Fike® Protection Systems

VESDA LaserPLUS
Scanner Option

UL: S5198, FM: 1DOA4.AY

CATALOG NUMBER 1160

Scanner Option

VESDA LaserPLUS Scanner™ is a detector unit that distinguishes and identifies the VESDA Sector (pipe) that is carrying smoke. The detection of smoke results in the system initially locating the first sector with the highest level of smoke, indicating the origin of a fire. The unit then continues to sample from each sector individually to supply alarm annunciation for each pipe.

Features

- Individual Pipe Annunciation
- Adaptive Scan Threshold
- Wide Sensitivity Range 0.0015 to 6% obs/ft (0.005 to 20% obs/m)
- Laser-based Light Source
- Configurable Alarm Levels
- Purpose-built Aspirator
- 4 In-line Inlet Pipes
- Flow Sensor for Each Pipe Inlet
- Low-cost Maintenance
- Dual-stage Filter
- Easy Access to Filter Cartridge
- Recessed Mounting

Description

The Scanner is similar to the standard VESDA LaserPLUS Detector, but also includes a valve mechanism in the inlet manifold and associated software to control the airflow from the four VESDA sectors (pipes). This configuration enables one single VESDA zone to be divided into four separate sectors, for example, distinguishing between separate voids within a room.

The Scanner Detector Unit consists of three main sections:

The *mounting box* includes:

- Four-Pipe Inlet Manifold and Scanner Valve Mechanism
- Exhaust Manifold
- Air Flow Sensor Card
- Termination Card
  The Termination Card supports a choice of seven or twelve relays that produce Alert, Action, Fire 1 and Fire 2 signals. It also supports Maintenance, Major Fault and Isolate signals. The card provides connections for power and the VESDA*net*™ cabling.

The *chassis* brings together:

- Laser Detection Chamber
- Head Processor Card
- Dual-stage Filter Cartridge
- Aspirator

The *cover* supports a flexible combination of insertable modules:

- Scanner Display
- Programmer
- Blank Plates

Scanner Operation

The Scanner monitors the level of smoke in all sectors (pipes). It can provide four alarm levels for each individual pipe (Alert, Action, Fire 1 and Fire 2). Sector factors (sensitivity) can be set individually to ensure the optimal alarm thresholds are applied for each sector.

The Scanner continually draws air from all sectors (up to four if all inlet ports are in use) and once smoke reaches the Adoptive Scan threshold, the unit quickly scans to identify which pipe is carrying smoke. If more than one pipe is transporting smoke the sector with the greatest concentration or smoke will be designated as the First Alarm Sector (FAS).

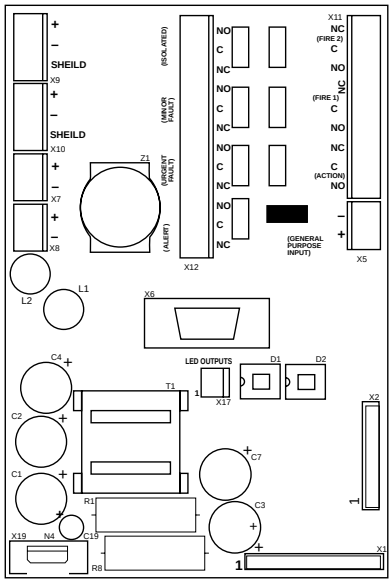
Once the Fast Scan is complete and the FAS is identified, the system will then begin a Slow Scan using Intelligent Sequencing. The Slow Scan period can be programmed from 8-15 seconds per pipe. Intelligent Sequencing means that the FAS is looking at every other pipe in the Scan Sequence.

