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Find the *Xtralis ECO-SC-42* at our website: ***Click HERE***

VESDA ECO™ Detector

Gas Detection and Environmental Monitoring

Gas Detection for Use with Aspirated Smoke Detection

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

When used with the compatible range of ASD products; VESDA ECO provides the industries first combined aspirated smoke and gas detection system.



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

Applications include:

- Battery charging rooms
- Boiler plant rooms
- Commercial kitchens
- Parking garages
- 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 uses an existing or new aspirating pipe network to actively monitor for gas escapes and build-ups.

Each ECO 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 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 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.

Hazardous area certified variants of VESDA ECO are available. For more information on VESDA ECO Ex, refer to document 19826.

Features

- Toxic, Oxygen or Flammable gas detection
- Single or dual gas versions
- Factory calibrated sensor cartridges
- Integral alarm status LEDs
- Integrates with PLCs/HVAC/BMS/FACP
- Configurable relays
- 4-20 mA analog outputs
- RS485 Modbus output
- On-board event logging
- On-board fault diagnostics
- Integral gas test port
- Remote reset

Compatibility

- VESDA ASD
- ICAM ASD
- FAAST ASD

Approvals

- CE
  Electrical safety
  - Conforms to ANSI/UL Std 61010-1
  - Certified to CAN/CSA Std C22.2 No. 61010-1
  - EN 61010-1
- EMC
  - FCC 47CFR Part 15B class B
  - ICES 003
  - EN 50270
- Others
  - LPCB, VdS, AFNOR compatible for use with EN54-20 approved ASD
  - LOM approved to UNE 23300 (CO & CO+NO_2)
  - AQISQ – CMC Pattern Approval
  - CCCF – CFE, GB:15322.1
  - VNIIPO
- SIL Rating
  - SIL 2 as per IEC 61508 (combustible gas and CO_2 versions)
  - SIL 1 as per IEC 61508 (toxic gas and oxygen versions)

Note: Consult with Xtralis if the application requires removal of interferent gases.

VESDA® ECO™ by xtralis

VESDA ECO™ Detector

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VESDA ECO Ordering information

VESDA ECO gas detectors come complete with the main housing, sensor cartridge, data storage card and USB interface cable. Two variants are available based on detector outputs:

Part number structure: ECO-D-B-AA-BB

Single Gas Units

Replace AA with the relevant gas type number below and remove BB:

11 Hydrogen (H_2) 0-100% LFL
12 Methane (CH_4) 0-100% LFL
13 Propane (C_3H_8) 0-100% LFL
14 Hydrogen (H_2) 0-2000 ppm
15 Gasoline Vapour 0-100% LFL
16 Pentane (C_5H_{12}) 0-100% LFL
20 Alcohols 0-100% LFL
31 Oxygen depletion only (O_2) 0-25% v/v
32 Oxygen depletion and enrichment (O_2) 0-25% v/v
41 Carbon Monoxide (CO) 0-500 ppm
43 Hydrogen Sulphide (H_2S) 0-100 ppm
44 Sulphur Dioxide (SO_2) 0-10 ppm
45 Nitrogen Dioxide (NO_2) 0-10 ppm
49 Carbon Dioxide (CO_2) 0-5% v/v

Dual Gas Units

Select one of the available combinations below. Replacing AA and BB with the preferred combination. Other combinations are available upon request:

12 – 31 Methane and Oxygen
12 – 41 Methane and Carbon Monoxide
12 – 43 Methane and Hydrogen Sulphide
13 – 31 Propane and Oxygen
31 – 41 Oxygen and Carbon Monoxide
41 – 43 Carbon Monoxide and Hydrogen Sulphide
41 – 45 Carbon Monoxide and Nitrogen Dioxide

Example: ECO-D-B-12-41

An ECO detector with relay, analogue and serial outputs for Methane and Carbon Monoxide.

Replacement sensor cartridge part number structure: ECO-SC-AA-BB

Where SC = Sensor Cartridge, AA-BB are 1st and 2nd gas types (see above).

Installation

VESDA ECO is designed to press fit on to the air sampling pipe. To fit VESDA ECO simply remove a 60 mm section of pipe when using 25 mm OD air-sampling pipe work or 4" for ¾" BSP pipe. Use ECO-FT15 adapter when fitting ECO to 6mm based sampling systems.

VESDA ECO 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.



Specifications

Supply Voltage
18-30 VDC
Power Consumption @ 24 VDC
3.6 W (max)
Current Consumption
Typically 60 mA @ 24 V DC for a dual gas (flammable / toxic) quiescent. 85 mA when in alarm.
Dimensions (WHD)
34 mm x 125 mm x 110 mm (1.3" x 4.9" x 4.4")
Weight
250 g (0.6 pounds)
IP/NEMA ratings
IP65 and NEMA 4
Operating Conditions
Temperature typically -20ºC to 50ºC (-4ºF to 122ºF) gas dependant. O_2 - 20ºC to 55ºC (-4ºF to 131ºF) Humidity: 10-95% RH, non-condensing
Pipe Size
External Diameter 25 mm (EU), ¾" (US/CAN)
Wire/Terminal size
1.5 mm^2 16 AWG maximum
Cable Access and Termination
2 x PG9 cable glands, to suit 4.0 to 8.5 mm (0.157" to 0.335") outer cable diameter
Accuracy
+/- 5%
Outputs
4 wire RS 485 Modbus RTU (2 wire data comms + 2 wire power) Four (4) programmable relays 30 VDC 1A One (1) 4-20 mA output per sensor
Onboard Memory Card
Micro SD card 2 GB - 8 GB (50,000+ events)

VESDA ECO by xtralis

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