Gas Detection for Use with Aspirating Smoke Detection

Xtralis, the manufacturer of the market leading VESDA aspirating smoke detection (ASD) technology, has developed the industry's first multi-hole aspirated gas detector.

When used with the compatible range of ASD products, VESDA ECO (Ex) provides the industry's first combined aspirated smoke and gas detection system.

VESDA ECO (Ex) provides early warning of toxic, oxygen and flammable gas hazards to protect personnel and property whilst ensuring business continuity.

VESDA ECO (Ex) is approved for use within Class I Division 2 classified hazardous locations. It must be used with a similarly approved VESDA ASD and installed within the Class I Div 2 area.

Applications include:
- Battery charging rooms
- Boiler plant rooms
- Utility/service tunnels
- Refrigerated stores and plant rooms
- Water treatment and sewerage plants
- Power generation plants
- Metal processing plants
- and more.

How It Works

VESDA ECO (Ex) uses an existing or new aspirating pipe network to actively monitor for gas escapes and build-ups.

Each VESDA ECO (Ex) gas detector can house up to two gas sensors, and additional detectors can be added easily to the pipe network to monitor more gases if required. Pre-calibrated sensor cartridges are easily replaced in the field and make converting to different gas sensors or replacing sensors a simple task.

The VESDA ECO (Ex) detector is configured using Xtralis VSC configuration software and can be remotely monitored using Xtralis VSM4 monitoring software. Both VSC and VSM can be used to download data from the on-board memory card for data analysis and trending of historical data.

Integration with other building systems, including safety systems, PLCs, HVAC and building management systems, provides real-time situational awareness for intelligent response.

VESDA ECO (Ex) by Xtralis provides significant installation and routine maintenance cost savings over conventional multi-point gas detection solutions, by reducing the number of detectors required to cover an area and by providing easy access for routine maintenance.
**Specifications**

**Supply Voltage**
18-30 VDC

**Power Consumption @ 24 VDC**
3.6 W (max)

**Current Consumption**
Typically 60 mA @ 24 VDC per sensor (Gas and quantity dependant)

**Dimensions (protective enclosure)**
155 mm x 135 mm x 74 mm (6.1” x 5.3” x 2.9”)

**Material**
Enclosure 304 Stainless Steel, Detector PC/ABS

**Weight**
1 kg (2.2 lb) detector and enclosure combined

**IP/NEMA ratings**
IP54 (minimum)

**Operating Conditions**
Temperature typically -20ºC to 50ºC (-4ºF to 122ºF) gas dependant.
O2 - 20ºC to 55ºC (-4ºF to 131ºF)
Humidity: 10-95% RH, non-condensing

**Accuracy**
Typically +/- 5%

**Sample Pipe Size**
External Diameter 25 mm (EU), ¾” (US/CAN)

**Cable Access**
2 x PG9 cable glands, to suit 4.0 to 8.5 mm (0.157” to 0.335”) outer cable diameter

**Wire/Terminal size**
1.5 mm² 16 AWG maximum

**Outputs**
Four (4) programmable relays 30 VDC 1A
Two 4-20 mA outputs, one per gas sensor and 2 wire RS 485 Modbus RTU

**Onboard Memory Card**
Micro SD card 2 GB - 8 GB (50,000+ events)

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**VESDA ECO (Ex) Ordering information**

VESDA ECO (Ex) gas detectors are supplied complete with: Outer metal casing and surface mounting assembly, detector housing, sensor cartridge, data storage card and USB interface cable. Detector outputs include: relays, analogue outputs and a serial output.

**Single Gas Units**

**Part number structure:** ECO-D-B-AA-Ex

Replace AA with the relevant gas type number below:

- 20 Alcohols 0-100% LFL

**Installation**

VESDA ECO (Ex) is designed to press fit on to the air sampling pipe. To fit VESDA ECO (Ex) simply remove a 60 mm section of pipe when using 25 mm OD air-sampling pipe work or 4” for ¾” BSP pipe.

VESDA ECO (Ex) provides total flexibility to install one or more detectors anywhere on the pipe network to enable monitoring of a specific point, zone or total area.