Scanner Display

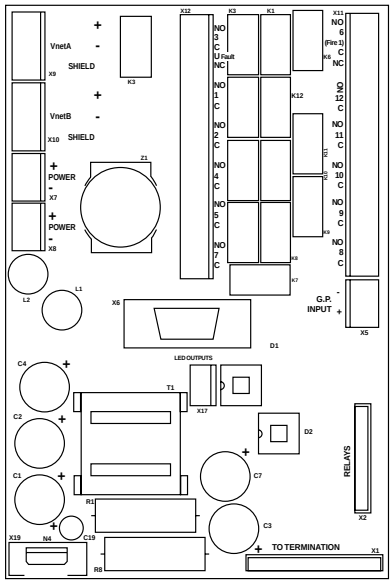
The Scanner display is similar in appearance to the standard VESDA LaserPLUS display with a bar graph indicating the overall smoke level, alarm thresholds and comprehensive fault indication. The bar graph also shows the individual pipe smoke levels during the scanning sequence.There is an extra LED to indicate when the First Alarm Sector has been established and extra functionality to the Silence button to allow a Manual Scan to be initiated. Like the VESDA LaserPLUS, the Scanner display can be mounted on the detector unit, remotely, in a 19" rack or replicated on VSM3.

Scanner Unit Specifications

Detector Termination Card
7 Relay Version



Detector Termination Card
12 Relay Version



Supply Voltage:
18 to 30VDC

Power Consumption:
No Display or Programmer:
5.7 - 11.0 watts quiescent
(@ 3000-4200 rpm) plus 1.3 watts alarm

Current Consumption:
No Display or Programmer:
240mA quiescent plus 70mA alarm
(24VDC & 3000rpm)

Dimensions (WHD):
13.8 in. x 8.9 in. x 4.9 in.
(350mm x 225mm x 125mm)

Weight:
9lbs. (4.0 Kg) including Display and Programmer modules

Operating Temperature:
Detector Ambient: 32° to 103°F
(0° to 39°C)
Sampled Air: -4° to 140°F (-20° to 60°C)
Humidity: 10-95%RH, noncondensing

Pipe ID:
3/4" to 1 in. (preferred ID 3/4")
19 to 25 mm (preferred OD 25mm)

7 Relays:
7 Relays rated 2A @ 30VDC
(Form C: NO/NC)
Default configuration:
Alert, Action, Fire 1, Fire 2,
Maintenance, Fault and Isolate

12 Relays:
12 Relays rated 2A @ 30VDC
(10X NO and 2X NO/NC)
Default configuration:
Alert, Action, Fire 1 & Fire 2.
First Alarm Sector 1 to 4 and Scan
Maintenance, Fault & Isolate.

IP Rating: IP30

Cable Access:
1in. (25mm) knock outs in various positions

Cable Termination:
Screw terminal blocks
(0.2-2.5mm^2, 30-12 AWG)

Sensitivity Range:
0.0015 to 6% obscuration/ft*
(0.005 to 20% obscuration/m)

Key Software Features:
Event log: up to 18,000 events stored
AutoLearn: Minimum 15 minutes, maximum 15 days. Recommended minimum period 1 day.
During AutoLearn thresholds are NOT changed from pre-set values.
Referencing: compensation for external ambient conditions
Four Levels of Alarm per sector:
Alert, Action, Fire 1 & Fire 2
Day/night/weekend & holiday
Two levels of fault warning:
Maintenance and Major fault
Software Configurable relays: 7 or 12
Maintenance Aids: Filter & Flow monitoring, informative event reporting via VESDA*net* or event log.
Adaptive Scan Threshold:
Detector selects the appropriate scan threshold automatically

** For UL, minimum sensitivity is 4%/ft.*

Ordering Information:
68-007 Scanner detector, 7 relays
68-009 Scanner detector, 12 relays
68-010 Scanner detector, 7 relays with LED's
68-011 Scanner detector, 12 relays with LED's
68-012 Scanner detector, 7 relays with display
68-013 Scanner detector, 12 relays with display
68-014 Scanner detector, 7 relays with display & programmer
68-015 Scanner detector, 12 relays with display & programmer
68-016 Scanner detector, 7 relays with programmer
68-017 Scanner detector, 12 relays with programmer

Fike® Protection Systems
Division Fike Corporation

Fike Protection Systems
704 S. 10th Street
Blue Springs, Missouri USA 64015
Ph: 816-229-3405
Fax: 816-229-4615
Http://www.fike.com

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