Senscient Gas Detectors **for Ammonia**

The Safe Choice for Industrial Gas Detection

MSA
The Safety Company

WE KNOW WHAT'S AT STAKE.

Overview

Ammonia is used in the petrochemical, chemical, fertiliser and refrigeration industries. Fixed point Ammonia gas detectors typically use electro-chemical cell sensing technology, while open path optical Ammonia gas detectors use either xenon flash lamps operating in the ultra violet or tuneable laser diodes (TLD) in the infrared. These open path optical detectors use a separate transmitter/ receiver arrangement. Senscient's laser based infrared open path detectors use patented 'Enhanced Laser Diode Spectroscopy' (ELDS) technology that gives no false alarms and the best uptime availability in adverse weather compared to UV based detectors covering greater areas.

Why Use Senscient Gas Detectors for Ammonia

Removes personnel from risk area

Fixed point electro-chemical detectors require regular routine manual testing and calibration to validate performance. This requires operational staff to enter the risk area and handle dangerous test gases. Senscient's ELDS™ is factory calibrated for life and uses an integral NH_3 reference cell to automatically run a daily end-toend performance test called 'SimuGas™'. This, in-turn generates a test result log for remote download and interrogation, eliminating the need for routine manual testing and all associated costs.

Faster hazard mitigation

Effective hazard mitigation requires fast activation of safety processes. Fixed point electro-chemical cell detectors typically have a response time of <90 seconds or longer in cold climatic conditions. This assumes the detector is ideally located in relation to the gas release. Senscient ELDS has a speed of response of <3 seconds and will detect NH_3 anywhere it intercepts the beam. This results in faster isolation of the leak and a reduction in the volume of NH_3 that escapes.

No consumable sensing elements

Fixed point electro-chemical cell devices have a finite life, with some of just a few weeks if a background concentration is permanently present and require replacement and re-calibration at significant cost. Senscient ELDS has no consumable parts eliminating routine maintenance, spare parts and labor costs.

Failsafe operation

Electro-chemical cell point detectors fail to danger, with no indication at the end of their operational life. Senscient's ELDS transmitter / receiver arrangement is failsafe and requires no routine maintenance. With an in built automatic self testing function, SimuGas, ELDS offers end users a solution to the problem of costly and time consuming testing and maintenance on existing NH_3 leak detection instruments.

No false alarms

False alarms lead to unwanted loss of production and reduced operator confidence. No electro-chemical cell device is NH_3 specific and interference gases can lead to unwanted plant shutdown. UV based open path detectors are also effected by a number of common interference gases. Senscient ELDS is target gas specific ensuring no false alarms.

About Senscient ELDS products

Senscient's ELDS product range uses patented technologies, Harmonic Fingerprint™ and SimuGas, delivering the most robust and reliable gas detection.

Detection gases include:

- Methane (CH_4)
- Ammonia (NH_3)
- Hydrogen Sulphide (H_2S)
- Hydrogen Fluoride (HF)
- Ethylene (C_2H_4)
- Carbon Dioxide (CO_2)
- Hydrogen Chloride (HCl)
- Multi-Hydrocarbons (MHC)

Other gases to be added.

MSA operates in over 40 countries worldwide. To find an MSA office near you, please visit ***MSAsafety.com/offices***.

0700-143-MC / 02.2021