



**Advanced infrared  
point gas detector**

# Searchpoint Optima Plus



## Why Searchpoint Optima Plus is the right choice...

- The proven strengths of the original Searchpoint Optima design
- Experience gained from over 30,000 units installed worldwide
- The latest technology and techniques used to develop the successful Honeywell Analytics open path gas detector, the Searchline Excel
- Improved reliability

## 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?

- 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

## Why Searchpoint Optima Plus?

- Increased false alarm rejection with ✓<sup>2</sup> SOFTWARE™
- 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: European (ATEX), UL, CSA and more

## For over 40 years our company has been a world leader in the design and manufacture of gas detection instrumentation.

Our team continues to develop advanced and innovative sensing technology, to create highly reliable, fit for purpose, cost effective gas detection solutions for the most demanding of environments.

Experience in the design, manufacture, installation and maintenance of point infrared gas detection has resulted in a worldwide installed base of over 30,000 units operating from light industrial to the most demanding of offshore petrochemical applications.

This expertise has resulted in Honeywell Analytics offering a new dimension in the supply of reliable infrared point gas detection with the release of the Searchpoint Optima Plus.

## Typical Applications

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 vapour calibrations available. For a list of gases and vapours which Searchpoint Optima Plus can detect, contact your local distributor.



# Failsafe Flammable Gas Detection Plus $\checkmark^2$ Software™




The main image shows a Searchpoint Optima Plus gas detector. It is a cylindrical metal device with a white label on the side that reads "searchpoint OPTIMA PLUS". The detector has two black gas inlet ports on the left side. Four numbered callouts point to specific features: 1. Optics Block, 2. Microprocessor, 3. Heated Optics Plus Dynamic Heating Control, and 4. Remote Gassing Cell. Below the main image are five smaller images, each in a white box, representing different accessories: a white sunshade, a blue storm baffle, a black standard weather protection cap, a yellow dust barrier, and a red gassing cap.

**Sunshade / Deluge Protection**  
This multi-purpose accessory supplied as standard shields Searchpoint Optima Plus from the extremes of operational environments ensuring reliable operation.

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

**Dust Barrier**  
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**  
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.

**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-focussed beam provides the Searchpoint Optima Plus with the most stable optics design possible.

**2. Microprocessor Including  $\checkmark^2$  SOFTWARE™**  
The microprocessor controls the operation of the Searchpoint Optima Plus. New  $\checkmark^2$  SOFTWARE™ 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.

# Accessories



## Termination / Mounting

### DVC / DX-100(I)

These hazardous area certified enclosures are used to terminate Searchpoint Optima Plus field cabling and provides 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.



### DVC / DX-100(M) Modbus Interface Module

Provides a multi drop Modbus RS485 interface for the Searchpoint Optima Plus and Searchline Excel infrared gas detection products. Reduces servicing and maintenance costs.



### Certified Junction Boxes

A full range of hazardous area certified Exe and Exd junction boxes are available.



## Field Interrogation

### Multi Purpose Hand Held Interrogator (SHC-1)

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 SHC-1 when used with conventional terminal housings under a gas free permit to work system.



### 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.



### Analogue to Bridge Converter

This safe area DIN rail mounted item converts the analogue output from a Searchpoint Optima Plus into an mV bridge output similar to that of conventional catalytic point gas detectors. This permits the use of Searchpoint Optima Plus with existing catalytic gas sensor control hardware.

