



**Advanced infrared
point gas detector**

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: European (ATEX), UL, CSA, IECEx and more

Market leading point infrared Hydrocarbon gas detector offering proven performance and sensitivity

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 petrochemical 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 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, for example; 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, refineries, solvent printing and coating plants.

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



HART
COMMUNICATION PROTOCOL

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 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

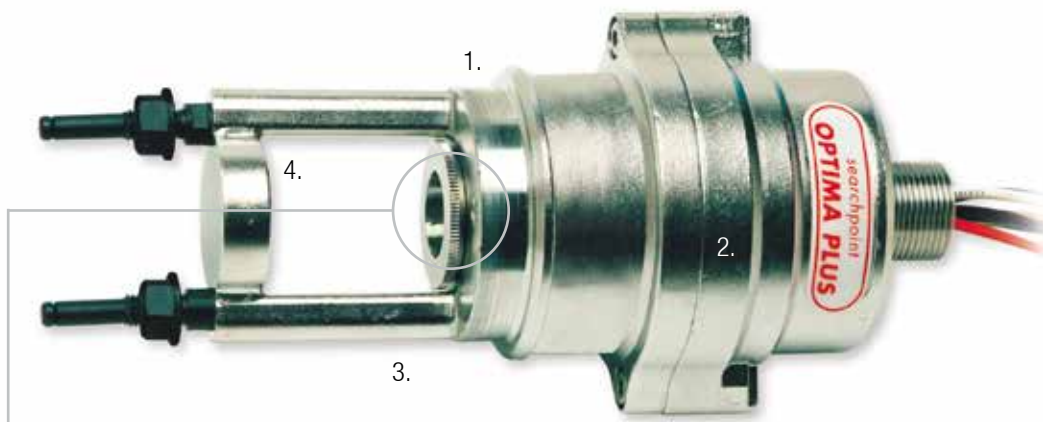
Heated optic components, monitored via smart electronics, eliminate condensation build up with power saving features.

4. Remote Gassing Cell

Factory 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

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

SNX Universal Transmitter

This device offers a local display and non-intrusive access via a magnetic switch. It has a HART® communications output and optional Modbus, Foundation Fieldbus or relays.



HALO Junction Box

This is an Ex e certified junction box, with an LED light ring to provide a local visual status indication, and an optional non-intrusive HART® interface.



Other Accessories



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.

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

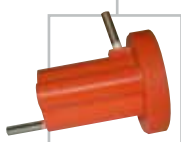
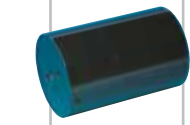
This barrier fitted inside the standard weather protection provides additional protection against the ingress of dust and contamination entering the optical path.

Gassing Cover

The gassing cover 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.

Calibration Cap

The calibration cap is required to achieve accurate calibration of the Searchpoint Optima Plus.



Accessories



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.

Termination / Mounting



Certified Junction Boxes

A full range of hazardous area certified Ex e and Ex d junction boxes are available.



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.

HART[®] COMMUNICATION PROTOCOL

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 analogue 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 also 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 means that users can 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.

Searchpoint Optima Plus' HART[®] interface speaks the language of gas detection

Searchpoint Optima Plus' HART[®] user interface is designed for gas detection using familiar terminology. Honeywell Analytics' engineers have designed the Device Description (DD) file to provide easy to understand messaging on HART[®] host devices, guiding the user through operations and eliminating time wasted referring to manuals to "decode" generic HART[®] messages.

Searchpoint Optima Plus and its DD file are registered with the HART[®] Communication Foundation, having passed the Foundation's rigorous test program.

Available functions:

- View gas reading, configuration and diagnostic information
- Bump test
- mA loop calibration
- Gas calibration
- Simulate alarm, fault or warning
- Set device tag, ID and description
- View active warnings / faults and event history
- Force mA output to a set level for testing
- Configure real time clock
- Configure inhibit, warning and overrange levels
- Configure alarm threshold
- Change target gas
- Password protected access

Benefits of using HART[®]

- Access full information from Searchpoint Optima Plus, anywhere in the current loop
- No associated infrastructural costs, unlike some other communications protocols; additional communication is achieved without the need for extra cabling
- Save on set up costs by eliminating the need for proprietary handheld devices
- Save on long-term costs by enabling proactive not reactive maintenance
- Save a field engineer investigation trip - "know before you go"

Technical Summary

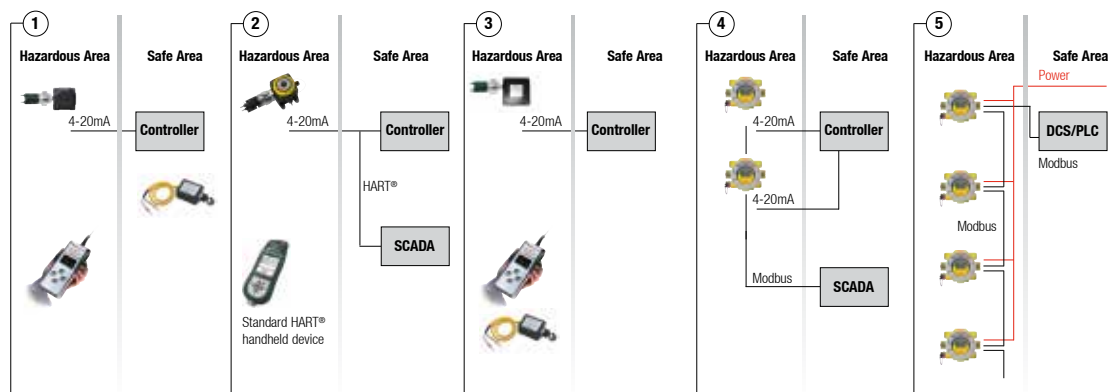


Searchpoint Optima Plus Specification

Measuring Range	0-100% LEL, wide selection of Hydrocarbon gas and vapour calibrations. Different measuring ranges and solvent calibrations available for specialist applications	
Signal Output	4-20mA autosensing sink or source	
Inhibit	1-3mA (Default 2mA)	
Warning	0-6mA (Default 3mA *)	
Fault	0mA (HART® units adjustable to 1mA)	
Over Range	20-21.5mA (Default 21mA)	
Digital Output	Optional Multidrop Modbus RS485 (via XNX, Optional HART® over 4-20mA output (HART® version 7)	
Material	316 stainless steel	
Weight	1.6kg	
Accuracy	Optima Plus (Hydrocarbon) Baseline < ±1% FSD, 50% FSD <±2% FSD Optima Plus (Ethylene) Baseline < ±2% FSD, 50% FSD <±3% FSD	
Repeatability	< ±2% FSD at 50% FSD	
Linearity	< 5% FSD	
Response Time	T50 < 3 seconds, T90 < 4 seconds (methane)	
Operational and Certified**	-40°C to +65°C temperature range **CU-TR-EX (Russia) Approval – XTC Version, Certified Temperature Range -60°C to + 65°C	
Long Term Stability (as defined in EN 60079-29-1)	Baseline	Methane 100 %LEL Range: ≤ ± 2 %FSD Ethylene 100 %LEL Range: ≤ ± 4 %FSD
	50 %FSD	Methane 100 %LEL Range: ≤ ± 4 %FSD Ethylene 100 %LEL Range: ≤ ± 5 %FSD
Drift Over Temperature Range (-40 °C to 65 °C)	Baseline	≤ ± 2 %FSD
	50 %FSD	Methane 100 %LEL Range: ≤ ± 0.131 %FSD per °C Ethylene 100 %LEL Range: ≤ ± 0.078 %FSD per °C
Variation with Pressure	0.1% (of reading) per mbar	
Power Supply	18-32Vdc (24Vdc nom), < 4.5W max	
Environmental Protection	IP 66 / 67	
Diagnostics (and Re-calibration)	Via certified Hand-held Interrogator, XNX or optional HART® communications	
Safety Approvals	ATEX: Baseefa13ATEX0296X Ⓜ II 2 GD Ex d op is IIC Gb Ex tb IIIC Db T96°C (T _{amb} -40°C to +65°C) T86°C (T _{amb} -40°C to +55°C) IP 66/67 UL / CSA: Class 1, Div 1, groups B, C, and D (-40°C to +65°C) IECEx: II 2 GD Ex d op is IIC Gb Ex tb IIIC Db T86°C (T _{amb} -40°C to +55°C) or T96°C (T _{amb} -40°C to +65°C) IP66/67 CU-TR-EX (Russian Customs Union) - XTC Version 1Ex d op is IIC T5/T4 Gb X (T _{amb} -60°C to +65°C)	
Performance Approvals	EN 60079-29-1 (BVS 03 ATEX G 016 X), CSA C22.2 152., FM ANSI/ISA-12.13.01., Russian Pattern Approval (Metrology) - XTC Version ***	
Functional Safety	IEC61508 Safety Integrity Level 2	
EMC Compliance Software	EN 50270:2006 EN 50271:2010	
Marine Approvals	Marine Equipment Directive (MED), type approvals from DNV, BV, ABS, Lloyd's Register	

* Note for ATEX compliance the warning value should not be set between 3 and 5mA
 *** Please refer to manual for full information

Installation Options



Honeywell Analytics Gas Detection



Honeywell Analytics is able to provide gas detection solutions to meet the requirements of all applications and industries. Contact us in the following ways:

Headquarters

Europe, Middle East, Africa

Life Safety Distribution AG

Javastrasse 2

8604 Hegnau

Switzerland

Tel: +41 (0)44 943 4300

Fax: +41 (0)44 943 4398

gasdetection@honeywell.com

Customer Service:

Tel: 00800 333 222 44 (Freephone number)

Tel: +41 44 943 4380 (Alternative number)

Fax: 00800 333 222 55

Middle East Tel: +971 4 450 5800 (Fixed Gas Detection)

Middle East Tel: +971 4 450 5852 (Portable Gas Detection)

Americas

Honeywell Analytics Distribution Inc.

