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Note

Specifications and exact product offering are subject to change without notice. This publication is not intended to form the basis of a contract.

Explosion-Proof Transmitters

Quick Reference Chart

Product	Gases Detected	Display	Relays	Material	Communication
XXN™ Universal Transmitter	See Below	Y	DC	AL, SS	4-20 mA; HART; Modbus; Foundation Fieldbus
Sensepoint XCD		Y	DC	AL, SS	4-20 mA; Modbus
Sensepoint XCD RTD		Y	DC	AL, SS	4-20 mA; Modbus
Sensepoint XCD RFD		Y	DC	AL, SS	4-20 mA; Modbus
Series 3000 MKII		Y	No	AL, SS	4-20 mA
705 Sensor		N	No	SS	4-20 mA
APEX		Y	DC	SS	4-20 mA; LonWorks®

Toxic Gas Sensor	XXN™	XCD	XCD RTD	APEX	S3000
Ammonia (NH ₃)	X		X	X	X
Arsine (AsH ₃)				X	
Boron trichloride (BCl ₃)				X	
Bromine (Br ₂)				X	
Carbon monoxide (CO)	X		X	X	X
Carbon dioxide (CO ₂)	X	X			
Chlorine (Cl ₂)	X		X	X	X
Chlorine dioxide (ClO ₂)	X			X	X
Diborane (B ₂ H ₆)				X	
Dichlorosilane (H ₂ SiCl ₂)				X	
Fluorine (F ₂)				X	
Germane (GeH ₄)				X	
Hydrogen (H ₂)	X	X	X	X	X
Hydrogen bromide (HBr)				X	
Hydrogen chloride (HCl)	X			X	X
Hydrogen cyanide (HCN)				X	
Hydrogen fluoride (HF)	X			X	X
Hydrogen sulfide (H ₂ S)	X	X	X	X	X
Nitric oxide (NO)	X		X	X	X
Nitrogen dioxide (NO ₂)	X	X	X	X	X
Oxygen (O ₂)	X	X	X	X	X
Ozone (O ₃)				X	
Phosphine (PH ₃)	X			X	X
Silane (SiH ₄)				X	
Sulfur dioxide (SO ₂)	X		X	X	X

LEL Sensor	XXN™	XCD	XCD RFD	705	APEX
Non-specific combustible	X	X	X	X	X
Butane (C ₄ H ₁₀)	X	X	X	X	X
Butyl acetate (C ₆ H ₁₂ O ₂)	X	X	X	X	X
Ethylene (C ₂ H ₄)	X	X	X	X	X
Hexane (C ₆ H ₁₄)	X	X	X	X	X
Hydrogen (H ₂)	X	X	X	X	X
Methane (CH ₄)	X	X	X	X	X
Pentane (C ₅ H ₁₂)	X	X	X	X	X
Propane (C ₃ H ₈)	X	X	X	X	X
Toluene (C ₇ H ₈)	X	X	X	X	X



XNX™ Universal Transmitter

C₂H₄, C₃H₈, C₄H₁₀, C₅H₁₂, C₆H₁₂O₂, C₆H₁₄, C₇H₈, CH₄, Cl₂, ClO₂, CO, CO₂, H₂, H₂S, HCl, HF, LEL, NH₃, NO, NO₂, O₂, PH₃, SO₂



The XNX™ Universal Transmitter, now with HART EDDL, marks a new turn in gas detection from Honeywell Analytics. It supports the widest range of sensors on a common platform and offers a modular choice of inputs and outputs.

XNX is designed for flexible integration, simple installation, user-friendly operation and straight-forward maintenance. It is ideal for use with a range of gas monitoring controllers or industry standard PLCs. The introduction of our HART Enhanced Device Descriptor Language (EDDL) software provides users with an at-a-glance indication of the health of their gas detectors in the field.

High performance

- Flammable gas detection 0 to 100% LFL/LEL
- Point IR with heated optics provides immunity to poisoning and no hidden faults
- Open-path IR flammable gas detection in LEL-m measurement
- Electrochemical cell offers toxic gas detection in ppm
- IR cell provides CO₂ and combustible gas monitoring
- Robust and reliable operation in explosive areas and harsh environments

Cost Effective

- Minimal training required
- One-man operation
- Plug-in sensor replacement
- All necessary accessories included

Flexible Operation

- 3 versions - supports (Catalytic Bead and IR Cell), Electrochemical Cell and IR (point and open-path) gas detection
- Multi-Purpose Detector (MPD) with field serviceable mV, Catalytic bead and IR Cell capability
- 4-20 mA with HART® as standard
- HART Enhanced Device Description Language (EDDL) software*
- Multiple communications options include up to 3 relays, Modbus® and FOUNDATION® H1 Fieldbus
- Optional local IS port for handheld HART configurator

Easy to Install

- 3 or 4 wire operation, source, sink or isolated
- Simple plug-in sensors and replaceable cells
- NEMA 4X IP66 rated for rugged indoor/outdoor use
- Five conduit entries for ease of installation

Easy to Use

- Large, backlit, easy-to-view LCD display offers multisensory indicators (visual icons, colored buttons, text, etc.) to display gas and sensor readings
- User interface supported by 8 selectable languages (English, Spanish, German, Italian, Portuguese, French, Russian, Chinese)
- Self-test and fault indication features
- Non-intrusive, one-man operation
- Quick calibration with auto-inhibit

Certifications

- UL, CSA, FM, DEMKO, DEKRA, InMetro, TUV, ABS, HART, FIELDBus Foundation, GOST and KTL approved for Hazardous Locations, Gas Performance and SIL 2 ratings among others
- Class I, Div 1, Groups B, C & D; Class II, Div 1, Groups F and G; Hazardous Locations
- Class I Zone 1 Group IIC, Class II, Zone 20 & 21
- Intrinsically safe barriers for HART and EC connections
- For additional information on certifications and approvals contact Honeywell Analytics

XNX™ Universal Transmitter (continued)

Toxic and Oxygen Smart Sensors

A wide range of toxic and oxygen sensors, featuring patented Surecell™ and Reflex technology, are available for use with the XNX™ Universal Transmitter. Featuring a field replaceable sensor, these sensors are shipped pre-calibrated to the range listed below.

XNX™ Sensors	Part Number
Oxygen (O ₂) 23% v/v fixed (FM approved)	XNXXSO1FM
Oxygen (O ₂) 0-25% v/v	XNXXSO1SS
Carbon monoxide (CO) 0-300 ppm (100 to 1,000 ppm, 100 ppm)	XNXXSC1SS
Carbon monoxide (CO) 100-1000 ppm (FM approved)	XNXXSC1FM
Hydrogen sulfide (H ₂ S) 0-15 ppm	XNXXSH3SS
Hydrogen sulfide (H ₂ S) 10-50 ppm (FM approved)	XNXXSH1FM
Hydrogen sulfide (H ₂ S) 0-15 ppm (10 to 50 ppm, 1 ppm)	XNXXSH1SS
Hydrogen sulfide (H ₂ S) 0-100 ppm (50 to 500 ppm, 10 ppm)	XNXXSH2SS
Chlorine (Cl ₂) 0-5.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)	XNXXSL1SS
Chlorine (Cl ₂) 0-5.00 ppm fixed range	XNXXSL2SS
Sulfur dioxide (SO ₂) 0-15.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)	XNXXSS1SS
Sulfur dioxide (SO ₂) 0-50.0 ppm (20.0 to 50 ppm, 10 ppm)	XNXXSS2SS
Chlorine dioxide (ClO ₂) 0-1.00 ppm	XNXXSX1SS
Nitric oxide (NO) 0-100 ppm	XNXXSM1SS
Nitrogen dioxide (NO ₂) 0-10.0 ppm (5.0 to 50.0 ppm, 5.0 ppm)	XNXXSN1SS
Hydrogen (H ₂) 0-1000 ppm	XNXXSG1SS
Hydrogen (H ₂) 0-10,000 ppm	XNXXSG2SS
Hydrogen fluoride (HF) 0-12.0 ppm	XNXXSF1SS
Ammonia (NH ₃) 0-200 ppm (50 to 200 ppm, 50 ppm)	XNXXSA1SS
Ammonia (NH ₃) 0-1000 ppm (200 to 1000 ppm, 50 ppm)	XNXXSA2SS
Phosphine (PH ₃) 0-1.2 ppm	XNXXSP1SS
Hydrogen chloride (HCl) 0-10 ppm (10 to 20 ppm, 1 ppm)	XNXXSR1SS

MPD: Multi-Purpose Detector (mV) - UL/CSA (3/4 in. NPT)	Part Number
XNX MPD UL/CSA catalytic bead sensor 0-100% LEL	MPD-UTCB1
XNX MPD UL IR cartridge 0-100% LEL propane (C ₃ H ₈) (flammables)	MPD-UTIF1
XNX MPD UL IR cartridge 0-100% LEL methane (CH ₄)	MPD-UTIV1
XNX MPD UL/cUL IR cartridge carbon dioxide (CO ₂) 0-5% VV	MPD-UTIC1

Note: When remote mounting the MPD, Ferrite Bead (0600-1051) is required.

MPD: Multi-Purpose Detector (mV) - ATEX/IECEX (M25)	Part Number
XNX MPD ATEX/IECEX catalytic bead sensor 0-100% LEL	MPD-AMCB1
XNX MPD ATEX/IECEX IR cartridge 0-100% LEL propane (flammables)	MPD-AMIF1
XNX MPD ATEX/IECEX IR cartridge 0-100% LEL methane	MPD-AMIV1
XNX MPD ATEX/IECEX IR cartridge CO ₂ 0-5% VV	MPD-AMIC1

XNX™ Universal Transmitter (continued)

XNX™ Accessories: For Use With All Versions of XNX	Part Number
Pipe mount kit	1226A0358
Ceiling mount bracket	1226A0355
Duct mount kit	S3KDMK
Remote gassing kit	1226A0354
UL/CSA aluminum 6 wire junction box assembly	2441-0022
UL/CSA aluminum 3 wire junction box assembly	2430-0021
ATEX/IECEX junction box assembly	00780-A-0100

XNX™ Accessories: For Use With MPD Catalytic and IR Cartridge Sensors	Part Number
MPD interface adaptor (required with duct mount kit for MPD)	1226A0382
Calibration gas flow adaptor (for use with MPD)	1226A0411
Calibration gas flow adaptor (for use with Sensepoint sensors)	02000-A-1645
Calibration gas flow adaptor (for use with 705 sensors)	00780-A-0035
Weatherproof cap (for use with MPD and Sensepoint sensors)	02000-A-1640
Weatherproof cap (for use with 705 sensors)	02000-A-1635
Collecting cone (for use with MPD, Sensepoint and 705 sensors)	02000-A-1642
Ferrite bead (for use with mV sensors)	0060-1051

XNX™ Accessories: For Use With Toxic and Oxygen Sensors	Part Number
Remote EC mounting kit	S3KRMK
Enclosed weather protection housing with bump port	SPXCDWP
Weatherproof housing (for use with corrosives)	S3KWP
Calibration gas flow adaptor (for use with EC sensors)	S3KCAL
Collecting cone for use with lighter than air gases <i>Note: must be used with SPXCDWP weather protection housing.</i>	SPXCDCC

Replacement Toxic and Oxygen Sensor Cartridges	Part Number
Oxygen (O ₂) 0-25% v/v	S3KO1SS
Carbon monoxide (CO) 0-300 ppm (100 to 999 ppm, 100 ppm)	S3KC1SS
Hydrogen sulfide (H ₂ S) 0-15 ppm (10 to 50 ppm, 1 ppm)	S3KH1SS
Hydrogen sulfide (H ₂ S) 0-100 ppm (50 to 500 ppm, 10 ppm)	S3KH2SS
Chlorine (Cl ₂) 0-5.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)	S3KL1SS
Sulfur dioxide (SO ₂) 0-15.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)	S3KS1SS
Chlorine dioxide (ClO ₂) 0-1.00 ppm	S3KX1SS
Nitric oxide (NO) 0-100 ppm	S3KM1SS
Nitrogen dioxide (NO ₂) 0-10.0 ppm (5.0 to 50.0 ppm, 5.0 ppm)	S3KN1SS
Hydrogen (H ₂) 0-1000 ppm	S3KG1SS
Hydrogen (H ₂) 0-10,000 ppm	S3KG2SS
Hydrogen fluoride (HF) 0-12.0 ppm	S3KF1SS
Ammonia (NH ₃) 0-200 ppm (50 to 200 ppm, 50 ppm)	S3KA1SS
Ammonia (NH ₃) 0-1000 ppm (200 to 1000 ppm, 50 ppm)	S3KA2SS
Phosphine (PH ₃) 0-1.2 ppm	S3KP1SS
Hydrogen chloride (HCl) 0-10 ppm (10 to 20 ppm, 1 ppm)	S3KR1SS

XNX™ Universal Transmitter (continued)

Replaceable MPD Catalytic and IR Cartridges

	Part Number
Replacement catalytic bead sensor 0-100% LEL	1226A0359
Replacement IR cartridge 0-100% LEL propane (C ₃ H ₈) (flammables)	1226-0300
Replacement IR cartridge 0-100% LEL methane (CH ₄)	1226-0299
Replacement IR cartridge carbon dioxide (CO ₂) 0-5% VV	1226-0301

XNX™ Spares

	Part Number
M25 stopping plug with protective cap and O-ring	1226-0257
3/4 in. NPT stopping plug with protective cap and O-ring	1226-0258
Replacement O-ring for XNX front cover	0235-1266
Terminal block assembly 6-pin for XNX EC	1226A0302
Terminal block assembly 9-pin for XNX mV	1226A0304
IR terminal block assembly kit includes: 9-pin and 2 pin blocks	1226A0305
Relay terminal block assembly kit includes: 9-pin and 2-pin blocks	1226A0306
Terminal block assembly 10-pin for XNX Modbus	1226A0307
Magnetic wand/screwdriver	1226-0254
Small screwdriver (for use with relay board and IR personality board)	1226-0408

XNX™ PODs

	Part Number
XNX POD IR personality	1226-9001
XNX POD IR personality with relay option	1226-9002
XNX POD IR personality with Modbus option	1226-9003
XNX POD IR personality with FFB option	1226-9004
XNX POD ECC personality	1226-9005
XNX POD ECC personality with relay option	1226-9006
XNX POD ECC personality with Modbus option	1226-9007
XNX POD ECC personality with FFB option	1226-9008
XNX POD MV personality	1226-9009
XNX POD MV personality with relay option	1226-9010
XNX POD MV personality with Modbus option	1226-9011
XNX POD MV personality with FFB option	1226-9012

For XNX Calibration please consult the Calibration Kits and Calibration Gas pages.



Sensepoint XCD

LEL, C₃H₈, CH₄, H₂S, CO, CO₂, H₂, NO₂, O₂



The Sensepoint XCD range provides comprehensive monitoring of flammable, toxic and oxygen gas hazards in potentially explosive atmospheres, both indoors and outdoors. Users can modify detector operation using the LCD and magnet switches without ever needing to open the unit. This enables one-man, non-intrusive operation and reduces routine maintenance time and costs.

One-Stop Shop

- Flammable (catalytic or infrared), toxic and oxygen versions available
- New and retrofit applications
- Suitable for indoor or outdoor use
- Stainless steel or aluminium explosion-proof housing options
- IP66 as standard

Proven and Reliable Sensor Technology

- Surecell™ electrochemical sensors
- Poison immune infrared sensors
- Poison resistant catalytic bead sensors
- Long life sensors

Global Approvals

- US and Latin America, European, Canadian and Asian
- Compliant with UL, INMETRO, ATEX, IECEx, CSA, KTL, PA, GB and CCCF standards

Easy to Use

- User friendly and intuitive tri-colour backlit display with digits, bar graph and icons
- Fully configurable via magnetic switches
- Optional remote sensor mounting
- Selectable sink or source 4-20 mA output
- Auto-inhibit during maintenance
- Modbus communications for remote diagnostics/configuration

Cost Effective

- Common transmitter platform
- Minimal training required
- Reduced spares
- Non-intrusive, one-man operation
- Plug-in sensor replacement
- Modbus multi drop option offers cabling savings

Simple Installation

- Plug-in display module removes to give access to terminal area
- Integral mounting bracket
- 2 x M20 or 3/4 in. NPT cable/conduit entries (certification dependent)
- Removable plug/socket type terminal blocks for ease of wiring
- Sink/source switch to suit preferred wiring topology

Range of Optional Accessories

- Remote sensor mounting kit
- Remote sensor gassing kit
- Duct mounting kit
- Calibration gas flow housing
- Collecting cone

Sensepoint XCD (continued)

UL/cUL/CSA/INMETRO Approval (LM25)

	Part Number
UL/CSA/INMETRO approved SP XCD flammable CAT 0-100% LEL (20 to 100% LEL, 10% LEL) with LM25, 3/4 in. NPT entry	SPXCDULNFX
UL/INMETRO approved SP XCD flammable methane (CH ₄) IR 0-100% LEL (20 to 100% LEL, 10% LEL) with LM25, 3/4 in. NPT entry	SPXCDULNRX
UL/INMETRO approved SP XCD flammable propane (CH ₄), ethylene (C ₂ H ₄), butane (C ₄ H ₁₀) and pentane (C ₅ H ₁₂); IR 0-100% LEL (20 to 100% LEL, 10% LEL) with LM25, 3/4 in. NPT entry	SPXCDULNPX
UL/cUL/INMETRO approved SP XCD carbon dioxide (CO ₂) IR 0-2% v/v with LM25, 3/4 in. NPT entry	SPXCDULNB1
UL/cUL/INMETRO approved SP XCD oxygen (O ₂) 25.0% v/v with LM25, 3/4 in. NPT entry	SPXCDULNO1
UL/cUL/INMETRO approved SP XCD hydrogen sulfide (H ₂ S) 0-50 ppm (10.0 to 100.0 ppm, 1 ppm) with LM25, 3/4 in. NPT entry	SPXCDULNHX
UL/cUL/INMETRO approved SP XCD carbon monoxide (CO) 0-300 ppm (100 to 1000 ppm, 100 ppm) with LM25, 3/4 in. NPT entry	SPXCDULNCX
UL/cUL/INMETRO approved SP XCD hydrogen (H ₂) 0-1000 ppm with LM25, 3/4 in. NPT entry	SPXCDULNG1
UL/cUL/INMETRO approved SP XCD nitrogen dioxide (NO ₂) 0-10 ppm (10 to 50 ppm, 5 ppm) with LM25, 3/4 in. NPT entry	SPXCDULNNX

UL/cUL/CSA/INMETRO Approval (LM25) Modbus

	Part Number
UL/CSA/INMETRO approved SP XCD flammable CAT 0-100% LEL (20 to 100% LEL, 10% LEL) with LM25, 3/4 in. NPT entry with Modbus	SPXCDULNFXM
UL/INMETRO approved SP XCD flammable methane (CH ₄) IR 0-100% LEL (20 to 100% LEL, 10% LEL) with LM25, 3/4 in. NPT with Modbus	SPXCDULNRXM
UL/INMETRO approved SP XCD flammable propane (CH ₄), ethylene (C ₂ H ₄), butane (C ₄ H ₁₀) and pentane (C ₅ H ₁₂); IR 0-100% LEL (20 to 100% LEL, 10% LEL) with LM25, 3/4 in. NPT entry with Modbus	SPXCDULNPXM
UL/cUL/INMETRO approved SP XCD carbon dioxide (CO ₂) IR 0-2% v/v with LM25, 3/4 in. NPT entry with Modbus	SPXCDULNB1M
UL/cUL/INMETRO approved SP XCD oxygen (O ₂) 25.0% v/v with LM25, 3/4 in. NPT entry with Modbus	SPXCDULNO1M
UL/cUL/INMETRO approved SP XCD hydrogen sulfide (H ₂ S) 0-50 ppm (10.0 to 100.0 ppm, 1 ppm) with LM25, 3/4 in. NPT entry with Modbus	SPXCDULNHXM
UL/cUL/INMETRO approved SP XCD carbon monoxide (CO) 0-300 ppm (100 to 1000 ppm, 100 ppm) with LM25, 3/4 in. NPT entry	SPXCDULNCXM
UL/cUL/INMETRO approved SP XCD hydrogen (H ₂) 0-1000 ppm with LM25, 3/4 in. NPT entry with Modbus	SPXCDULNG1M
UL/cUL/INMETRO approved SP XCD nitrogen dioxide (NO ₂) 0-10 ppm (10 to 50 ppm, 5 ppm) with LM25, 3/4 in. NPT entry with Modbus	SPXCDULNNXM

Sensepoint XCD (continued)

UL/cUL/CSA/INMETRO Approval (316SS)	Part Number
UL/CSA/INMETRO approved SP XCD flammable CAT 0-100% LEL (20 to 100% LEL, 10% LEL) with 316SS, 3/4 in. NPT entry	SPXCDUSNFX
UL/INMETRO approved SP XCD flammable methane (CH ₄) IR 0-100% LEL (20 to 100% LEL, 10% LEL) with 316SS, 3/4 in. NPT entry	SPXCDUSNRX
UL/INMETRO approved SP XCD flammable propane (CH ₄), ethylene (C ₂ H ₄), butane (C ₄ H ₁₀) and pentane (C ₅ H ₁₂); IR 0-100% LEL (20 to 100% LEL, 10% LEL) with 316SS 3/4 in. NPT entry	SPXCDUSNPX
UL/cUL/INMETRO approved SP XCD carbon dioxide (CO ₂) IR 0-2% v/v with 316SS 3/4 in. NPT entry	SPXCDUSNB1
UL/cUL/INMETRO approved SP XCD oxygen (O ₂) 25.0% v/v with 316SS 3/4 in. NPT entry	SPXCDUSNO1
UL/cUL/INMETRO approved SP XCD hydrogen sulfide (H ₂ S) 0-50 ppm (10.0 to 100.0 ppm, 1 ppm) with 316SS 3/4 in. NPT entry	SPXCDUSNHX
UL/cUL/INMETRO approved SP XCD carbon monoxide (CO) 0-300 ppm (100 to 1000 ppm, 100 ppm) with 316SS 3/4 in. NPT entry	SPXCDUSNCX
UL/cUL/INMETRO approved SP XCD hydrogen (H ₂) 0-1000 ppm with 316SS 3/4 in. NPT entry	SPXCDUSNG1
UL/cUL/INMETRO approved SP XCD nitrogen dioxide (NO ₂) 0-10 ppm (10 to 50 ppm, 5 ppm) with 316SS 3/4 in. NPT entry	SPXCDUSNNX

UL/cUL/CSA/INMETRO Approval (316SS) Modbus	Part Number
UL/CSA/INMETRO approved SP XCD flammable CAT 0-100% LEL (20 to 100% LEL, 10% LEL) with 316SS 3/4 in. NPT entry with Modbus	SPXCDUSNFXM
UL/INMETRO approved SP XCD flammable methane (CH ₄) IR 0-100% LEL (20 to 100% LEL, 10% LEL) with 316SS, 3/4 in. NPT with Modbus	SPXCDUSNRXM
UL/INMETRO approved SP XCD flammable propane (CH ₄), ethylene (C ₂ H ₄), butane (C ₄ H ₁₀) and pentane (C ₅ H ₁₂); IR 0-100% LEL (20 to 100% LEL, 10% LEL) with 316SS, 3/4 in. NPT entry with Modbus	SPXCDUSNPXM
UL/cUL/INMETRO approved SP XCD carbon dioxide (CO ₂) IR 0-2% v/v with 316SS, 3/4 in. NPT entry with Modbus	SPXCDUSNB1M
UL/cUL/INMETRO approved SP XCD oxygen (O ₂) 25.0% v/v with 316SS, 3/4 in. NPT entry with Modbus	SPXCDUSNO1M
UL/cUL/INMETRO approved SP XCD hydrogen sulfide (H ₂ S) 0-50 ppm (10.0 to 100.0 ppm, 1 ppm) with 316SS, 3/4 in. NPT entry with Modbus	SPXCDUSNHXM
UL/cUL/INMETRO approved SP XCD carbon monoxide (CO) 0-300 ppm (100 to 1000 ppm, 100 ppm) with 316SS, 3/4 in. NPT entry	SPXCDUSNCXM
UL/cUL/INMETRO approved SP XCD hydrogen (H ₂) 0-1000 ppm with 316SS, 3/4 in. NPT entry with Modbus	SPXCDUSNG1M
UL/cUL/INMETRO approved SP XCD nitrogen dioxide (NO ₂) 0-10 ppm (10 to 50 ppm, 5 ppm) with 316SS, 3/4 in. NPT entry with Modbus	SPXCDUSNNXM

Sensepoint XCD (continued)