# Technical Summary

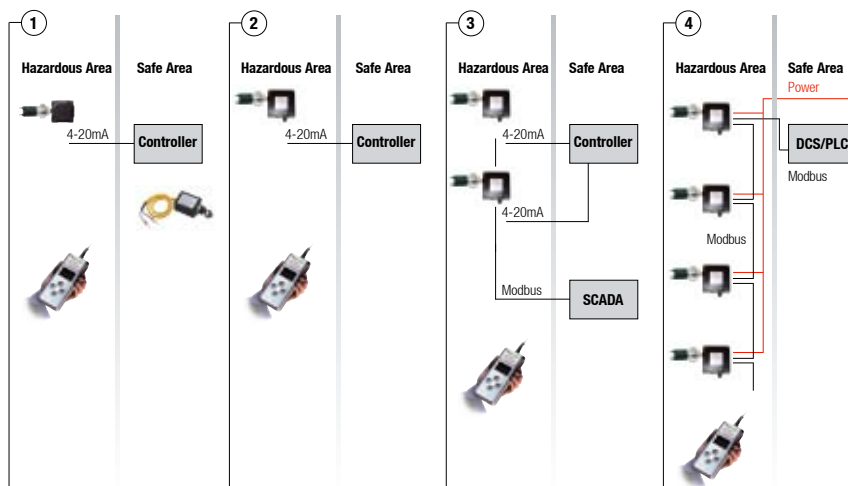


## Searchpoint Optima Plus Specification

<b>Output</b>	
<b>Measuring Range</b>	4-20mA sink or source, (Default current source)
<b>Inhibit</b>	1-3mA (Default 2mA)
<b>Warning</b>	0-6mA (Default 3mA *)
<b>Fault</b>	0mA
<b>Over Range</b>	20-21.5mA (Default 21mA)
<b>Digital Output</b>	Optional Multidrop Modbus RS485 (via DVC / DX100(M))
<b>Material</b>	316 stainless steel
<b>Weight</b>	1.6kg
<b>Accuracy</b>	
<b>Optima Plus (HC)</b>	Baseline < ±1% LEL, 50% FSD <±2% LEL
<b>Optima Plus (ET)</b>	Baseline < ±2% LEL, 50% FSD <±3% LEL
<b>Repeatability</b>	< ±2% LEL at LEL 50% FSD
<b>Linearity</b>	< 5% FSD
<b>Response Time</b>	T50 < 4.5 seconds, T90 < 6.5 seconds (for Methane, including weather protection)
<b>Operational and Certified</b>	-40°C to +65°C temperature range
<b>Drift with Time and Over Temperature Range</b>	-40°C to +65°C Baseline < ±2% LEL 50% FSD < ±4% LEL
<b>Variation with Pressure</b>	0.1% (of reading) per mbar
<b>Power Supply</b>	18-32V (24V nom) DC, < 4.5W max
<b>Environmental Protection</b>	IP 66 / 67
<b>Diagnostics (and Re-calibration)</b>	Via certified Hand-held Interrogator
<b>Safety Approvals</b>	ATEX: BAS99ATEX2259X II 2GD EEx d IIC T100°C (T <sub>amb</sub> -40°C to +55°C) T135°C (T <sub>amb</sub> -40°C to +65°C) UL / CSA Class 1, Div 1, groups B, C, and D (-40°C to +65°C) GOST and SAA
<b>Performance Approvals</b>	EN61779 EXAM, BVS 03 ATEX G 016 X, CSA C22.2 152.
<b>EMC Compliance Software</b>	EN 50270 EN 50271

\* Note for ATEX compliance the warning value should not be set between 3 and 5mA

## Installation Options



# Our Product Range



## Fixed Gas Monitoring

Honeywell Analytics offers a wide range of fixed gas detection solutions for a diverse array of industries and applications including: Commercial properties, industrial applications, semiconductor manufacturers, energy plants and petrochemical sites.

- » Detection of flammable, oxygen and toxic gases (including exotics)
- » Innovative use of 4 core sensing technologies – paper tape, electrochemical cell, catalytic bead and infrared
- » Capability to detect down to Parts Per Billion (ppb) or Percent by Volume (%v/v)
- » Cost effective regulatory compliance solutions

## Portable Gas Monitoring

When it comes to personal protection from gas hazards, Honeywell Analytics has a wide range of reliable solutions ideally suited for use in confined or enclosed spaces.

These include:

- » Detection of flammable, oxygen and toxic gases
- » Single gas personal monitors – worn by the individual
- » Multi-gas portable gas monitors – used for confined space entry and regulatory compliance
- » Multi-gas transportable monitors – used for temporary protection of area during site construction and maintenance activities

## Technical Services

At Honeywell Analytics, we believe in the value of great service and customer care. Our key commitment is providing complete and total customer satisfaction. Here are just a few of the services we can offer:

- » Full technical support
- » Expert team on hand to answer questions and queries
- » Fully equipped workshops to ensure quick turnaround on repairs
- » Comprehensive service engineer network
- » Training on product use and maintenance
- » Mobile calibration service
- » Customised programmes of preventative/corrective maintenance
- » Extended warranties on products

### Find out more

[www.honeywellanalytics.com](http://www.honeywellanalytics.com)

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10/08

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