



**Protect people and processes, achieve maximum uptime and cost efficiencies with the industry's most reliable, advanced point infrared gas detector – now with HART® digital communication**

# Searchpoint Optima Plus



## Why Infrared?

- Failsafe operation
- Fast speed of response
- Reduced routine maintenance
- Immune to catalytic poisons
- Long operating life
- Works in inert atmospheres

## Why Searchpoint Optima Plus is the right choice

- Experience gained from over 100,000 units installed worldwide
- Improved reliability
- Optional HART® over 4-20mA output
- Can detect a wide range of hydrocarbon gases including solvents
- Increased reliability with no moving parts
- Increased stability from self compensating optics
- Immune to long term component drift
- Remote functional gas test facility
- Certified for North American and European Hazardous areas
- Increased false alarm rejection
- Increased uptime with contaminated optics warning
- Dynamic Heating Control ensures condensation free optics
- No undetected failures
- Improved diagnostics
- Integral event logging
- Reduced power consumption
- Certified to many hazardous area classification schemes including: UL, CSA, ATEX, IECEx and more

## Take advantage of HART communication added to the proven performance of the market-leading hydrocarbon point infrared gas detector

With over 40 years experience in the design, manufacture, installation and maintenance of point infrared gas detection, Honeywell Analytics currently has a worldwide installed base of over 100,000 infrared point hydrocarbon gas detectors in a wide spectrum of applications from light industrial to the most demanding of offshore environments.

Searchpoint Optima Plus is an infrared point Hydrocarbon gas detector certified for use in potentially explosive atmospheres. The unit's infrared detection principle offers the fastest speed of response and fail-to-safe operation, ensuring that your plant is compliant, your personnel are protected and your production process can deliver maximum uptime. Reduced routine maintenance, when compared with conventional electro-catalytic based gas detectors, provides low ongoing cost of ownership. The development of advanced internal fault diagnostics and false alarm rejection algorithms ensures that the Searchpoint Optima Plus delivers the highest level of operational integrity.

Typical applications include environments that may suffer from the presence of catalytic bead poisons or inhibitors, or where there are harsh environmental conditions forcing increased time between routine maintenance:

- Offshore oil and gas platforms
- Floating production storage and offloading (FPSO) vessels
- Tankers
- Onshore oil and gas terminals
- Refineries
- LNG/LPG bottling plants
- Gas compressor/metering stations
- Gas turbine power plants
- Solvent printing and coating plants

Over 100 gas and vapor calibrations are available. For a list of detectable gases and vapors, please contact our Customer Support team or your local distributor.



### HART: Reduce your operational costs and gain enhanced device visibility

Searchpoint Optima Plus is available with HART® over 4-20mA output. This communication aspect allows Searchpoint Optima Plus to deliver a wide range of added value benefits.

#### What is HART®?

HART® (Highway Addressable Remote Transducer) is a widely used digital communications protocol, which allows users to access live data, status indications and diagnostic information from intelligent field devices. It works by superimposing a digital signal on the existing analog signal.

A key benefit of HART® is the fact no additional field cabling is required, because HART® uses the device's 4-20 mA signal cable.

HART® can help to reduce costs in a number of ways. For example, it eliminates the need for proprietary handheld devices; a field engineer can use a single HART® handheld device to access any HART® enabled equipment on site. The HART® signal can be interrogated from anywhere in the current loop, and this users access diagnostic information without going into the field. This means that if maintenance is required, the scope of work is known before the engineer goes to the device, potentially helping to reduce ongoing maintenance costs.

#### Benefits of using HART®

- Access full information from Searchpoint Optima Plus, from anywhere in the current loop
- No associated infrastructural costs; additional communication is achieved without the need for extra cabling
- Eliminate the need for proprietary handheld devices
- Save on maintenance costs by enabling proactive maintenance – “know before you go”

# Failsafe Hydrocarbon Gas Detection



## 1. Optics Block

The 4-channel (dual compensated) optics-block is the heart of the Searchpoint OPTIMA PLUS. It is specifically designed to compensate for changes in the external environment similar to 2-channel designs, but also compensates for long term component drift such as infrared sources and detectors. This combined with the de-focused beam provides the Searchpoint OPTIMA PLUS with the most stable optics design possible.

## 2. Microprocessor

The microprocessor controls the operation of the Searchpoint Optima Plus. The signal processing and algorithms provide a new dimension in false alarm rejection delivering the highest level of operational integrity.

## 3. Heated Optics Plus Dynamic Heating Control

Heated optic components, monitored via smart electronics, eliminate condensation build up with power saving features.

## 4. Remote Gassing Cell

Permanent fitting of this optional gassing cell within the optical path allows the remote injection of functional test gas to validate the performance of a Searchpoint OPTIMA PLUS.

## Remote Gas Sampling Systems

For monitoring remote or inaccessible locations Searchpoint OPTIMA PLUS can be fitted with a flow housing and engineered into a gas sampling system. Single-point and multi-point systems are available for both hazardous and non-hazardous areas.



## Sunshade / Deluge Protection (Part #2108D0275)

This multi-purpose accessory supplied as standard shields Searchpoint OPTIMA PLUS from the extremes of operational environments ensuring reliable operation.



## Storm Baffle (Part #2108B0280)

This optional baffle reduces wind chill, salt and dust build-up in exposed applications subjected to high wind speeds e.g. Offshore HVAC intakes and FPSO turrets etc.



## Standard Weather Protection (Part #2108B0276)

This accessory supplied as standard, offers the best compromise between water/dust ingress and speed of response.



## Dust Barrier (Part #2108B0259)

This optional barrier fitted inside the standard weather protection provides additional protection against the ingress of dust and contamination entering the optical path.



## Gassing Cap (Part #2108D0258)

The gassing cap enables confidence checking of the Searchpoint OPTIMA PLUS. It provides a close fit onto the standard weather protection and can be installed without the use of any special tools.

# Accessories



## Termination / Mounting



### XNX™ Universal Transmitter

The XNX offers a truly universal gas sensing and communications platform that expands communications functionality while reducing installation and cabling costs associated with a gas detection system. The XNX communications module includes standard HART, with optional Modbus, Fieldbus or three relays (two alarm, one fault). XNX enables multi-drop installations of the Optima, instead of the usual 'home run' required for each detector; for example, a single communications cable can be run between up to 32 detectors on a Modbus protocol. The XNX supports electrochemical, catalytic bead and infrared gas sensing devices.



### DX 100(I)

This hazardous area certified enclosure is used to terminate Searchpoint Optima Plus field cabling and provide an interface for the Hand Held Interrogator (SHC-1) via an intrinsically safe connection socket. This provides in-situ one-man maintenance without the need for a hot work permit. Used in conjunction with a remote gas test point this provides the best solution for checking sensors in remote locations.



### Duct Mounting Kit

This mounting plate arrangement enables installation of Searchpoint OPTIMA PLUS with a duct/ventilation system. It enables functional gas testing without removing the Searchpoint OPTIMA PLUS from the ducting system.



### Certified Junction Boxes

A full range of hazardous area certified junction boxes are available

## Field Interrogation



### Multi Purpose Hand Held Interrogator (HHI)

This versatile commissioning /maintenance tool is certified for hazardous areas and used to reconfigure Searchpoint OPTIMA PLUS for different gases and fault diagnostics. The same interrogator can be used with the original Searchpoint OPTIMA and Searchline Excel (open path gas detector) reducing operator training.



### SHC-1 Protection Device

This device provides electrical protection for the HHI when used with conventional terminal housings under a gas free permit to work system.

# Installation Options