ATEX/IECEX/CHINA Approval (LM25)	Part Number
ATEX/IECEX/KTL/PA and GB approved SP XCD flammable CAT 0-100% LEL (20 to 100% LEL, 10% LEL) with LM25, M20 entry	SPXCDALMFx
ATEX/IECEX/KTL/PA and GB approved SP XCD methane (CH ₄) IR 0-100% LEL (20,0 to 100.0% LEL, 10% LEL) with LM25, M20 entry	SPXCDALMRx
ATEX/IECEX/KTL/PA and GB approved SP XCD flammable propane (CH ₄), ethylene (C ₂ H ₄), butane (C ₄ H ₁₀) and pentane (C ₅ H ₁₂); IR 0-100% LEL (20 to 100% LEL, 10% LEL) with LM25, M20 entry	SPXCDALMPx
ATEX/IECEX/KTL/PA and GB approved SP XCD carbon dioxide (CO ₂) IR 0-2% v/v with LM25, M20 entry	SPXCDALMB1
ATEX/IECEX/KTL/PA and GB approved SP XCD oxygen (O ₂) 25.0% v/v with LM25, M20 entry	SPXCDALMO1
ATEX/IECEX/KTL/PA and GB approved SP XCD hydrogen sulfide (H ₂ S) 0-50 ppm (10.0 to 100.0 ppm) with LM25, M20 entry	SPXCDALMHx
ATEX/IECEX/KTL/PA and GB approved SP XCD carbon monoxide (CO) 0-300 ppm (100 to 1000 ppm) with LM25, M20 entry	SPXCDALMCx
ATEX/IECEX/KTL/PA and GB approved SP XCD hydrogen (H ₂) 0-1000 ppm with LM25, M20 entry	SPXCDALMG1
ATEX/IECEX/KTL/PA and GB approved SP XCD nitrogen dioxide (NO ₂) 0-10 ppm (10 to 50 ppm, 5 ppm) with LM25, M20 entry	SPXCDALMNx

ATEX/IECEX/CHINA Approval (LM25) Modbus	Part Number
ATEX/IECEX/KTL/PA and GB approved SP XCD flammable CAT 0-100% LEL (20 to 100% LEL, 10% LEL) with LM25, M20 entry with Modbus	SPXCDALMFxM
ATEX/IECEX/KTL/PA and GB approved SP XCD methane (CH ₄) IR 0-100% LEL (20.0 to 100.0% LEL, 10% LEL) with LM25, M20 entry with Modbus	SPXCDALMRxM
ATEX/IECEX/KTL/PA and GB approved SP XCD flammable propane (CH ₄), ethylene (C ₂ H ₄), butane (C ₄ H ₁₀) and pentane (C ₅ H ₁₂); IR 0-100% LEL (20 to 100% LEL, 10% LEL) with LM25, M20 entry with Modbus	SPXCDALMPxM
ATEX/IECEX/KTL/PA and GB approved SP XCD carbon dioxide (CO ₂) IR 0-2% v/v with LM25, M20 entry with Modbus	SPXCDALMB1M
ATEX/IECEX/KTL/PA and GB approved SP XCD oxygen (O ₂) 25.0% v/v with LM25, M20 entry with Modbus	SPXCDALMO1M
ATEX/IECEX/KTL/PA and GB approved SP XCD hydrogen sulfide (H ₂ S) 0-50 ppm (10.0 to 100.0 ppm) with LM25, M20 entry with Modbus	SPXCDALMHxM
ATEX/IECEX/KTL/PA and GB approved SP XCD carbon monoxide (CO) 0-300 ppm (100 to 1000 ppm) with LM25, M20 entry with Modbus	SPXCDALMCxM
ATEX/IECEX/KTL/PA and GB approved SP XCD hydrogen (H ₂) 0-1000 ppm with LM25, M20 entry with Modbus	SPXCDALMG1M

Sensepoint XCD (continued)

ATEX/IECEX/CHINA Approval (316SS)	Part Number
ATEX/IECEX/KTL/PA and GB approved SP XCD flammable CAT 0-100% LEL (20 to 100% LEL, 10% LEL) with 316SS, M20 entry	SPXCDASMFx
ATEX/IECEX/KTL/PA and GB approved SP XCD methane (CH ₄) IR 0-100% LEL (20.0 to 100.0% LEL, 10% LEL) with 316SS, M20 entry	SPXCDASMRx
ATEX/IECEX/KTL/PA and GB approved SP XCD flammable propane (CH ₄), ethylene (C ₂ H ₄), butane (C ₄ H ₁₀) and pentane (C ₅ H ₁₂); IR 0-100% LEL (20 to 100% LEL, 10% LEL) with 316SS, M20 entry	SPXCDASMPx
ATEX/IECEX/KTL/PA and GB approved SP XCD carbon dioxide (CO ₂) IR 0-2% v/v with 316SS, M20 entry	SPXCDASMB1
ATEX/IECEX/KTL/PA and GB approved SP XCD oxygen (O ₂) 25.0% v/v with 316SS, M20 entry	SPXCDASMO1
ATEX/IECEX/KTL/PA and GB approved SP XCD hydrogen sulfide (H ₂ S) 0-50 ppm (10.0 to 100.0 ppm) with 316SS, M20 entry	SPXCDASMHx
ATEX/IECEX/KTL/PA and GB approved SP XCD carbon monoxide (CO) 0-300 ppm (100 to 1000 ppm) with 316SS, M20 entry	SPXCDASMCx
ATEX/IECEX/KTL/PA and GB approved SP XCD hydrogen (H ₂) 0-1000 ppm with 316SS, M20 entry	SPXCDASMG1
ATEX/IECEX/KTL/PA and GB approved SP XCD nitrogen dioxide (NO ₂) 0-10 ppm (10 to 50 ppm, 5 ppm) with 316SS, M20 entry	SPXCDASMNx

ATEX/IECEX/CHINA Approval (316SS) Modbus	Part Number
ATEX/IECEX/KTL/PA and GB approved SP XCD flammable CAT 0-100% LEL (20 to 100% LEL, 10% LEL) with 316SS, M20 entry with Modbus	SPXCDASMFxM
ATEX/IECEX/KTL/PA and GB approved SP XCD methane (CH ₄) IR 0-100% LEL (20.0 to 100.0% LEL, 10% LEL) 316SS M20 entry with Modbus	SPXCDASMRxM
ATEX/IECEX/KTL/PA and GB approved SP XCD flammable propane (CH ₄), ethylene (C ₂ H ₄), butane (C ₄ H ₁₀) and pentane (C ₅ H ₁₂); IR 0-100% LEL (20 to 100% LEL, 10% LEL) with 316SS M20 entry with Modbus	SPXCDASMPxM
ATEX/IECEX/KTL/PA and GB approved SP XCD carbon dioxide (CO ₂) IR 0-2% v/v with 316SS, M20 entry with Modbus	SPXCDASMB1M
ATEX/IECEX/KTL/PA and GB approved SP XCD oxygen (O ₂) 25.0% v/v with 316SS, M20 entry with Modbus	SPXCDASMO1M
ATEX/IECEX/KTL/PA and GB approved SP XCD hydrogen sulfide (H ₂ S) 0-50 ppm (10.0 to 100.0 ppm) with 316SS, M20 entry with Modbus	SPXCDASMHxM
ATEX/IECEX/KTL/PA and GB approved SP XCD carbon monoxide (CO) 0-300 ppm (100 to 1000 ppm) with 316SS, M20 entry with Modbus	SPXCDASMCxM
ATEX/IECEX/KTL/PA and GB approved SP XCD hydrogen (H ₂) 0-1000 ppm with 316SS, M20 entry with Modbus	SPXCDASMG1M

Sensepoint XCD (continued)

Accessories	Part Number
Calibration cap	S3KCAL
Collecting cone for use with lighter than air gases	SPXCDCC
Duct mounting kit	SPXCDDMK
Mounting bracket (inc. bolts, nuts, brackets)	SPXCMTBR
Sunshade / deluge protection	SPXCSDP
Hard copy manual in english	SPXCDSMANEN

Sensepoint XCD Replacement Toxic, Flammable and Oxygen Cartridges	Part Number
Flammable catalytic 0-100% LEL (20.0 to 100.0% LEL)	SPXCDXSFSS
Flammable IR 0-100% LEL methane (CH ₄) (20.0 to 100.0% LEL)	SPXCDXSRSS
Flammable IR 0-100% LEL propane (C ₃ H ₈) (20.0 to 100.0% LEL, 10% LEL)	SPXCDXSPSS
Carbon dioxide IR (CO ₂) 0-2.00% v/v	SPXCDXSB1SS
Oxygen (O ₂) 25.0% v/v	SPXCDXSO1SS
Hydrogen sulfide (H ₂ S) 0-50 ppm (10.0 to 100.0 ppm)	SPXCDXSHSS
Carbon monoxide (CO) 0-500 ppm (100 to 1000 ppm)	SPXCDXSCSS
Nitrogen dioxide (NO ₂) (10 to 50 ppm)	SPXCDXSNSS
Hydrogen (H ₂) 0-1000 ppm	SPXCDXSG1SS

Spares (Miscellaneous)	Part Number
Sensepoint XCD standard weather protection	SPXCDWP
Sensor retainer with locking screw	SPXCDSRLS
Allen key for stopper	SPXCDAKS
Hex wrench for earth screw	SPXCDSHWES
Earth bracket and screws	SPXCDEBS
Magnetic wand	SPXCDSMAG

Spares (Replacement Display Module)	Part Number
Each replacement Display Module includes pre-configured PCB (for sensor and range), backlit LCD and plastic housing. The unit is a plug in replacement and simply requires configuration after fitting via the menu.	
Replacement display module for oxygen (O ₂) & toxic	SPXCDDMT
Replacement display module for FL & IR	SPXCDDMF

Spares (Replacement Terminal Module)	Part Number
Each replacement terminal module includes pre-configured PCB (for sensor and range), terminals, screws, 'U' clamp, plastic cover and fixing screws.	
Replacement terminal module for oxygen (O ₂)	SPXCDSMO
Replacement terminal module for toxic	SPXCDSMT
Replacement terminal module for FL and IR	SPXCDSMTF



Sensepoint XCD RTD

Cl₂, CO, H₂, H₂S, NH₃, NO, NO₂, O₂, SO₂



Sensepoint XCD RTD from Honeywell Analytics makes it easy on your maintenance team, time and budget when faced with the challenge of monitoring toxic gases in Class I, Div. 2 areas.

You can mount the unit up to 100 ft. from the transmitter to obtain maximum gas detection coverage in areas not easily accessible or where the sensor would not be visible, as in high-or low-level concealed areas, or detection outside the room being monitored. XCD RTD offers unrivaled flexibility and performance via its easily recognizable display (traffic light pattern) to convey safety status, communication and mounting options, and onboard diagnostics.

Reduce Cost of Ownership Over Life of the Product

- Cut stocking and procurement costs with a common transmitter platform
- Reduce maintenance time and expense with non-intrusive, one-man operation
- Simplify maintenance with plug-in, removable sensor
- Reduce inspection and training time with tri-color 'traffic light' display conveying safety status at a glance
- Simplify set-up and configuration with non-intrusive magnetic switches

Certifications

- cCSAus Ex d IIB+H2; Class I, Zone 1, AEx d IIB+H2; Class I, Div 2, Groups B, C & D
- Class I, Zone 1, AEx d ia IIC Gb; Class I, Div. 2, Groups B, C and D
- InMetro Ex d IIC T6 Gb, Ex tb IIIC T85°C Db, IP66, -40°C < ta < +65°C

Gain Added Flexibility, Reliability and Performance

- Extend gas sensing element up to 100 ft. (30 m) from transmitter; mount in the most difficult to access areas
- Reduce likelihood of human error via on-board diagnostics and easy-to-read display
- Protect against dust/water ingress with IP66/67 rated stainless steel or aluminum enclosure
- Prevent false alarms with auto-inhibit during maintenance
- Select sink or source 4-20 mA output; integral or remote configuration
- Full range of accessories and purchase options let you choose the remote monitoring system that's right for your application



Sensor Fitted to Remote Junction Box

Sensepoint XCD RTD (continued)

Sensepoint XCD RTD: Class I, Div. 2 Explosion Proof Transmitter (4-20 mA, 3 Relays) and Sensepoint Toxic sensor	Part Number
Oxygen (O ₂) 0-25% v/v, aluminum enclosure	SPXCDULNO2
Oxygen (O ₂) 0-25% v/v, stainless steel enclosure	SPXCDUSNO2
Oxygen (O ₂) 0-25% v/v, aluminum enclosure, Modbus	SPXCDULNO2M
Oxygen (O ₂) 0-25% v/v, stainless steel enclosure, Modbus	SPXCDUSNO2M
Hydrogen sulfide (H ₂ S) 0-50 ppm, aluminum enclosure	SPXCDULNH2
Hydrogen sulfide (H ₂ S) 0-50 ppm, stainless steel enclosure	SPXCDUSNH2
Hydrogen sulfide (H ₂ S) 0-50 ppm, aluminum enclosure, Modbus	SPXCDULNH2M
Hydrogen sulfide (H ₂ S) 0-50 ppm, stainless steel enclosure, Modbus	SPXCDUSNH2M
Carbon monoxide (CO) 0-200 ppm, aluminum enclosure	SPXCDULNC2
Carbon monoxide (CO) 0-200 ppm, stainless steel enclosure	SPXCDUSNC2
Carbon monoxide (CO) 0-200 ppm, aluminum enclosure, Modbus	SPXCDULNC2M
Carbon monoxide (CO) 0-200 ppm, stainless steel enclosure, Modbus	SPXCDUSNC2M
Hydrogen (H ₂) 0-1,000 ppm, aluminum enclosure	SPXCDULNG2
Hydrogen (H ₂) 0-1,000 ppm, stainless steel enclosure	SPXCDUSNG2
Hydrogen (H ₂) 0-1,000 ppm, aluminum enclosure, Modbus	SPXCDULNG2M
Hydrogen (H ₂) 0-1,000 ppm, stainless steel enclosure, Modbus	SPXCDUSNG2M
Nitrogen dioxide (NO ₂) 0-10 ppm, aluminum enclosure	SPXCDULNN2
Nitrogen dioxide (NO ₂) 0-10 ppm, stainless steel enclosure	SPXCDUSNN2
Nitrogen dioxide (NO ₂) 0-10 ppm, aluminum enclosure, Modbus	SPXCDULNN2M
Nitrogen dioxide (NO ₂) 0-10 ppm, aluminum enclosure, Modbus	SPXCDUSNN2M
Ammonia (NH ₃) 0-50 ppm, aluminum enclosure	SPXCDULNA2
Ammonia (NH ₃) 0-50 ppm, stainless steel enclosure	SPXCDUSNA2
Ammonia (NH ₃) 0-50 ppm, aluminum enclosure, Modbus	SPXCDULNA2M
Ammonia (NH ₃) 0-50 ppm, stainless steel enclosure, Modbus	SPXCDUSNA2M
Chlorine (Cl ₂) 0-5 ppm, aluminum enclosure	SPXCDULNL2
Chlorine (Cl ₂) 0-5 ppm, stainless steel enclosure	SPXCDUSNL2
Chlorine (Cl ₂) 0-5 ppm, aluminum enclosure, Modbus	SPXCDULNL2M
Chlorine (Cl ₂) 0-5 ppm, stainless steel enclosure, Modbus	SPXCDUSNL2M
Sulfur dioxide (SO ₂) 0-15 ppm, aluminum enclosure	SPXCDULNS2
Sulfur dioxide (SO ₂) 0-15 ppm, stainless steel enclosure	SPXCDUSNS2
Sulfur dioxide (SO ₂) 0-15 ppm, aluminum enclosure, Modbus	SPXCDULNS2M
Sulfur dioxide (SO ₂) 0-15 ppm, stainless steel enclosure, Modbus	SPXCDUSNS2M
Nitric oxide (NO) 0-100 ppm, aluminum enclosure	SPXCDULND2
Nitric oxide (NO) 0-100 ppm, stainless steel enclosure	SPXCDUSND2
Nitric oxide (NO) 0-100 ppm, aluminum enclosure, Modbus	SPXCDULND2M
Nitric oxide (NO) 0-100 ppm, stainless steel enclosure, Modbus	SPXCDUSND2M

Sensepoint XCD RTD (continued)

Sensepoint XCD RTD: Class I, Div. 2: XP Explosion Proof Transmitter (4-20 mA, 3 Relays), Sensepoint Toxic sensor and Junction Box

	Part Number
Oxygen (O ₂) 0-25%, aluminum enclosure	SPXCDULNO2R
Oxygen (O ₂) 0-25%, stainless steel enclosure	SPXCDUSNO2R
Oxygen (O ₂) 0-25%, aluminum enclosure, Modbus	SPXCDULNO2RM
Oxygen (O ₂) 0-25%, stainless steel enclosure, Modbus	SPXCDUSNO2RM
Hydrogen sulfide (H ₂ S) 0-50 ppm, aluminum enclosure	SPXCDULNH2R
Hydrogen sulfide (H ₂ S) 0-50 ppm, stainless steel enclosure	SPXCDUSNH2R
Hydrogen sulfide (H ₂ S) 0-50 ppm, aluminum enclosure, Modbus	SPXCDULNH2RM
Hydrogen sulfide (H ₂ S) 0-50 ppm, stainless steel enclosure, Modbus	SPXCDUSNH2RM
Carbon monoxide (CO) 0-200 ppm, aluminum enclosure	SPXCDULNC2R
Carbon monoxide (CO) 0-200 ppm, stainless steel enclosure	SPXCDUSNC2R
Carbon monoxide (CO) 0-200 ppm, aluminum enclosure, Modbus	SPXCDULNC2RM
Carbon monoxide (CO) 0-200 ppm, stainless steel enclosure, Modbus	SPXCDUSNC2RM
Hydrogen (H ₂) 0-1,000 ppm, aluminum enclosure	SPXCDULNG2R
Hydrogen (H ₂) 0-1,000 ppm, stainless steel enclosure	SPXCDUSNG2R
Hydrogen (H ₂) 0-1,000 ppm, aluminum enclosure, Modbus	SPXCDULNG2RM
Hydrogen (H ₂) 0-1,000 ppm, stainless steel enclosure, Modbus	SPXCDUSNG2RM
Nitrogen dioxide (NO ₂) 0-10 ppm, aluminum enclosure	SPXCDULNN2R
Nitrogen dioxide (NO ₂) 0-10 ppm, stainless steel enclosure	SPXCDUSNN2R
Nitrogen dioxide (NO ₂) 0-10 ppm, aluminum enclosure, Modbus	SPXCDULNN2RM
Nitrogen dioxide (NO ₂) 0-10 ppm, stainless steel enclosure, Modbus	SPXCDUSNN2RM
Ammonia (NH ₃) 0-50 ppm, aluminum enclosure	SPXCDULNA2R
Ammonia (NH ₃) 0-50 ppm, stainless steel enclosure	SPXCDUSNA2R
Ammonia (NH ₃) 0-50 ppm, aluminum enclosure, Modbus	SPXCDULNA2RM
Ammonia (NH ₃) 0-50 ppm, stainless steel enclosure, Modbus	SPXCDUSNA2RM
Chlorine (Cl ₂) 0-5 ppm, aluminum enclosure	SPXCDULNL2R
Chlorine (Cl ₂) 0-5 ppm, stainless steel enclosure	SPXCDUSNL2R
Chlorine (Cl ₂) 0-5 ppm, aluminum enclosure, Modbus	SPXCDULNL2RM
Chlorine (Cl ₂) 0-5 ppm, stainless steel enclosure, Modbus	SPXCDUSNL2RM
Sulfur dioxide (SO ₂) 0-15 ppm, aluminum enclosure	SPXCDULNS2R
Sulfur dioxide (SO ₂) 0-15 ppm, stainless steel enclosure	SPXCDUSNS2R
Sulfur dioxide (SO ₂) 0-15 ppm, aluminum enclosure, Modbus	SPXCDULNS2RM
Sulfur dioxide (SO ₂) 0-15 ppm, stainless steel enclosure, Modbus	SPXCDUSNS2RM
Nitric oxide (NO) 0-10 ppm, aluminum enclosure	SPXCDULND2R
Nitric oxide (NO) 0-10 ppm, stainless steel enclosure	SPXCDUSND2R
Nitric oxide (NO) 0-10 ppm, aluminum enclosure, Modbus	SPXCDULND2RM
Nitric oxide (NO) 0-10 ppm, stainless steel enclosure, Modbus	SPXCDUSND2RM

Sensepoint XCD RTD (continued)

XCD RTD Replacement Sensors: Sensepoint Toxic sensors Class I, Div. 2 (3/4 in. NPT)	Part Number
Oxygen (O ₂) 0-25% v/v sensor	2106B1830
Hydrogen sulfide (H ₂ S) 0-50 ppm, sensor	2106B1801
Carbon monoxide (CO) 0-200 ppm, sensor	2106B1806
Hydrogen (H ₂) 0-1,000 ppm, replacement sensor	2106B1816
Nitrogen dioxide (NO ₂) 0-10 ppm, replacement sensor	2106B1822
Ammonia (NH ₃) 0-50 ppm, replacement sensor	2106B1813
Chlorine (Cl ₂) 0-5 ppm, replacement sensor	2106B1810
Sulfur dioxide (SO ₂) 0-15 ppm, replacement sensor	2106B1820
Nitric oxide (NO) 0-100 ppm, replacement sensor	2106B1818

XCD RTD Spares Class I, Div. 2	Part Number
Sensepoint XCD RTD transmitter, 4-20 mA, 3 relays	SPXCDULNTX4
Sensepoint XCD RTD transmitter, 4-20 mA, 3 relays, stainless steel	SPXCDUSNTX4
Sensepoint XCD RTD transmitter, 4-20 mA, 3 relays, Modbus	SPXCDULNTX4M
Sensepoint XCD RTD transmitter, 4-20 mA, 3 relays, Modbus stainless steel	SPXCDUSNTX4M
Oxygen (O ₂) electrochemical cell exchange kit	2106B1545
Sulfur dioxide (SO ₂) electrochemical cell exchange kit	2106B1546
Chlorine (Cl ₂) electrochemical cell exchange kit	2106B1547
Carbon monoxide (CO) electrochemical cell exchange kit	2106B1548
Hydrogen sulfide (H ₂ S) electrochemical cell exchange kit	2106B1549
Nitric oxide (NO) electrochemical cell exchange kit	2106B1594
Ammonia (NH ₃) 0-50 ppm, electrochemical cell exchange kit	2106B1596
Hydrogen (H ₂) 0-1,000 ppm, electrochemical cell exchange kit	2106B1597
Nitrogen dioxide (NO ₂) 0-10 ppm, electrochemical cell exchange kit	2106B1599
Sensepoint XCD RTD remote junction box, 3 terminal	2430-0021

Accessories	Part Number
Pipe mounting bracket (inc. Fixings and hex wrench set)	SPXCDMTBR
Sunshade / deluge protection	SPXCDSDP
Series 2000 weather housing use with toxic sensor	02000-A-1635
Series 2000 flow housing assembly	02000-A-1645
Toxic calibration kit with calibration cover, removal tool, potentiometer adjustment tool	2106B2114

Note: Flow housing (02000-A-1645) is required and must be ordered separately.

For XCD Calibration Kits, please consult the Calibration Kits and Calibration Gas pages.



Sensepoint Sensors

Cl₂, CO, H₂, H₂S, NH₃, NO, NO₂, O₂, SO₂



Sensepoint is a range of hazardous area certified combustible and toxic gas detectors suitable for indoor and outdoor environments. The combustible version is disposable whereas the toxic version allows users to replace the sensing element.

Certifications include:

North America: cCSAus Class I Div. 2 (Toxic only)
 European: ATEX
 Australian: SAA

Performance approvals include:

European combustible EN50054/57
 European toxic pr EN45544
 Casing manufactured from PPS plastic

Wiring:

Combustible 3 wire mV
 Toxic 2 wire 4-20 mA

Mounting thread:

M20, M25, M26, 3/4 in. NPT

Ordering information:

Select gas range and thread from the following tables.