405 Barclay Blvd.

Lincolnshire, IL 60069

USA

Tel: +1 847 955 8200

Toll free: +1 800 538 0363

Fax: +1 847 955 8210

detectgas@honeywell.com

Asia Pacific

Honeywell Analytics

Asia Pacific

#701 Kolon Science Valley (1)

43 Digital-Ro 34-Gil, Guro-Gu

Seoul 152-729

Korea

Tel: +82 (0) 2 6909 0300

Fax: +82 (0) 2 2025 0388

India Tel: +91 124 4752700

analytics.ap@honeywell.com

Technical Support Centres

Honeywell Analytics Ltd.

4 Stinsford Road

Nuffield Industrial Estate

Poole, Dorset, BH17 0RZ

United Kingdom

Tel: +44 (0) 1202 645 544

Fax: +44 (0) 1202 645 555

Honeywell Analytics

ZAC Athélia 4 - 375 avenue du Mistral

Bât B, Espace Mistral

13600 La Ciotat

France

Tel: +33 (0) 4 42 98 17 75

Fax: +33 (0) 4 42 71 97 05

Honeywell Analytics

Elsenheimerstrasse 43

80687 München

Germany

Tel: +49 89 791 92 20

Fax: +49 89 791 92 43

Honeywell Analytics

P.O. Box-45595

6th Street

Musaffah Industrial Area

Abu Dhabi

UAE

Tel: +971 2 554 6672

Fax: +971 2 554 6672

EMEA: HAexpert@honeywell.com

US: ha.us.service@honeywell.com

AP: ha.ap.service@honeywell.com

www.honeywellanalytics.com

www.raesystems.com

Honeywell Analytics
Experts in Gas Detection

BWF
Technologies
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06/15

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СЕРТИФИКАТ СООТВЕТСТВИЯ



№ ТС RU C-US.ГБ08.В.01294

Серия RU № 0303500

ОРГАН ПО СЕРТИФИКАЦИИ ВЗРЫВОЗАЩИЩЕННОГО ОБОРУДОВАНИЯ ЗАО ИСПЫТАТЕЛЬНОГО ЦЕНТРА ТЕХНИЧЕСКИХ ИЗМЕРЕНИЙ, БЕЗОПАСНОСТИ И РАЗРАБОТОК (ОС ВО ЗАО ТИБР), аттестат аккредитации № РОСС RU.0001.11ГБ08, срок действия с 15.06.2011 по 15.06.2016, выдан Федеральным Агентством по техническому регулированию и метрологии. Адрес: 105082, город Москва, улица Фридриха Энгельса, дом 75, строение 11, офис 204, Россия (юридический адрес); 301760, Тульская область, город Донской, улица Горноспасательная, дом 1, строение А, Россия (фактический адрес). Телефон/факс: (48746) 5-59-53, адрес электронной почты: pmv@tiber.ru

ЗАЯВИТЕЛЬ ЗАО «Хоневелл», ОГРН 1027739067168
Адрес: 121059, город Москва, улица Киевская, дом 7, Россия
Телефон: +74957969800, +74957969801, факс: +74957969893
адрес электронной почты: info.ru@honeywell.com

ИЗГОТОВИТЕЛЬ Honeywell International Inc.
Адрес: 9680 Old Bales Road Fort Mill, SC 29707, США
Перечень предприятий-изготовителей продукции, на которую распространяется действие сертификата соответствия, смотри приложение бланк № 0241338

ПРОДУКЦИЯ
Газоаналитическое оборудование типы, смотри приложение бланк № 0241339.
Серийный выпуск.

КОД ТН ВЭД ТС 9027 10 100 0, 9027 90 800 0

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ Технического регламента Таможенного союза
«О безопасности оборудования для работы во взрывоопасных средах» ТР ТС 012/2011

СЕРТИФИКАТ ВЫДАН НА ОСНОВАНИИ Протокол испытаний № 1334/1332-Ex от 18.08.2015, ИЛ ВО ЗАО ТИБР, номер аттестата аккредитации РОСС RU.0001.21ГБ08 от 15.06.2011 по 15.06.2016. Адрес: 301760, Тульская область, город Донской, улица Горноспасательная, дом 1, строение А, Россия, акт анализа состояния производства изготовителя № 1105/АСП от 26.05.2015

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Условия и сроки хранения, срок службы согласно сопроводительной технической документации изготовителя. Схема оценки (подтверждения) соответствия 1с. Сертификат действителен только с приложением (бланки № 0241338, 0241339, 0241340, 0241341, 0241342, 0241343, 0241344).

СРОК ДЕЙСТВИЯ С 25.09.2015 **ПО** 24.09.2020 **ВКЛЮЧИТЕЛЬНО**

Руководитель (уполномоченное
лицо) органа по сертификации

(подпись)

Д.С. Подсевалов
(инициалы, фамилия)

Эксперт (эксперт-аудитор)
(эксперты (эксперты-аудиторы))

(подпись)

М.В. Пономарев
(инициалы, фамилия)

ПРИЛОЖЕНИЕ

Лист 1

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ТС RU C-US.ГБ08.В.01294

Серия RU № 0241338

Перечень предприятий-изготовителей продукции, на которую распространяется действие сертификата соответствия:

Полное наименование заводов-изготовителей	Адрес (место нахождения)
Honeywell Analytics Ltd	Hatch Pond House, 4 Stinsford Road, Poole, Dorset BH17 0RZ, Соединенное королевство Великобритании и Северной Ирландии
Honeywell Analytics Inc	405 Barclay Boulevard, Lincolnshire, Illinois 60069, Соединенные Штаты Америки
Honeywell Analytics Asia Pacific Co., Ltd.	#701 Kolon Science Valley(1), 43 Digital-Ro 34-Gil, Guro-Gu Seoul, 152-729, Республика Корея
Honeywell Analytics Ltd	Chonan Factory 56, Chaam-dong, Cheonan-City, Choongcheongnam-do, 330-200, Республика Корея
Sesung Co. Ltd	743-103 Eoro-2-ri, Buksam-eup, Chilgok-gun, Gyeong-sangbuk-do, , Республика Корея
Jianhui Plastic & Electronic Industry (Shenzhen) Co. Ltd.	No. 127, Sili Road, Guanlan Town, Bao'an District, Shenzhen, Guangdong, 518110, Китай



Руководитель (уполномоченное
лицо) органа по сертификации

(подпись)

Эксперт (эксперт-аудитор)
(эксперты (эксперты-аудиторы))

(подпись)

Д.С. Подсевалов

(инициалы, фамилия)

М.В. Пономарев

(инициалы, фамилия)

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ №ТС RU C-US.ГБ08.В.01294

Серия RU № **0241339**


Перечень продукции, на которую распространяется действие сертификата соответствия

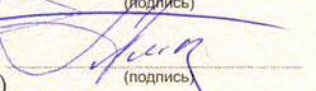
Код ТН ВЭД ТС	Наименование, типы, марки, модели однородной продукции, составные части изделия или комплекса	Обозначение документации, по которой выпускается продукция
9027 10 100 0, 9027 90 800 0	1. Трансмиттер XNX, XNX ХТС с маркировкой взрывозащиты и защиты от воспламенения горючей пыли 1Ex db IIC T4/T6 X 1Ex db [ia IIC] IIC T4/T6 X Ex tb [ia IIIС] IIIС T85 X Ex tb IIIС T85°C X	техническая документация изготовителя
9027 10 100 0, 9027 90 800 0	2. Трансмиттер Sensepoint XCD с маркировкой взрывозащиты и защиты от воспламенения горючей пыли 1 Ex db IIC T6 X или 1 Ex db IIC T5 X, Ex tb IIIС T85°C X или Ex tb IIIС T100°C X	техническая документация изготовителя
9027 10 100 0, 9027 90 800 0	3. Инфракрасный точечный детектор Searchpoint Optima Plus, Searchpoint Optima Plus ХТС с маркировкой взрывозащиты и защиты от воспламенения горючей пыли 1 Ex db op isb IIC T86°C/T96°C X Ex tb IIIС T86°C/T96°C X	техническая документация изготовителя
9027 10 100 0, 9027 90 800 0	4. Датчик XCD с маркировкой взрывозащиты и защиты от воспламенения горючей пыли 1 Ex db IIC T6 или 1 Ex db IIC T4 Ex tb IIIС T85°C или Ex tb IIIС T135°C	техническая документация изготовителя
9027 10 100 0, 9027 90 800 0	5. Датчик MPD с маркировкой взрывозащиты и защиты от воспламенения горючей пыли 1 Ex db IIC T6 X Ex tb IIIС T85°C X	техническая документация изготовителя
9027 10 100 0, 9027 90 800 0	6. Датчик S3KX/XNXX 0 Ex ia IIC T4 X Ex ia IIIС T135°C X	техническая документация изготовителя
9027 10 100 0, 9027 90 800 0	7. Датчик Sensepoint HT с маркировкой взрывозащиты и защиты от воспламенения горючей пыли 1 Ex db IIC T3 X Ex tb IIIС T200°C X	техническая документация изготовителя



