

Gas Detection and Aspirating Smoke Detection Plus Environmental Monitoring

Expanding on the market-leading ICAM air-sampling smoke detection technology, Xtralis has developed the industry's first system to combine ASD with gas detection and environmental monitoring.

ICAM ECO provides protection from both fire and gas threats in powerful yet cost-effective configurations to provide point, zone or total-area coverage in battery-charging rooms, underground utility tunnels, boiler rooms, warehouses, manufacturing facilities, parking garages, transportation centers, and a variety of other applications.

How It Works

The ECO uses an existing firetracer air sampling pipe network to actively monitor for gas leaks and continuously ensure air quality in occupied areas. This simple expansion requires no construction and does not involve installing electrical conduit.

ECO reliably detects unseen hazards by conditioning or filtering the air to remove moisture, interferent gases, dirt and other particulates that can cause traditional point gas detection systems to false alarm or become contaminated.

The ECO detector is configured using Xtralis VSC configuration software and can be 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 fire alarm control panels, PLCs, HVAC and building management systems, provides real-time situational awareness for intelligent emergency response. For example, the ECO can be used in a transportation hub to monitor carbon monoxide and nitrogen dioxide levels, activating variable-speed fans as part of a demand-controlled ventilation system, which controls costs and saves energy.

Monitor Two Gases with Each VESDA ECO Detector

Each ECO gas detector can house up to two gas sensors, and additional detectors can be added easily to the ICAM 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.

With the ECO, you can proactively protect your facility with early warning fire and gas detection and maintain enterprise air quality with significant costs savings and more reliable results over traditional gas detectors.



Gas Detection and Environmental Monitoring

Features

- Cost effectively installs on existing ASD pipe network
- Centralized monitoring for realtime awareness
- Each ECO detector is pre-configured with one or two sensors
- Simple expansion to monitor multiple gases
- Integrates with PLCs/HVAC/BMS/FACP
- Simple inline installation
- 4-wire RS485 Modbus network
- Configurable relays
- 4-20 mA analog outputs
- On-board data logging

EMC

FCC 47CFR Part15B class B
ICES 003
EN 50270, CE

Listings/Approvals (Pending)

ETL listed to UL 61010-1
ETL listed to CAN/CSA C22.2
No.61010-1
EN 61010-1

Ordering Information

Detectors

ECO-D-B-AA:

Single-sensor models with relays and 4-20 ma outputs

ECO-D-B-AA-BB:

Dual-sensor models with relays and 4-20 ma outputs

Replacement Sensors

ECO-D-R-AA: Replacement sensor cartridge for single-sensor models

ECO-D-R-AA-BB: Replacement sensor cartridge for dual-sensor models

Note: Lowest sensor code number must be in "AA" position

Sensor Code	Sensor Description
11	Hydrogen (H2) 0-100 % LEL
12	Methane CH4 0-100% LEL
13	Propane (C3H8) 0-100 % LEL
31	Oxygen 0-25% Vol
41	Carbon Monoxide (CO) 0-250 ppm
42	Ammonia (NH3) 0-100 ppm
43	Hydrogen Sulfide (H2S) 0-100 ppm
44	Sulfur Dioxide (SO2) 0-10 ppm
45	Nitrogen Dioxide (NO2) 0-10 ppm

For example: to order a hydrogen detector, order ECO-D-B-11; to order methane and oxygen, order ECO-D-B-12-31; to order a replacement cartridge for methane and oxygen, order ECO-D-R-12-31.

The following sensor combinations are available.

11-31 (H2 & O2) 12-31 (CH4 and O2) 12-41 (CH4 & CO)

12-43 (CH4 & H2S) 31-41 (O2 & CO) 41-43 (CO & H2S)

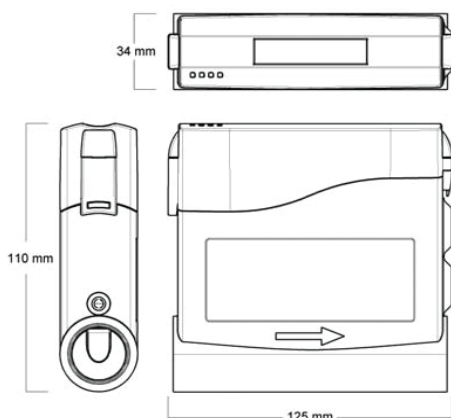
41-45 (CO & NO2) 11-31 (H2 & O2)

Ask for availability of different sensor types and combinations.

Installation

Install a ECO detector inline simply by cutting a 10 cm (4") gap in the inlet or outlet pipe of your ASD system. No mounting bracket required. Designed to press fit onto 25 mm or 3/4 inch aspirating pipe.

The 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

3.2 W

Current Consumption

135 mA @ 24 VDC per sensor

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

Detector Ambient: -20 to 55°C (-4 to 131°F)

Sampled Air: -20 to 55°C (-4 to 131°F)

Humidity: 10-95% RH, non-condensing

Pipe Size

External Diameter 25mm (EU), 3/4" (US/CAN)

Wire/Terminal size

1.5 mm² 16 AWG maximum, shielded twisted pair

Cable Access and Termination

2xM16 bulkhead grommets

Accuracy

+/- 5%

Outputs

RS485 Modbus TCP/IP

Four (4) programmable relays

One (1) 4-20 mA output per sensor

Onboard Memory Card

2 GB