Combustible Sensor (ATEX Only)	Part Number
0-100% LEL M20	2106B1200
0-100% LEL M25	2106B1201
0-100% LEL 3/4 in. NPT	2106B1204

Combustible Sensor - High Temperature (150°C with 3rd Party Performance Approval)	Part Number
(ATEX) M20	2106B2310
(ATEX) M25	2106B2311
(ATEX) 3/4 in. NPT	2106B2312

Sensepoint Toxic Sensor (cCSAus Class I, Div. 2)	Part Number
Oxygen (O ₂) 0-25% v/v	2106B1830
Hydrogen sulfide (H ₂ S) 0-50 ppm	2106B1801
Carbon monoxide (CO) 0-200 ppm	2106B1806
Hydrogen (H ₂) 0-1,000 ppm	2106B1817
Nitrogen dioxide (NO ₂) 0-10 ppm	2106B1822
Ammonia (NH ₃) 0-50 ppm	2106B1813
Chlorine (Cl ₂) 0-5 ppm	2106B1810
Sulfur dioxide (SO ₂) 0-15 ppm	2106B1820
Nitric oxide (NO) 0-100 ppm	2106B1818

Sensepoint Sensors (continued)

Sensepoint Toxic Sensor (ATEX)	Part Number
Hydrogen sulfide (H ₂ S) 0-20 ppm M20	2106B1400
Hydrogen sulfide (H ₂ S) 0-50 ppm M20	2106B1401
Hydrogen sulfide (H ₂ S) 0-100 ppm M20	2106B1402
Hydrogen sulfide (H ₂ S) 0-20 ppm 3/4 in. NPT	2106B1700
Hydrogen sulfide (H ₂ S) 0-50 ppm 3/4 in. NPT	2106B1701
Hydrogen sulfide (H ₂ S) 0-100 ppm 3/4 in. NPT	2106B1702
Carbon monoxide (CO) 0-100 ppm M20	2106B1405
Carbon monoxide (CO) 0-200 ppm M20	2106B1406
Carbon monoxide (CO) 0-500 ppm M20	2106B1407
Carbon monoxide (CO) 0-100 ppm 3/4 in. NPT	2106B1705
Carbon monoxide (CO) 0-200 ppm 3/4 in. NPT	2106B1706
Carbon monoxide (CO) 0-500 ppm 3/4 in. NPT	2106B1707
Chlorine (Cl ₂) 0-5 ppm M20	2106B1410
Chlorine (Cl ₂) 0-15 ppm M20	2106B1411
Chlorine (Cl ₂) 0-5 ppm 3/4 in. NPT	2106B1710
Chlorine (Cl ₂) 0-15 ppm 3/4 in. NPT	2106B1711
Ammonia (NH ₃) 0-50 ppm M20	2106B1413
Ammonia (NH ₃) 0-1000 ppm M20	2106B1414
Ammonia (NH ₃) 0-100 ppm M20	2106B1415
Ammonia (NH ₃) 0-50 ppm 3/4 in. NPT	2106B1713
Ammonia (NH ₃) 0-1000 ppm 3/4 in. NPT	2106B1714
Ammonia (NH ₃) 0-100 ppm 3/4 in. NPT	2106B1715
Hydrogen (H ₂) 0-1000 ppm M20	2106B1416
Hydrogen (H ₂) 0-10000 ppm M20	2106B1417
Hydrogen (H ₂) 0-1000 ppm 3/4 in. NPT	2106B1716
Hydrogen (H ₂) 0-10000 ppm 3/4 in. NPT	2106B1717
Nitric oxide (NO) 0-100 ppm M20	2106B1418
Nitric oxide (NO) 0-100 ppm 3/4 in. NPT	2106B1718
Sulfur dioxide (SO ₂) 0-15 ppm M20	2106B1420
Sulfur dioxide (SO ₂) 0-50 ppm M20	2106B1421
Sulfur dioxide (SO ₂) 0-15 ppm 3/4 in. NPT	2106B1720
Sulfur dioxide (SO ₂) 0-50 ppm 3/4 in. NPT	2106B1721
Nitrogen dioxide (NO ₂) 0-10 ppm M20	2106B1422
Nitrogen dioxide (NO ₂) 0-10 ppm 3/4 in. NPT	2106B1722
Oxygen (O ₂) 25% V/V	2106B1430
Oxygen (O ₂) 25% V/V 3/4 in. NPT	2106B1730

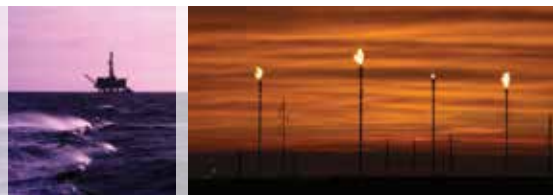
Sensepoint Sensors (continued)

Accessories	Part Number
Junction box - Bartec DE1155 with continuity plate 1 x 25 mm - 3 x 20 mm entries - ATEX approved	00780-A-0100
Right angle mounting bracket for hawke junction box	00780-A-0160
Series 2000 weather housing use with toxic sensor	02000-A-1635
Series 2000 weather housing use with combustible sensor	02000-A-1640
Series 2000 collecting cone use with combustible sensor	02000-A-1642
Series 2000 flow housing assembly	02000-A-1645
Series 2k flow housing assembly plastic	02000-A-3120
Catalytic bridge to 4-20 mA converter	2106B1110
Signalpoint toxic calibration kit with calibration cover, removal tool, potentiometer adjustment tool	2106B2114
M36/M40 thread adaptor	2106D2055
Cable gland and caps, 20 mm, Nylon	225-262-138

Replacement Sensor Kits	Part Number
Oxygen (O ₂) electrochemical cell exchange kit	2106B1545
Sulfur dioxide (SO ₂) electrochemical cell exchange kit	2106B1546
Chlorine (Cl ₂) electrochemical cell exchange kit	2106B1547
Carbon monoxide (CO) electrochemical cell exchange kit	2106B1548
Hydrogen sulfide (H ₂ S) electrochemical cell exchange kit	2106B1549
Nitric oxide (NO) electrochemical cell exchange kit	2106B1594
Ammonia (NH ₃) 0-1,000 ppm electrochemical cell exchange kit	2106B1595
Ammonia (NH ₃) 0-50 ppm electrochemical cell exchange kit	2106B1596
Hydrogen (H ₂) 0-1,000 ppm electrochemical cell exchange kit	2106B1597
Hydrogen (H ₂) 10,000 ppm electrochemical cell exchange kit	2106B1598
Nitrogen dioxide (NO ₂) 0-10 ppm electrochemical cell exchange kit	2106B1599

Sensepoint Sensors

With Junction Box



CH₄, Cl₂, CO, H₂, H₂S, NH₃, NO₂, O₂, SO₂



The Sensepoint range of flammable, toxic and oxygen gas detectors offer users a low cost solution to their gas monitoring needs, in or out of doors and even in potentially explosive atmospheres (ATEX approval only). Supplied with a pre-wired junction box, the detector can be installed using conduit or armored cable and glands depending on individual site standards. The junction box includes a hinged lid to ensure both hands are free to complete electrical connections. Threaded M20 as well as 3/4 in. and 1/2" NPT clearance entries are included as standard, each one fitted with an appropriate seal, so enabling the user to select the most convenient entry size to use.

Each ATEX approved Sensepoint is supplied complete with pre-wired universal junction box (1 x threaded M20, 1x clearance 3/4 in. NPT, 1 x clearance 1/2 in. NPT, 3 x approved stopping plugs, earth continuity plate), instruction manual and factory set gas sensor as listed below.

Sensepoint Sensor with Junction Box	Part Number	Notes
Methane (CH ₄) 0-100% LEL	SPSTAXF1	*1 / *3
Oxygen (O ₂) 0-25% v/v	SPSTAXO1	*1 / *3
Carbon monoxide (CO) 0-200 ppm	SPSTAXC1	*1
Carbon monoxide (CO) 0-500 ppm	SPSTAXC2	*2
Hydrogen sulfide (H ₂ S) 0-50 ppm	SPSTAXH1	*1
Hydrogen sulfide (H ₂ S) 0-20 ppm	SPSTAXH2	*2
Hydrogen sulfide (H ₂ S) 0-100 ppm	SPSTAXH3	*2
Hydrogen (H ₂) 0-1000 ppm	SPSTAXG1	*1
Hydrogen (H ₂) 0-10000 ppm	SPSTAXG2	*2
Chlorine (Cl ₂) 0-5 ppm	SPSTAXL1	*1
Chlorine (Cl ₂) 0-15 ppm	SPSTAXL2	*2
Sulfur dioxide (SO ₂) 0-15 ppm	SPSTAXS1	*1
Sulfur dioxide (SO ₂) 0-50 ppm	SPSTAXS2	*2
Nitrogen dioxide (NO ₂) 0-10 ppm	SPSTAXN1	*1
Ammonia (NH ₃) 0-50 ppm	SPSTAXA1	*1
Ammonia (NH ₃) 0-1000 ppm	SPSTAXA2	*2

*1 = Standard gas ranges to be used wherever possible. Parts generally available from stock.

*2 = 'Other' ranges are made to order and subject to extended lead times.

*3 = No alternate ranges have been released. Contact Honeywell Analytics for further information.

Sensepoint Sensors

With Junction Box

Accessories	Part Number
Calibration gas flow housing (for flammable and toxic)	02000-A-1645
Right angle mounting bracket for ceiling mounting	00780-A-0160
Weatherproof cap for use with flammable detector including remote gassing nozzle	02000-A-1635
Weatherproof cap for use with toxic/oxygen detector including remote gassing nozzle	02000-A-1640
Collecting cone for use with flammable detector	02000-A-1642

Replacement Sensor Cartridge	Part Number
Methane (CH ₄) 0-100% LEL	SPSTAXF1SS
Oxygen (O ₂) 0-25% v/v	SPSTAXO1SS
Carbon monoxide (CO) 0-200 ppm	SPSTAXC1SS
Carbon monoxide (CO) 0-500 ppm	SPSTAXC2SS
Hydrogen sulfide (H ₂ S) 0-50 ppm	SPSTAXH1SS
Hydrogen sulfide (H ₂ S) 0-20 ppm	SPSTAXH2SS
Hydrogen sulfide (H ₂ S) 0-100 ppm	SPSTAXH3SS
Hydrogen (H ₂) 0-1,000 ppm	SPSTAXG1SS
Hydrogen (H ₂) 0-10,000 ppm	SPSTAXG2SS
Chlorine (Cl ₂) 0-5 ppm	SPSTAXL1SS
Chlorine (Cl ₂) 0-15 ppm	SPSTAXL2SS
Sulfur dioxide (SO ₂) 0-15 ppm	SPSTAXS1SS
Sulfur dioxide (SO ₂) 0-50 ppm	SPSTAXS2SS
Nitrogen dioxide (NO ₂) 0-10 ppm	SPSTAXN1SS
Ammonia (NH ₃) 0-50 ppm	SPSTAXA1SS
Ammonia (NH ₃) 0-1,000 ppm	SPSTAXA2SS

Sensepoint XCD RFD



LEL (*1-*8)



Transmitter Display



705 Sensor



Sensor Fitted to Remote Junction Box

The Sensepoint RFD is a remote flammable detection system for LEL monitoring applications. The XCD RFD combines the XCD transmitter with the 705 combustibility sensor, and is certified for use in Class I Div. 1 rated areas. The XCD RFD offers one man, non-intrusive, operation and reduces routine maintenance time and costs. The XCD transmitter includes two programmable alarm/fault relays as well as an industry standard 4-20 mA output. Calibration and relay operation of the transmitter may be adjusted via the transmitters' backlit LCD. Outputs are automatically inhibited during adjustment thereby reducing the risk of false alarm at the control panel during maintenance.

Sensepoint RFD is supplied with all necessary accessories for easy installation. It can be mounted on a wall or 2 in. round support pole using the universal bracket provided. The detector is ideal for use with either conduit or steel wire armored cable and glands and includes both 3/4 in. NPT and M20 entries to the junction box.

Sensepoint RFD offers easy installation and fast routine operation. Compatible with both standard and high temperature variants of the Sensepoint and 705 flammable sensors from Honeywell Analytics the overall flexibility of the product range is increased. Meets Class I Div. 1 UL performance standards.

Note: Conduit and fittings not included

Transmitter - cCSAus Certified for North America (Class I, Div. 1, Groups B, C & D)

Part Number

Transmitter with LM25, 3/4 in. NPT entry, aluminum	SPXCDULNRFD
Transmitter with LM25, 3/4 in. NPT entry, Modbus, aluminum	SPXCDULNRFDM
Transmitter with 3/4 in. NPT entry, 316SS	SPXCDUSNRFD
Transmitter with 3/4 in. NPT entry, Modbus, 316SS	SPXCDUSNRFDM

Sensor

Part Number

705 combustibility sensor - aluminum - cat bead (SG16B) 0-100% LEL	00705-A-1733
705 high temperature combustibility sensor - 150°C - UL / 3/4 in. NPT threads	00705-A-1735

Sensepoint XCD RFD

Kits	Part Number
Transmitter with LM25, 3/4 in. NPT entry, aluminum, 705 sensor, and 3 wire junction box	XCDRFDL
Transmitter with LM25, 3/4 in. NPT entry, aluminum, 705 high temp sensor and 3 wire junction box	XCDRFDLH
Transmitter with LM25, 3/4 in. NPT entry, Modbus, aluminum, 705 sensor, and 3 wire junction box	XCDRFDLM
Transmitter with LM25, 3/4 in. NPT entry, Modbus, aluminum, 705 High Temp sensor, and 3 wire junction box	XCDRFDLMH
Transmitter with 3/4 in. NPT entry, 316SS, with 705 sensor, and 3 wire junction box	XCDRFDS
Transmitter with 3/4 in. NPT entry, 316SS, 705 high temp sensor, and 3 wire junction box	XCDRFDSH
Transmitter with 3/4 in. NPT entry, Modbus, 316SS, 705 sensor, and 3 wire junction box	XCDRFDSM
Transmitter with 3/4 in. NPT entry, Modbus, 316SS, 705 high temp sensor, and 3 wire junction box	XCDRFDSMH

Accessories	Part Number
Pipe mounting bracket (inc. fixings and hex wrench set)	SPXCMTBR
Sunshade / deluge protection	SPXCSDP
Weather protection stainless steel for 705 HT	00780-A-0076
Nylon weather protection for combustible sensor	02000-A-1640
Weather protection housing	02000-A-1635
Duct mount adaptor assembly (requires 1283-1084)	1283-1047
Sensepoint adaptor interface kit (requires 1283-1047)	1283-1084
Calibration gas flow adaptor (for use with 705 sensors)	00780-A-0035
Collecting cone (for use with MPD, Sensepoint and 705 sensors)	02000-A-1642

705 Combustible Gas Detector



LEL (*1-*8)



The 705 Combustible Gas Sensor is a low cost, explosion proof sensor assembly, fitted with poison-resistant combustible gas detection elements. Fully encapsulated, it is designed for use in hazardous locations. The sensor is electro-catalytic and consists of 2 beads of refractory oxide, formed on a fine platinum wire coil. The active bead is coated with a catalyst material, while the reference bead is glass coated. In the presence of gas, the catalyst coated bead promotes the oxidation of the gas, causing it to heat up and increase in electrical resistance. This change of resistance, relative to the reference bead, can be measured and is in direct proportion to the concentration of combustible gas.

Features

- Fast response
- High resistance to catalytic poisoning
- Low cost, high performance design
- Low power consumption
- Accurate, trouble free gas detection
- Corrosion resistant aluminum construction
- Five year warranty

Approvals

- CSA & UL approved (705 HT UL only)
- Class I, Div 1, Groups B, C & D

Sensor

705 combustible sensor, SG16B junction box, WP

Part Number

2430K0001

Accessories

UL/CSA aluminum 6 wire junction box assembly

Nylon weather protection for combustible sensor

Flow housing

Weather protection stainless steel for high temps.

Weather protection housing

Duct mount adaptor assembly

Part Number

2441-0022

02000-A-1640

00780-A-0035

00780-A-0076

02000-A-1635

1283-1047

Spares

705 combustible sensor - aluminum - SG16B 0-100% LEL

705 high temperature combustible sensor - 150°C - UL / 3/4 in. NPT threads

Part Number

00705-A-1733

00705-A-1735



Series 3000 MkII

Cl₂, ClO₂, CO, H₂, H₂S, HCl, HF, NH₃, NO, NO₂, O₂, PH₃, SO₂



The Series 3000 MkII provides comprehensive monitoring of toxic and oxygen gas hazards in potentially explosive atmospheres, both in and out of doors. This low powered gas detector operates on an industry standard 2-wire 4-20 mA loop, making it ideal for both new and retrofit applications. Users can configure the detector without the need of a 'hot work permit' by using the LCD and magnetic switches. Fault diagnostic software and configurable calibration intervals simplify maintenance procedures.

Reliable detection

- Proven electrochemical sensing technology
- Uses Surecell™ electrochemical cells, ideal for hot and humid environments
- Long life sensing elements (typical >2 years)
- Patented 'Reflex' sensing element verification diagnostics

Reduced installation costs

- Universal mounting bracket included, supplied as standard
- Explosion proof transmitter allows field wiring to be run along with other non IS instruments
- Plug-in sensor removes wiring

Reduced commissioning costs

- Sensor recognition software auto configures transmitter
- Non-intrusive configuration
- Plug and play factory configured sensors

Reduced maintenance costs

- IS sensor connection permits hot swap, reducing down time
- User programmable calibration frequency
- Integral fault diagnostic software
- Menu/icon driven calibration procedure
- IP 66 rated to protect against dust/water ingress

Regulatory compliance

- US (UL)
- Canadian (cUL/CSA)
- International (IECEX)
- European (ATEX)

Range of optional accessories

- Remote sensor mounting kit
- Duct mounting kit (for H₂, CO and H₂S only)
- Calibration cup to apply test gas
- Collecting cone (for H₂ and CO only)

S3K MkII Transmitter	Part Number
UL/cUL approved Series 3000 MkII toxic and oxygen (O ₂) transmitter, aluminum LM25 and 2 x 3/4 in. NPT entries	S3KUL2
UL/cUL approved Series 3000 MkII toxic and oxygen (O ₂) transmitter, stainless steel 316 and 2 x 3/4 in. NPT entries	S3KUS2
ATEX/IECEX approved Series 3000 MkII toxic and oxygen (O ₂) transmitter, aluminum LM25 and 2 x M20 entries	S3KAL2
ATEX/IECEX approved Series 3000 MkII toxic and oxygen (O ₂) transmitter, stainless steel 316 and 2 x M20 entries	S3KAS2
INMETRO approved Series 3000 MkII toxic and oxygen (O ₂) transmitter, aluminum LM25 and 2 x 3/4 in. NPT entries	S3KNL2
INMETRO approved Series 3000 MkII toxic and oxygen (O ₂) transmitter, stainless steel 316 and 2 x 3/4 in. NPT entries	S3KNS2

Series 3000 MkII (continued)

Toxic and Oxygen (O₂) Smart Sensor Cartridges

A wide range of toxic and oxygen (O₂) sensors, featuring patented Surecell™ and Reflex technology, are available for use with the Series 3000 MkII transmitter. Featuring a field replaceable sensor, these sensors are shipped pre-calibrated to the range listed below.

Smart Sensor Cartridges	Part Number
S3K sensor oxygen (O ₂) 0-25% v/v	XNXXSO1SS
S3K sensor carbon monoxide (CO) 0-300 ppm (100 to 1,000 ppm, 100 ppm)	XNXXSC1SS
S3K sensor hydrogen sulfide (H ₂ S) 0-15 ppm (10 to 50 ppm, 1 ppm)	XNXXSH1SS
S3K sensor hydrogen sulfide (H ₂ S) 0-100 ppm (50 to 500 ppm, 10 ppm)	XNXXSH2SS
S3K sensor chlorine (Cl ₂) 0-5.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)	XNXXSL1SS
XNX sensor sulfur dioxide (SO ₂) 0-15.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)	XNXXSS1SS
XNX sensor chlorine (Cl ₂) dioxide 0-1.00 ppm	XNXXSX1SS
XNX sensor nitrogen monoxide (NO) 0-100 ppm	XNXXSM1SS
XNX sensor nitrogen dioxide (NO ₂) 0-10.0 ppm (5.0 to 50.0 ppm, 5.0 ppm)	XNXXSN1SS
XNX sensor hydrogen (H ₂) 0-1000 ppm	XNXXSG1SS
XNX sensor hydrogen (H ₂) 0-10,000 ppm	XNXXSG2SS
XNX sensor hydrogen fluoride (HF) 0-12.0 ppm	XNXXSF1SS
XNX sensor ammonia (NH ₃) 0-200 ppm (50 to 200 ppm, 50 ppm)	XNXXSA1SS
XNX sensor ammonia (NH ₃) 0-1000 ppm (200 to 1000 ppm, 50 ppm)	XNXXSA2SS
XNX sensor phosphine (PH ₃) 0-1.2 ppm	XNXXSP1SS
XNX sensor hydrogen chloride (HCl) 0-10 ppm (10 to 20 ppm, 1 ppm)	XNXXSR1SS

Accessories	Part Number
Calibration cup (flow adaptor)	S3KCAL
Collecting cone (for carbon monoxide (CO) and hydrogen (H ₂) only)	SPXCDCC
Duct mounting kit (for carbon monoxide (CO), hydrogen (H ₂) and hydrogen sulfides (H ₂ S) only) (For flat surfaces only)	S3KDMK
Remote sensor mounting kit	S3KRMK

Series 3000 MkII (continued)

S3K replacement Toxic and Oxygen (O₂) Sensor Cells	Part Number
Ammonia (NH ₃) 0-1,000 ppm (200 to 1,000 ppm, 50 ppm)	S3KA2SS
Ammonia (NH ₃) 0-200 ppm (50 to 200 ppm, 50 ppm)	S3KA1SS
Carbon monoxide (CO) 0-300 ppm (100 to 999 ppm, 100 ppm)	S3KC1SS
Chlorine (Cl ₂) 0-5.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)	S3KL1SS
Chlorine dioxide (ClO ₂) 0-1.00 ppm	S3KX1SS
Hydrogen (H ₂) 0-10,000 ppm	S3KG2SS
Hydrogen (H ₂) 0-1,000 ppm	S3KG1SS
Hydrogen chloride (HCl) 0-10 ppm (10.0 to 20.0 ppm, 1.0 ppm)	S3KR1SS
Hydrogen fluoride (HF) 0-12.0 ppm	S3KF1SS
Hydrogen sulfide (H ₂ S) 0-100 ppm (50 to 500 ppm, 10 ppm)	S3KH2SS
Hydrogen sulfide (H ₂ S) 0-15 ppm (10 to 50 ppm, 1 ppm)	S3KH1SS
Nitrogen dioxide (NO ₂) 0-10.0 ppm (5.0 to 50.0 ppm, 5.0 ppm)	S3KN1SS
Nitrogen monoxide (NO) 0-100 ppm	S3KM1SS
Oxygen (O ₂) 0-25% v/v	S3KO1SS
Ozone (O ₃) 0-0.4 ppm	S3KZ1SS
Phosphine (PH ₃) 0-1.2 ppm	S3KP1SS
Sulfur dioxide (SO ₂) 0-15.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)	S3KS1SS

Spares (Miscellaneous)	Part Number
3/4 in. NPT to M20 adaptor	SPPPMADP
Instruction manual	S3KMAN
Large hex wrench (for mounting bracket)	SPPPMLHW
Magnet/screwdriver	S3KMAG
Mounting bracket (inc. fittings and hex wrench set)	SPPMMTBR
Replacement display module	S3KDM
Replacement terminal module	S3KTM
Small hex wrench (for sensor retaining screw)	SPPPMSHW
Weatherproof housing with bump test port	S3KWP

APEX Flammable and Toxic Gas Sensor and Transmitter



AsH₃, B₂H₆, BCl₃, Br, C₂H₄, C₂H₄O, C₂H₆O, C₃H₄, C₃H₆, C₃H₈, C₄H₁₀, CH₃, CH₄, Cl₂, ClO₂, CO, F, GeH₄, H₂, H₂S, H₂SiCl₂, HBr, HCl, HCN, HF, LEL, NH₃, NO, NO₂, O₂, O₃, PH₃, SiH₄, SO₂



Apex takes all the best elements of gas detection design and combines them into one unit. Apex provides the highest performance, installation flexibility, a wide range of accessories and a choice of communication outputs. All this is provided in a package that is easy to install, operate and maintain.

Transmitter

The robust hazardous area approved Apex transmitter housing and mounting bracket is made from 316 stainless steel. It has a large backlit LCD display, simple 4 button operation, 3 fully configurable relay outputs and selectable sink, source or isolated 4-20 mA signal. The transmitter is common to all types of sensor.

Sensor

The Apex Sensor can be mounted directly on the transmitter or remotely up to 100 m away. There are two versions of sensor; one for both catalytic and electrochemical type sensor cartridges and one for the thick film (semi conductor) type cartridges.

Smart Cartridge

The sensors can be fitted with a choice of over 40 toxic gas ranges and wide range of detectable flammable gases. Each cartridge is pre calibrated and simply plugs into the sensor. The Intrinsically Safe design allows cartridges to be changed with the unit under power. The transmitter recognizes a newly fitted sensor cartridge and automatically reads all the configuration information from it.

Material

Stainless steel 316

Wiring & Mounting

3 wire sink or source or 4 wire isolated 4-20 mA. A1, A2 and fault relays. Optional digital outputs. 2 x M25 or 2 x 3/4 in. NPT cable or conduit entries.

