



**Advanced infrared
point gas detector**

Sieger 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 Sieger 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 \checkmark^2 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 the 'Sieger' name has been a world leader in the design and manufacture of gas detection instrumentation.

As part of the Honeywell Analytics group, Sieger 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 Sieger Searchpoint OPTIMA PLUS.

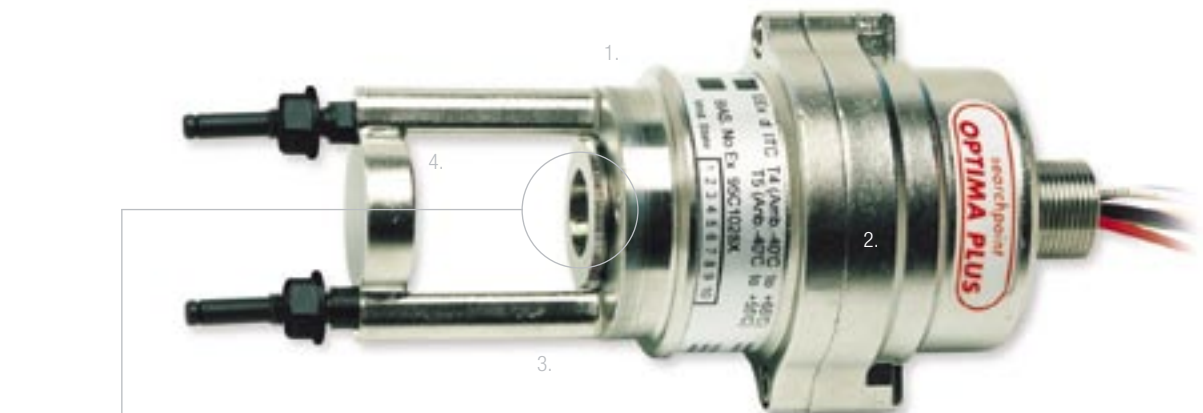
Typical Applications

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.

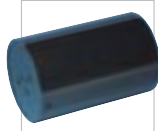


Failsafe flammable gas detection plus \checkmark^2 software™



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

Output

| | |
|-----------------|--|
| Measuring range | 4-20 mA sink or source, (Default current source) |
| Inhibit | 1-3 mA (Default 2 mA) |
| Warning | 0-4 mA (Default 4 mA) |
| Fault | 0 mA |
| Over range | 20-21.5 mA (Default 21 mA) |

Digital Output Optional Multidrop Modbus RS485 (via DVC/DX100(m))

Material 316 stainless steel

Weight 1.6 kg

Accuracy

| | |
|------------------|---------------------------------------|
| Optima PLUS (HC) | Baseline < ±1% LEL, 50% FSD < ±2% LEL |
| Optima PLUS (ET) | Baseline < ±2% LEL, 50% FSD < ±3% LEL |

Repeatability < ±2% LEL at LEL 50% FSD

Linearity < 5% FSD

Response time T50 < 4.5 seconds, T90 < 6.5 seconds (for methane, including weather protection)

Operational and certified -40°C to +65°C temperature range

Drift with time and over temperature range
 -40°C to +65°C
 Baseline < ±2% LEL
 50% FSD < ±4% LEL

