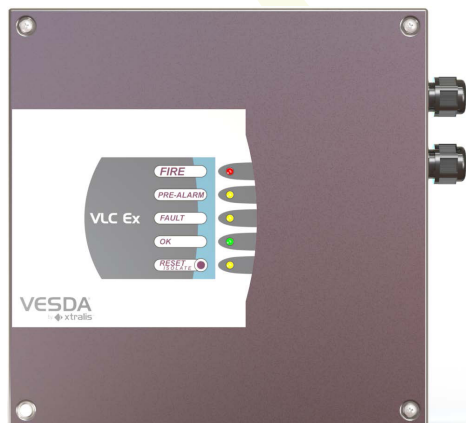


VLC-EX & VLC-505-EX



VESDA®

INTRODUCTION

The VESDA VLC-EX detector has been specifically designed to provide all the benefits of aspirating smoke detection, including very early warning, for the protection of hazardous applications with Zone 2 classification.

The VLC-EX combines the well-proven VESDA VLP detection technology with a modified aspirator design, and incorporates them into an IP54 rated stainless steel enclosure.

TWO VARIANTS AND A REMOTE DISPLAY OPTION

The VLC-EX is available in two versions, one that interfaces via relays only (RO) and one that interfaces via relays and VESDAnet (VN).

The VN version is compatible with the remote Display Module, which allows the current status of the detector to be reported in the most convenient location. The remote Display Module has 7 remote relays to support any combination of signalling that may be demanded by the application. The VN version allows several detectors to be linked together on VESDAnet thereby allowing one to act as a reference detector for other VESDA detectors.

DESCRIPTION

The VLC-EX is enclosed in a stainless steel housing which is comprised of the main enclosure and the front cover.

The main enclosure houses all the key components of the detector. All non-serviceable items such as the main processor board and detector chamber are mounted away from the general access area, protecting them during the installation and servicing process.


The front cover includes:

- 5 LEDs: Fire, Pre-Alarm/Alert, Fault, OK, Reset/Isolate
- Reset/Isolate Push Button (press to reset, press and hold to isolate)

FEATURES

- Suitable for Zone 2 applications
- Absolute smoke detection
- Wide sensitivity range
- Single pipe inlet
- Five (5) status LEDs
- Referencing
- VESDAnet communication (VN)
- Clean air barrier optics protection
- Three (3) Alarm Levels
- Three (3) Programmable Relays
- Air flow monitoring
- Optional remote display and relay capability
- Simple mounting design
- AutoLearn™
- IP54 rated stainless steel enclosure

LISTINGS/APPROVALS

- ATEX II  3G
EN 60079-0:2009 and EN 60079-15:2010 Ex ic nA nC IIC T5 Gc IP54
-10°C ≤ Ta ≤ +55°C Certificate No: ITS 12 ATEX 47492X
QAN: ITS 11 ATEX Q7454
- IECEx II 3G IEC 60079-15 Ed4.0 and IEC 60079-0 Ed6.0 Ex ic nA nC IIC T5 Gc IP54 -10°C ≤ Ta ≤ +55°C Certificate No: IECEx ITS 12.0008X
QAR: GB/ITS/QAR 11.0016/00

SPECIFICATIONS

Input Power

Voltage:	24V DC Nominal (18-30 V DC)
Current @ 24 VDC:	410 mA nominal, 490 mA in alarm
Dimensions (W x H x D)	255 mm x 185 mm x 90 mm (97/8 in x 71/8 in x 31/2 in)
Weight	Approx. 2 kg (4.4 lbs)
IP Rating	IP30
Mounting	Upright, inverted or horizontal
Operating Conditionst	
Detector Ambient:	0 °C to 40 °C (32 °F to 104 °F)
Sampled Air:	0 °C to 40 °C (32 °F to 104 °F)
Humidity:	5% to 95% (non-condensing)
Sampling Network	
Maximum pipe lengths:	1 x 50 m (150 ft) (Max. 24 holes) 2 x 30 m (90 ft) per branch (Max. 12 holes per branch)
Sampling Hole Options:	Pre-Engineered Option or Maximum Pipe length in accordance with Pipe Modelling Design Tool (ASPIRE2™)

Air Inlet Pipe

Accepts both metric and American standard pipe sizes.