Easy to Install

- Sensor can be remotely mounted up to 100 m from the transmitter
- On board relays allow for local audible/visual alarms
- Strong integral 316 STST mounting bracket
- Large easy access cable entries
- Easy access terminal blocks
- Wide range of accessories

Easy to Maintain

- Simple plug in under power sensor cartridge
- Smart cartridges are supplied pre calibrated
- Common transmitter for all gas types
- Simple filter replacement

Easy to Use

- Intuitive menu operating system
- Clear on screen instructions guide user
- Simple for button operation
- Multiple language options
- Transmitter recognizes new sensor cartridges
- Easy to change gas types
- Large clear backlit graphical LCD display

APEX Flammable and Toxic Gas Sensor and Transmitter (Sensor Cartridges are Sold Separately)

	Part Number
Apex ATEX/INMETRO transmitter and sensor kit for catalytic and electrochemical cartridges	2110N2280
Apex UL transmitter and sensor kit for catalytic and electrochemical cartridges	2110N2283
Apex CSA transmitter and sensor kit for catalytic and electrochemical cartridges	2110N2284

APEX Flammable and Toxic Gas Sensor and Transmitter

Toxic Electrochemical Sensor Cartridge	Part Number
Arsine (AsH ₃) 0.2 ppm	2110B3000
Diborane (B ₂ H ₆) 0.4 ppm	2110B3010
Boron trichloride (BCl ₃) 6 ppm	2110B3020
Bromine (Br) 0.4 ppm	2110B3040
Chlorine (Cl ₂) 2 ppm	2110B3090
Chlorine (Cl ₂) 5 ppm	2110B3100
Chlorine (Cl ₂) 15 ppm	2110B3110
Chlorine dioxide (ClO ₂) 0.4 ppm	2110B3130
Carbon monoxide (CO) 100 ppm	2110B3140
Carbon monoxide (CO) 200 ppm	2110B3150
Carbon monoxide (CO) 500 ppm	2110B3160
Ethylene oxide (C ₂ H ₄ O) 25 ppm	2110B3052
DiChlorosilane (H ₂ SiCl ₂) 10 ppm	2110B3430
Fluorine (F) 4 ppm	2110B3200
Germane (GeH ₄) 0.8 ppm	2110B3210
Hydrogen (H ₂) 1,000 ppm	2110B3220
Hydrogen sulfide (H ₂ S) 20 ppm	2110B3230
Hydrogen sulfide (H ₂ S) 50 ppm	2110B3240
Hydrogen sulfide (H ₂ S) 100 ppm	2110B3250
Hydrogen sulfide (H ₂ S) 15 ppm	2110B3530
Hydrogen bromide (HBr) 12 ppm	2110B3270
Hydrogen chloride (HCl) 20 ppm	2110B3280
Hydrogen cyanide (HCN) 20 ppm	2110B3290
Hydrogen fluoride (HF) 12 ppm	2110B3300
Ammonia (NH ₃) 50 ppm	2110B3320
Ammonia (NH ₃) 100 ppm	2110B3330
Ammonia (NH ₃) 400 ppm	2110B3340
Ammonia (NH ₃) 1,000 ppm	2110B3350
Nitric oxide (NO) 100 ppm	2110B3360
Nitrogen dioxide (NO ₂) 12 ppm	2110B3370
Oxygen (O ₂) 21% V/V	2110B3380
Ozone (O ₃) 0.4 ppm	2110B3390
Phosphine (PH ₃) 1.2 ppm	2110B3400
Silane (SiH ₄) 20 ppm	2110B3440
Silane (SiH ₄) 2 ppm	2110B3490
Sulfur dioxide (SO ₂) 8 ppm	2110B3460
Sulfur dioxide (SO ₂) 15 ppm	2110B3470
Sulfur dioxide (SO ₂) 50 ppm	2110B3520

APEX (continued)

Catalytic Sensor Cartridges

Select catalytic cartridges for detection of a wide range of flammable gases. For catalytic cartridges calibrated to the European standard EN61779-1:2000 select part numbers from 2110B3700 to 2110B3749. For catalytic cartridges calibrated to UL/CSA requirements select part numbers from 2110B3750 to 2110B3799. Ensure the cartridge selected matches the type of sensor selected.

Catalytic Sensor Cartridge Calibrated to EN61779	Part Number
Propane (C ₃ H ₈) 100% LEL	2110B3701
Butane (C ₄ H ₁₀) 100% LEL	2110B3702
Propene (C ₃ H ₆) 100% LEL	2110B3703
Methane (CH ₄) 100% LEL	2110B3704
LPG 100% LEL	2110B3705
Hydrogen (H ₂) 100% LEL	2110B3707
Ethylene (C ₂ H ₄) 100% LEL	2110B3708
Ethyl alcohol (C ₂ H ₆ O) 100% LEL	2110B3712
Toluene (CH ₃) 100% LEL	2110B3728
Ammonia (NH ₃) 100% LEL	2110B3917
*1 LEL combustible smart cartridge Apex SG16	2110B3910
*2 LEL combustible smart cartridge Apex SG16	2110B3911
*3 LEL combustible smart cartridge Apex SG16	2110B3912
*4 LEL combustible smart cartridge Apex SG16	2110B3913
*5 LEL combustible smart cartridge Apex SG16	2110B3914
*6 LEL combustible smart cartridge Apex SG16	2110B3915
*7 LEL combustible smart cartridge Apex SG16	2110B3916
*8 LEL combustible smart cartridge Apex SG16	2110B3917

Catalytic Sensor Cartridge Calibrated to UL/CSA Requirements	Part Number
Butane (C ₄ H ₁₀) 100% LEL	2110B3752
Hydrogen (H ₂) 100% LEL	2110B3757
Ethylene (C ₂ H ₄) 100% LEL	2110B3758
Methane (CH ₄) 100% LEL	2110B3754
Propane (C ₃ H ₈) 100% LEL	2110B3751
*1 LEL combustible smart cartridge Apex SG16	2110B3930
*2 LEL combustible smart cartridge Apex SG16	2110B3931
*3 LEL combustible smart cartridge Apex SG16	2110B3932
*4 LEL combustible smart cartridge Apex SG16	2110B3933
*5 LEL combustible smart cartridge Apex SG16	2110B3934
*6 LEL combustible smart cartridge Apex SG16	2110B3935
*7 LEL combustible smart cartridge Apex SG16	2110B3936
*8 LEL combustible smart cartridge Apex SG16	2110B3937

Accessories	Part Number
Apex duct mount kit excl. JB and flexible conduit	1283K2237
Collecting cone	2110B2151
Flow housing	2110B2140
LonWorks® digital interface board	2110B2600
Remote sensor junction box-ATEX Ex II 2G D	2110B2100
Remote sensor junction box-UL Class I, Div. 1, Groups B, C, & D & Class I, Zone 1 / CSA Class I, Groups B, C, & D	2110B2103
Sun shade	2110B2152
Universal duct mounting kit	2442-0016
Weather protection housing	2110B2150

Spares	Part Number
Apex display module (ATEX/UL transmitters only)	2110B1828
Apex display module (CSA transmitters only)	2110B1829
ATEX certified sensor for ECC and catalytic cartridges	2110B2070
UL certified sensor for ECC and catalytic cartridges	2110B2073
CSA certified sensor for ECC and catalytic cartridges	2110B2074
Sensor mesh filter assembly	2110B2170
Sensor hydrophobic filter assembly	2110B2171
Sensor carbon filter assembly	2110B2172
Apex Transmitter ATEX certified 2 x M25 cable entries	2110B2200
Apex Transmitter UL certified 2 x 3/4 in. NPT entries	2110B2203
Apex Transmitter CSA certified 2 x 3/4 in. NPT entries	2110B2204
Sensor Cartridge Locking Ring (except O ₂)	2110B2800
Apex 'O' ring, gaskets, screws and fixture kit	2110B2829
Internal ribbon cable (transmitter)	2110B2833

Infrared Transmitters

Quick Reference Chart

Product	Gases Detected	Display	Material	Communication
Optima Plus	See Below	XNX™	SS316	HART over 4-20 mA, Modbus
Optima Plus with Hart		Optional	SS316	HART over 4-20 mA, Modbus
Searchline Excel		XNX™	SS316	HART over 4-20 mA, Modbus
Searchline Excel XD		DX100(M)	Cast Aluminum	4-20 mA, Modbus

Gas Detected	Optima Plus	Searchline Excel	Searchline Excel XD
Non-specific Flammable			
Methane (CH ₄)	X	X	X
Ethane (C ₂ H ₆)	X	X	
Propane (C ₃ H ₈)	X	X	
Butane (C ₄ H ₁₀)	X	X	
Pentane (C ₅ H ₁₂)	X	X	
Ethylene (C ₂ H ₄)	X	X	
Methanol (CH ₃ OH)	X	X	
Ethanol (CH ₃ CH ₂ OH)	X	X	
Ethylene / Ethene (C ₂ H ₄)	X	X	
Methane (CH ₄) 100% UEG	X		
Ethane (C ₂ H ₆) 100% UEG	X		
Propane (C ₃ H ₈) 100% UEG	X		
Butane (C ₄ H ₁₀) 100% UEG	X		
Ethylene/Ethene (C ₂ H ₄) 100% UEG	X		
Special and Custom Calibrations (See data sheet)	X		



Searchpoint Optima Plus

Infrared Combustible Gas Detector

CH₄, C₂H₆, C₃H₈, C₄H₁₀, C₅H₁₂, C₂H₄, CH₃OH, CH₃CH₂OH, Special/Custom (see below)



Searchpoint Optima Plus is a hazardous area certified flammable infrared gas detector. Infrared gas detectors are ideal for applications in the harshest environments or where catalytic poisons may be routinely present. Searchpoint Optima Plus has the fastest speed of response combined with the highest reliability and reduced routine maintenance. Two versions are available: A hydrocarbon unit and an ethylene unit that can detect a wide range of hydrocarbon gases including solvents.

Range:

Hydrocarbon: 0-100% LEL
Ethylene: 0-100% LEL

Material:

316 stainless steel

Performance Approvals:

European: Combustible EN50054
Canadian: CSA (methane only)
USA: FM

Wiring (6-wire configuration as follows):

- 3 wire, 4-20 mA (Optional Hart)
- 2 wire, Modbus
- 1 wire, Ground

Ordering information:

Select gas type and range plus appropriate accessories.

Note: The target gas must be specified for all Optima units.

Searchpoint Optima Plus Incorporates:

- The proven strengths of the original Searchpoint OPTIMA design
- Experience gained from over 75,000 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 $\sqrt{2}$ 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 UL, CSA, ATEX and more

Searchpoint Optima Plus (continued)

Hydrocarbon Optima Instruments: UL/InMetro certified	Part Number
Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade, configured as current source output	2108N4100N
Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade, configured as current source output, HART® output	2108N4100H
Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade, configured as current source output, includes remote gassing cell	2108N4110N
Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade, configured as current source output, HART® output, includes remote gassing cell	2108N4110H
Hydrocarbon calibration, for use in remote sampling systems, includes flow housing, configured as current source output	2108N5100N
Hydrocarbon calibration, for use in remote sampling systems complete with flow housing, HART® output	2108N5100H
Hydrocarbon calibration, for use in remote sampling systems for gas ranges 0–100 % v/v methane (CH ₄), 0–600,000 ppm propane (C ₃ H ₈) and 0–400,000 ppm propane (C ₃ H ₈), fitted with remote gassing cell and flow housing	2108N5110N
Hydrocarbon calibration, for use in remote sampling systems for gas ranges 0–100 % v/v methane (CH ₄), 0–600,000 ppm propane (C ₃ H ₈) and 0–400,000 ppm propane (C ₃ H ₈), fitted with remote gassing cell and flow housing, HART® output	2108N5110H

Hydrocarbon Optima Instruments: CSA certified	Part Number
Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade, configured as current source output	2108N4200N
Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade, configured as current source output, HART® output	2108N4200H
Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade, configured as current source output, includes remote gassing cell	2108N4210N
Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade, configured as current source output, includes remote gassing cell, HART® output	2108N4210H
Hydrocarbon calibration, for use in remote sampling systems, includes flow housing and remote gassing cell, configured as current source output	2108N5200N
Hydrocarbon calibration, for use in remote sampling systems, includes flow housing and remote gassing cell, configured as current source output, HART® output	2108N5200H

Note: See Gas Tables (starting next page) for available configurations.

Searchpoint Optima Plus (continued)

Gas Tables for use with Hydrocarbon Optimas (UL/CSA/InMetro certified)

Add the following costs and part numbers to Hydrocarbon Optima's (previous page). Calibration is required for all Optima's ordered. Calibration is performed using EN50054 LEL values (UL/CSA/INMETRO). All v/v calibrations restricted to Optima's with gassing cells (2108N4010, 2108N4110, 2108N5210)

Standard Gas Curves (UL/CSA/INMETRO)	Full Scale	LEL (% v/v)	Part Number
Methane (CH ₄)	100% LEL	5	2108D3001
Ethane (C ₂ H ₆)	100% LEL	3	2108D3002
Propane (C ₃ H ₈)	100% LEL	2	2108D3004
Butane (C ₄ H ₁₀)	100% LEL	1.5	2108D3005

Special Gas Curves (UL/CSA/INMETRO)	Full Scale	LEL (% v/v)	Part Number
Propene / Propylene (C ₃ H ₆)	100% LEL	2	2108D3006
Acetone ((CH ₃) ₂ CO)	100% LEL	2.15	2108D3012
Butan-1-ol (C ₄ H ₉ OH)	100% LEL	1.4	2108D3018
Butyl acetate (C ₆ H ₁₂ O ₂)	100% LEL	1.2	2108D3020
Butanone (CH ₃ (O)CH ₂ CH ₃)	100% LEL	1.8	2108D3022
Cyclohexane (C ₆ H ₁₂)	100% LEL	1.2	2108D3024
Cyclohexanone (C ₆ H ₁₀ O)	100% LEL	1.3	2108D3026
Ethanol (CH ₃ CH ₂ OH)	100% LEL	3.3	2108D3028
Ethyl acetate (C ₄ H ₈ O ₂)	100% LEL	2.1	2108D3030
Heptane (C ₇ H ₁₆)	100% LEL	1.1	2108D3032
Hexane (C ₆ H ₁₄)	100% LEL	1.2	2108D3034
Methanol (CH ₄ O)	100% LEL	5.5	2108D3040
Toluene (C ₇ H ₈)	100% LEL	1.2	2108D3042
o-Xylene (C ₈ H ₁₀)	100% LEL	1	2108D3044
Diethyl ether (C ₄ H ₁₀ O)	100% LEL	1.7	2108D3048
p-Xylene (C ₈ H ₁₀)	100% LEL	1	2108D3054
Pentanes (C ₅ H ₁₂)	100% LEL	1.4	2108D3056
Dimethyl ether (CH ₃ OCH ₃)	100% LEL	3	2108D3059
N,N-Dimethylformamide (DMF) (C ₃ H ₇ NO)	100% LEL	2.2	2108D3064
Propane (C ₃ H ₈)	100% LEL	2	2108D3073

Searchpoint Optima Plus (continued)

Additional Ranges Offered (UL/CSA/INMETRO)	Full Scale	LEL (% v/v)	Part Number
Hexamethy disiloxane (HMDS) (O[Si(CH ₃) ₃] ₂)	100% LEL	1.3	2108D3017
Propan-2-ol (C ₃ H ₈ O)	100% LEL	2	2108D3036
Propyl acetate (C ₅ H ₁₀ O ₂)	100% LEL	1.8	2108D3038
Benzin 60/95 (C ₆ H ₆)	100% LEL	1	2108D3047
Methane v/v (CH ₄)	100% v/v	n/a	2108D3050
AVTUR JP ₈	100% LEL	0.8	2108D3058
Decamethy tetrasiloxane	100% LEL	0.9	2108D3060
Octane (C ₈ H ₁₈)	100% LEL	1	2108D3061
Octamethyltetrasiloxane (OMTS) ([-Si(CH ₃) ₂ O-] ₄)	100% LEL	0.9	2108D3063
JP ₁	100% LEL	0.6	2108D3067
Methyl isobutyl ketone (MIBK) (C ₆ H ₁₂ O)	100% LEL	1.4	2108D3068
Isobutane (C ₄ H ₁₀)	100% LEL	1.8	2108D3069
1-Pentene (C ₅ H ₁₀)	100% LEL	1.4	2108D3077
1-Octene (C ₈ H ₁₆)	100% LEL	0.7	2108D3081
1-Hexene (C ₆ H ₁₂)	100% LEL	1.2	2108D3083
Methane 100k (CH ₄)	100k ppm	n/a	2108D3087
Ethylene 100k (C ₂ H ₄)	100k ppm	n/a	2108D3088
Propane 100k (C ₃ H ₈)	100k ppm	n/a	2108D3089
Propene 50k (C ₃ H ₆)	50k ppm	n/a	2108D3092
1-Methoxy-2-propanol (C ₄ H ₁₀ O ₂)	100% LEL	1.8	2108D3093
3-Ethoxy-1-propanol (C ₅ H ₁₂ O ₂)	100% LEL	1.3	2108D3094
Benzin 80/110 (C ₆ H ₆)	100% LEL	0.9	2108D3095
Propane 10k (C ₃ H ₈)	10k ppm	n/a	2108D3096
Propane 400k (C ₃ H ₈)	400k ppm	n/a	2108D3100
Propylene glycol methyl ether acetate (PGMEA) (C ₆ H ₁₂ O ₃)	100% LEL	1.3	2108D3101
Propane 600k (C ₃ H ₈)	600k ppm	n/a	2108D3102
Propane 20k (C ₃ H ₈)	20k ppm	n/a	2108D3105
Butane 18k (C ₄ H ₁₀)	18k ppm	n/a	2108D3107
Methyl I amyl ketone (MIAK) (C ₇ H ₁₄ O)	100% LEL	1.3	2108D3108
Band A	100% LEL	n/a	2108D3150
Band B	100% LEL	n/a	2108D3151
Band C	100% LEL	n/a	2108D3152
Band D	100% LEL	n/a	2108D3153
Propane 5k (C ₃ H ₈)	5k ppm	n/a	2108D3175

Searchpoint Optima Plus (continued)

Hydrocarbon Optima Instruments: ATEX/SAA certified

Part Number

Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade	2108N4000N
Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade, HART® output	2108N4000H
Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade, including remote gassing cell	2108N4010N
Hydrocarbon calibration, with dust barrier, weather housing, deluge/heat shade, HART® output, including remote gassing cell	2108N4010H
Hydrocarbon calibration, for use in remote sampling systems complete with flow housing	2108N5000N
Hydrocarbon calibration, for use in remote sampling systems complete with flow housing, HART® output	2108N5000H
Hydrocarbon calibration, for use in remote sampling systems for gas ranges 0–100 % v/v methane, 0–600,000 ppm propane and 0–400,000 ppm propane, fitted with remote gassing cell and flow housing	2108N5010N
Hydrocarbon calibration, for use in remote sampling systems for gas ranges 0–100 % v/v methane, 0–600,000 ppm propane and 0–400,000 ppm propane, fitted with remote gassing cell and flow housing, HART® output	2108N5010H

Gas Tables for use with Hydrocarbon Optimas (ATEX/SAA)

Add the following costs and part numbers to Hydrocarbon Optima's (previous page). Calibration is required for all Optima's ordered. Calibration is performed using EN61779 LEL values (ATEX). All v/v calibrations restricted to Optima's with gassing cells (2108N4010, 2108N4110, 2108N5210).

Standard Gas Curves (ATEX/SAA)	Full Scale	LEL (% v/v)	Part Number
Methane (CH ₄)	100% LEL	4.4	2108D3170
Ethane (C ₂ H ₆)	100% LEL	2.5	2108D3171
Propane (C ₃ H ₈)	100% LEL	1.7	2108D3172
Butane (C ₄ H ₁₀)	100% LEL	1.4	2108D3173

Searchpoint Optima Plus (continued)

Special Gas Curves (ATEX/SAA)	Full Scale	LEL (% v/v)	Part Number
Acetone ((CH ₃) ₂ CO)	100% LEL	2.5	2108D3013
Butan-1-ol (C ₄ H ₉ OH)	100% LEL	1.7	2108D3019
Butyl acetate (C ₈ H ₁₂ O ₂)	100% LEL	1.3	2108D3021
Butanone (CH ₃ (O)CH ₂ CH ₃)	100% LEL	1.8	2108D3023
Cyclohexane (C ₆ H ₁₂)	100% LEL	1.2	2108D3025
Cyclohexanone (C ₆ H ₁₀ O)	100% LEL	1	2108D3027
Ethanol (CH ₃ CH ₂ OH)	100% LEL	3.1	2108D3029
Ethyl acetate (C ₄ H ₈ O ₂)	100% LEL	2.2	2108D3031
Heptane (C ₇ H ₁₆)	100% LEL	1.1	2108D3033
Hexane (C ₆ H ₁₄)	100% LEL	1	2108D3035
Propan-2-ol (C ₃ H ₈ O)	100% LEL	2	2108D3037
Propyl acetate (C ₅ H ₁₀ O ₂)	100% LEL	1.7	2108D3039
Methanol (CH ₄ O)	100% LEL	5.5	2108D3041
Toluene (C ₇ H ₈)	100% LEL	1.1	2108D3043
o-Xylene (C ₈ H ₁₀)	100% LEL	1	2108D3045
Diethyl ether (C ₄ H ₁₀ O)	100% LEL	1.7	2108D3049
p-Xylene (C ₈ H ₁₀)	100% LEL	1	2108D3055
Pentanes (C ₅ H ₁₂)	100% LEL	1.4	2108D3056
Octane (C ₈ H ₁₈)	100% LEL	0.8	2108D3062
Isobutane (C ₄ H ₁₀)	100% LEL	1.3	2108D3070
i-Propyl acetate (C ₅ H ₁₀ O ₂)	100% LEL	1.8	2108D3078
Chloroethane (C ₂ H ₅ Cl)	100% LEL	3.6	2108D3084
Propan-1-ol (C ₃ H ₈ O)	100% LEL	2.2	2108D3085
1,2-Dichloroethane (C ₂ H ₄ Cl ₂)	100% LEL	6.2	2108D3090
Dimethyl ether (CH ₃ OCH ₃)	100% LEL	2.7	2108D3098
Propene (C ₃ H ₆)	100% LEL	2	2108D3174

Ethylene Optima Instruments: UL/CSA certified	Part Number
Ethylene calibration, with dust barrier, weather housing, deluge/heat shade, configured as current source output	2108N4101
Ethylene calibration with dust barrier, weather housing, deluge/heat shade, configured as current source output, includes remote gassing cell	2108N4111
Ethylene calibration, for use in remote sampling systems, includes flow housing and remote gassing cell, configured as current source output	2108N5101

Ethylene Optima Instruments: CSA certified	Part Number
Ethylene calibration, with dust barrier, weather housing, deluge/heat shade, configured as current source output	2108N4201
Ethylene calibration with dust barrier, weather housing, deluge/heat shade, configured as current source output, includes remote gassing cell	2108N4211
Ethylene calibration, for use in remote sampling systems, includes flow housing and remote gassing cell, configured as current source output	2108N5201

Searchpoint Optima Plus (continued)

Gas Tables for use with ethylene Optimas (UL/CSA/InMetro certified)

Add the following costs and part numbers to ethylene Optima's (previous page). Calibration is required for all Optima's ordered. Calibration is performed using EN50054 LEL values (UL/CSA/INMETRO).

Standard Gas Curves (UL/CSA/INMETRO)	Full Scale	LEL (% v/v)	Part Number
Ethylene (C ₂ H ₄)	100% LEL	2.7	2108D3225

Special Gas Curves (UL/CSA/INMETRO)	Full Scale	LEL (% v/v)	Part Number
Benzene (C ₆ H ₆)	100% LEL	1.2	2108D3227
Styrene (C ₈ H ₈)	100% LEL	1.1	2108D3228
Buta-1,3-diene (C ₄ H ₆)	100% LEL	1.4	2108D3229

Ethylene Optima Instruments: ATEX/SAA certified	Part Number
Ethylene calibration, with dust barrier, weather housing, deluge/heat shade, configured as current source output	2108N4001
Ethylene calibration with dust barrier, weather housing, deluge/heat shade, configured as current source output including remote gassing cell	2108N4011
Ethylene calibration, for use in remote sampling systems complete with flow housing and remote gassing cell	2108N5001

Gas Tables for use with ethylene Optimas (ATEX/SAA certified)

Add the following costs and part numbers to ethylene Optima's (previous page). Calibration is required for all Optima's ordered. Calibration is performed using EN61779 LEL values (ATEX).

Standard Gas Curves (ATEX/SAA)	Full Scale	LEL (% v/v)	Part Number
Ethylene (C ₂ H ₄)	100% LEL	2.3	2108D3240

Special Gas Curves (ATEX/SAA)	Full Scale	LEL (% v/v)	Part Number
Benzene (C ₆ H ₆)	100% LEL	1.2	2108D3227
Styrene (C ₈ H ₈)	100% LEL	1.1	2108D3228
Buta-1,3-diene (C ₄ H ₆)	100% LEL	1.4	2108D3229

Searchpoint Optima Plus (continued)

Optima Sampling System Options

Part Number

Class I - Div. 1, air aspirated, extractive sampling system, single channel; (both require separate purchase of XNX and Optima. C1D1 requires IS barrier for flow sensor (supplied by others)	SVIP3722-1P
Class I - Div. 1, air aspirated, extractive sampling system, two channel; (both require separate purchase of XNX and Optima. C1D1 requires IS barrier for flow sensor (supplied by others)	SVIP3722-2P

Note: An application datasheet (ADS) is required when ordering the above extractive systems.

