	Scanner Display with RTC7		
	5	RTC7 & DRP only (7-relays only)	5	RTC7 & DRP only (7-relays only)	5	RTC7 & DRP only (7-relays only)	5	RTC7 & DRP only (7-relays only)		
	6	Display with RTC0 (no relays)	6	Display with RTC0 (no relays)	6	Display with RTC0 (no relays)	6	Display with RTC0 (no relays)		
	7	Scanner Display with RTC0 (no relays)	7	Scanner Display with RTC0 (no relays)	7	Scanner Display with RTC0 (no relays)	7	Scanner Display with RTC0 (no relays)		
	8	Scanner Display with RTC12]	8	Scanner Display with RTC12]	8	Scanner Display with RTC12]	8	Scanner Display with RTC12]		
	9	RTC12 & DRP only (12-relays only)	9	RTC12 & DRP only (12-relays only)	9	RTC12 & DRP only (12-relays only)	9	RTC12 & DRP only (12-relays only)		
	A	Programmer with no RTC (Sharing)	A	Programmer with no RTC (Sharing)	A	Programmer with no RTC (Sharing)	A	Programmer with no RTC (Sharing)		
	B	Display with no RTC (Sharing)	B	Display with no RTC (Sharing)	B	Display with no RTC (Sharing)	B	Display with no RTC (Sharing)		
	C	Scanner Display, no RTC (Sharing)	C	Scanner Display, no RTC (Sharing)	C	Scanner Display, no RTC (Sharing)	C	Scanner Display, no RTC (Sharing)		
	D	<reserved>	D	<reserved>	D	<reserved>	D	<reserved>		
	E	<reserved>	E	<reserved>	E	<reserved>	E	<reserved>		
	F	<reserved>	F	<reserved>	F	<reserved>	F	<reserved>		

Notes:

- Definitions as follows:
- RTC = Relay Termination Card
- RTC0 = Relay Termination Card with no relays fitted
- RTC7 = 7-Relay Relay Termination Card
- RTC12 = 12-Relay Relay Termination Card
- DRP = Display & Relay Processor Card
- Sharing = Module in this position shares adjacent RTC by daisy-chain connection (if possible).
- Use of any kind of RTC (RTC0, RTC7 and RTC12) requires connection to DRP either by itself or part of Display or Scanner Display. The DRP provides the intelligence & VESDAnet addressing.
- Items marked in brackets eg. [Custom] are proposed and not yet available.
- The 19" sub-rack can be fitted with 4 modules. The left most is position 1, & the right most is position 4.
- Eg. VSR-01260-G00 is a 19" sub rack fitted with Blank plate in position 1, Programmer in position 2, Display with relays in position 3, and Display without relays in position 4, all with Generic English display coding.
- Eg. VSR-0126 is a 19" sub rack fitted with Blank plate in position 1, Programmer in position 2, Display with relays in position 3, and Display without relays in position 4, all with Generic English display coding. (truncated format)

8. For Box type HX (HLI)

Field	1	2 3	4	5 6 7 8 9	10	11 12 13
Use	Series	Box type	Dash	Dependant on Box type	Dash	Variations
Chars	1	2	1	5	1	3
values	V	HX	-	0..9	-	A..Z, 0..9

Field	5	6	7	8	9
Use	Protocol Stack		Custom ID	Physical Interface	Custom ID
values	Access Port		0 Standard / NP	Access Port	0 Standard
	Protocol Stack		1 Even Parity	Physical Interface	1..9 [Custom ID]
	00 No Protocol (Accessory item)		2 .. 9 [Custom ID]	0 PCLink RS232	
	01 PCLink HLI Stop'n'Go			1..8 Reserved for future	
	02 PCLink HLI Sliding Windows			9 Modem Cable	
	03..99 Reserved for future				

Notes:

Items marked in brackets eg. [Open Protocol] are proposed and not yet available.
Eg. VHX-01000-G00 is a HLI box loaded with PCLink HLI Stop'n'Go protocol with No Parity, and RS232 Asynchronous Serial interface on the Access port side, configured for Generic English.
Eg. VHX-02000 is a HLI box loaded with PCLink HLI Sliding Windows protocol with No Parity, and RS232 Asynchronous Serial interface on the Access port side, configured for Generic English.
Eg. VHX-00090 is a standard modem cable only.