Metric: 25 mm American Pipe: IPS ¾ in.

Area Coverage

Up to 500 m² (5000 sq. ft.) depending on local codes and standards

Relay Outputs

3 changeover relays (Fire 1, Action, Fault), Contacts rated 2A @ 30 VDC (max).

NO/NC Contacts

Cable Access

3 x 25 mm (11/16 in.) cable entries (1 rear entry, 2 top entry)

Cable Termination

Screw Terminals 0.2-2.5 mm² (30-12 AWG)

Interfaces

Shown in Terminal Block Connections diagram, to right, plus an RS232 Programming Port.

General Purpose Input (GPI) interface offers: Reset, Disable, Standby, Alarm set 1, Alarm set 2 and External Input functions.

Alarm Threshold Setting Range

Alert, Action, 0.025 - 2.00% obs/m (0.008 - 0.625% obs/ft)

Fire 1, Fire 2 0.025 - 20.00% obs/m (0.008 - 6.25% obs/ft)

Individual Alarm Delays 0 – 60 seconds

Two Alarm Threshold Settings Either time or GPI based

Display

• 4 Alarm State Indicators • Fault and Disabled Indicators

• Smoke Level Indicator • Instant Fault Finder

• Reset, Disable and Test Controls • Smoke and Flow AutoLearn Controls

Event Log

Up to 18000 events, time and date stamped in separate, non-volatile, logs for:

Smoke Level, Flow Level, Detector Status and Faults

AutoLearn Smoke & Flow

• Automatically set acceptable alarm thresholds for both smoke and flow levels

• Minimum 15 minutes, maximum 15 days (default 14 days)

• During AutoLearn, thresholds are NOT changed from pre-set values

Warranty Period

2 years

Ordering Information:

VLF-500-00 Xtralis VESDA VLF. European language set. English display labels

VLF-500-01 Xtralis VESDA VLF. European language set. International display labels

VLF-500-02 Xtralis VESDA VLF. English + Asian language set. International display labels

VLF-500-04 Xtralis VESDA VLF. English + Russian language set. International display labels

VLF-500-05 Xtralis VESDA VLF. English + Eastern Euro language set. International display labels

VIC-010 VESDAnet Interface Card

VIC-020 Multifunction Control Card (MCC)





VIC-030 Multifunction Control Card (MCC) with Monitored Powered Output (MPO)

VSP-005 Filter Cartridge, VSP-715 Aspirator for VLF-500

DISPLAY

The display provided to the user includes a Smoke Dial and alarm and status indicators.

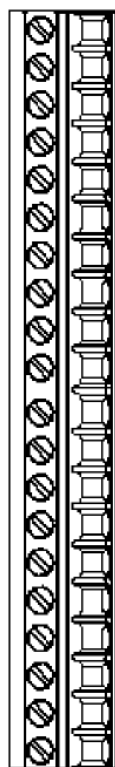


When the field service access door is open, the user has access to the RESET , DISABLE , Fire Test , AutoLearn  and Instant Fault Finder functions. When the Instant Fault Finder function is activated, the Smoke Dial converts to a fault indicator, with the dial segment numbers corresponding to the faults listed below.

LEGEND OF FAULT INDICATORS

1 Filter	6 External Device/PSU
2 Aspirator	7 Interface card
3 High flow	8 Field wiring
4 Low flow	9 AutoLearn Fail
5 n/a	10 Detector failure

TERMINAL BLOCK CONNECTIONS



1 GPI	
2 GPI	
3 Display TX	
4 Display RX	
5 Display Common Ground	
6 Display Power -	
7 Display Power +	
8 Power Return 0 VDC	From power supply unit
9 Power In 24 VDC	
10 Power Return 0 VDC	To next detector (if more than 1 detector per Power Supply Unit)
11 Power Out 24 VDC	
12 NC	
13 Common	Fault relay
14 NO	
15 NC	
16 Common	Action relay
17 NO	
18 NC	
19 Common	Fire 1 relay
20 NO	

APPROVALS COMPLIANCE

Please refer to the Product Guide for details regarding compliant design, installation and commissioning