Руководитель (уполномоченное лицо) органа по сертификации

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы))


 (подпись)


 (подпись)

Д.С. Подсевалов
(инициалы, фамилия)

М.В. Пономарев
(инициалы, фамилия)

ПРИЛОЖЕНИЕ

Лист 3

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ТС RU C-US.ГБ08.В.01294

Серия RU № 0241340

Сведения о национальных стандартах (сводах правил), применяемых на добровольной основе для соблюдения требований технических регламентов

Обозначение национального стандарта или свода правил	Наименование национального стандарта или свода правил	Подтверждение требованиям национального стандарта или свода правил
ГОСТ Р МЭК 60079-0-2011	Взрывоопасные среды. Часть 0. Оборудование. Общие требования	стандарт в целом
ГОСТ IEC 60079-1-2013	Взрывоопасные среды. Часть 1. Оборудование с видом взрывозащиты «взрывонепроницаемые оболочки «d»	стандарт в целом
ГОСТ Р МЭК 60079-11-2010	Взрывоопасные среды. Часть 11. Искробезопасная электрическая цепь «i»	стандарт в целом
ГОСТ IEC 60079-31-2013	Взрывоопасные среды. Часть 31. Оборудование с защитой от воспламенения пыли оболочками «t»	стандарт в целом
ГОСТ 31610.26-2012	Взрывоопасные среды. Часть 26. Оборудование с уровнем взрывозащиты оборудования Ga	стандарт в целом
ГОСТ 31610.28-2012	Взрывоопасные среды. Часть 28. Защита оборудования и передающих систем, использующих оптическое излучение	стандарт в целом



Руководитель (уполномоченное лицо) органа по сертификации

Эксперт (эксперт-аудитор)
(эксперты (эксперты-аудиторы))

(Handwritten signature)
(подпись)

(Handwritten signature)
(подпись)

Д.С. Подсевалов
(инициалы, фамилия)

М.В. Пономарев
(инициалы, фамилия)

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ТС RU C-US.ГБ08.В.01294

Серия RU № 0241341

1. Назначение и область применения.

Газоаналитическое оборудование предназначено для контроля содержания в воздухе кислорода, горючих и токсичных газов и их паров на различных промышленных объектах.

Газоаналитическое оборудование предназначено для применения во взрывоопасных зонах в соответствии с присвоенной маркировкой взрывозащиты и защиты от воспламенения горючей пыли.

2. Описание конструкции и средств обеспечения взрывозащиты.

2.1. **Трансмиттер XNX, XNX XTC** представляют собой взрывонепроницаемый корпус, в котором размещены электронные компоненты и искробезопасные барьеры. В корпусе выполнены пять отверстий (неиспользуемые закрываются заглушкой M25) и смотровое окно для наблюдения за показаниями дисплея (мониторинг и калибровка прибора).

2.2. **Трансмиттер Sensepoint XCD** представляют собой взрывонепроницаемый корпус (алюминиевый сплав или нержавеющая сталь), в котором размещены электронные компоненты. В корпусе выполнены технологические отверстия (неиспользуемые закрываются заглушками) и смотровое окно для наблюдения за показаниями дисплея (мониторинг и калибровка прибора).

2.3. **Инфракрасный точечный детектор Searchpoint Optima Plus, Searchpoint Optima Plus XTC** представляет собой цилиндрический корпус, изготовленный из нержавеющей стали. В корпусе установлена плата оптического узла. На корпусе нанесены предупредительные надписи, предупреждающие о том, что открытие корпуса опасно даже при отключенном питании (опасность разогретых частей и заряженных конденсаторов).

2.4. **Датчик XCD** выполнен в корпусе из нержавеющей стали. В корпусе выполнены (встроенные) штекерные разъемы. Корпус состоит из двух частей которые скреплены зажимным кольцом со стопорным винтом. Внутри корпуса размещены электронные компоненты.

2.5. **Датчик MPD** представляют собой взрывонепроницаемый корпус (нержавеющая сталь), в котором размещены электронные компоненты. Используется термокаталитический или инфракрасный датчик. Подключение к датчику как прямое так и дистанционное.

2.6. **Датчик S3KX/XNXX** корпус датчика выполнен из алюминия, в котором размещены три платы.

2.7. **Датчик Sensepoint HT** представляет собой цилиндрический корпус, изготовленный из нержавеющей стали, в которую вкручивается крышка (представляет собой агломерат из нержавеющей стали для облегчения проникновения пробы газа). Задняя часть представляет собой резьбу (и постоянно присоединённый кабель). Две половинки корпуса закрыты с резьбовым соединением и затем заполняют эпоксидной смолой.

3. Специальные условия применения (если в маркировке взрывозащиты указан знак «X»)**3.1. Трансмиттер XNX, XNX XTC**

- исполнения с барьером HART не может быть подключено с максимальными параметрами индуктивности и емкости одновременно (параметры должны соответствовать ГОСТ Р МЭК 60079-11-2010);
- корпус XNX окрашен неметаллической краской и на нем может образовываться заряд статического электричества. Пользователь должен убедиться, что оборудование не установлено в месте, где оно может быть подвергнуто внешним условиям, которые могут вызвать накопление электростатического заряда на непроводящей поверхности. Кроме того, очистка оборудования должны выполняться только с помощью влажной ткани;
- контрольные испытания для трансформаторов используемых в барьерах по ГОСТ Р МЭК 60079-11-2010 (глава 11.2). Должно быть приложено 1500В между входом и выходом обмотки в течение 60 секунд или кроме того, тест может быть осуществлен при минимуме 1800В в течение 1 секунды;
- для определения соответствующего температурного класса смотри эксплуатационную документацию.
- температуру окружающей среды при эксплуатации смотри эксплуатационную документацию.

3.2. Трансмиттер Sensepoint XCD – отсутствуют

Руководитель (уполномоченное
лицо) органа по сертификации

(подпись)

Эксперт (эксперт-аудитор)
(эксперты (эксперты-аудиторы))

(подпись)

Д.С. Подсевалов

(инициалы, фамилия)

М.В. Пономарев

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К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ТС RU C-US.ГБ08.В.01294

Серия RU № 0241342

3.3. Инфракрасный точечный детектор Searchpoint Optima Plus, Searchpoint Optima Plus XTC

- отходящие провода должны быть должным образом защищены (от наведенного напряжения и повреждения), подключение проводов только в сертифицированной коробке;
- замена крепежных винтов только на винты рекомендованные производителем (по рекомендации производителя);
- оптическое излучение должно быть ограничено мощностью излучения менее 35 мВт и пиковой плотностью мощности меньше, чем 5 мВт/мм² по ГОСТ 31610.28-2012;
- следует соблюдать рекомендации по установке для соблюдения размеров взрывонепроницаемых соединений

Соединение	Максимальный зазор, мм	Минимальная длина зазора, мм
корпус и окно	0,15	18,05

- для определения соответствующего температурного класса смотри эксплуатационную документацию.
- температуру окружающей среды при эксплуатации смотри эксплуатационную документацию.

3.4. Датчик XCD

- отходящие провода должны быть должным образом защищены (от наведенного напряжения и повреждения), подключение проводов только в сертифицированной коробке;
- при подключении датчика следует обращать внимание на то чтоб обеспечить минимальную длину резьбы (у резьбы корпуса выполнен подрез (фаска) 3 мм шириной);
- должно быть предусмотрено выравнивание потенциалов;
- зазор патрон датчика/корпус равен 0,35 мм, это значение не должно контролироваться в процессе эксплуатации (не должно быть увеличено);
- для определения соответствующего температурного класса смотри эксплуатационную документацию.
- температуру окружающей среды при эксплуатации смотри эксплуатационную документацию.

3.5. Датчик MPD

- положение датчика при установке в соответствии с инструкцией.

3.6. Датчик S3KX/XNXX

- корпус изготовлен из алюминия, при установке в зоне «0» следует принять дополнительные меры, чтоб избежать опасности воспламенения в результате удара или трения;
- для определения соответствующего температурного класса смотри эксплуатационную документацию.
- температуру окружающей среды при эксплуатации смотри эксплуатационную документацию.

3.7. Датчик Sensepoint HT

- отходящие провода должны быть должным образом защищены (от наведенного напряжения и повреждения), подключение проводов только в сертифицированной коробке;
- должно быть предусмотрено выравнивание потенциалов;
- положение датчика при установке в соответствии с инструкцией.



Руководитель (уполномоченное
лицо) органа по сертификации

(подпись)

Эксперт (эксперт-аудитор)
(эксперты (эксперты-аудиторы))

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Д.С. Подсевалов
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ПРИЛОЖЕНИЕ

Лист 6

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ТС RU C-US.ГБ08.В.01294

Серия RU № **0241343**

4. Маркировка.