Variation with pressure 0.1% (of reading) per mbar

Power supply 18-32 V (24 V nom) DC, < 4.5 W max

Environmental protection IP 66/67

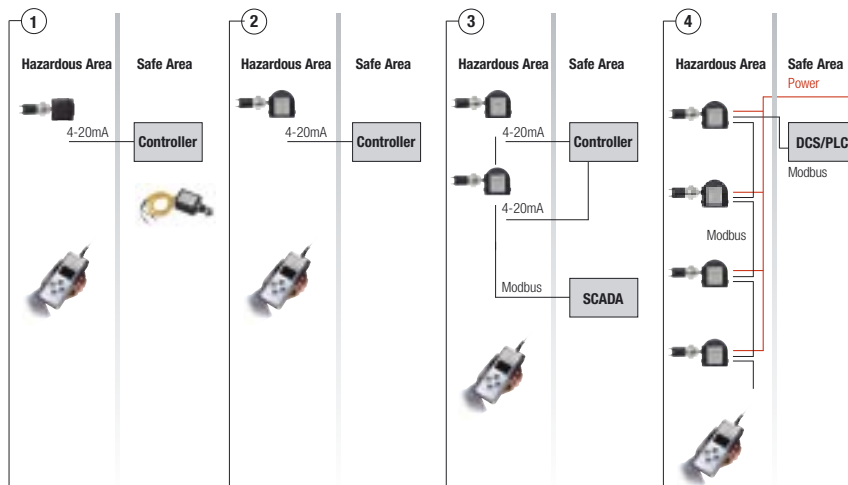
Diagnostics (and re-calibration) Via certified Hand Held Interrogator

Safety approvals
 ATEX,
 Ex II 2 G EEx d IIC T5 (T_{amb} -40°C to +55°C)
 T4 (T_{amb} -40°C to +65°C)
 UL/CSA Class 1, Div 1, groups B, C, and D (-40°C to +65°C)
 GOST and SAA

Performance approvals EN50054, EN50057, CSA C22.2 152.

EMC compliance EN 50270

Installation Options



As World leaders in gas detection solutions, Honeywell Analytics' Sieger systems provide the most efficient, practical and cost-effective fixed-point equipment. Wherever protection is required from flammable or toxic gases, you can rely on our equipment to provide practical solutions and to help keep your business running safely and profitably.

The Sieger range of fixed gas detection



Apex

Typically used in the oil and gas distribution, petroleum extraction and chemical manufacturing industries, the Apex gas detector can detect a wide range of flammable and toxic gases. With its rugged 316 stainless steel enclosure, it is especially suited for extreme conditions, and provides a cost-effective gas detection solution for a wide range of applications.



Searchline Excel

Searchline Excel is a open path infrared gas detector designed for the detection of hydrocarbon gases across open spaces of up to 200 metres. Clearshield glass coating, infrared beam and heated optical surfaces all combine to provide high sensitivity and fast response times that dramatically reduce downtime and increase system availability.



Searchpoint Optima Plus

Designed for use in potentially explosive atmospheres in harsh environmental conditions, Searchpoint Optima Plus is ideal where speed of response, reduced maintenance and failsafe operation is essential. Common applications include offshore platforms, production storage and offloading vessels, and oil and gas terminals.



Sensepoint

Sensepoint gas detection sensors are designed for the detection of combustible or toxic gases in very harsh, aggressive environments. An extremely rugged, high performance, polymer sensor housing contains proven sensing elements which require very little maintenance, and are designed to give years of service before simple replacement. Sensepoint offers ingress protection with IP66 / 67 approval and is fully certified to the latest International and European ATEX safety and performance standards.

A high temperature version is also available.



System 57

The System 57 controller provides display and alarm facilities for the full range of gas detectors and a wide range of fire detection products. Packaged in either wall mounting cabinets or panel mounting racks, System 57 can be used standalone or integrated into a fire and gas system.

Find out more

www.honeywellanalytics.com

Customer business centre Europe and the rest of the world

Honeywell Analytics AG
Wilstrasse 11-U11
CH-8610 Uster
Switzerland
Tel: +41 (0)44 943 4300
Fax: +41 (0)44 943 4398
sales@zelana.co.uk

Customer business center Americas

Honeywell Analytics Distribution, Inc.
400 Sawgrass Corporate Pkwy
Suite 100
Sunrise, FL 33325
USA
Tel: +1 954 514 2700
Toll free: +1 800 538 0363
Fax: +1 954 514 2784
sales@zelana.com

www.honeywell.com

Please Note:

While every effort has been made to ensure accuracy in this publication, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards, and guidelines. This publication is not intended to form the basis of a contract.
© 2006 Honeywell Analytics

H_Searchpoint Optima Plus_DS0276_V1
01/06
© 2006 Honeywell Analytics

Honeywell