9. For Box type LC (LaserCOMPACT™ Detector)

Field	1	2 3	4	5 6 7 8 9	10	11 12 13
Use	Series	Box type	Dash	Dependant on Box type	Dash	Variations
Chars	1	2	1	5	1	3
values	V	LC	-	0..9	-	A..Z, 0..9

Field	5	6	7	8	9
Use	Position 1	Position 2	Position 3	Mounting	Standard/Custom
values	100 OEM EMC^2			0 Normal	0 Standard
	200 <reserved for future use>			1 inverted	1 [Custom]
	300 <reserved for future use>				
	400 <reserved for future use>				
	500 RO Relays Only 500 m^2				
	505 VN VESDA*net* 500 m^2				
	600 <reserved for future use>				
	700 <reserved for future use>				
	800 Rx 200 m^2				
	805 Rx 500 m^2				
	900 E700R 2000 m^2				

Notes:

Items marked in brackets eg. [Custom] are proposed an not yet available
Eg. VLC-100 is an EMC^2 OEM variant of the LaserCOMPACT™ Detector
Eg. VLC-50000-G00 is a LaserCOMPACT Detector, Relays only outputs, set up for Generic English.
The mounting options are normal mounted or inverted mounted.
The LaserCOMPACT™ recessed mounting kit is available as part VSP-010
Eg. VLC-505 is a LaserCOMPACT™ Detector, with VESDAnet interface, and set up for Generic English. (truncated format)
Eg. VLC-90001-133 is an E700R variant of the LaserCOMPACT™ Detector, with customisation as specified in Variations Specifications #133.

10. For Box type SW (Software Package)

Field	1	2	3	4	5	6	7	8	9	10	11	12	13
Use	Series	Box type		Dash	Dependant on Box type					Dash	Variations		
Chars	1	2		1	5					1	3		
values	V	SW		-	0..9					-	A..Z, 0..9		

Field	5	6	7	8	9
Use	Software			Custom Unique ID	
values	001 ASPIRE - DOS 1.95 (superseded by VSW-002)			00 Standard	
	002 ASPIRE - WIN (Win-95 & 3.11 (superseded by VSW-202)			[01..99] Custom Software	
	003 VConfig Basic (Win-3.1) {formerly free PC-configurator}			Unique Identifier	
	004 VConfig Basic (Win-95) {formerly free PC-configurator}				
	005 VConfig Pro (Win-95) {enhanced & licensed software}				
	006 <reserved>				
	007 VSM III (Win-95)				
	008 <reserved>				
	009 <reserved>				
	010 <reserved>				
	011 Demo Disk (AUS)				
	012 .. 999 Reserved for future use				

Notes:

Items marked in brackets eg. [VesdaCAD] are proposed and not yet available.
Eg. VSW-00100-G00 is ASPIRE for DOS software, Generic English (latest version).
Eg. VSW-00732-G00 is a Special custom VSM III software package number 32, Generic English.
Eg. VSW-00500-G00 is a Downloader software package, Generic English.
Eg. VSW-00501-G00 is a VConfig Pro (Win-95) package number 01, Generic English.
Eg. VSW-002 is ASPIRE for Win-95/3.11 software, Generic English (latest version, truncated format).
Eg. VSW-00200-B is ASPIRE for Win-95/3.11 software (Beta version), Generic English (latest version).
Eg. VSW-00700-A is VSM III for Win-95 (Alpha version) software, Generic English (latest version).

11. Truncating

Where specialised or customised VLP components are not required the variation MAY be omitted. Fields which may be truncated MUST have their default value or zero and lie between Field 8 and Field 13. Specification of fields 1 through 7 is mandatory.