- 4.1. Маркировка, наносимая на оборудование должна включать следующие данные:
- 4.2. Наименование изготовителя или его зарегистрированный товарный знак;
- 4.3. Обозначение типа оборудования;
- 4.4. Заводской номер;
- 4.5. Номер сертификата соответствия;
- 4.6. Маркировку взрывозащиты и защиты от воспламенения горючей пыли;
- 4.7. Специальный знак взрывобезопасности, установленный в ТР ТС 012/2011 (приложение 2);
- 4.8. Необходимые технические параметры и предупредительные надписи.

5. Основные технические данные.

5.1. Трансмиситтер XNX, XNX ХТС

- 5.1.1. Температура окружающей среды, °С.....от минус 40 (минус 60 для ХТС) до +65
- 5.1.2. Степень защиты по ГОСТ 14254.....IP65/IP66
- 5.1.3. Напряжение питания, В.....18÷32
- 5.1.4. Электрические параметры реле
 - напряжение питания, В AC..... 250
 - напряжение питания, В DC..... 30
 - сила тока, А 5
- 5.1.5. Максимальное входное напряжение барьера Um, В 250

5.1.6. Искробезопасные параметры Hart-цепей и барьеров

Искробезопасные параметры Hart-цепей				Выходные искробезопасные параметры барьеров	
Uo, В	24,15	Ui, В	21,85	Uo, В	5,88
Io, мА	136	Ii, мА	120	Io, мА	84
Ро, Вт	0,83	Pi, Вт	1	Ро, Вт	0,123
Lo, мГн	1,4	Li, мкГн	0	Lo, мГн	10
Co, мкФ	0,122	Сi, мкФ	0	Co, мкФ	1

5.1.7. Соответствие температурного класса

- T4..... при использовании с датчиком MPD
 T6..... все остальные датчики

5.2. Трансмиситтер Sensepoint XCD

- 5.2.1. Температура окружающей среды, °С
 - T6 или T85°С.....от минус 40 до +65
 - T5 или T100°С.....от минус 40 до +75
- 5.2.2. Степень защиты по ГОСТ 14254.....IP66
- 5.2.3. Напряжение питания, В..... 32
- 5.2.4. Мощность, Вт..... 3,5

5.3. Инфракрасный точечный детектор Searchpoint Optima Plus, Searchpoint Optima Plus ХТС

- 5.3.1. Температура окружающей среды, °С
 - T86°С.....от минус 40 (минус 60 для ХТС) до +55
 - T96°С.....от минус 40 (минус 60 для ХТС) до +65
- 5.3.2. Степень защиты по ГОСТ 14254.....IP66/IP67
- 5.3.3. Напряжение питания, В..... 18÷32
- 5.3.4. Максимальная потребляемая мощность, Вт..... 4,5
- 5.3.5. Текущий ток
 - <235 мА 18В
 - <190 мА 24В
 - <155 мА 32В



Руководитель (уполномоченное лицо) органа по сертификации

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы))

(подпись)
 (подпись)

Д.С. Подсеголов
 (инициалы, фамилия)

М.В. Пономарев
 (инициалы, фамилия)

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ТС RU C-US.ГБ08.В.01294

Серия RU № 0241344

5.3.6. Выходные сигналы, мА 4÷20

5.4. Датчик XCD

5.4.1. Температура окружающей среды, °C

 T6 или T85°C от минус 40 до +65

 T4 или T135°C от минус 40 до +75

5.4.2. Степень защиты по ГОСТ 14254 IP6X

5.4.3. Электрические параметры

 U, В 4

 I, мА 250

 P, Вт 1

5.5. Датчик MPD

5.5.1. Температура окружающей среды, °C от минус 40 до +65

5.5.2. Степень защиты по ГОСТ 14254 IP66

5.5.3. Электрические параметры

MPD-CB1

U=2,42В до 2,9В (при I=200 мА), I=200мА, Pmax=600 мВт

MPD-IV1, MPD-IF1, MPD-IC1

U=3В до 5В, I=75÷85мА, Pmax=500 мВт

5.6. Датчик S3KX/XNXX

5.6.1. Температура окружающей среды, °C от минус 40 до +55

5.6.2. Степень защиты по ГОСТ 14254 IP66

5.6.3. Электрические параметры

 Ui, В 21,85

 Ii, мА 120

 Pi, Вт 1

 Li, мкГн 0

 Ci, мкФ 0

5.7. Датчик Sensepoint HT

5.7.1. Температура окружающей среды, °C от минус 55 до +150

5.7.2. Степень защиты по ГОСТ 14254 IP66

5.7.3. Напряжение питания, В 18÷30

5.7.4. Максимальная потребляемая мощность, Вт 0,9

5.7.5. Выходной сигнал, мА 4÷20

При внесении изготовителем в конструкцию и (или) техническую документацию, подтверждающую соответствие оборудования и (или) Ех-компонента требованиям ТР ТС 012/2011, изменений, влияющих на показатели взрывобезопасности оборудования, он должен предоставить в ОС ВО ЗАО ТИБР, описание изменений, техническую документацию (чертежи средств обеспечения взрывозащиты) с внесенными изменениями и образец для проведения дополнительных испытаний, если ОС ВО ЗАО ТИБР считает недостаточным проведение только экспертизы технической документации с внесенными изменениями для принятия решения о соответствии оборудования и (или) Ех-компонента ТР ТС 012/2011 с внесенными изменениями.



Руководитель (уполномоченное лицо) органа по сертификации

(подпись)

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы))

(подпись)

Д.С. Подсевалов

(инициалы, фамилия)

М.В. Пономарев

(инициалы, фамилия)



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product. This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 30/OCT/2017. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 10/MAR/2021 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Product Name: Gas Detector, Infrared
Model Name(s): Searchpoint Optima Plus (with optional HART) Infrared Point Gas Detector

Presented to:
HONEYWELL ANALYTICS
HATCHPOND HOUSE, 4 STINSFORD ROAD
NUFFIELD INDUSTRIAL ESTATE
United Kingdom

Intended Service: For use on ABS Classed Vessels and Offshore Facilities in accordance with the listed ABS Rules and International Standards

Description: Advanced infrared point gas detector certified for use in potentially explosive atmospheres

Ratings: Power Supply: 18-32V DC (24V nom), 4.5W max, 4-20mA sink or source output
Temperature range -40C to +65C, IP66/67 Explosion proof types certified: IECEx: II 2 GD Ex d op is IIC Gb Ex tb IIIC Db T86°C (Tamb -40°C to +55°C) or T96°C (Tamb -40°C to +65°C) IP66/67

Service Restrictions: Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments: Each application is to be specifically approved and in accordance with the type of protection and markings as indicated on the corresponding IECEx Certificate of Conformity. Special conditions for safe use in accordance with Certificate IECEx BAS 13.0069X: 1. The integral leads must be suitably terminated and protected from impact 2. For replacement purposes the cover fixing screws shall be grade A4-80 minimum. 3. Optical power through the Search point Optima Plus is to be

limited to a radiated power of less than 35mW and a peak power density of less than 5mW/mm2 as defined by IEC 60079-28 The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes / Documentation:

Drawing No. 2108E0036, Cert DRG searchpoint optima plus assembly, Revision: 7, Pages: 1 Drawing No. 2108E0037, Cert DRG casing casing searchpoing optima plus, Revision: 3, Pages: 1 Drawing No. 2108E0038, Cert Brawing searchpoing optics head optima plus, Revision: 1, Pages: 1 Drawing No. 2108E0039, cert drawing optima plus accessories, Revision: 7, Pages: 1 Drawing No. 2108E0042, Cert DRG S'point optima plus clearance between body and protective cover, Revision: 1, Pages: 1 Drawing No. 2108E0044, Cert DRG searchpoing optima 2 alternative assembly, Revision: 2, Pages: 1 Drawing No. 2108E0045, cert label consilium trade mark ATEX/IECEX, Revision: 0, Pages: 1 Drawing No. GB/BAS/ExTR13.0148/00, Optima Plus IECEx Test Report GB, Revision: 0, Pages: 7 Drawing No. GB/BAS/ExTR14.0253/00, Optima Plus IECEx Test Report GB, Revision: 0, Pages: 4 Drawing No. IECEx BAS 13.0069X issue 0, Optima Plus IECEx CofC IECEx BAS 13, Revision: 0, Pages: 4 Drawing No. IECEx BAS 13.0069X issue 1, Optima Plus IECEx CofC IECEx BAS 13, Revision: 0, Pages: 4 Drawing No. IECEx BAS 13.0069X issue 2, Optima Plus IECEx CofC IECEx BAS 13, Revision: 0, Pages: 4

Term of Validity:

This Product Design Assessment (PDA) Certificate 16-LD1488737-PDA, dated 11/Mar/2016 remains valid until 10/Mar/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

ABS Rules:


- Steel Vessels (2016): 1-1-4/7.7, 1-1-A3&A4 4-8-3/1.7, 4-8-3/1.11, 4-8-3/13.3.2, 4-8-4/27.5.1 - Steel Vessels Under 90 Meters (295 Feet) in Length (2016): 1-1-4/7.7, 1-1-A3&A4, 4-6-1/11, 4-6-1/15, 4-6-3/11.1.1 (a) Explosion-proof (XP), 4-6-3/11.3.1 (a) - Mobile Offshore Drilling Units (2016): 1-1-4/9.7, 1-1-A2&A3, 4-3-1/3.7, 4-3-1/15, 4-3-3/9.1.2 (b), 4-3-3/9.3.1 - Offshore Support Vessels (2016): 1-1-4/7.7, 1-1-A3&A4 4-8-3/1.7, 4-8-3/1.11, 4-8-3/13.3.2, 4-8-4/29.5.1 - Facilities on Offshore Installations (2016): 1-1-4/9.7, 1-1-A2&A3 - Steel Vessels for Service on Rivers and Intracoastal Waterways (2016): 1-1-4/7.7, 1-1-A3&A4, 4-5-1/3.9, 4-5-1/17, 4-5-3/11.1.1(a) Explosion-proof (XP), 4-5-3/11.3.1(a) - High-Speed Craft (2016): 1-1-4/11.9, 1-1-A2&A3; 4-6-1/3.9, 4-6-3/9.1.1(a) Explosion-proof (XP), 4-6-3/9.1.1(a), 9.3.1 - Steel Barge (2016): 1-1-4/7.9, 1-1-A3&A4

**National Standards:
International Standards:**

IEC 60079-0:2011 Edition 6 IEC 60079-1:2007 Edition 6 IEC 60079-28:2006 Edition 1 IEC 60079-31:2013 Edition 2

**Government Authority:
EUMED:
Others:**

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	16-LD1488737-PDA	11/MAR/2016	10/MAR/2021



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in

class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.



Marine & Offshore
Division

Certificate number: 18830/B1 BV

File number: AP 3798

Product code: 3793H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to

HONEYWELL ANALYTICS Ltd.

POOLE - UNITED KINGDOM

for the type of product

FIXED FLAMMABLE GAS DETECTORS

Searchpoint Optima Plus

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships.

EN/IEC 60079-0 (2011), IEC/EN 60079-1 (2007), IEC/EN 60079-31 (2013).

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 23 Jul 2017

For BUREAU VERITAS,

At BV LONDON, on 17 Dec 2014,

Spencer Yule



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=ej64cpflfs>

BV Mod. Ad.E 530 October 2014

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Searchpoint Optima Plus is an Infrared Point Gas Detector designed to detect flammable gases.

1.1 - Main Characteristics:

Principle	Infrared
Output	4-20 mA (with or without HART protocol)
Power Supply	24 VDC (18-32 VDC)
Software Version	6V2 on all types / versions
Ex marking	Ex d op is IIC T* Gb Ex tb IIIC T* Db *T86°C (Ta -40°C to +55°C) or *T96°C (Ta -40°C to +65°C)

2. DOCUMENTS AND DRAWINGS:

Honeywell:

Installation Guide, MAN0838 Issue 3 05-10

Operating Instructions, MAN0551 Issue 11 04-12

Searchpoint Optima Plus with optional HART® output Operating Instructions 2108M0550 No. MAN905 Issue 5_12/13

Data Sheet Ref. H Searchpoint Optima Plus_DS0276_V9 EMEAI dated 08/13.

3. TEST REPORTS:

TÜV:

Test report dated 08/09/2006, referenced SX614977/01

Test report dated 08/09/2006, referenced SX614977/02

Test report dated 09/2006, referenced OO614977/01

Test report dated 08/09/2006, referenced SJ614977/01.

AQLEMC:

Test report dated 07/10/2003, referenced 1007B/30.

EECS / Baseefa:

SGS Baseefa Replaced with EC-Type Examination Certificate No.: Baseefa13ATEX0296X dated 2014-05-14

EXAM / DEKRA:

EC-Type Examination Certificate No. BVS 03 ATEX G 016X with its 7th Sup. - last update on 14 August 2014 (Testing according to EN60079-29-1 requirements of Optima Plus, Z and X)

IEC:

IECEX Certificate No. IECEX BAS 13.0069X Issue No.:1, dated 2014-09-05.

4. APPLICATION / LIMITATION:

4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships and EN 60079-29-1.

4.2 - Approval also valid for ships to be granted with the notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**

4.3 - Only Hardware and Firmware / Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above products are to be supplied by **HONEYWELL ANALYTICS Ltd.** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320.

5.3 - **HONEYWELL ANALYTICS Ltd.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products :

HONEYWELL ANALYTICS Ltd.
Hatch Pond House, 4 Stinsford Road, Nuffield Estate
POOLE
BH17 ORZ
UNITED KINGDOM

6. MARKING OF PRODUCT:

- According to EN 60079-29-1
- Ex marking as relevant.

7. OTHERS:

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that **HONEYWELL ANALYTICS Ltd., United Kingdom**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This Certificate supersedes the Type Approval Certificate No. 18830/B0 BV issued on 23 Jul 2012 by the Society.

***** END OF CERTIFICATE *****

Type Approval Certificate

This is to certify that the undernoted products have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER	Honeywell Analytics
PLACE OF PRODUCTION	4, Stinsford Road Nuffield Industrial Estate Poole, Dorset, BH17 0RZ United Kingdom (UK)
DESCRIPTION	Infrared gas detectors
TYPE	Searchpoint Optima Plus Optima Z
APPLICATION	For use in environmental category ENV5 as defined in Lloyd's Register Type Approval System Test Specification No. 1: 2002.

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. 13/00025 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No.	13/00025
Issue Date	10 April 2013
Expiry Date	9 April 2018
Sheet	1 of 1

Lloyd's Register EMEA
71 Fenchurch Street, London EC3M 4BS



R.M. Kelkar
London Design Support Office
Lloyd's Register EMEA

Lloyd's Register EMEA
Is a subsidiary of Lloyd's Register Group

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



Certificate of Compliance

Certificate: 1139164 **Master Contract:** 171882
Project: 70021700 **Date Issued:** December 1, 2015
Issued to: Honeywell Analytics Ltd.
Hatch Pond House
4 Stinsford Rd
Nuffield Industrial Estate
Poole, Dorset BH17 0RZ
United Kingdom
Attention: Richard King

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Konstantin Rybalko

Issued by: Konstantin Rybalko

PRODUCTS

- CLASS 4828 81** - SIGNAL APPLIANCES-Combustible Gas Detection Instruments - For Hazardous Location-Certified to U.S. Standards
CLASS 4828 01 - SIGNAL APPLIANCES - - Combustible Gas Detection Instruments-For Hazardous Locations

Class I, Groups B, C and D;

Ex d IIC T5

- "Searchpoint Optima PLUS", Models 2108B2201, 2108B2202, 2108B2201N and 2108B2201H stationary; input rated 32V dc max, 8 Watts, Temp Code T5. May be used with the following accessories; Standard Weather Protection P/N 2108D0276, Sunshade/Deluge Protection P/N 2108D0275, Gassing Cover P/N 2108D0258, Calibration Cap P/N 2108D0272, Flow Housing p/n 2108B0282 and Handheld Interrogator Model



Certificate: 1139164

Master Contract: 171882

Project: 70021700

Date Issued: December 1, 2015

SHC-1 P/N 04233-A-1000 or 04233-A-1001 (Interrogator is for calibration only in a non-hazardous location) or P/N 2104B when used with DX100, DX100I or DX100M Termination Units (suitable for use in the hazardous area when connected per Control Drawing 2104E0097, 2104E0025 or 2104E0016).

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 0-M91 - General Requirements-Canadian Electrical Code, Part II

CSA Std C22.2 No. 30-M1986 - Explosion-Proof Enclosures for Use in Class I Hazardous Locations

CSA Std C22.2 No. 142-M1987 - Process Control Equipment

CSA Std C22.2 No. 152-M1984 - Combustible Gas Detection Instruments

CAN/CSA E-79-0-95 - Electrical apparatus for explosive gas atmospheres, Part 0: General requirements

CAN/CSA E-79-1-95 - Electrical apparatus for explosive gas atmospheres, Part 1: Construction and verification test of flameproof enclosures of electrical apparatus

FM 3600, November 1998 - Electrical Equipment for use in Hazardous (Classified) Locations, General Requirements

FM 3610, October 1998 - Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II & III Division 1 and Class I Zone 0 & 1 Hazardous (Classified) Locations

FM 3615, March 1989 - Explosionproof Electrical Equipment, General Requirements

FM 3810, March 1989 (Including Supplement #1, July 1995) - Electrical and Electronic Test, Measuring and Process Control Equipment

ANSI/ISA-12.13.01-2000 - Performance Requirements for Combustible Gas Detectors



Supplement to Certificate of Compliance

Certificate: 1139164

Master Contract: 171882

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70021700	Dec 1, 2015	Update to report 1139164 for Searchpoint Optima Plus Model 2108 minor components change and software update and testing.
2668114	Oct 21, 2013	HAZ 130400: Update to report 1139164 to add Flow Housing p/n 2108B0282.
2618055	Apr 25, 2013	Update to report 1139164 for revised construction and firmware.
2550485	Aug 16, 2012	Update of report 1139164 to cover software revision from 5V9 to 6V0
2514492	May 8, 2012	Update report 1139164 to revise drawings, construction and certified models listed.
2262061	Dec 17, 2010	Update report to include revised drawings and US Certification.

History

1403995, Aug. 21, 2003, Addition of use with DX100I and DX100M

1139164, Oct. 27, 2000, Original Certification.