Remote and Duct mounting Optima options

Part Number

6 wire junction box (UL certified)	2441-0022
Universal duct mounting kit - use only with UL and CSA versions	2442-0016
Optima duct mounting kit - use only with ATEX and SAA versions	04200-A-1015

DX100 / DVC100 junction boxes

Part Number

DX100i XP junction box UL with IS barrier	2104B2381
DX100M XP junction box UL with Modbus capability	2104B2382
DVC100i MK2 junction box ATEX	2104B6211
DVC100M MK2 junction box ATEX with Modbus capability	2104B6212

Accessories

Part Number

Dust barrier	2108B0259
Weather housing	2108B0276
Storm baffle	2108B0280
Optima Plus flow housing	2108B0282
Optima Plus gassing cover	2108D0258
Optima Plus calibration cap	2108B0272
Optima Plus deluge / heat shade	2108D0275
Hand held interrogator ATEX certified (4V0 software) for Optima, Optima Plus and Excel	04230-A-1001
Hand held interrogator UL certified (4V0 software) for Optima, Optima Plus and Excel	2104B2351
Hand held interrogator CSA certified (4V0 software) for Optima, Optima Plus and Excel	2104B2354
Hand held EEPROM upgrade (4V0)	2108B1455
SHC protection device module and lead	04230-A-1025
SHC calibrator connector system 10 m	2104B6250
Junction box-Bartec DE1155 with continuity plate 1 x 25 mm-3 x 20 mm entries (ATEX certified)	00780-A-0100
Optima junction box adaptor plate	04200-A-1040
Fit 2 cable glands to Optima DVC100	04200-N-9002
Stainless steel tag, 3.0 in. x 0.5 in. , #10(m5) screw	2441-0001
Adapter M25 female to 3/4 in. NPT male stainless steel	2992-0038
Adapter 3/4 in. NPT female to M25 male stainless steel	157-001-074
Adapter M20 male to 3/4 in. NPT female stainless steel	157-001-075
Optima Plus current source to sink	2108B0701

Searchpoint Optima Plus (continued)

Additional Gasses That Can Be Detected Using Optima Plus

Gas	Optima Plus Gas Reference Calibration
152A Difluoroethane (C ₂ H ₄ F ₂)	Band C
Aeron A-31 isobutane (C ₄ H ₁₀)	Butane (C ₄ H ₁₀)
Aeron A-46 LPG (C ₃ H ₈)	Butane (C ₄ H ₁₀)
Allyl alcohol (C ₃ H ₆ O)	Band C
Amyl alcohol (C ₅ H ₁₁ OH)	Band C
Benzene (C ₆ H ₆)	Ethylene (C ₂ H ₄) 0-100% LEL
Butadiene dimer (C ₈ H ₁₂)	Ethylene (C ₂ H ₄) 0-100% LEL (leak detection only)
Butadiene-1,2 (C ₄ H ₆)	Ethylene (C ₂ H ₄) 0-100% LEL (leak detection only)
Butene (C ₄ H ₈)	Band C
Cyclopentane (C ₅ H ₁₀)	Band C
Dichloro-ethane (C ₂ H ₄ Cl ₂)	Band D
Difluoroethane (C ₂ H ₄ F ₂)	Band B
Dimethyl ether (C ₂ H ₆ O)	Butane (C ₄ H ₁₀)
Ethylene dichloride (EDC) (C ₂ H ₄ Cl ₂)	Band D
Ethylene oxide (C ₂ H ₄ O)	Band C
IsoButylene (C ₄ H ₈)	Band B
Iso-hexane (C ₆ H ₁₄)	Hexane (C ₆ H ₁₄) 0-100 LEL
Methyl ethyl ketone (C ₄ H ₈ O)	Butanone (C ₄ H ₈ O) 0-100% LEL
Polypropylene ((C ₃ H ₆) _n)	Propylene ((C ₃ H ₆) _n) 0-100% LEL
Styrene (C ₈ H ₈)	Ethylene (C ₂ H ₄) 0-100% LEL (leak detection only)
Turpentine (C ₁₀ H ₁₆)	Band B
Xylene (C ₈ H ₁₀)	Band C

Gasses Unable To Be Detected Using Optima Plus

1,3 Butadiene (C ₄ H ₆) 100% LEL	Ethylchloroformate (C ₃ H ₅ ClO ₂)	Phenol (C ₆ H ₅ OH)
Acetic acid (C ₂ H ₄ O ₂)	Ethylene (C ₂ H ₄) 15,000 ppm	Propan (C ₃ H ₈ O) 100% UEG
Acetonitrile (C ₂ H ₃ N)	Halothane (C ₂ HBrClF ₃)	Propane (C ₃ H ₈) 2,000 ppm
Alphamethylstyrene (AMS, C ₉ H ₁₀)	Hexane (C ₆ H ₁₄) 2,000 ppm	Propane (C ₃ H ₈) 25% LEL
Aniline (C ₆ H ₅ NH ₂)	I-butane (C ₄ H ₁₀) 10% v/v	Propane (C ₃ H ₈) 5% v/v
Bromopropane (C ₃ H ₇ Br)	Isoflurane ether (C ₃ H ₂ ClF ₅ O)	Pyridine (C ₅ H ₅ N)
Butyl isocyanate (C ₅ H ₉ NO)	Methane (CH ₄) 40% LEL	Sevoflurane ethyl-ether (C ₄ H ₃ F ₇ O)
Chloroform (CHCl ₃)	Methyl chloride (CH ₃ Cl)	Sulfuric acid (H ₂ SO ₄)
Desflurane (C ₃ H ₂ F ₆ O)	Methyl flouride (CH ₃ F)	Tetrahydrofuran (C ₄ H ₈ O)
Dichloromethane (CH ₂ Cl ₂)	Methyl mercaptan (CH ₄ S)	Toluene (C ₇ H ₈) 10,000 ppm
Dicyclopentadiene (C ₁₀ H ₁₂)	Methylchloroformate (C ₂ H ₃ ClO ₂)	Tri-chloro-ethylene (C ₂ HCl ₃)
Dimethyl disulphide (CH ₃ SSCH ₃)	Methylene chloride (CH ₂ Cl ₂)	VCM (C ₂ H ₃ Cl)
Enflurane (C ₃ H ₂ ClF ₅ O)	Morpholine (C ₄ H ₉ NO)	Vinylidene chloride (C ₂ H ₂ Cl ₂)
Ethane (C ₂ H ₆) 10% v/v	N-butane (C ₄ H ₁₀) 5% v/v	
Ethanol (C ₂ H ₆ O) 5,000 ppm	Pentane (C ₅ H ₁₂) 3,000 ppm	

Searchline Excel

Infrared Open Path Combustible Gas Detector



C_3H_8 , C_4H_{10} , C_5H_{12} , CH_3CH_2OH , CH_3OH , CH_4



The Searchline Excel is the world's best selling infrared open path gas detector with over 6,000 units installed in challenging applications throughout industry. From the Arctic Circle to the Gulf of Mexico, customers have repeatedly selected the Searchline Excel as their preferred choice.

Choose from 3 versions:

Short Range: 5-40 m
Medium Range: 40-120 m
Long Range: 120-200 m

Hazardous Area Certifications include:

European: ATEX
North American: UL
Canadian: CSA

Performance Approvals include:

Canada – CSA
USA - FM

Material:

316 Stainless Steel

Excellent-Performing Technology

- Fast speed of response provides earliest warning of gas release
- High sensitivity allows low alarm set points
- Alignment free design makes installation simple
- Duct flex and vibration tolerance keeps the system online
- Integral functional gas test facility allows for simple system check
- Contamination resistant optics reduce the need for unscheduled maintenance
- Not affected by interference from water vapor
- Immune to catalytic poisons
- Works in inert atmospheres

Why open path gas detection?

Open path detectors complement the use of individual point detectors and offer many significant benefits including:

- Wider area coverage — most likely to pick up any leak
- Very high speed of response
- No unrevealed failure modes — no possibility of blocked gas path to detector
- Detector location not as critical
- Indicates size of hazard

Full Range of Accessories

- Deluge shield / sunshade
- True alignment system
- Gassing cell
- Hand-held interrogator
- Optical gas test filters
- SHC protection device

Searchline Excel

Infrared Open Path Combustible Gas Detector

Searchline Excel Short Range 5 m – 40 m (15 ft.- 130 ft.), UL/CSA Certified	Part Number
Short range TX/RX 5 m to 40 m UL current source	02104-N-5010
Short range TX/RX 5 m to 40 m UL current sink	02104-N-5040
Short range TX/RX 5 m to 40 m CSA current source	02104-N-6010
Short range TX/RX 5 m to 40 m CSA current sink	02104-N-6040

Searchline Excel Medium Range 40 m – 120 m (130 ft.- 390 ft.), UL/CSA Certified	Part Number
Medium range TX/RX 40 m to 120 m UL current source	02104-N-5020
Medium range TX/RX 40 m to 120 m UL current sink	02104-N-5050
Medium range TX/RX 40 m to 120 m CSA current source	02104-N-6020
Medium range TX/RX 40 m to 120 m CSA current sink	02104-N-6050

Searchline Excel Long Range 120 m – 200 m (390 ft.- 650 ft.), UL/CSA Certified	Part Number
Long range TX/RX 120 m to 200 m UL current source	02104-N-5030
Long range TX/RX 120 m to 200 m UL current sink	02104-N-5060
Long range TX/RX 120 m to 200 m CSA current source	02104-N-6030
Long range TX/RX 120 m to 200 m CSA current sink	02104-N-6060

Installation Hardware Kit (UL/CSA Certified)	Part Number
Excel installation hardware kit	2992K0088

Receiver Junction Box (UL/CSA Certified) for Termination/Communication to Excel	Part Number
XNX transmitter, HART® over 4-20 mA output, UL/CSA approved, 5 x 3/4 in. NPT entries, painted LM25, configured for Searchline Excel.	XNX-UTAI-NNNNN
XNX transmitter, HART® over 4-20 mA output, UL/CSA approved, 5 x 3/4 in. NPT entries, painted LM25, with local HART® interface port, configured for Searchline Excel.	XNX-UTAI-NHNNN
XNX transmitter, HART® over 4-20 mA output, UL/CSA approved, 5 x 3/4 in. NPT entries, painted LM25, with Modbus® output, configured for Searchline Excel.	XNX-UTAI-MNNNN
XNX transmitter, Foundation Fieldbus output, UL/CSA approved, 5 x 3/4 in. NPT entries, painted LM25, configured for Searchline Excel.	XNX-UTAI-FNNNN
XNX transmitter, HART® over 4-20 mA output, UL/CSA approved, 5 x 3/4 in. NPT entries, painted 316 stainless steel, configured for Searchline Excel.	XNX-UTSI-NNNNN
XNX transmitter, HART® over 4-20 mA output, UL/CSA approved, 5 x 3/4 in. NPT entries, painted 316 stainless steel, with local HART® interface port, configured for Searchline Excel.	XNX-UTSI-NHNNN
XNX transmitter, HART® over 4-20 mA output, UL/CSA approved, 5 x 3/4 in. NPT entries, painted 316 stainless steel, with Modbus® output, configured for Searchline Excel.	XNX-UTSI-MNNNN
XNX transmitter, Foundation Fieldbus output, UL/CSA approved, 5 x 3/4 in. NPT entries, painted 316 stainless steel, configured for Searchline Excel.	XNX-UTSI-FNNNN
DX100M XPROOF junction box UL with Modbus capability	2104B2382

Note: Only common XNX configurations listed; see electronic XNX configurator for all available options.

Searchline Excel (continued)

Searchline Excel Short Range 5 m – 40 m (15 ft.- 130 ft.), INMETRO Certified	Part Number
Short range TX/RX 5 m to 40 m INMETRO current source	02104-N-7012
Short range TX/RX 5 m to 40 m INMETRO current sink	02104-N-7042

Searchline Excel Medium Range 40 m – 120 m (130 ft.- 390 ft.), INMETRO Certified	Part Number
Medium range TX/RX 40 m to 120 m INMETRO current source	02104-N-7022
Medium range TX/RX 40 m to 120 m INMETRO current sink	02104-N-7052

Searchline Excel Long Range 120 m – 200 m (390 ft.- 650 ft.), INMETRO Certified	Part Number
Long range TX/RX 120 m to 200 m INMETRO current source	02104-N-7032
Long range TX/RX 120 m to 200 m INMETRO current sink	02104-N-7062

ATEX Searchline Excel kits; Includes Transmitter, Receiver, And Installation Hardware.

Note: XNX must be ordered separately.

Searchline Excel Short Range 5 m – 40 m (15 ft.- 130 ft.), ATEX Certified	Part Number
Short range system 5 m to 40 m ATEX complete TXR and RXR system, installation hardware kit, SS316 mounting plates and brackets, 1 junction box current source	02104-N-XSAAUS

Searchline Excel Medium Range 40 m – 120 m (130 ft.- 390 ft.), ATEX Certified	Part Number
Medium range system 40 m to 120 m ATEX complete TXR and RXR system, installation hardware kit, SS316 mounting plates and brackets, 1 junction box current source	02104-N-XMAAUS

Searchline Excel Long Range 120 m – 200 m (390 ft.- 650 ft.), ATEX Certified	Part Number
Long range system 120 m to 200 m ATEX complete TXR and RXR system, installation hardware kit, SS316 mounting plates and brackets, 1 junction box current source	02104-N-XLAAUS

ATEX Searchline Excel kits; includes DVC100M, transmitter, receiver, and installation hardware.

Searchline Excel Short Range 5 m – 40 m (15 ft.- 130 ft.), ATEX Certified	Part Number
Short range system 5 m to 40 m ATEX complete TXR and RXR system, fully wired with flexible conduit, SS316 mounting plates and brackets, 1 DVC100M digital junction box, 1 junction box current source	02104-N-4011

Short range system 5 m to 40 m ATEX complete TXR and RXR system, fully wired with flexible conduit, SS316 mounting plates and brackets, 1 DVC100M digital junction box, 1 junction box current sink	02104-N-4041
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Searchline Excel Medium Range 40 m – 120 m (130 ft.- 390 ft.), ATEX Certified	Part Number
Medium range system 40 m to 120 m ATEX complete TXR and RXR system, fully wired with flexible conduit, SS316 mounting plates and brackets, 1 DVC100M digital junction box, 1 junction box current source	02104-N-4021

Medium range system 40 m to 120 m ATEX complete TXR and RXR system, fully wired with flexible conduit, SS316 mounting plates and brackets, 1 DVC100M digital junction box, 1 junction box current sink	02104-N-4051
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Searchline Excel Long Range 120 m – 200 m (390 ft.- 650 ft.), ATEX Certified	Part Number
Long range system 120 m to 200 m ATEX complete TXR and RXR system, fully wired with flexible conduit, SS316 mounting plates and brackets, 1 DVC100M digital junction box, 1 junction box current source	02104-N-4031

Long range system 120 m to 200 m ATEX complete TXR and RXR system, fully wired with flexible conduit, SS316 mounting plates and brackets, 1 DVC100M digital junction box, 1 junction box current sink	02104-N-4061
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Searchline Excel (continued)

Calibrations Table 1: Excel Calibration Gas Table. Additional Charge for Alternate Calibrations.

	Part Number
Methane (CH ₄) / LEL.m (standard calibration)	2104D5026
Ethane (C ₂ H ₆) / LEL.m	2104D5002
Propane (C ₃ H ₈) / LEL.m	2104D5003
Butane (C ₄ H ₁₀) / LEL.m	2104D5004
Pentane (C ₅ H ₁₂) / LEL.m	2104D5005
Ethylene (C ₂ H ₄) / LEL.m (standard calibration)	2104D5021
Propylene (C ₃ H ₆) / LEL.m	2104D5022
Butadiene (C ₄ H ₆) / LEL.m	2104D5023

Alignment Kits For Use With XNX™ Universal Transmitter

	Part Number
Short range Excel and XNX alignment and conformity kit including telescope, carry case and test filters (no SHC1)	02104-N-4006X
Long/medium range Excel and XNX alignment and conformity kit including telescope, carry case and test filters (no SHC1)	02104-N-4007X

Searchline Excel Alignment Kits For Use With DX100

	Part Number
Short range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for ATEX approved systems	02104-N-4006
Long range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for ATEX approved systems	02104-N-4007
Short range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for UL approved systems	02104-N-5006
Long range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for UL approved systems	02104-N-5007
Short range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for CSA approved systems	02104-N-6006
Long and medium range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for CSA approved systems	02104-N-6007

Handheld Interrogator and Accessories

	Part Number
Hand held interrogator ATEX certified (4V0 software) for Optima, Optima Plus and Excel	04230-A-1001
Hand held interrogator UL certified (4V0 software) for Optima, Optima Plus and Excel	2104B2351
Hand held interrogator CSA certified (4V0 software) for Optima, Optima Plus and Excel	2104B2354
Hand held EEPROM upgrade (4V0)	2108B1455
SHC calibrator connector system 10 m	2104B6250
SHC calibrator connector system 6 m	2104B6251
SHC calibrator connector system 3 m	2104B6252

DVC/DX Interfaces

	Part Number
DVC100M junction box ATEX with Modbus capability	2104B6212
DX100M XPROOF junction box UL with Modbus capability	2104B2382

Searchline Excel (continued)

Installation Accessories	Part Number
Sun/heat shade (deluge cover)	2104D0295
UL/CSA aluminum 6 wire junction box assembly	2441-0022
Conduit assembly for Excel UL certified	2992A0071
Stainless steel enclosure NEMA 4X 3/4 in. NPT UL	0230-0069
Upgrade to stainless steel glands	02104-N-9870
Upgrade to nickel plated glands	02104-N-9880

Gas Test Equipment	Part Number
Excel test filters kit type A, B, C, D, E, F, G, H and manual	2104N2999
Excel test filter manual	2104M0523
Gassing cell	2104B2326

Spares	Part Number
Short range telescope	2104B2391
Medium / long range telescope	2104B2322
Short range alignment case	210-190-003
Searchline Excel isolation kit short range	2104B0300
Searchline Excel isolation kit medium/long range	2104B0310
Mounting bracket short range and insul. kit	2104B2301
Mounting bracket long range and insul. kit	2104B2302
Mounting plate	2104D0237

Searchline Excel (continued)

Spare Transmitters	Part Number
Short range receiver standard version, ATEX	2104B2111
Short range receiver source, UL	2104B3101
Short range receiver source, INMETRO	2104B3501
Short range receiver source, CSA	2104B3301
Short range receiver sink, UL	2104B3102
Short range receiver sink, INMETRO	2104B3502
Short range receiver sink, CSA	2104B3302
Short range receiver sink, ATEX	2104B2112
Short range transmitter, UL	2104B3001
Short range transmitter, INMETRO	2104B3401
Short range transmitter, CSA	2104B3201
Short range transmitter, ATEX	2104B2071
Medium range receiver source, UL	2104B3111
Medium range receiver source, INMETRO	2104B3511
Medium range receiver source, CSA	2104B3311
Medium range receiver source, ATEX	2104B2131
Medium range receiver sink, UL	2104B3112
Medium range receiver sink, INMETRO	2104B3512
Medium range receiver sink, CSA	2104B3312
Medium range receiver sink, ATEX	2104B2132
Medium range transmitter, UL	2104B3011
Medium range transmitter, INMETRO	2104B3411
Medium range transmitter, CSA	2104B3211
Medium range transmitter, ATEX	2104B2081
Long range receiver standard version, ATEX	2104B2151
Long range receiver source, UL	2104B3121
Long range receiver source, INMETRO	2104B3521
Long range receiver source, CSA	2104B3321
Long range receiver sink, UL	2104B3122
Long range receiver sink, INMETRO	2104B3522
Long range receiver sink, CSA	2104B3322
Long range receiver sink, ATEX	2104B2152
Long range transmitter, UL	2104B3021
Long range transmitter, INMETRO	2104B3421
Long range transmitter, CSA	2104B3221
Long range transmitter, ATEX	2104B2091

Searchline Excel XD

Infrared Open Path Combustible Gas Detector



CH₄



Searchline Excel Cross Duct is a Hazardous Area certified infrared open path gas detector, for use in HVAC intakes and exhausts. There are 2 types: Short Range for ducts 0.5 m – 2.5 m width and Long Range for ducts 2.5 m – 5.0 m width.

Hazardous area approvals include European (ATEX) and North American (UL). Receiver output is 3 wire 4-20 mA selectable sink or source.

Note: Methane (CH₄) calibration only.

The DX/DVC100(M) termination units provide convenient field wiring connections as well as an intrinsically safe connection socket for the Handheld Interrogator. Additionally, the DX/DVC100(M) termination units provide a multi drop Modbus RS485 interface. The Handheld Interrogator is a commissioning / maintenance tool and is certified for use in hazardous areas.

It is important to ensure the suitability of an application for Searchline Excel Cross-Duct before ordering. The target gas must be methane. Alarm levels should be set at 20% LEL for the short range unit and 10% for the long range unit. The installation must be made where it is protected from dirt and condensation. Regular routine maintenance should include cleaning the reflector tiles, re-zeroing and functional test using the test filters. If in any doubt about suitability for an application, contact Honeywell Analytics Engineering Team for further guidance.

