FireSense
FIRE ALARM EQUIPMENT

DATA SHEET
ECO-D-B
Aspirating Gas Monitoring

Features:

- Leverages existing VESDA ASD pipe networks to cost effectively detect both smoke and gas in addition to providing environmental monitoring.
- Provides detection for multiple gases through simple expansion without major construction or retrofitting.
- Conditions the air to remove dirt, particulates, moisture, poisonous agents, and cross-interference gases.
- Suitable for harsh environments.
- Provides non-intrusive detection for aesthetics or to prevent vandalism.
- Enables centralized monitoring and communication with building systems for real-time awareness.
- Easily integrates with FACP/PLCs/HVAC/BMS.

Description:

VESDA ECO adds gas detection capability to existing or new installations of VESDA Aspirated Smoke Detection (ASD) systems that utilize 25mm or ¾" BSP air sampling pipe networks.

The VESDA ECO can detect a range of flammable gases, toxic gases and oxygen deficiency. Each VESDA ECO detector houses a replaceable sensor cartridge which contains one or two gas sensors.

Specifications:

Gas and Range Specifications	
Carbon Monoxide (CO)	0-500 ppm
Ammonia (NH_3)	0-100 ppm
Oxygen (O_2)	0-25% V
Hydrogen (H_2)	0-100% LEL
Hydrogen Sulphide (H_2S)	0-100 ppm
Sulphur Dioxide (SO_2)	0-10 ppm
Nitrogen Dioxide (NO_2)	0-10 ppm
Methane (CH_4)	0-100% LEL
Propane (C_3H_8)	0-100% LEL

Cost-effective Gas Monitoring Applications:

UPS and Battery-charging Rooms
Hydrogen gas is given off during battery charging. Explosions can occur due to inadequate ventilation and/or the absence of fireproof equipment.
When hydrogen is detected, VESDA ECO can automatically activate the ventilation system to prevent the build-up of explosive levels of hydrogen gas. This on-demand ventilation approach reduces electrical energy consumption by ventilating only when potentially dangerous gases are present instead of continuously ventilating the space. If hydrogen levels continue to increase, an alarm can be automatically sent to notify staff of a potential system malfunction so that measures can be taken to prevent a disaster.

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Underground Utility Tunnels
Utility tunnels are the life blood of industry, supplying critical power and data for operations and service continuity. A fire or gas leak in these areas can lead to catastrophic consequences and cost millions of dollars in disruptions and lost business.
Unlike conventional smoke and gas detectors that become easily contaminated due to airborne dust, VESDA ECO overcomes harsh environmental conditions to provide reliable detection of methane (CH_4) and carbon monoxide (CO) or other hazardous gases.

Transportation Centers
Transportation canters, like car parks, depots, road tunnels and even vehicle maintenance workshops, are normally dusty and exposed to potentially dangerous levels of carbon monoxide (CO) or nitrogen dioxide (NO_2) exhaust from vehicles.
VESDA ASD has been used reliably in this harsh environment to provide early warning smoke detection. By adding VESDA ECO to an existing VESDA ASD pipe network, high concentrations of CO can be detected locally through area or zone detection as compared to a fixed CO detector that provides only point coverage.
When combined with ASD, substantial cost savings for car-park operators can be achieved due to lower installation and operating costs while providing a safe and healthy environment.

As well as…
- Utility and boiler rooms
- Warehouses
- Public spaces
- Manufacturing facilities

Ordering Codes:

ECO Detector Single Gas (Relay, 4-20mA, RS485):	
Hydrogen (h2) 0-100% LEL	ECO-D-B-11
Methane (CH_4) 0-100% LEL	ECO-D-B-12
Propane (C_3H_8) 0-100% LEL	ECO-D-B-13
Oxygen (O_2) 0-25% V	ECO-D-B-31
Carbon Monoxide (CO) 0-500 ppm	ECO-D-B-41
Ammonia (NH_3) 0-100 ppm	ECO-D-B-42
Hydrogen Sulphide (H_2S) 0-100 ppm	ECO-D-B-43
Sulphur Dioxide (SO_2) 0-10 ppm	ECO-D-B-44
Nitrogen Dioxide (NO_2) 0-10 ppm	ECO-D-B-45
ECO Detector Dual Gas (Relay, 4-20mA, RS485):	
Hydrogen (h2) 0-100% LEL + Oxygen (O_2) 0-25% V	ECO-D-B-11-31
Methane (CH_4) 0-100% LEL + Oxygen (O_2) 0-25% V	ECO-D-B-12-31
Methane (CH_4) 0-100% LEL + Hydrogen Sulphide (H_2S) 0-100 ppm	ECO-D-B-12-41
Propane (C_3H_8) 0-100% LEL + Oxygen (O_2) 0-25% V	ECO-D-B-13-31
Oxygen (O_2) 0-25% V+ Carbon Monoxide (CO) 0-500 ppm	ECO-D-B-31-41
Carbon Monoxide (CO) 0-500 ppm + Hydrogen Sulphide (H_2S) 0-100 ppm	ECO-D-B-41-43
Carbon Monoxide (CO) 0-500 ppm + Nitrogen Dioxide (NO_2) 0-10 ppm	ECO-D-B-41-45

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