Marine & Offshore
Division

Certificate number: 18830/A1 EC

File number: AP 3798

Annex A1 Item number: A.1/3.54

This certificate is not valid when presented without the full
attached schedule composed of 7 sections
www.veristar.com

Notified Body 0062 - MARINE EQUIPMENT DIRECTIVE 96/98/EC

EC TYPE EXAMINATION CERTIFICATE

as per Module B of European Union Council Directive 96/98/EC on marine equipment
as amended by Commission Directive 2013/52/EU

This certificate is issued to

HONEYWELL ANALYTICS Ltd.

POOLE - UNITED KINGDOM

for the type of product

FIXED OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT

Fixed Flammable Gas Detectors - Type: Searchpoint Optima Plus, Optima X and Optima Z

Requirements:

SOLAS 74 convention as amended, Regulations II-2/4, VI/3.

IMO Res. MSC.98(73)-(FSS Code)- as amended by MSC.206(81), MSC.217(82), MSC.292(87), MSC.311(88), MSC.327(90) and MSC.339(91), 15

IMO MSC.1/Circ.1370

IEC 60092-504 (2001) incl. Corr.1 (2011), IEC 60533 (1999)

EN 50104 (2010), EN 60079-29-1 (2007)

IEC 60079-0 (2011) incl. Corr.1 (2012) & Corr.2 (2013)

This certificate is issued on behalf of the French Maritime Authorities to attest that BUREAU VERITAS did undertake the relevant type-examination procedures for the product identified above which was found to comply with the relevant requirements of the Council Directive 96/98/EC of 20 December 1996 as amended.


This certificate will expire on: 16 Oct 2017

For BUREAU VERITAS Notified Body 0062,

At BV LONDON, on 13 Feb 2015,

Spencer Yule



This certificate does not allow to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark ) to the products corresponding to this type. To this end, the production-control phase module (D, E or F) of Annex B of the Directive is to be complied with and controlled by a written inspection agreement with a notified body.

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. BUREAU VERITAS is designated by the French Maritime Authority as a "notified body" under the terms of the French Regulations Division 140 Chapter 140-2. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Searchpoint Optima Plus, Optima X and Optima Z (Type: 2108B2XXYZ) are Infrared Point Gas Detectors designed to detect flammable gases.

1.1 - Main Characteristics:

Principle	Infrared
Output	Optima X: 4-20 mA only Optima Plus & Optima Z: 4-20 mA (with or without HART protocol)
Power Supply	24 VDC (18-32 VDC)
Software Version	4.0/4.1 or 6V2 on all types versions
Ex marking	Ex d op is IIC T* Gb Ex tb IIIC T* Db *T86°C (Ta -40°C to +55°C) or *T96°C (Ta -40°C to +65°C)
Ingress Protection	IP66/67

1.2 - Covered Types:

2108B2XXYZ	XX= 00 (ATEX CE Type) or 02 (ATEX X Type) Y= 1 (Hydrocarbon Type) or 3 (Ethylene Type) Z= H (Optima Plus with HART Protocol Type) or N (Optima Plus without HART Protocol Type)
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2. DOCUMENTS AND DRAWINGS:

Honeywell:

Installation Guide, MAN0838 Issue 3 05-10
 Operating Instructions, MAN0551 Issue 11 04-12
 Searchpoint Optima Plus with optional HART® output Operating Instructions 2108M0550 No. MAN905 Issue 5_12/13
 Data Sheet, Ref. H_Searchpoint Optima Plus_DS0276_V9_EMEAI dated 08/13.
 Drawings No. 2108E0036 Iss. 7, 2108E0037 Iss. 3, 2108E0038 Iss. 1, 2108E0039 Iss. 7 and 2108E0044 Iss. 2.
 Drawings No. 2108E0042 Iss. 1 Protective Cover Details,
 Drawings No. 2108E0045 Iss. 1 Cert Label for Consilium.

3. TEST REPORTS:

TÜV:

Test report dated 08/09/2006, referenced SX614977/01
 Test report dated 08/09/2006, referenced SX614977/02
 Test report dated 09/2006, referenced OO614977/01
 Test report dated 08/09/2006, referenced SJ614977/01

AQLEMC:

Test report dated 07/10/2003, referenced 1007B/30.

EECS / Baseefa:

EC-Type Examination Certificate No.: Baseefa13ATEX0296X dated 2014-05-14.

EXAM / DEKRA:

EC-Type Examination Certificate No. BVS 03 ATEX G 016 X with its 7th Sup., last update on 14 August 2014 (Testing according to EN60079-29-1 requirements of Optima Plus, Z and X).

IEC:

IECEX Certificate No. IECEX BAS 13.0069X Issue No.:1, dated 2014-09-05.

4. APPLICATION / LIMITATION:

- 4.1 - As per Requirements of Regulations stated on the front page of this certificate.
 4.2 - The equipment fulfils the EMC requirements for installation on the Bridge, Deck Zone and General Power Distribution Zone.
 4.3 - Only Hardware and Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - This certificate alone does not allow the applicant to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module D "Production Quality Assurance" or E "Product Quality Assurance" or F "Product Verification" of Annex B of the Directive is to be complied with and controlled by a written inspection agreement with a Notified Body.

6. MARKING OF PRODUCT:

6.1 - According to EN 60079-29-1.

6.2 - Ex marking, as relevant.

6.3 - Markings as per MED 96/98/EC :

☒ YYYY/XX where YYYY is the number of the Notified Body undertaking surveillance module (when BV, 0062) and where XX are the last two digits of year mark affixed.

7. OTHERS:

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that: **HONEYWELL ANALYTICS Ltd. - Hatch Pond House - 4 Stinsford Road - Nuffield Estate - POOLE - UNITED KINGDOM** will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No. 18830/A0 EC issued on 16 Oct 2012 by the Society.

*** END OF CERTIFICATE ***



Honeywell

EU Declaration of Conformity

In accordance with EN ISO / IEC 17050-1:2010

SEARCHPOINT OPTIMA PLUS, OPTIMA X and OPTIMA Z (with and without HART® option)

Declaration Number: 2004Y0001_20

Description: Infrared hydrocarbon gas detector
Intended Use: Gas detection in potentially explosive atmospheres

Manufacturer: Honeywell Analytics Limited
Hatch Pond House, 4 Stinsford Road, Poole, Dorset. BH17 0RZ United Kingdom

Trading Company: Life Safety Distribution GmbH
Javastrasse 2, 8604 Hegnau, Switzerland

We hereby declare that the product identified above meets the requirements of the following EU Directives and therefore qualifies for free movement within markets comprising the European Union (EU) and the European Economic Area (EEA). This declaration is issued under the sole responsibility of the manufacturer.

EMC Directive 2014/30/EU

Conforms to:
EN 50270:2015 Electromagnetic compatibility. Electrical apparatus for the detection and measurement of combustible gases, toxic gases and oxygen

RoHS Directive 2011/65/EU

Consideration given to:
EN 50581:2012 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

ATEX Directive 2014/34/EU


ATEX Hazardous

Notified Body: SGS Baseefa Limited
Rockhead Business Park, Staden Lane, Buxton, Derbyshire, SK17 9RZ.

Notified Body Number: 1180

EC Certificate Number: Baseefa13ATEX0296X

Conforms to:
EN 60079-0:2012+A11:2013* Explosive atmospheres. General requirements
EN 60079-1:2007 Explosive atmospheres. Equipment protection by flameproof enclosures "d"
EN 60079-28:2007 Explosive atmospheres. Protection of equipment and transmission systems using optical radiation
EN 60079-31:2014 Explosive atmospheres. Equipment dust ignition protection by enclosure 't'

Type Approval:  II 2 GD Ex d op is IIC Gb Ex tb IIIC Db
T86°C (Ta -40°C to +55°C) T96°C (Ta -40°C to +65°C)

* There are no significant changes relevant to the product between EN 60079-0:2012 and EN 60079-0:2012+A11:2013, therefore SGS Baseefa certification remains current.