Searchline Excel XD

Infrared Open Path Combustible Gas Detector

Searchline Excel Cross Duct Short Range 0.5 m - 2.5 m	Part Number
Short range cross duct system 0.5 m To 2.5 m. UL approved, current source including single tile reflector assembly. <i>Note: Duct Mounting Kit Part # 2440K0004 is required and must be ordered separately.</i>	2104N1010
Searchline Excel Cross Duct Long Range 2.5 m - 5.0 m	Part Number
Long range cross duct system 2.5 m to 5.0 m. ATEX approved, current sink with DVC100M MK2 interface box and four tile reflector assembly	2104N0041
Installation Accessories	Part Number
Duct mounting kit for use with UL approved short range cross duct systems. Comprises DX100M, junction box and flexible conduit.	2440K0004
Duct mounting kit for use with UL approved short range cross duct systems. Comprises 8 terminal junction box and flexible conduit (2).	2440K0005
8 terminal junction box for remote mounted cross duct systems (3 x 3/4 in. NPT entries)	2441-0027
Junction box-Bartec DE1155 with continuity plate 1 x 25 mm-3 x 20 mm Entries (ATEX/IECEX certified)	00780-A-0100
Hand Held Interrogators	Part Number
Hand held interrogator ATEX certified (4V0 software) for Optima, Optima Plus and Excel	04230-A-1001
Hand held interrogator UL certified (4V0 software) for Optima, Optima Plus and Excel	2104B2351
Hand held EEPROM upgrade (4V0)	2108B1455
SHC protection device module and lead	04230-A-1025
SHC Calibrator connector system 10 m	2104B6250
DX/DVC Interfaces	Part Number
DVC100M MK2 junction box ATEX with Modbus capability	2104B6212
DX100M XPROOF junction box UL with Modbus capability	2104B2382
Gas Test Equipment	Part Number
Excel test filters kit type A, B, C, D, E, F, G, H and manual	2104N3000
Spares	Part Number
Remote gassing pipe	2108D0271

FSX Detectors

Quick Reference Chart

		FS24X-2	FS24X-9	FS20X	FS10
SPECTRAL SENSITIVITY	Ultraviolet Band (0.18 – 0.26 μ)			✓	
	Visible Band (0.4 – 0.7 μ)	✓	✓	✓	✓
	NearBand IR (0.7 μ – 1.1 μ)	✓	✓	✓	✓
	WideBand IR1 (1.1 – 3 μ)	✓	✓	✓	✓
	WideBand IR2 (1.1 – 7 μ)	✓	✓		
SENSITIVITY (feet)*	Very High	200+	200+	200+	
	High	150	150	150	45
	Medium	100	100	100	30
	Low	50	50	50	15
RESPONSE	Fireball / Quick Response Option (< 500 mS)	✓	✓	✓	✓
	Acetylene Long Range Option			✓	
OTHER	Field of View (conical)	110°	90°	90°	90°
	HART Option	✓	✓	✓	✓
	Modbus Built-In	✓	✓	✓	✓
ENCLOSURES	Aluminum Class I, Div. 1	✓	✓	✓	✓
	316 Stainless Steel Class I, Div. 1	✓	✓	✓	✓
APPROVALS	FM	✓	✓	✓	✓
	cFM	✓	✓	✓	✓
	ATEX	✓	✓	✓	✓
	IECEX	✓	✓	✓	✓
	INMETRO	✓	✓		
	GOST-R			✓	
	CCCF		✓		
	SIL 2 Compliant	✓	✓		
TEST LAMPS	TL-2055X	✓	✓	✓	
	TL-1055X	✓	✓	✓	
	TL-1133X				✓
MOUNT	SM4	✓	✓	✓	✓

*Detection distance for a one sq. ft. reference heptane pan fire

FSX Detectors

Applications Chart

		FS24X-2	FS24X-9	FS20X	FS10
FINISHING	Aerosol Filling Facilities	●	●	●	●
	Automotive Paint Lines	○	○	○	●
	Curing Ovens	○	○	○	●
	General Finishing	○	○	○	●
	Liquid Paint Spray Line	○	○	○	●
	Paint and Solvent Storage	●	●	●	●
	Powder Coating Booths	○	○	○	●
GENERAL	Aircraft Hangars	●	●	●	○
	Airport Terminals	●	●	○	○
	Cold Storage Warehouses	●	●	○	○
	Engine Test Cells	●	●	●	○
	General Warehouse	●	●	●	○
	Lumber Storage	●	●	●	○
	Marine Engine Rooms	●	●	●	○
	Marine Terminals	●	●	●	○
	Munitions	○	○	○	○
	Power Plants	●	●	●	○
OIL, GAS & PETROCHEMICALS	Acetylene Processing and Storage	○	○	●	○
	Chemical Storage	●	●	●	○
	Cogeneration Plants	●	●	●	○
	Crude and Product Tank Farms	●	●	○	○
	Ethanol Production and Storage	○	○	●	○
	Gas Collection Facilities	●	●	●	○
	Gas Compressor Buildings	●	●	●	○
	Gas Processing Plants	●	●	●	○
	Gas Turbine Enclosures	●	●	●	○
	Gasoline Loading Terminals	●	●	●	○
	Isopropanol (IPA) Production and Storage	○	○	●	○
	LNG Storage/Distribution	○	○	●	○
	LPG Storage/Distribution	●	●	●	○
	Methanol Production and Storage	○	○	●	○
	Natural Gas and CNG Plants	○	○	●	○
	Offshore Drilling Platforms	●	●	●	○
	Offshore Production Platforms	●	●	●	○
	Petrochemical Plants	●	●	●	○
	Petroleum Product Pipelines	●	●	●	○
	Petroleum Product Pumping Stations	●	●	●	○
Rail and Truck Loading/Unloading	●	●	●	○	
Refineries	●	●	●	○	
SEMICONDUCTOR	Clean Rooms	○	○	○	○
	Gas Cabinets	○	○	○	○
	Hydrogen Gas Cabinets	○	○	○	○
	Hydrogen Plants	○	○	○	○
	Hydrogen Storage	○	○	○	○
	IPA Stations	○	○	○	○
	Silane Gas Cabinets	○	○	○	○
	Silane Gas Manufacturing	○	○	○	○
	Silane Gas Storage	○	○	○	○
	Wet Benches	○	○	○	○
	Wet Chemicals	○	○	○	○

● Recommended ○ Suitable ○ Not Recommended

Model FS24X

QuadBand™ Triple IR Fire and Flame Detector
(IR/IR/IR/Visible)



The Fire Sentry FS24X is the latest generation high technology Multi-Spectrum Triple IR (IR/IR/IR/Visible) Fire and Flame Detector, which is part of our FSX family of advanced technology Electro-Optical fire detectors. Using our patented* WideBand IR™, WideBand 4.3 micron IR™, and Visible detection technology, the Fire Sentry FS24X is a quantum leap in flame and fire detection. Sophisticated software algorithms and dual microprocessors ensure that the Fire Sentry FS24X has the highest fire detection performance combined with optimal false alarm rejection.

110° field of view with a range up to 200 ft.

Features

- Patented* WideBand IR™ Technology
- Patented* Electronic Frequency Analysis™
- Visible Sensor for optimum false alarm rejection
- Selectable detection sensitivities
- Field-of-View: 110° full 100% cone-of-vision (90° full 100% cone-of-vision model also available)
- Dual microprocessors for reliable performance
- Real-time clock for accurate time dating of events
- FirePic™ — pre-fire event data storage
- Event log with date and time stamp
- RS-485 Modbus communication
- Non-Isolated 4-20 mA Analog output (sink or source)
- Alarm, Fault and Fire Verification relays
- Automatic optical path and electronic self-test
- Widest operating temperature range
- Patented* Electronics Module for components protection with easy plug-in terminations and field installation
- Two 3/4 in. NPT OR 25 mm conduit entries
- Low power consumption
- High RFI and EMI immunity
- FM, ATEX, CE mark approvals
- Meets SIL 2 requirements

Benefits

- Detects hydrocarbon fuel fires in all environmental conditions
- User selectable outputs
- Optimal false alarm rejection for all environmental conditions
- Minimal maintenance for trouble-free operation
- PC software and Interface Module (FSIM) for fault diagnostics, real-time graphics (RTGs), and downloading of FirePics™ and event log
- Suitable for a wide variety of applications
- Easy electronics module replacement
- Test lamps for manual testing

Model FS24X

QuadBand™ Triple IR Fire and Flame Detector (IR/IR/IR/Visible)

FS24X-211 Series with 110° Field of View, Standard Temp Range -40° to 85°C	Part Number
QuadBand™ IR3+ detector, copper-free aluminum encl., (2) 3/4 in. NPT entries FM and ATEX approved	FS24X-211-21-1
QuadBand™ IR3+ detector, 316 stainless steel encl., (2) 3/4 in. NPT entries FM and ATEX approved	FS24X-211-22-1
QuadBand™ IR3+ detector, copper-free aluminum encl., (2) M25 entries FM and ATEX approved	FS24X-211-23-1
QuadBand™ IR3+ detector, 316 stainless steel encl. (2) M25 entries FM and ATEX approved	FS24X-211-24-1

FS24X-911 Series with 90° Field of View, Standard Temp Range -60° to 85°C	Part Number
QuadBand™ IR3+ detector, copper-free aluminum encl., (2) 3/4 in. NPT entries FM and ATEX approved	FS24X-911-21-1
QuadBand™ IR3+ detector, 316 stainless steel encl., (2) 3/4 in. NPT entries FM and ATEX approved	FS24X-911-22-1
QuadBand™ IR3+ detector, copper-free aluminum encl., (2) M25 entries FM and ATEX approved FM and ATEX approved	FS24X-911-23-1
QuadBand™ IR3+ detector, 316 stainless steel encl. (2) 25 mm entries FM and ATEX approved	FS24X-911-24-1

Replacement Detector Modules FS24X	Part Number
211 Series standard temp range	FS24X-211-10
911 Series standard temp range	FS24X-911-10

Accessories FS24X	Part Number
Stainless steel swivel mounting assembly for FS24X, FS20X, FS10, SS4, SS2 detectors	SM4
Universal charger for Fire Sentry test lamps and interface kits. For 110-240 V _{AC} with international plugs	PSU-12
IR test lamp for testing FSX detectors, explosion proof version. Incl universal charger	TL-2055
IR test lamp for testing FSX detectors, non-explosion proof version. Incl universal charger	TL-1055
Sunshield for SS2, SS4, FS20X, and FS24X detectors, 316 stainless steel	SH-001
Field of view restrictor	FVR-01

Spare Parts FS24X	Part Number
FSX interface kit with interface module, RS485 cable, USB cable, power adapter and Windows PC software	FSX-A001
FSX interface module with RS485 cable	FSX-A002
Stainless steel grill kit for FS18X and FS24X-2 detectors	FSX-A009
Stainless steel grill kit for FS24X-9 detectors	FSX-A010
Optional HART module for FS20X and FS24X detectors (factory installed)	FSX-A014

Model FS20X

Multi-Spectrum Fire and Flame Detector
(IR/IR/UV)



The Fire Sentry FS20X is the latest generation high technology Multi-Spectrum (UV/Dual IR/VIS) Fire and Flame Detector, which is part of the FSX family of advanced technology Electro-Optical Flame detectors. Based on the foundation of the highly successful and reliable Fire Sentry SS4 detector, the Fire Sentry FS20X detector represents a quantum leap in integrating Infrared and Ultraviolet sensing technologies. The Fire Sentry FS20X is a Multi-Spectrum and UV/Dual IR/VIS fire and flame detector with a proven UV solar-blind sensor. The Fire Sentry FS20X exhibits faster false-alarm free response to fires over a wider temperature range and with a much longer detection range compared to conventional UV/IR detectors.

Solar blind 90° field of view and detection range greater than 200 ft.

Features

- Patented* WideBand IR™ Infrared combined with Ultraviolet
- Detection range greater than 200 ft. to 1 sq. ft. heptane fire
- Patented* Electronic Frequency Analysis
- Visible Sensor for optimum false alarm rejection
- Selectable detection sensitivities
- Solar blind 90° full 100% cone-of-vision
- Dual Microprocessors for reliable performance
- Real-time clock for accurate time dating of events
- FirePic™ — Up to 6 pre-fire event data storage
- Event log — Up to 200 events with date and time stamp
- Built-in RS-485 Modbus Communication
- Built-in non-isolated 4-20 mA analog output (sink or source)
- Alarm, Fault and Fire Verification relays
- Automatic Optical Path and Electronic Self-Test
- Widest operating temperature range
- Patented* Electronics Module for components protection with plug-in terminations for easy field installation
- Two 3/4 in. NPT OR 25 mm conduit entries
- Low power consumption
- High RFI and EMI immunity
- FM, ATEX, CE mark approvals
- Meets SIL 2 requirements

Benefits

- Detects hydrocarbon and non-hydrocarbon fuel fires in all environmental conditions
- Arc welding immunity
- False alarm rejection for all environmental conditions
- Minimal maintenance for trouble-free operation
- PC software and Interface Module (FSIM) for fault diagnostics real-time graphs (RTGs), and downloading of FirePics™ and event log
- Suitable for a wide variety of applications

Model FS20X

Multi-Spectrum Fire and Flame Detector (IR/IR/UV)

FS20X-211 Series, Standard Temp Range -40° to 85°C

Part Number

Dual IR/UV copper-free aluminum encl. with (2) 3/4 in. NPT entries, FM, cFM for Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III	FS20X-211-21-2
Dual IR/UV stainless steel encl. with (2) 3/4 in. NPT entries, FM, cFM for Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III	FS20X-211-22-2
Dual IR/UV copper-free aluminum encl. with (2) M25 entries, FM, cFM, ATEX, IECEx for Class I, Zone 1	FS20X-211-23-3
Dual IR/UV stainless steel encl. with (2) M25 entries, FM, cFM, ATEX, IECEx for Class I, Zone 1	FS20X-211-24-3

Accessories FS20X

Part Number

Optional HART module for FS18X, FS19X, FS20X, FS24X (factory installed)	FSX-A014
Stainless steel swivel mounting assembly for FS24X, FS18X, SS4, SS2 detectors	SM4
Universal charger for Fire Sentry test lamps and interface kits. For 110-240 V _{AC} with international plugs	PSU-12
IR test lamp for testing FS18X, FS20X and FS24X detectors, explosion proof version. Incl universal charger	TL-2055
IR test lamp for testing FS18X, FS20X and FS24X detectors, non-explosion proof version. Incl universal charger	TL-1055
Sunshield for SS2, SS4 and FS24X detectors, 316 stainless steel	SH-001
Field of view restrictor	FVR-01

Spare parts FS20X

Part Number

Replacement electronics module for FS20X detectors. Module only, standard temp. range	FS20X-211-10
911 Series standard temp range	FS24X-911-10

FS10 Fire Detection Systems

For Liquid and Powder Electrostatic Paint Booths



A high-speed microprocessor based fire detection and process control system specially designed for liquid and powder coating applications, the Fire Sentry FS System 10 quickly detects the presence of a flame, reacts by initiating a shutdown of the electrostatic finishing process in a matter of milliseconds; and effectively interrupts the fire before residues and wet paint films can ignite.

The Fire Sentry FS System 10 is the only system that provides a two-stage response: an ALERT for spray gun "fireball" type fires and if the fire continues, a FIRE ALARM is declared in 4-5 seconds.

90° field of view and detection range of 15 ft.

Features

- Multi-Spectral digital electro-optical infrared fire detector
- Meets requirements of NFPA 33
- Unique two-stage ALERT and FIRE ALARM response
- Immune to false alarms caused by arcs or corona discharges
- Built-in automatic "through the lens" self-test
- Not sensitive to background radiant energy sources such as paint heaters
- Not affected by absorbing smoke or paint solvent mist in liquid paint spray booths
- Sees through paint, powder or oil residue on detector's lens
- Digital communications with RS-485 interface
- FirePic™: retrieval of recorded pre-fire data
- SnapShot™: dynamic graphical display of what the detector sees

Wall Mount Controllers with FS10 Electro-Optical Fire Detector(s)

FS10 wall mount controller with fire detector(s) and 50 ft. of cable for each fire detector. Incl PC software, RS232 cable and manual. Meets NFPA 33

	Part Number
2 Fire Detectors 120 V _{AC}	Option-1-GF
2 Fire Detectors 220 V _{AC}	Option-1-240-GF
1 Fire Detector 120 V _{AC}	Option-1S-120-GF
1 Fire Detector 220 V _{AC}	Option-1S-240-GF

Card Controller with FS10 Electro-Optical Fire Detector

FS10 fire detector with card controller. Incl PC software and manual.

Note: Requires backplane card and 24 V_{DC}.

	Part Number
2FL system: liquid paint spray line applications with two (2) fire signal relay levels	Option-2FL
2GF system: general finishing applications with process control and fire alarm signal relays	Option-2GF
2WE system: powder coating and paint spray line applications with two (2) fire signal relay levels	Option-2WE
2WL system: paint spray line applications with three (3) fire signal relay levels	Option-2WL
Backplane for 1 card controller	BP-1
Backplane for 2 card controllers	BP-2
Backplane for 4 card controllers	BP-4

FS10 Fire Detection Systems

For Liquid and Powder Electrostatic Paint Booths

Spare Parts - FS10 Wall Mount Controller and Card Controller	Part Number
Model FS10 wall mount controller. Specify if for (1) or (2) detectors	FS10-CONT
Model FS10 wall mount controller. For (1) detector	FS10-CTL-1S
Model FS10 wall mount controller. For (2) detectors	FS10-CTL-2
Replacement electronic PC board for FS10 wall mount controller for 1 detector	FS10-MOD-CTL-1
Replacement electronic PC board for FS10 wall mount controller for 2 detectors	FS10-MOD-CTL-2
Replacement keypad for FS10 wallmount	SW-5143-001
FS10 card controller, XX = version, i.e., GF	FS10-CARD-2XX
Model FS10 fire detector for use with wall mount controller or card controller	FS10-DETECTOR
Replacement electronics module for fire detector for the above systems	FS10-DET-MODULE
<i>Note: State serial number of module to be replaced at time of order.</i>	

Detector Cables	Part Number
Fire detector cable available in 10 ft. increments. (XX = specify length in feet)	CAB-XX
50 ft. card controller cable. Connects fire detector to controller	CAB-50
100 ft. card controller cable. Connects fire detector to controller	CAB-100

FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors

Includes ALARM and FAULT relays. 24 Vdc input. Temperature range (-40°C to +85°C). Approvals: FM, cFM, CSFM for Class I, Div. 2, Groups B, C, & D.

	Part Number
Copper-free aluminum housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (latching alert and alarm relays)	FS10-R30
316 stainless steel housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (latching alert and alarm relays)	FS10-R30-SS
Copper-free aluminum housing 45 ft. sensitivity (latching alarm relays)	FS10-R45
316 stainless steel housing 45 ft. sensitivity (latching alarm relays)	FS10-R45-SS
Copper-free aluminum housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (non-latching alert and alarm relays)	FS10-RN30
316 stainless steel housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (non-latching alert and alarm relays)	FS10-RN30-SS
Copper-free aluminum hsg 45 ft. sensitivity (non-latching alarm relays)	FS10-RN45
316 Stainless steel housing 45 ft. sensitivity (non-latching alarm relays)	FS10-RN45-SS

FS10 Fire Detection Systems (continued)

Spare Parts - FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors	Part Number
Replacement electronics module for Model FS10-R30 stand alone fire detector (latching alert and alarm relays)	FS10-R30-MOD
Replacement electronics module for Model FS10-R45 stand alone fire detector (latching alarm relay)	FS10-R45-MOD
Replacement electronics module for Model FS10-RN30 stand alone fire detector (non-latching alert and alarm relays)	FS10-RN30-MOD
Replacement electronics module for Model FS10-RN45 stand alone fire detector (non-latching alarm relay)	FS10-RN45-MOD

Spare Parts - FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors	Part Number
Stainless steel grill kit for FS10-R and FS10-CS detectors (Killark housing) kit includes: (1) SS grill, (2) SS brackets, and (2) SS screws	FS10R-GR-KIT
RS485 computer cable for connection from fire detector to interface box	FS10R-CABLE-DET
Interface kit, complete with interface box, cables, 100-240 V _{AC} / 12 V _{DC} universal charger and software. Used for interrogating the FS10R/A fire detector	FS10R-IK
Interface box used for interrogating FS7-2173-2RP/FS10R fire detectors (includes universal charger)	PCI-24
RS232 computer cable for connection from FS7-130-SX, S7-2175, option-1 or option-2 controllers or interface box to PC	RS-232 CABLE
PC software (Windows version) for FS10 stand alone interface box	W-FS10R-SW
110/220 V _{AC} , 50-60 HZ input /15 V _{DC} output : universal charger for interface box or DD Series, FT Series and TL Series test lamps	PSU-12

Accessories - FS10 Stand Alone (Unitized) and Controller Based Electro-Optical Fire Detectors	Part Number
Stainless steel swivel mount allows detector to be pointed in any direction	SM4
Test lamp battery operated for testing FS10 fire detectors up to 10 ft.	FS-846-B
Disposable protective covers keeps powder or paint off the window lens of the FS10 fire detector (12 per bag)	DPC-12
Air shield for powder applications protects FS10 fire detector window lens from powder build-up. Supplied with fitting for 1/4 in. tubing	DASA1-P
Air shield for powder applications protects FS10 Fire Detector window lens from powder build-up. Supplied with fitting for 6 mm tubing	DASA6-N
Key for wall-mount controller panel	HD-CTL-KEY
Field of view restrictor	FVR-01

SSX Detectors

Quick Reference Chart

		SS4-A	SS4-AS	SS4-AUV	SS3-A	SS2-A	SS2-AM
SPECTRAL SENSITIVITY	Ultraviolet Band (0.18 - 0.26 μ)	✓	✓	✓	✓	✓	✓
	Visible Band (0.4 - 0.7 μ)	✓	✓		✓	✓	✓
	WideBand IR (0.7 - 3.0 μ)	✓	✓		✓	✓	✓
SENSITIVITY (in feet)*	Very High	60	60	60	30	60	60
	High	45	45	45			
	Medium	30	30	30			
	Low	15	15	15			
RESPONSE	Ultra High-Speed Response (Munitions)						✓
	Ultra High-Speed Response (Sodium Azide)						✓
	Optimized Response (H ₄ Si, H ₂ , Alcohols, CH ₄)		✓				
	Standard Response	✓		✓	✓	✓	✓
OTHER	Field of View	120°	120°	120°	120°	120°	120°
	HART Option	✓	✓	✓			
	Modbus Option	✓	✓	✓			
	4-20 mA Option	✓	✓	✓			
ENCLOSURE	Aluminum	✓	✓	✓		✓	✓
	316 Stainless Steel	✓	✓	✓		✓	✓
	ABS Plastic				✓		
APPROVALS	FM	✓	✓	✓	✓	✓	✓
	cFM	✓	✓	✓	✓	✓	✓
	ATEX	✓	✓	✓			
	IECEX	✓	✓	✓			
	INMETRO	✓					
	GOST-R	✓					
	SIL 2 Compliant	✓	✓	✓			
TEST LAMP/SOURCE	FT-2145 (Explosion Proof)	✓	✓	✓	✓	✓	✓
	DD85001 (Short Range)	✓	✓	✓	✓	✓	✓
	85001			✓			
	TS2					✓	✓
MOUNT	SM4	✓	✓	✓		✓	✓
	188424				✓		

*Detection distance for a one sq. ft. reference heptane pan fire

SSX Detectors

Applications Chart

		SS4-A	SS4-AS	SS4-AUV	SS3-A	SS2-A	SS2-AM
GENERAL	Airbag Manufacturing	○	○	○	○	○	●
	Aircraft Hangars	●	●	○	○	●	○
	Airport Terminals	●	●	○	○	●	○
	Cold Storage Warehouses	●	●	●	●	●	○
	Engine Test Cells	●	●	●	●	●	○
	General Warehouse	●	●	●	●	●	○
	Lumber Storage	●	●	○	●	●	○
	Marine Engine Rooms	●	●	●	●	●	○
	Marine Terminals	●	●	○	○	●	○
	Munitions	○	○	○	○	○	●
	Power Plants	●	●	●	○	●	○
OIL, GAS & PETROCHEMICALS	Acetylene Processing and Storage	○	●	●	○	○	○
	Chemical Storage	●	●	●	○	●	○
	Cogeneration Plants	●	●	●	○	●	○
	Crude and Product Tank Farms	●	●	●	○	●	○
	Ethanol Production and Storage	○	●	●	○	○	○
	Gas Collection Facilities	●	●	●	○	●	○
	Gas Compressor Buildings	●	●	●	○	●	○
	Gas Processing Plants	●	●	●	○	●	○
	Gas Turbine Enclosures	○	●	●	○	○	○
	Gasoline Loading Terminals	●	●	●	○	●	○
	Isopropanol (IPA) Production and Storage	○	●	●	○	○	○
	LNG Storage/Distribution	○	●	●	○	○	○
	LPG Storage/Distribution	●	●	●	○	●	○
	Methanol Production and Storage	○	●	●	○	○	○
	Natural Gas and CNG Plants	○	●	●	○	○	○
	Offshore Drilling Platforms	●	●	●	○	●	○
	Offshore Production Platforms	●	●	●	○	●	○
	Petrochemical Plants	●	●	●	○	●	○
	Petroleum Product Pipelines	●	●	●	○	●	○
Petroleum Product Pumping Stations	●	●	●	○	●	○	
Rail and Truck Loading/Unloading	●	●	●	○	●	○	
Refineries	●	●	●	○	●	○	
SEMICONDUCTOR	Clean Rooms	○	○	○	●	○	○
	Gas Cabinets	○	●	●	●	○	○
	Hydrogen Gas Cabinets	○	●	●	●	○	○
	Hydrogen Plants	○	●	●	●	○	○
	Hydrogen Storage	○	●	●	●	○	○
	IPA Stations	○	●	●	●	○	○
	Silane Gas Cabinets	○	●	●	●	○	○
	Silane Gas Manufacturing	○	●	●	●	○	○
	Silane Gas Storage	○	●	●	●	○	○

● Recommended ● Suitable ○ Not Recommended



SS4-A2 & AS Series Multi-Spectrum™ Electro-Optical Digital Fire and Flame Detector (UV/IR)



The SS4 is a hazardous area certified flame detector for the detection of hydrocarbon (SS4-A2) and non-hydrocarbon fires (SS4-AS2). This multispectrum detector senses radiant energy in the ultraviolet (UV), visible and wideband infrared (IR) spectrum. The radiant energy from all types of flaming fires will alert the detector to their presence. The field of view is the widest in the industry with 120° field of view with a range of 60 ft. This means more hazard can be covered by each detector.

120° field of view with range up to 60 ft.