For example:

VLP-012	is translated as VLP-01200-G00
VLP-01200	is also translated as VLP-01200-G00
VLP-0121	is translated at the generic version inverted
VLP-01201	is a standard unit with specific instructions FOR THIS ORDER ONLY
VLP-01200-B03	is a customised version with specific badging
VLP-01201-B03	is the same customised version with additional requirements
VPS-101	is a standard PSL i.e. VPS-10100-G00
VRT-201	is the standard remote display - VRT-20100-G00
VSP-011	is the LaserPLUS™ Recess Mounting Kit ie. VSP-01100-G00

12. Software version

The software version refers to the Version and update number for VESDA*net*. This number consists of three parts, the major and minor numbers, and the patch level. In general two LaserPLUS™ units linked together with differing minor numbers will operate without error. Two LaserPLUS™ units linked together with differing major numbers will generate a system fault.
Software version is always represented as three groups of 2 digit numbers separated by dots:
<2 major number digits>.<2 minor number digits>.<2 patch level digits>

Ambient temperature range:	0°C to 39°C
Sampled temperature range:	-10°C to 60°C
Relative humidity:	10% to 95%, non-condensing
Sensitivity of detector	0.005% to 20 % obscuration/metre ±0.005% or ±10% of reading (whichever is greater)
Coverage of detector:	2000 square metres maximum
Signal outputs:	7 Relay outputs NC/NO 12 Relay outputs NC/NO. (except for Fire 1 and Urgent Faults that are NO/NC) 2 Adc @ 30 Vdc Latched, Non-latched, or Pulsed (Programmable)
Dimensions (W x H x D):	
Detector:	350 mm x 225 mm x 125 mm
Remote:	140 mm x 150 mm x 90 mm
19 inch Sub rack:	19 inch x 3U x 4 inch
Module weight:	
Detector with display & Programmer	4 kg
Remote with display	1 kg
Operating voltage range:	18 Vdc to 30 Vdc
Current consumption:	Dependant upon supply voltage and modules operating within the system.

Model VLC-505 (VN) LaserCOMPACT™ Detector
Model VLC-500 (RO) LaserCOMPACT™ Detector

Sensitivity range:	0.005 to 20% obscuration/metre
Threshold setting range:	
Alert:	0.005% to 1.990% obscuration/metre
Pre-alarm:	0.010% to 1.995% obscuration/metre
Fire:	0.015% to 20% obscuration/metre
Supply voltage:	18 Vdc to 30 Vdc
Current consumption (quiescent):	170 mA @ 24 Vdc
Current consumption (alarm):	quiescent plus 20 mA (typical)
Power consumption:	4.0 watts quiescent plus 0.5 watt in alarm
Operating temperature:	
Detector ambient:	-10°C to 39°C
Sampled air:	-20°C to 60°C
Humidity:	10 to 95% RH, non condensing
Sampling network:	
Maximum area of coverage:	500 m^2
Single pipe length:	50 m
"T" pipe arrangement:	100 m (ie. 2 x 50 m) - maximum aggregate length

Model VPS-101 Single Zone Intelligent Power Supply (with VESDA*net*)

Nominal output voltage:	24 Vdc
Maximum rated output current:	1 A
Current limit fuse rating:	2 A
Line regulation @ I_L = 1 A	0.8 %
Load regulation @ 254 Vac supply:	1.2 %
Worst case ripple @ 216 Vac supply:	11 mV p-p

Certificate num.	Registration date	Version		Valid until	Page **25** of **25**
		Number	Issue date		
afp - 1083	23-May-1997	20	1-May-2023	30-Apr-2024	

Battery Charger:

Battery charge voltage setting:	26.8 Vdc
Circuit current limit:	3.4 A
Current limit device rating:	10 A
Line regulation @ I_L = 0 A:	3.7 %
Maximum battery charger current (I_{bat}):	0.75 A @ 21.8 Vdc
Power supply Standby consumption (I_S):	0.38-0.45 A @ 24 Vdc
Manufacturer's nominated battery capacity:	12 Ah