ATEX Measuring Function

Notified Body:

Dekra Exam GmbH
Dinnendahlstrasse 9, 44809 Bochum. Germany

Notified Body Number:

0158

EC Certificate Number:

BVS 03ATEX G 016

Conforms to:

EN 60079-29:2007

Explosive atmospheres. Gas Detectors. Performance requirements of detectors for flammable gases

EN 50271:2010

Electrical apparatus for the detection and measurement of combustible gases, toxic gases and oxygen. Requirements and tests for apparatus using software and/or digital technologies

Production Quality Assurance

Notified Body:

Sira Certification Service (CSA Group)
Unit 6, Hawarden Industrial Park, Hawarden, Deeside CH5 3US

Notified Body Number:

0518

QA Notification Number:

Sira 11 ATEX M518

Conforms to:

EN ISO/IEC 80079-34:2011

Explosive atmospheres. Application of quality systems for equipment manufacture

Marine Equipment Directive 2014/90/EU

Notified Body:

Bureau Veritas
Suite 1, Keel House, Tyne Dock, South Shields, Tyne & Wear NE34 9BY

Notified Body Number:

2690

Module D

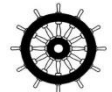
Certificate Number:

SMS.MED2.D/52323/B.1

Module B *Directive 96/98/EC as amended by 2015/559EU*

Certificate Number:

18830/A2 EC



2690/18

Conforms to:

EN 60945:2002

Maritime navigation and radio communication equipment and systems. General requirements. Methods of testing and required test results

IEC 60092-504:2001

Electrical Installation in ships. Special features. Control and instrumentation

IEC 60533:2015

Electrical and electronic installations in ships. Electromagnetic compatibility

EN 60079-29-1:2007

Explosive atmospheres. Gas Detectors. Performance requirements of detectors for flammable gases

Signature:

Name:

Richard King
EMEA Regulatory Group Leader

Date: 1st January 2018

For and on behalf of

Honeywell Analytics Limited
Hatchpond House, 4 Stinsford Road, Poole, Dorset. BH17 0RZ United Kingdom

DNV GL – BUSINESS ASSURANCE

CERTIFICADO DE CONFORMIDADE

Certificate of Conformity / Certificado de Conformidad

Certificado nº: DNV 18.0130 X – Revisão 01
Certificate nº / Certificado nº

Emissão: 12/03/2019
Issuance / Otorgamiento

Válido até: 04/09/2021
Valid until / Válido hasta

Produto:
Product/Productos

DETECTOR DE GÁS INFRAVERMELHO

Tipo / Modelo:
Type – Model/Tipo – Modelo

SEARCHPOINT Optima Plus

Solicitante:
Applicant/Solicitante

HONEYWELL ANALYTICS LTD.
Hatch Pond House, 4 Stinsford Road,
Nuffield Estate, Poole, Dorset, BH17 0RZ,
United Kingdom

Fabricante:
Manufacturer/Fabricante

HONEYWELL ANALYTICS LTD.
Hatch Pond House, 4 Stinsford Road,
Nuffield Estate, Poole, Dorset, BH17 0RZ,
United Kingdom

Normas Técnicas:
Standards/Normas

**ABNT NBR IEC 60079-0:2013, ABNT NBR IEC 60079-1:2016,
ABNT NBR IEC 60079-28:2016 e ABNT NBR IEC 60079-31:2014**

Laboratório de Ensaio:
Testing Laboratory/Laboratorio de Ensayo

SGS Baseefa Limited

Nº do Relatório de Ensaios:
Test Report Number/Nº del informe de Ensayo

**SGS Baseefa nº GB/BAS/ExTR13.0148/00 de 14/05/2014
SGS Baseefa nº GB/BAS/ExTR14.0253/00 de 03/09/2014
SGS Baseefa nº GB/BAS/ExTR16.0384/00 de 21/12/2016
SGS Baseefa nº GB/BAS/ExTR18.0087/00 de 16/01/2019**

Nº do Relatório de Auditoria:
Audit Report Number/Nº del informe de Audit

2016-9372 – Revisão 01 de 16/05/2018

Esquema de Certificação:
Certification Scheme/Esquema de Certificación

Modelo 5 com Avaliação do Sistema de Gestão da Qualidade do Fabricante e Ensaio no Produto, conforme cláusula 6.1 dos Requisitos de Avaliação da Conformidade, anexo à Portaria nº 179 do INMETRO, publicada em 2010.

Notas:
Notes/Anotación

A validade deste Certificado de Conformidade está atrelada à realização das avaliações de manutenção e tratamento de possíveis não conformidades de acordo com as orientações da DNV GL previstas no RAC específico. Para verificação da condição atualizada de regularidade deste Certificado de Conformidade deve ser consultado o banco de dados de produtos e serviços certificados do INMETRO.

Portaria:
Governmental Regulation/Regulación Oficial

INMETRO nº 179 de 2010.



Adriano Marcon Duarte
Gerente de Operações
Operations Manager



Helena dos Santos Ferreira
Especialista Atmosferas Explosivas
Specialist for Explosive Atmospheres

Nota: A falta de cumprimento das condições estabelecidas no contrato pode tornar este certificado inválido.
O documento assinado digitalmente e distribuído eletronicamente é o original do certificado e válido. Ref.: https://www.dnvgl.com/assurance/general/validating_digital_signatures.html

DNV GL Business Assurance Avaliações e Certificações Brasil Ltda
Av. Alfre do Egy dio de Souza Aranha, 100 - Bloco D - 3º Andar – CEP: 04726-908 - São Paulo, SP, Brasil
Form Ref.: ZNS-BR-EX-006 Rev.: 02 Data: 12/12/2017 <http://www.dnvgl.com.br>

DNV GL – BUSINESS ASSURANCE

CERTIFICADO DE CONFORMIDADE

Certificate of Conformity / Certificado de Conformidad

Certificado nº: DNV 18.0130 X – Revisão 01
Certificate nº / Certificado nº

Emissão: 12/03/2019
Issuance / Otorgamiento

Válido até: 04/09/2021
Valid until / Válido hasta

Descrição do Equipamento:

O detector de gás infravermelho modelo Searchpoint Optima 2 consiste de um invólucro cilíndrico a prova de explosão fabricado em aço inoxidável com junta de encaixe travada por dois parafusos M5 x 16 mm classe A4-80. Na parte traseira do detector está disponível uma rosca macho de 3/4" NPT ou M25 com os condutores que emergem do encapsulamento. Na parte frontal do detector está disponível um visor de quartzo e dois braços aquecido para apoiar a montagem de um espelho externo. O interior da unidade compreende uma série de PCB's e um conjunto óptico com uma dissipação máxima de 5,5 W, juntamente com resistências de aquecimento montadas nos braços de apoio dissipação até 2,5 W. O aterramento interno é realizado pelo cabo de alimentação e o externo através da parte traseira do conjunto de fixação central.

Características Elétricas:

Tensão de alimentação: 18 a 32 Vcc (nominal 24 Vcc)
 Potência máxima: 8 W

Análises e ensaios realizados:

As análises e os ensaios realizados encontram-se no arquivo nº DNV 18.0130.

Documentação descritiva:

Documento	Páginas	Descrição	Rev.	Data
IECEX BAS 13.0069X	3	Certificado de Conformidade	0	14/05/2014
IECEX BAS 13.0069X	4	Certificado de Conformidade	1	05/09/2014
IECEX BAS 13.0069X	4	Certificado de Conformidade	2	24/07/2015
IECEX BAS 13.0069X	4	Certificado de Conformidade	3	21/12/2016
IECEX BAS 13.0069X	4	Certificado de Conformidade	4	18/12/2018
GB/BAS/ExTR13.0148/00	7	Relatório de ensaios	0	14/05/2014
GB/BAS/ExTR14.0253/00	4	Relatório de ensaios	0	03/09/2014
GB/BAS/ExTR16.0384/00	5	Relatório de ensaios	0	21/12/2016
GB/BAS/ExTR18.0087/00	13	Relatório de ensaios	0	16/01/2019

Marcação:

O detector de gás infravermelho foi aprovado nos ensaios e análises, nos termos das normas adotadas, devendo receber a marcação, levando-se em consideração o item observações.

Ex db op is IIC 86 °C Gb
Ex tb IIIC T86 °C Db
-40 °C ≤ T_a ≤ +55 °C
IP66/IP67

Ex db op is IIC 96 °C Gb
Ex tb IIIC T96 °C Db
-40 °C ≤ T_a ≤ +65 °C
IP66/IP67

DNV GL – BUSINESS ASSURANCE

CERTIFICADO DE CONFORMIDADE

Certificate of Conformity / Certificado de Conformidad

Certificado nº: DNV 18.0130 X – Revisão 01
 Certificate nº / Certificado nº

Emissão: 12/03/2019
 Issuance / Otorgamiento

Válido até: 04/09/2021
 Valid until / Válido hasta

Observações:

- O número do certificado é finalizado pela letra X para indicar que o produto está sujeito às condições específicas de uso seguro especificadas abaixo:
 Os cabos de alimentação devem ser mecanicamente protegidos e terminados em um terminal adequado ou em caixa de ligação certificada.
 Os parafusos de fixação da tampa devem ser de aço inoxidável com classe de propriedade mecânica de pelo menos A4-80.
 A potência óptica através do Searchpoint Optima Plus deve ser limitada a uma potência irradiada inferior a 35 mW e a uma densidade de potência máxima inferior a 5 mW/mm², conforme definido pela ABNT NBR IEC 60079-28.
- Este Certificado de Conformidade é válido para os produtos de modelo e tipo idêntico ao protótipo ensaiado. Qualquer modificação de projeto ou utilização de componentes e materiais diferentes daqueles descritos na documentação deste processo, sem autorização prévia da DNV GL, invalidará o certificado.
- É responsabilidade do fabricante assegurar que os produtos estejam de acordo com as especificações do protótipo ensaiado, através de inspeções visuais e dimensionais.
- Os produtos devem ostentar, na sua superfície externa e em local visível, a Marca de Conformidade e as características técnicas da mesma de acordo com as especificações da ABNT NBR IEC 60079-0 / ABNT NBR IEC 60079-1 / ABNT NBR IEC 60079-28 / ABNT NBR IEC 60079-31 e Requisitos de Avaliação da Conformidade, anexo à Portaria INMETRO nº 179 de 2010. Esta marcação deve ser legível e durável, levando-se em conta possível corrosão química.
- Os produtos devem ostentar, na sua superfície externa e em local visível, a seguinte advertência:

ATENÇÃO
NÃO ABRA ONDE UMA ATMOSFERA EXPLOSIVA ESTIVER PRESENTE

- Os produtos devem ser instalados em atendimento às Normas pertinentes em Instalações Elétricas em Atmosferas Explosivas.
- As atividades de instalação, inspeção, manutenção, reparo, revisão e recuperação dos produtos são de responsabilidade do usuário e devem ser executadas de acordo com os requisitos das normas técnicas vigentes e com as recomendações do fabricante.
- Para fins de comercialização no Brasil, as responsabilidades da alínea “e” do item 10.1 da Portaria 179 de 18 de maio de 2010, é do representante legal, do importador ou do usuário.