Features

- Multi-Spectrum™: senses ultraviolet, visible and Wide Band Infrared™
- Built-in test for optical “through the lens” testing
- False alarm immunity
- Detects hydrocarbon and non-hydrocarbon based fires
- Wide field-of-view and solar-blind
- Adjustable detector sensitivity
- Microprocessor based algorithms: FirePic™, Snapshot™ and Tri-Mode Plot™
- Wide temperature range of operation
- Compatible with standard approved fire alarm panels
- Explosion-proof housing
- Time programmable alarm verification
- FM, ATEX mark approvals

SS4-A2 & AS Series (continued)

SS4-A2 & SS4-AS2	Part Number
Aluminum UV/IR, FM, hydrocarbon fires, non latching alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B, C & D (2) 3/4 in. NPT	SS4-A2
Stainless steel UV/IR, FM, hydrocarbon fires, non latching alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B, C & D (2) 3/4 in. NPT	SS4-A2-SS
Aluminum UV/IR, ATEX, hydrocarbon fires, non latching alarm LED, FM, cFM, ATEX, IECE for Zone 1 (2) 3/4 in. NPT	SS4-A2-C
Aluminum UV/IR, ATEX, hydrocarbon fires, non latching alarm LED, FM, cFM, ATEX, IECEx for Zone 1 (2) M25	SS4-A2-C-E
Stainless steel UV/IR, ATEX, hydrocarbon fires, non latching alarm LED, FM, cFM, ATEX, IECEx for Zone 1 (2) M25	SS4-A2-CSS-E
Aluminum UV/IR, ATEX, hydrogen and non hydrocarbon fires, non latching alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B, C & D (2) M25	SS4-AS2-C-E
Stainless steel UV/IR, ATEX, hydrogen and non hydrocarbon fires, non latching alarm LED, FM, cFM, ATEX, IECEx for Zone 1 (2) M25	SS4-AS2-CSS-E
Stainless steel UV/IR, ATEX, hydrocarbon fires, non latching alarm LED, FM, cFM, ATEX, IECE for Zone 1 (2) 3/4 in. NPT	SS4-A2-CSS
Aluminum UV/IR, FM, hydrogen and Non-Hydrocarbon Fires, non-latching alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B, C & D (2) 3/4 in. NPT	SS4-AS2
Stainless steel UV/IR, FM, hydrogen and Non-Hydrocarbon Fires, non-latching alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B, C & D (2) 3/4 in. NPT	SS4-AS2-SS
Aluminum UV/IR, ATEX, hydrogen and non hydrocarbon fires, non latching alarm LED, FM, cFM, CSFM for Class I, Div.1 groups B, C & D (2) 3/4 in. NPT	SS4-AS2-C
Stainless steel UV/IR, ATEX, hydrogen and non hydrocarbon fires, non latching alarm LED, FM, cFM, ATEX, IECEx for Zone 1 (2) 3/4 in. NPT	SS4-AS2-CSS

Accessories SS4-A2 & SS4-AS2	Part Number
Stainless steel swivel mounting assembly for FS24X, FS18X and SS4 detectors	SM4
0-20 MA module for SS4 detectors new version (factory installed)	MA420-4
UV/IR test lamp with universal charger (FM and ATEX approval)	FT-2145
Interface kit for SS4 detector, with universal charger	2029-INTERFACE-KIT
Sunshield for SS2, SS4 and FS24X detectors, 316 stainless steel	SH-001
Field of view restrictor	FVR-01
SS4 module HART (factory fitted, order with detector)	SS4-FSHCOM

Spare Parts SS4-A2 & SS4-AS2	Part Number
Replacement electronics module for SS4-A2 (UV/IR) detectors. Module only, non-latching LED	SS4-MOD-A2
Replacement electronics module for SS4-AS2 (UV/IR) detectors. Module only, non-latching LED	SS4-MOD-AS2
UV test source module for SS4 detectors	H200
IR test lamp bulb (FT-2145)	LAMP-3135-0002
UV test lamp bulb (FT-2145)	DT-3124-0001A



SS4-AUV Series

UV-Spectrum™ Electro-Optical Digital Fire and Flame Detector (UV)



While retaining all the features of the standard SS4-A2, is optimized for the detection of ethanol, methanol, hydrogen and natural gas with a range up to 60 ft. range and a field of view of 120°. The UV only version, SS4-AUV2, is for indoor applications where UV sources such as welding are not present.

120° field of view with range up to 60 ft.

Features

- Senses solar-blink ultraviolet band
- Built-in test for optical “through the lens” testing
- Utilizes long-life, ruggedized UV sensors
- Detects hydrocarbon and non-hydrocarbon based fires
- Wide field-of-view and solar-blind
- Adjustable detector sensitivity
- Microcomputer based algorithms: FirePic™, Snapshot™ and UV Plot
- Wide temperature range of operation
- Compatible with standard approved fire alarm panels
- Explosion-proof housing
- Time programmable alarm verification
- FM, ATEX mark approvals

SS4-AUV Series

Part Number

Aluminum UV, FM, hydrocarbon and non-hydrocarbon fires, non-latching alarm LED, FM, cFM, CSFM for C1, D1, Groups B, C, D (2) 3/4 in. NPT	SS4-AUV2
Aluminum UV, FM, ATEX, hydrocarbon and non-hydrocarbon fires, non-latching alarm LED, FM, cFM, ATEX, IECEx Zone 1 (2) M25	SS4-AUV2-C
Aluminum UV, FM, ATEX, hydrocarbon and non-hydrocarbon fires, non-latching alarm LED, FM, cFM, ATEX, IECEx Zone 1 (2) M25	SS4-AUV2-C-E
Stainless steel UV, FM, ATEX, hydrocarbon and non-hydrocarbon fires, non-latching alarm LED FM, cFM, ATEX, IECEx Zone 1 (2) M25	SS4-AUV2-CSS-E
Stainless steel UV, FM, ATEX, hydrocarbon and non-hydrocarbon fires, non-latching alarm LED FM, cFM, ATEX, IECEx Zone 1 (2) M25	SS4-AUV2-CSS
Stainless steel UV, FM hydrocarbon and non-hydrocarbon fires, non-latching alarm LED, FM, cFM, CSFM for C1, D1, Groups B, C, D (2) 3/4 in. NPT	SS4-AUV2-SS

Accessories SS4-AUV

Part Number

Stainless steel swivel mounting assembly for FS24X, FS18X, SS4, SS2 detectors	SM4
0-20 MA module for SS4 detectors new version (factory installed)	MA420-4
UV/IR test lamp with universal charger (FM and ATEX approval)	FT-2145
Sunshield for SS2, SS4 and FS24X detectors, 316 stainless steel	SH-001
Field of view restrictor	FVR-01
SS4 module HART (factory fitted, order with detector)	SS4-FSHCOM

Spare Parts SS4-AUV

Part Number

Replacement electronics module for SS4-AUV2 (UV) detectors. Module only, non-latching LED	SS4-MOD-AUV2
UV test source module for SS4 detectors	H200
IR test lamp bulb for FT-2145/2045	LAMP-3135-0002
UV test lamp bulb for FT-2145/2045	DT-3124-0001A

SS3 Series

Fire and Flame Detectors for Safe Area (UV/IR)



The Model SS3-A (latching fire alarm relay) and SS3-AN (non-latching Fire Alarm relay) retain outstanding fire and flame detection capabilities in a non explosion-proof, ABS housing. This detector senses radiant energy in the ultraviolet (UV), visible and WideBand Infrared™ (IR) spectrum. The radiant energy from all types of flaming fires will alert the detector to their presence.

120° field of view with range up to 30 ft.

Features

- Multi-Spectrum™ senses energy in the ultraviolet, Visible and Wide Band Infrared™
- False alarm immunity
- Detects hydrocarbon and non-hydrocarbon fires
- Microprocessor based algorithms: FirePic™ and Tri-Mode Plot™
- Wide field-of-view
- FS2000™ System compatible or stand alone operation
- Compatible with approved fire alarm panels
- FM mark approval

SS3 Series

Part Number

UV/IR general purpose, safe area use detector, latching fire relay, FM and CSFM approval

SS3-A

UV/IR general purpose, safe area use detector, non-latching fire relay, FM and CSFM approval

SS3-AN

Accessories SS3

Part Number

UV/IR test lamp with universal charger (FM and ATEX approval)

FT-2145

IR test lamp bulb (FT-2145)

LAMP-3135-0002

UV test lamp bulb (FT-2145)

DT-3124-0001A



SS2-A Series

Digital Fire and Flame Detector (UV/IR)



The Model SS2-A, (latching Fire Alarm relay), and SS2-AN (non-latching Fire Alarm relay), represents the world's pre-eminent UV/IR technology for Electro-Optical Fire and Flame Detectors, with thousands successfully operating in a multitude of installations worldwide. This Detector senses radiant energy in the ultraviolet (UV), visible and WideBand Infrared™ (IR) spectrum. The radiant energy from all types of flaming fires will alert the detector to their presence.

120° field of view with range up to 60 ft.

Features

- Multi-Spectrum senses energy in the UV, Vis and WideBand IR™
- False alarm immunity
- Detects hydrocarbon and non-hydrocarbon fires
- Microprocessor based algorithms: FirePic™ and Tri-Mode Plot™
- Wide field of view and solar blind
- Wide temperature range of operation
- Explosion-proof housing
- FS2000™ System compatible or stand-alone operation
- Compatible with approved fire alarm panels
- FM, ATEX mark approvals

SS2-A Series

Part Number

Copper-free aluminum housing UV/IR/VIS electro-optical fire detector, latching alarm relay, Class I, Div. 1, Groups B, C, & D, FM, CSFM, and cFM approved (2) 3/4 in. NPT	SS2-A
Copper-free aluminum housing UV/IR/VIS electro-optical fire detector, latching alarm relay, ATEX approved (2) M25	SS2-A-C-E
Copper-free aluminum housing UV/IR/VIS electro-optical fire detector, non-latching alarm relay, ATEX approved (2) M25	SS2-AN-C-E
Stainless steel housing UV/IR/VIS electro-optical fire detector, latching alarm relay, ATEX approved (2) M25	SS2-A-SS-C-E
Stainless steel housing UV/IR/VIS electro-optical fire detector, non-latching alarm relay, ATEX approved (2) M25	SS2-AN-SS-C-E
Copper-free aluminum housing UV/IR/VIS electro-optical fire detector, non-latching alarm relay, Class I, Div. 1, Groups B, C, & D, FM, CSFM, and cFM approved (2) 3/4 in. NPT	SS2-AN
Stainless steel housing UV/IR/VIS electro-optical fire detector, latching alarm relay, Class I, Div. 1, Groups B, C, & D, FM, CSFM, and cFM approved (2) 3/4 in. NPT	SS2-A-SS
Stainless steel housing UV/IR/VIS electro-optical fire detector, non-latching alarm relay, Class I, Div. 1, Groups B, C, & D, FM, CSFM, and cFM approved (2) 3/4 in. NPT	SS2-AN-SS

Accessories SS2-A

Part Number

Stainless steel swivel mounting assembly for FS24X, FS18X, SS4, SS2 detectors	SM4
UV/IR test lamp with universal charger, (FM and ATEX approval)	FT-2145
Sunshield for SS2, SS4 and FS24X detectors, 316 stainless steel	SH-001
Field of view restrictor	FVR-01

Spare Parts SS2-A

Part Number

SS2-A replacement electronics module	SS2-MOD-A
SS2-AN replacement electronics module	SS2-MOD-AN
IR test lamp bulb (FT-2145)	LAMP-3135-0002
UV test lamp bulb (FT-2145)	DT-3124-0001A

SS2-AM Series

Ultra-High Speed Digital Fire and Flame Detector (UV/IR)



The Model SS2-AM, (latching Fire Alarm relay), and SS2-AML (non-latching Fire Alarm relay), represent the world's pre-eminent Ultra-High Speed UV/IR technology for Electro-Optical Fire and Flame Detectors, with thousands successfully operating in a multitude of installations worldwide. This detector senses radiant energy in the Ultraviolet (UV), Visible and WideBand Infrared™ (IR) spectrum. The radiant energy from all types of flaming fires will alert the detector to their presence. 120° field of view with range up to 60 ft.

120° field of view with range up to 60 ft.

Features

- Multi-Spectrum senses energy in the UV, Vis and WideBand IR™
- False alarm immunity
- Detects hydrocarbon and non-hydrocarbon fires
- Microprocessor based algorithms: FirePic™ and Tri-Mode Plot™
- Wide field of view and solar blind
- Wide temperature range of operation
- Explosion-proof housing
- FS2000™ System compatible or stand-alone operation
- Compatible with approved fire alarm panels
- FM, ATEX mark approvals

SS2-AM Series

Part Number

Copper-free aluminum housing UV/IR/VIS high-speed electro-optical fire detector, non-latching alarm relay, ALARM and FAULT relays, Class I, Div. 1, Groups B, C, & D, FM, CSFM, and cFM approved, 3/4 in. NPT

SS2-AM

Copper-free aluminum housing UV/IR/VIS high-speed electro-optical fire detector, latching alarm relay, ALARM and FAULT relays, Class I, Div. 1, Groups B, C, & D, FM, CSFM, and cFM approved, 3/4 in. NPT

SS2-AML

Accessories SS2-AM

Part Number

Stainless steel swivel mounting assembly for FS24X, FS18X, SS4, SS2 detectors

SM4

UV/IR test lamp with universal charger, (FM and ATEX approval)

FT-2145

Sunshield for SS2, SS4 and FS24X detectors, 316 stainless steel

SH-001

Field of View Restrictor

FVR-01

Spare Parts SS2-AM

Part Number

SS2-AM replacement electronics module

SS2-MOD-AM

SS2-AML replacement electronics module

SS2-MOD-AML

Replacement housing copper-free aluminum base and top (white)

HA-SS2

IR test lamp bulb (FT-2145)

LAMP-3135-0002

UV test lamp bulb (FT-2145)

DT-3124-0001A

Gas Detection Controllers

Quick Reference Chart

Honeywell Analytics offers a family of gas detection controllers that monitor 2, 4, 8, or 16 points of gas detection. Our digital gas controllers are designed to work in the harshest industrial environments. These controllers are rated for Class I, Div. 2, Groups A, B, C, and D. The HA20 and HA40 controllers are designed to provide simultaneous display and alarm functions for two (HA20) or four (HA40) 4-20 mA sensor transmitters. Each system has three independent alarm levels per channel. HA40 options include an RS-485 Modbus slave port that allows up to 128 HA40's to be multi-dropped into a single data highway.

Product	Max. # of Points	Certification	Configurations	Communication
HA20	2	<ul style="list-style-type: none"> • Class I, Div. 2 • NEMA 4X • NEMA 7X 	<ul style="list-style-type: none"> • Wall Mount 	<ul style="list-style-type: none"> • 4-20 mA • 2 Relays Standard • 6 Additional Relays Optional
HA40	4	<ul style="list-style-type: none"> • Class I, Div. 2 • NEMA 4X • NEMA 7X 	<ul style="list-style-type: none"> • Wall Mount 	<ul style="list-style-type: none"> • 4-20 mA • Modbus • 2 Relays Standard • 6 Additional Relays Optional
HA71	16	<ul style="list-style-type: none"> • Class I Div. 2 • NEMA 4X • NEMA 7X 	<ul style="list-style-type: none"> • Rack Mount • Panel Mount • Wall Mount 	<ul style="list-style-type: none"> • RS-485 • Modbus • 4-20 mA • Configurable Relays
HA72	64	<ul style="list-style-type: none"> • Class I Div. 2 • NEMA 4X 	<ul style="list-style-type: none"> • Rack Mount • Panel Mount • Wall Mount 	<ul style="list-style-type: none"> • Ethernet • RS-485 • Modbus • 4-20 mA • Configurable Relays
96d	96	<ul style="list-style-type: none"> • NEMA 4X 	<ul style="list-style-type: none"> • Wall Mount 	<ul style="list-style-type: none"> • RS-485 Modbus • 4 Configurable Relays • Expansion Relay Module
GM-JR	1	<ul style="list-style-type: none"> • NEMA 1 	<ul style="list-style-type: none"> • Wall Mount 	<ul style="list-style-type: none"> • 4-20 mA • 1 Relay
Unipoint	1	<ul style="list-style-type: none"> • Safe Area 	<ul style="list-style-type: none"> • DIN Rail 	<ul style="list-style-type: none"> • 4 Relays
System 57	60 Fire OR 64 Gas Detection per rack	<ul style="list-style-type: none"> • Safe Area 	<ul style="list-style-type: none"> • Rack Mount • Wall Mount 	<ul style="list-style-type: none"> • Modbus • RS-485/422 • 4-20 mA • Configurable Relays

HA20 & HA40

Digital Gas Controllers



The HA-20 and HA-40 controllers are designed to provide simultaneous display and alarm functions for two or four 4-20 mA sensor transmitters. The 4-20 mA inputs are standard equipped and ideal for interfacing to sensor transmitters that may be long distances from the controller.

Enhanced Technology

- Accepts inputs from up to two (HA-20) or four (HA-40) 4-20 mA sensors transmitters. Internal power supply generates 24 Vdc and provides 15 watts total system power; optional 50 watts supply available.
- CSA certified to C22.2 NO. 152 for combustible detection and Class I, Div. 2, Groups A, B, C, D CE mark
- 3 independent alarm levels per channel. Relay Acknowledge feature allows silencing of external audible devices during existing alarm conditions
- Graphic LCD readout displays monitored data as bar graphs, trends and engineering units. Alarm LED's flash when new and become steady after acknowledged
- Two standard SPDT common alarm relays for HORN, HIGH, WARN or FAULT
- Internal 50 watt power supply provides more room to install wiring

Beneficial Options

- Optional discrete channel alarm relays are available
- Options such as Modbus slave RS-485 serial port, data logging, 4-20 mA outputs, discrete alarm relays and others are supported
- Cal Mode offers pushbutton zero/span calibration for direct sensor interface applications. Authorization Mode allows locking of critical configuration variables
- Touch and magnetic keypad for nonintrusive operation in potentially hazardous locations
- NEMA 4X (Div. 2 certified) and Explosion-Proof wall mount packaging options available

	# of Channels	Polycarbonate enclosure (NEMA 4X)	Painted carbon steel enclosure (NEMA 4)	Stainless Steel enclosure (NEMA 4X)
HA Controller standard configuration 4-20 mA analog input, 6 discrete relays, and internal 50W power supply	2 Channel	HA20PY	HA20PCS	HA20SS
	4 Channel	HA40PY	HA40PCS	HA40SS
HA Controller standard configuration with an additional factory mounted Class I, Div. 2 approved red xenon strobe light	2 Channel	HA20PY-S	HA20PCS-S	HA20SS-S
	4 Channel	HA40PY-S	HA40PCS-S	HA40SS-S
HA Controller standard configuration including a factory mounted red xenon strobe light, and Modbus RS-485 / RTU interface	4 Channel	HA40PY-S-M	HA40PCS-S-M	HA40SS-S-M
HA Controller with internal 50W power supply and custom configuration (all options ordered seperately)	2 Channel	HA20PY-C	HA20PCS-C	HA20SS-C
	4 Channel	HA40PY-C	HA40PCS-C	HA40SS-C

HA20 Standard Configurations (Include Internal 50W Power Supply, 2 Common Relays, and a 2 Channel 4-20 mA Input Card)

	Part Number
Two channel NEMA 4X controller with 6 discrete relays	HA20PY
Two channel NEMA 4X controller, 6 discrete relays, Class I, Div. 2 strobe	HA20PY-S
Two channel painted steel controller with 6 discrete relays	HA20PCS
Two channel painted steel controller, 6 discrete relays, Class I, Div. 2 strobe	HA20PCS-S
Two channel stainless steel controller with 6 discrete relays	HA20SS
Two channel stainless steel controller, 6 discrete relays, Class I, Div. 2 strobe	HA20SS-S

HA20 Custom Configurations

	Part Number
Compact enclosure - two channel NEMA 4X controller <i>Note: Internal power supply limited to 15W - 1000-2259 external power supply required increase to 50W)</i>	HA20N4
Two channel NEMA 4X controller - custom config. (Available with internal 50W power supply)	HA20PY-C
Two channel painted steel controller - custom config. (Available with internal 50W power supply)	HA20PCS-C
Two channel stainless steel controller - custom config. (Available with internal 50W power supply)	HA20SS-C
Two channel NEMA 7 - custom configuration	HA20N7-C

HA20 I/O Options

	Part Number
Dual 4-20 mA analog input	10-0221-2
Dual 4-20 mA analog output	10-0223
One bridge sensor / one EC sensor input combo	10-0216
Dual bridge sensor input	10-0219
Relay option to add six 5 amp Form C relays	10-0222

Note: The HA20 is limited to (3) I/O options per unit.

HA20 Options and Accessories

	Part Number
Div. 2 red xenon strobe light (includes mounting)	10-0284
Div. 2 amber xenon strobe light (includes mounting)	10-0285
100db piezo audible (general purpose: can be used with all HA 20/40 enclosures except for NEMA 7)	10-0337
50 watt NEMA 4X Div. 2 external power supply - for use with HA20N4	1000-2259
50 watt NEMA 4X Div. 2 - internal power supply	10-0315
550V A/300 watt UPS / surge protector with power loss relay	10-0287

HA20 & HA40 (continued)

HA40 Standard Configurations (Include Internal 50W Power Supply, 2 Common Relay, and a 4 Channel 4-20 mA Input Card)

	Part Number
Four channel NEMA4X controller with 6 discrete relays	HA40PY
Four channel NEMA 4X controller, 6 discrete relays, Class I, Div. 2 strobe	HA40PY-S
Four channel NEMA 4X controller, 6 discrete relays, Class I, Div. 2 strobe, RS-485 Modbus RTU interface	HA40PY-S-M
Four channel painted steel controller with 6 discrete relays	HA40PCS
Four channel painted steel controller, 6 discrete relays, Class I, Div. 2 strobe	HA40PCS-S
Four channel painted steel controller, 6 discrete relays, Class I, Div. 2 strobe, RS-485 Modbus RTU interface	HA40PCS-S-M
Four channel stainless steel controller with 6 discrete relays	HA40SS
Four channel stainless steel controller, 6 discrete relays, Class I, Div. 2 strobe	HA40SS-S
Four channel stainless steel controller, 6 discrete relays, Class I, Div. 2 strobe, RS-485 Modbus RTU interface	HA40SS-S-M

HA40 Custom Configurations

	Part Number
Four channel NEMA4X controller - custom config.	HA40PY-C
Four channel painted steel controller - custom config.	HA40PCS-C
Four channel stainless steel controller - custom config.	HA40SS-C
Four channel NEMA 7 - custom configuration	HA40N7-C

Note: Custom configurations include internal 50W power supply; all other options are ordered separately.

HA40 I/O Options

	Part Number
Quad 4-20 mA analog input	10-0221-4
Quad channel 4-20 mA output	10-0308
Quad bridge/dual analog configurable sensor input	10-0309
RS-232 / RS-485 Modbus RTU addressable interface	10-0253
Relay option to add six 5 amp Form C relays	10-0222

Note: The HA40 is limited to (3) I/O options per unit.

HA40 Options and Accessories

	Part Number
Div. 2 red xenon strobe light (includes mounting)	10-0284
Div. 2 amber xenon strobe light (includes mounting)	10-0285
50 watt NEMA 4X Div. 2 - internal power supply	10-0315
550V A/300 watt UPS / surge protector with power loss relay	10-0287
100db piezo audible (general purpose: can be used with all HA 20/40 enclosures except for NEMA 7)	10-0337



HA71 Digital Gas Controller



The Honeywell Analytics HA71 16 Channel Digital Gas Controller is a Class I Div. 2 controller designed to provide simultaneous display and alarm functions for up to 16 input variables. A graphic LCD displays monitored data as trends, bar graphs and engineering units. Three adjustable alarm levels are provided per channel. Relay outputs allow control of beacons, horns and other alarm events. A horn relay may be set for steady or pulsing operation. Analog inputs may be accepted and conditioned via sensor specific analog input cards. The standard Modbus Master port allows input data to be retrieved from Modbus slave devices. These including proven in use devices such as the XNX™ Universal Transmitter and the Sensepoint XCD.

Enclosure options include a NEMA 4X enclosure, 19 in. rack/panel mount enclosure, and a NEMA 7 explosion-proof enclosure. These package styles support addition of up to 7 I²C option board footprints (3 with 0 10-0180 expansion kit option) inside each respective enclosure. Additional options may be added externally or in other enclosures. Includes magnetic keypad for non-intrusive control.

Enhanced Technology

- Accepts up to 16 inputs from numerous sensor types
- Inputs may be analog or Modbus allowing data retrieval via RS-485 – reducing wiring costs at installation
- 8 channel display mode and option boards allow economical configuration of systems requiring only 8 channels or less
- Cal Mode offers pushbutton zero/span calibration for direct sensor interface applications
- Authorization Mode locks critical configuration variables
- Graphic LCD displays monitored data as trends, bar graphs and engineering data
- Standard A SPDT common alarm relays for HORN, HIGH, WARN and FAULT
- Dual Modbus RS-485 serial ports and optional phone modem
- 3 adjustable alarm levels/channel
- Relay Acknowledge feature silences external audible devices during existing alarm conditions
- HMI Software monitors up to ten HA-71 controllers simultaneously

Beneficial Options

- Alarm event printer interface, direct sensor inputs and discrete alarm relays supported via a 12C expansion bus
- Magnetic keypad available for non-intrusive operation in potentially hazardous locations
- NEMA 4X, Explosion-Proof, surface mount, panel and rack mount packaging

	# of Channels	Polycarbonate enclosure (NEMA 4X)
HA Controller 8 channel controller: UL/CSA approved, Class I, Div. 2, NEMA 4X enclosure with magnetic input for nonintrusive control, eight 4-20 mA analog inputs, Modbus input, four 5 amp common relays, sixteen 5 amp discrete relays, and an internal 150W power supply	8 Channel	HA71N4-8
HA Controller 16 channel controller: UL/CSA approved, Class I, Div. 2, NEMA 4X enclosure with magnetic input for nonintrusive control, sixteen 4-20 mA analog inputs, Modbus input, four 5 amp common relays, thirty-two 5 amp discrete relays, and an internal 150W power supply	16 Channel	HA71N4-16

HA71 (continued)

HA71 Standard Configurations

	Order Number
HA71 in NEMA 4X enclosure, 8 channel, standard configuration	HA71N4-8
HA71 in NEMA 4X enclosure, 16 channel, standard configuration	HA71N4-16

HA71 Custom Configurations

	Order Number
Panel mount rack incl bezel/rack hardware and magnetic keypad for non-intrusive control	HA71PM
HA71 in NEMA 4X enclosure incl magnetic keypad for non-intrusive control	HA71N4
HA71SM in bolt-on lid NEMA 7 enclosure incl magnetic keypad for non-intrusive control	HA71XP

Note: Custom configurations require all options to be ordered separately.