Projeto nº: PRJC-551953-2016-PRC-BRA

Histórico:

Revisão	Descrição	Data
0	Certificação inicial – Efetivação	04/09/2018
1	Correção na descrição	12/03/2019



Member of the FM Global Group

FM Approvals
1151 Boston Providence Turnpike
P.O. Box 9102 Norwood, MA 02062 USA
T: 781 762 4300 F: 781-762-9375 www.fmaprovals.com

CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

COMBUSTIBLE GAS DETECTORS, Fixed

Stationary Single Channel 4-20 mA Combustible Gas Detector. Stand Alone Sensor/Transmitter. Searchpoint Optima Plus are: the following equipment was evaluated as explosionproof for Class I, Division 1, Groups B, C and D hazardous (classified) locations as associated intrinsically safe apparatus for connection to Class I, Division 1, Groups B, C and D hazardous (classified) locations when installed in accordance with Control Drawings 2104E0016, 2104E0025 or 2104E0097. The Termination Units DX100 DX100(I), or DX100(M) are explosionproof for installation in Class I, Division 1, Groups B, C and D hazardous (classified) indoor/outdoor locations T5 Ta = +40°C, IP67 and provides intrinsically safe outputs to the Model Hand-Held Calibrator, Type SHC1 when installed in accordance with drawing 2104E0097, 2104E0025 or 2104E0016 respectively. Transmitter monitors 0-100% LFL methane-in-air atmospheres. The Searchpoint Optima Plus series are constructed of stainless steel and have an operating temperature range of -40°C to +65°C. The operating voltage range is 18-32 V dc (24 V dc nominal), 8W.

2108B220a. Searchpoint Optima Plus.

a = Unit: 1(methane: source) or 2 (methane: sink)

Stationary Single Channel 4-20mA Combustible Gas Detector. Stand Alone Sensor/Transmitter. Searchpoint Optima Plus with HART Option is explosionproof for Class I, Division 1, Groups B, C and D hazardous (classified) locations and as associated intrinsically safe apparatus for connection to Class I, Division 1, Groups B, C and D hazardous (classified) locations when installed in accordance with Control Drawings 2104E0016, 2104E0025 or 2104E0097. The Termination Units DX100, DX100(I), or DX100(M) are explosionproof for installation in Class I, Division 1, Groups B, C and D hazardous (classified) indoor/outdoor locations T5 Ta = +40°C, IP67 and provides intrinsically safe outputs to the Model Hand-Held Calibrator, Type SHC1 when installed in accordance with drawing 2104E0097, 2104E0025, or 2104E0016 respectively. Transmitter Monitors 0-100% LFL methane-in-air atmospheres and provides a 4-20mA measurement signal with optional HART communication. The Searchpoint Optima Plus with HART Option is constructed of Stainless Steel and has an operating temperature range of -40°C to +65°C. The operating voltage range is 18-32 Vdc (24Vdc nominal), 5W. Options: Flow housing (p/n 2108B0282); XNX Universal Transmitter. The integral Optima Plus/XNX configuration is suitable for Zone 1 and Division 2 locations.

2108B220a, Searchpoint Optima Plus with HART Option

a = Type: N or H

FM Approved for:

Honeywell Analytics, Ltd
Poole, Dorset United Kingdom

To verify the availability of the Approved product, please refer to www.approvalguide.com



This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	2011
Class 3610	2010
Class 3615	2006
Class 6310,6320	2001
Class 3810	2005
ANSI/ISA-12.13.01	2000

Original Project ID: 3015165

Approval Granted: February 27, 2004

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
3039528	June 6, 2012		
3042230	June 29, 2012		
3049694	October 22, 2013		

FM Approvals LLC

J.E. Marquedant
Group Manager, Electrical

22 October 2013

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

EC - TYPE EXAMINATION CERTIFICATE

**Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **Baseefa13ATEX0296X**

4 Equipment or Protective System: **Searchpoint Optima Plus Infrared Point Detector**

5 Manufacturer: **Honeywell Analytics Limited**

6 Address: **Hatchpond House, 4 Stinsford Road, Nuffield Estate, Poole, Dorset, BH17 0RZ**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **GB/BAS/ExTR13.0148/00**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012 EN 60079-1:2007 EN 60079-28:2007 EN 60079-31:2013

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include the following :

Ⓔ II 2 GD Ex d op is IIC T* Gb (For T* see below)

Ex tb IIIC T* Db

***T86°C (T_{amb} -40°C to +55°C) or *T96°C (T_{amb} -40°C to +65°C)**

Baseefa Customer Reference No. **0981**

Project File No. **13/0463**

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SGS Baseefa Limited

Rockhead Business Park, Staden Lane,
Buxton, Derbyshire SK17 9RZ

Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601
e-mail info@baseefa.com web site www.baseefa.com

Registered in England No. 4305578.

Registered address: Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN


P R S SINCLAIR
GENERAL MANAGER

On behalf of SGS Baseefa Limited

13

Schedule

14

Certificate Number Baseefa13ATEX0296X

15 Description of Equipment or Protective System

The Searchpoint Optima Plus Infrared Point Detector is rated up to 32V d.c. with a maximum power dissipation of 8W. The unit comprises a cylindrical enclosure, manufactured in stainless steel, with a central spigot joint secured by 2 off M5 by 16mm long stainless steel socket head cap screws of grade A4-80. At the rear of the unit is an M25 or ¾" NPT male thread with integral conductors passing through an epoxy cement barrier. At the front of the unit is a quartz or sapphire window and two heated arms to support an external mirror assembly.

The interior of the unit comprises a series of internal PCB's and a 3V 230mAh primary cell and an optical assembly dissipating a maximum of 5.5W, together with heater resistors mounted within the support arms dissipating up to a further 2.5W.

Internal earthing is by means of the supply cable and external earth connection facilities are provided at the rear of the central joint fixings.

To obviate the risk of hotspots and capacitor energy storage associated with this unit the cover must not be opened, even when isolated, when an explosive atmosphere is present. Each enclosure is marked with this information.

This apparatus is to be installed and used in accordance with the appropriate codes of practice and the manufacturer's instructions.

A range of accessories including weather protection covers and sensing head flow housings may also be provided. The flow housings are intended for use in intermittent explosive atmospheres only, and may not be used to monitor environments where an explosive atmosphere is present continuously.

16 Report Number

Baseefa certification report GB/BAS/ExTR13.0148/00.

17 Specific Conditions of Use

1. The integral leads must be suitably terminated and protected from impact.
2. For replacement purposes the cover fixing screws shall be grade A4-80 minimum.
3. Optical power through the Searchpoint Optima Plus is to be limited to a radiated power of less than 35mW and a peak power density of less than 5mW/mm² as defined by EN 60079-28.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
2108E0036	1 of 1	7	24/04/14	General assembly
2108E0037	1 of 1	3	10/01/14	Base casting
2108E0038	1 of 1	1	01/08/11	Cover casting
2108E0039	1 of 1	7	24/04/14	Accessories
2108E0042	1 of 1	1	20/06/11	Protective cover details
2108E0044	1 of 1	2	07/03/14	Internal arrangement

These drawings are common to, and held with, certificate IECEx BAS 13.0069X.

1 **SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

- 3 Supplementary EC - Type Examination Certificate Number: **Baseefa13ATEX0296X/1**
- 4 Equipment or Protective System: **Searchpoint Optima Plus Infrared Point Detector**
- 5 Manufacturer: **Honeywell Analytics Limited**
- 6 Address: **Hatchpond House, 4 Stinsford Road, Nuffield Estate, Poole, Dorset,
BH17 0RZ**
- 7 This supplementary certificate extends EC – Type Examination Certificate No. **Baseefa13ATEX0296X** to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

Baseefa Customer Reference No. **0981**

Project File No. **14/0596**

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SGS Baseefa Limited

Rockhead Business Park, Staden Lane,
Buxton, Derbyshire SK17 9RZ

Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601

e-mail info@baseefa.com web site www.baseefa.com

Registered in England No. 4305578.

Registered address: Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN

A handwritten signature in blue ink, appearing to read 'R S Sinclair'.

R S SINCLAIR
GENERAL MANAGER

On behalf of SGS Baseefa Limited

13

Schedule

14

Certificate Number Baseefa13ATEX0296X/1

15

Description of the variation to the Equipment or Protective System

Variation 1.1

To permit the detector to be marked in the name of Consilium.

16

Report Number

GB/BAS/ExTR14.0253/00.

17

Specific Conditions of Use

None additional to those listed previously

18

Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19

Drawings and Documents

Number	Sheet	Issue	Date	Description
2108E0045	1	1	08.07.14	Certification Label - Consilium

This drawing is common to, and held with, certificate IECEx BAS 13.0069X.