HA71 I/O Options

	Order Number
I ² C analog 8 input board incl EXC terminals	10-0158
I ² C catalytic bead LEL sensor / mA input board	10-0191
Dual catalytic bead LEL module (req's 10-0191)	10-0192
I ² C RTD / resistive / 4-20 mA 8 input board	10-0170
I ² C analog 4-20 mA 8 output board	10-0167
RS-485 to RS-232 converter (RS-485 RTU to PC DB9)	10-0177
I ² C printer interface with parallel, RS-232, and RS-422 ports	10-0229
Auxiliary common alarm relay board (add'I Form C relay for ALM 1, ALM 2 and HORN)	10-0144
I ² C discrete alarm relay board (8, 5A Form C Relays)	10-0195
NEMA 4X expansion enclosure for up to 8 option PCB's	10-0178
NEMA 4X expansion plate (adds up to 4 option positions)	10-0180
85-240 V _{AC} universal input 150 watt 24 V _{DC} internal power supply	10-0172
100db piezo audible alarm added to NEMA 4X enclosure except for NEMA 7 enclosures)	1000-1892
Amber/red dual light stack with 80db horn; general purpose	1000-1906
Human/machine interface (HMI) software package (CD)	HA-71-HMI
NEMA 7 expansion plate	10-0181

Note: HA71N4 enclosure accepts 3 I/O cards; for additional I/O capacity order 10-0180 or 10-0178.

Spares

	Order Number
Replacement main I/O PCB for HA71/XP	10-0142
Replacement main I/O PCB for HA71PM (ribbon connector on circuit side of PCB)	10-0213
Replacement HA71 flat panel LCD module	10-0006
Replacement complete HA71 front panel electronic nest assembly including 10-0006 LCD	10-0185
Replacement HA71 front graphic panel	10-0231
Replacement main I/O PCB fuse; 20 mm / 2 amp	1000-1992
I ² C 6 in. I/O Cable	0010-1110
I ² C 10 in. I/O Cable	0010-1180
"Big blue" magnetic wand for XP enclosures	1000-0078
"Small red" magnetic wand for NEMA 4X enclosures	1000-0076



HA72

Digital Gas Controller



The Honeywell Analytics HA-72 is a 32, 48, 64 Channel Digital Gas Controller, designed to provide simultaneous display and alarm functions for up to 64 input variables. A graphic LCD displays monitored data as trends, bar graphs and engineering units. Three adjustable alarm levels are provided per channel. Relay outputs allow control of beacons, horns and other alarm events. A horn relay may be set for steady or pulsing operation. Analog inputs may be accepted and conditioned via sensor specific analog input cards. The standard Modbus Master port allows input data to be retrieved from Modbus slave devices. These including proven in use devices such as the XNX™ Universal Transmitter and the Sensepoint XCD.

Enclosure options include a NEMA 4X enclosure (full-size or compact) and a 19 in. rack/panel mount enclosure. Flexible configuration allows you to customize inputs and outputs to your unique needs. Additional options may be added externally or in other enclosures. Includes magnetic keypad for non-intrusive control. Ethernet capability, zone logic, and voting make this an excellent choice for managing your gas detection system.

Flexible & Feature Rich

- Configure HA72 to accept inputs from many sensor types and signal ranges. Daisy chain up to 128 HA72 controllers to expand the system to meet your needs
- Custom software auto-recognizes and addresses Honeywell gas monitors (XNX™ and Sensepoint XCD)
- Connect sensors directly to HA72 with bridge sensor input board, saving installation time and eliminating need for extra devices
- Use HA72 as a discrete life safety system or network to a PLC or DCS for addressable operation
- Multiple password levels allow Ethernet access according to user need or qualification
- Various enclosure options available for hazardous and non-classified areas
- Programmable relays allow for a single relay contact point for multiple devices

Certifications

- Class I, Div. 2, Groups A, B, C and D
- CAN/CSA-C22.2 No.152-M1984
- ANSI/ISA-12.13.01-2000
- CSA-C22.2 No. 213-M1987
- UL Std No. 1604, Third Ed. – 1994
- ANSI/ISA-12.12.01-2010

Advanced, User-Friendly Interface

- Full array of visual indicators (bar graphs, multicolor cells, flashing icons) and integrated alarm levels simplify and enhance monitoring, troubleshooting and trending functions
- Improved zone logic reduces false alarm incidents
- Touch and magnetic keypad allows nonintrusive operation in hazardous locations
- SD card logs over one year of data including concentration levels, alarm events, min/max, calibrations and alarm resets
- NEMA 4X, NEMA 4X Stainless Steel, full and half 19 in. rack mount and wall-mount options
- Modbus master/slave functionality allows for simultaneous sending and receiving of data, through four RS-485 serial ports
- Calibration and Authorization Modes facilitate and speed commissioning time; Mimic Mode allows viewing of other HA72 controllers on the host display

HA72 (continued)

HA72 Controller with Enclosure Options

	Part Number
HA-72PM panel mount rack (includes bezel/rack hardware)	72-01
HA-72RM/1 one ST-72SM in full width 19 in. rack (64 channels)	72-02
HA-72RM/2 two ST-72SM's in full width 19 in. rack (128 channels)	72-03
HA-72N4 ST-72 in NEMA 4X large fiberglass enclosure	72-04
HA-72SS ST-72 in NEMA 4X 316 stainless steel enclosure	72-05
HA-72CP ST-72 in NEMA 4X compact non metallic enclosure	72-07

Note: All HA-72 models Include Magnetic Keypad for Non-Intrusive Control)

Input and Output Options

	Part Number
Auxiliary standard alarm relay board	10-0332
I ² C analog 16 input board including EXC terminals	10-0344
I ² C analog 16 output board	10-0348
I ² C discrete alarm relay board (16, 5A Form C relays)	10-0345
I ² C programmable alarm relay board (16, 5A Form C relays)	10-0350
RS485 isolated expansion board	10-0368
I ² C bridge sensor / mA input board (accepts up to 8 10-0192 modules)	10-0347
Dual bridge sensor module (requires 10-0347)	10-0192

Expansion Plates

	Part Number
Aluminum 19 expansion plate (adds QTY 4 option boards)	0010-0321
NEMA 4 expansion plate (adds QTY 5 option boards)	0010-1269

Power Supplies

	Part Number
85-240 V _{AC} universal input 150 watt 24 V _{DC} power supply (6.2 Amps)	10-0172
100-240 V _{AC} universal input 600 watt 24 V _{DC} power supply (27.0 Amps)	10-0367

Spares

	Part Number
Replacement HA-72 main I/O	10-0331
Replacement complete HA-72 front panel electronic nest assembly	10-0373
Replacement HA-72 front graphic panel	10-0374
Replacement main I/O fuse ; 5 X20 mm / 2 Amp	1000-1992
6 foot long 40 pin I/O ribbon cable	0010-1287
16 in. long 40 pin I/O ribbon cable	0010-1002
6 in. long I ² C cable	0010-1110
10 in. long I ² C cable	0010-1180
6 foot long I ² C cable	0010-1188



AirAlert 96d

Multi-Channel Readout



The AirAlert 96d is designed for installation and operational simplicity for continuous monitoring and control of toxic gases, combustible gases and oxygen hazards, provides continuous monitoring of up to 96 connected sensors on three distinct channels. Installation costs are minimized by using an addressable RS-485 Modbus communication protocol. Only two pairs of wires are required to connect all of the gas sensors and relay modules to one of the controller's three input channels. The AirAlert 96d provides a full array of displays, user-friendly menu-driven program allows for minor fine-tuning of the sequence of operation to reconfiguration of the entire network, automatic datalogging capability, cast aluminum enclosure.

96 Sensor Capacity

- Supports up to 96 network devices
- Three distinct channels act as the nerve centre of a modular gas detection network

Menu-Driven Program

- Easily fine-tune applications ranging from minor operational sequences to reconfiguration of entire network
- Simple push-button program facilitates adjustments

Centralized Information

- Interface with or function individually with plant control

Customizable

- Supports any combination of Honeywell Analytics gas sensors, including NH₃, CO₂, H₂, CO, Cl₂, CFC's, HCFC's, HFC's, CH₄, O₂, NO₂, and more
- Field-programmable alarm levels for each sensor
- Zoning capability allows for up to 126 zones

Immediate At-a-Glance Status

- 122 x 32 alphanumeric LCD display provides continuous information for the entire network

Automatic Datalogging Capability

- Controller provides automatic datalogging within cast aluminum enclosure
- Sensor concentrations and alarms is recorded for analysis

Easy Installation

- Cost is reduced by addressable RS-485 Modbus communication protocol
- Installation requires only two pairs of wires to connect each gas sensors and relay modules to one of the controller's three input channels

AirAlert 96D Multi-Channel Readout	Model Number	Order Number
AirAlert-96d gas detection controller with data logger	AA96D-DLC	AA96D-DLC
AirAlert-96d-RM8 relay module, 8 channel, RS-485	AA96D-RM8	AA96D-RM8
AirAlert 96d remote annunciator panel, includes 3 relays, audible alarm, RS-485	301-AP	301-AP
AirAlert 96d interface module 4-20 to RS485 with phoenix connector	420MDBS-96D	M-511352*
AirAlert 96d interface module 4-20 to RS485 with screw connector	420MDBS-96D-SC	M-511353*
AirAlert 96d interface module 4-20 to RS485 with phoenix connector (for use with a PLC)	420MDBS-96D-IM	M-510457*
AirAlert 96d interface module 4-20 to RS485 with screw connector (for use with a PLC)	420MDBS-96D-IM-SC	M-700010*

*Note: MDBS modules require factory-set configuration parameters. Please specify at time of ordering. Use of this module inside a sensor will invalidate any certifications.

GM-JR

Readout Module



The GM-JR Readout Module provides a calibrated 20 segment LED bargraph, alarm and fault LEDs, single trip point in 5% increments, and relay output. This versatile module provides a readout and relay inside a sensor housing or can be used as a remote warning device showing gas concentration levels, e.g., at a machine room entrance. The basic GM-JR Readout Module is mounted in the door of its own enclosure for easy viewing, and has a separate terminal board for the optional sensor and/or power cable connections. It is available in "stand-alone" and "feed-through" designs.

GM-JR Readout Module

Model Number

Order Number

GM-JR, feed-through configuration, NEMA 1 enclosure
 GM-JR, stand alone configuration, NEMA 1 enclosure
 GM-JR power supply, 24 V_{DC}, 1A
 GM-JR, stand alone configuration, stainless enclosure
 GM-JR, feed-through configuration, stainless enclosure

GM-JR-N1-FT
 GM-JR-N1-SA
 GM-JR-PS
 GM-JR-ST-SA
 GM-JR-ST-FT

M-510426
 M-600024
 M-600031
 M-511326
 M-700004



System 57

Control for Fire and Gas Detection



System 57 is a Safe Area, Modular Fire and Gas detection control system suitable for indoor use with our range of Catalytic, Electrochemical and Infrared gas detectors. System 57 offers gas and fire control cards, interface and relay cards, 8 and 16 way racks, power supplies and cabinets.

A world of control technology

- High precision, intelligent control
- Master/voted alarm options
- High packing density
- Flexible I/O configuration
- Relay output options

5701: Single-channel control card with mA or mV input. Kit options include front or rear access, Analog output and relay options.

5704: Four-channel control card with mA or mV input. Kit options include front or rear access, Analog output (sink or source) and two relay interface options (Relay interface requires 2 rack slots).

5704F: Four-channel card for a standard 4-zone loop and offers 2 optional relay interfaces.

Approvals:

EN50054 for single-channel systems (DMT)
EH54 for fire detection systems

Mounting:

3U, 19 in. rack + range of wall/floor mounting cabinets

Projects:

Please contact the Special Projects Team for detailed, customized systems.

System 57 (continued)

5701 Single Channel Control Card + Interface Card (For Front Access Racks)	Part Number
5701 catalytic, field interface, interconnect cable	05701-N-6100
5701 catalytic, double SPCO, interconnect cable	05701-N-6101
5701 catalytic, triple SPCO, interconnect cable	05701-N-6102
5701 catalytic, triple DPCO, interconnect cable	05701-N-6103
5701 catalytic, high integrity relay, interconnect cable	05701-N-6104
5701 mA, field interface, interconnect cable	05701-N-6105
5701 mA, double SPCO, interconnect cable	05701-N-6106
5701 mA, triple SPCO, interconnect cable	05701-N-6107
5701 mA, triple DPCO, interconnect cable	05701-N-6108
5701 mA, high integrity relay, interconnect cable	05701-N-6109

5701 Single Channel Control Card + Interface Card + Analog Output (For Front Access Racks)	Part Number
5701 catalytic, analog output, field interface, interconnect cable	05701-N-6110
5701 catalytic, analog output, double SPCO, interconnect cable	05701-N-6111
5701 catalytic, analog output, triple SPCO, interconnect cable	05701-N-6112
5701 catalytic, analog output, triple DPCO, interconnect cable	05701-N-6113
5701 catalytic, analog output, high integrity relay, interconnect cable	05701-N-6114
5701 mA, analog output, field interface, interconnect cable	05701-N-6115
5701 mA, analog output, double SPCO, interconnect cable	05701-N-6116
5701 mA, analog output, triple SPCO, interconnect cable	05701-N-6117
5701 mA, analog output, triple DPCO, interconnect cable	05701-N-6118
5701 mA, analog output, high integrity relay, interconnect cable	05701-N-6119

5701 Single Channel Control Card + Interface Card (For Rear Access Racks)	Part Number
5701 catalytic, field interface	05701-N-6200
5701 catalytic, double SPCO	05701-N-6201
5701 catalytic, triple SPCO	05701-N-6202
5701 catalytic, triple DPCO	05701-N-6203
5701 catalytic, high integrity relay	05701-N-6204
5701 mA, field interface	05701-N-6205
5701 mA, double SPCO	05701-N-6206
5701 mA, triple SPCO	05701-N-6207
5701 mA, triple DPCO	05701-N-6208
5701 mA, high integrity relay	05701-N-6209

5701 Single Channel Control Card + Interface Card + Analog Output (For Rear Access Racks)

	Part Number
5701 catalytic, analog output, field interface	05701-N-6210
5701 catalytic, analog output, double SPCO	05701-N-6211
5701 catalytic, analog output, triple SPCO	05701-N-6212
5701 catalytic, analog output, triple DPCO	05701-N-6213
5701 catalytic, analog output, high integrity relay	05701-N-6214
5701 mA, analog output, field interface	05701-N-6215
5701 mA, analog output, double SPCO	05701-N-6216
5701 mA, analog output, triple SPCO	05701-N-6217
5701 mA, analog output, triple DPCO	05701-N-6218
5701 mA, analog output, high integrity relay	05701-N-6219

5704 Four Channel Control Card + Interface Card (For Front Access Racks)

	Part Number
5704 catalytic, quad relay, interface interconnect cable	05704-N-0101
5704 catalytic, relay interface assembly, interconnect cable	05704-N-0102
5704 mA, quad relay interface, interconnect cable	05704-N-0103
5704 mA, relay interface assembly, interconnect cable	05704-N-0104

5704 Four Channel Control Card + Interface Card + Sink Analog Output (For Front Access Racks)

	Part Number
5704 catalytic, analog output-sink, quad relay interface, interconnect cable	05704-N-0111
5704 catalytic, analog output - sink, relay interface assembly, interconnect cable	05704-N-0112
5704 mA, analog output - sink, quad relay interface, interconnect cable	05704-N-0113
5704 mA, analog output - sink, relay interface assembly, interconnect cable	05704-N-0114

5704 Four Channel Control Card + Interface Card + Source Analog Output (For Front Access Racks)

	Part Number
5704 catalytic, analog output-source, quad relay interface, interconnect cable	05704-N-0121
5704 catalytic, analog output-source, relay interface assembly, interconnect cable	05704-N-0122
5704 mA, analog output-source, quad relay interface, interconnect cable	05704-N-0123
5704 mA, analog output-source, relay interface assy, interconnect cable	05704-N-0124

5704 Four Channel Control Card + Interface Card (For Rear Access Racks)

	Part Number
5704 catalytic, quad relay interface	05704-N-0201
5704 catalytic, relay interface assembly	05704-N-0202
5704 mA, quad relay interface	05704-N-0203
5704 mA, relay interface assembly	05704-N-0204

System 57 (continued)

5704 Four Channel Control Card + Interface Card + Sink Analog Output (For Rear Access Racks)

	Part Number
5704 catalytic, analog output-sink, quad relay interface	05704-N-0211
5704 catalytic, analog output-sink, relay interface assembly	05704-N-0212
5704 mA, analog output-sink, quad relay interface	05704-N-0213
5704 mA, analog output-sink, relay interface assembly	05704-N-0214

5704 Four Channel Control Card + Interface Card + Source Analog Output (For Rear Access Racks)

	Part Number
5704 catalytic, 5704 analog output - source, quad relay interface	05704-N-0221
5704 catalytic, 5704 analog output - source, relay interface assembly	05704-N-0222
5704 mA, analog output-source, quad relay interface	05704-N-0223
5704 mA, analog output-source, relay interface assembly	05704-N-0224

5704F Four Zone Fire Control Card (For Front Access Racks)

	Part Number
5704F 4ZCC- fire, hex relay interface, interconnect cable	05704-N-0105
5704F 4ZCC- fire, fire relay interface, interconnect cable	05704-N-0106

5704F Four Zone Fire Control Card (For Rear Access Racks)

	Part Number
5704F 4ZCC- fire, hex relay interface	05704-N-0205
5704F 4ZCC- fire, hex relay interface	05704-N-0206

Interface Modules

	Part Number
Engineering interface lead	05701-A-0120
Master alarm update module kit	05701-A-0309
Modbus interface module kit-RS 485/RS 422	05701-A-0312
Modbus interface module kit-RS 232	05701-A-0313
Event print module kit-RS 232	05701-A-0314
Master alarm update panel	05701-A-0339
Terminal panel, 16 w rack, front access only	SVIP3067-1
Terminal panel, 16 w rack, rear access	SVIP3067-1R
Terminal panel, 8 w rack, front access only	SVIP3067-2
Terminal panel, 16 w rack, rear access	SVIP3067-2R

System 57 (continued)

Single Way Rack	Part Number
1W rear access rack, engineering card, DC input, key set	05701-A-0601

8 Way Racks & Cabinets	Part Number
Cabinet - wall mounting - 8 way	05701-A-0452
8W front access rack, 0 blanking panels	05708-N-2008
8W front access rack, 0 blanking panels, 8W cabinet	05708-N-3008
8W front access rack, 0 blanking panels, 8W PSU - 50w	05708-N-5008
8W front access rack, 0 blanking panels, 8W cabinet, 8W PSU - 50W	05708-N-6008
8W rear access rack, 0 blanking panels	05708-N-1008
8W rear access rack, 0 blanking panels, 8W PSU - 50W	05708-N-4008

16 Way Racks & Cabinets	Part Number
Cabinet - wall mounting - 16 way	05701-A-0451
16W front access rack, 0 blanking panels	05716-N-2016
16W front access rack, 0 blanking panels, 16W cabinet	05716-N-3016
16W front access rack, 0 blanking panels, 16W PSU - 50W	05716-N-5016
16W front access rack, 0 blanking panels, 16W cabinet, 16w PSU - 50W	05716-N-6016
16W rear access rack, 0 blanking panels	05716-N-1016
16W rear access rack, 0 blanking panels, 16W PSU - 50W	05716-N-4016

Spare Rack Assembly Components	Part Number
Subrack - rear access - 1 way	05701-A-0600
Subrack - front access - 8 way	05701-A-0506
Subrack - rear access - 8 way	05701-A-0516
Subrack - front access - 16 way	05701-A-0505
Subrack - rear access - 16 way	05701-A-0515

Power Supplies	Part Number
Power supply unit-AC to DC-16 way-50 watts	05701-A-0405
Power supply unit-AC to DC-8 way-50 watts	05701-A-0406
Power supply module-50 watts (upgrade for PSUs and sub units)	05701-A-0440
Power supply subunit-50 watts (upgrade for 16 way PSU)	05701-A-0441

Rack & Cabinet Accessories	Part Number
Blanking panel - card slot	05701-A-0365
Blanking panel - 1U x 19 in. (16 way)	05701-C-0471
Blanking panel - 1U x 1/2 19 in. (8 way)	05701-C-0474

System 57 (continued)

5701 Spares	Part Number
System 57 calibration plug	05701-A-0550
Engineering card	05701-A-0361
Dc input card	05701-A-0325
Single channel control card - 4-20 mA	05701-A-0301
Single channel control card – catalytic	05701-A-0302
Sensor drive module–4-20 mA–5701	05701-A-0283
Sensor drive module-catalytic–5701	05701-A-0284
Analog output module–5701	05701-A-0285
Field interface card (no relays - sensor input only)	05701-A-0326
Relay card-double SPCO-5701 (A1, A2 and fault single pole hangover relays)	05701-A-0327
Relay card-triple SPCO-5701 (A1, A2, A3 fault and inhibit single pole changeover relays)	05701-A-0328
Relay card-triple DPCO-5701 (2Xa1, 2Xa2, 2Xa3 fault and inhibit single pole changeover relays)	05701-A-0329
High integrity relay card-double SPCO-5701 (2Xa1, 2Xa2, 2Xa3 fault and inhibit single pole changeover relays)	05701-A-0330
Master alarm update panel	05701-A-0339
Interconnection cable – 5701	05701-C-0390

5701 - 5704 Calibrations Available (Labels included free of charge with the configuration of the cards)

Catalytic - 0-10,000 ppm	mA - 0-0.2 ppm	mA - 0-2% V/V	mA - 0-5% V/V
Catalytic - 0-100% LEL	mA - 0-0.4 ppm	mA - 0-2,000 ppm	mA - 0-5,000 ppm
Catalytic - 0-15,000 ppm	mA - 0-1.2 ppm	mA - 0-200 ppm	mA - 0-500 ppm
Catalytic - 0-2,000 ppm	mA - 0-1,000 ppm	mA - 0-20 ppm	mA - 0-50 ppm
Catalytic - 0-20% LEL	mA - 0-10% V/V	mA - 0-25% V/V	mA - 0-5 ppm
Catalytic - 0-20,000 ppm	mA - 0-10,000 ppm	mA - 0-250 ppm	mA - 4-20 mA
Catalytic - 0-3,000 ppm	mA - 0-100% LEL	mA - 0-25 ppm	mA - Generic
Catalytic - 0-4% V/V	mA - 0-100% V/V	mA - 0-2 ppm	
Catalytic - 0-5,000 ppm	mA - 0-100 ppm	mA - 0-30% V/V	
Catalytic - 0-50% LEL	mA - 0-10 ppm	mA - 0-30 ppm	
Catalytic - Blank Scale	mA - 0-15 ppm	mA - 0-5 LEL	

5704 Spares	Part Number
Quad relay interface card - 5704 (4 SPCO relays)	05704-A-0121
Relay interface assy - 16 relays - 5704 (12 SPCO, 4 SPST)	05704-A-0131
4 channel control card – catalytic	05704-A-0144
4 channel control card - 4-20 mA	05704-A-0145
Interconnect cable – 5704	05704-C-0160

5704F Spares	Part Number
5704F hex relay interface card	05704-A-0123
5704F relay interface assembly	05704-A-0133
5704F fire card	05704-A-0146
5704F fire status panel	05704-A-0148



Unipoint

DIN Rail Mounted Controller



The Unipoint is a simple DIN rail mounted controller offering integrators a flexible and low cost solution to incorporate flammable, toxic or oxygen gas detection into their control systems. Unipoint can be easily installed into any plastic or metal enclosure for use indoor or outdoors and even in potentially explosive atmospheres.

With the addition of one of the Zareba range of flammable, toxic or oxygen detectors, systems may be configured to monitor gases in a wide range of applications from car parks and boiler houses to analyzer shelters or crane cabs in offshore facilities.

Each controller is supplied complete with all necessary removable terminals, DIN rail socket and power connector.

User Friendly

- Ultra-clear backlit display
- System status codes
- Built-in audiovisual alarms
- Intuitive menu system
- Simple pushbutton operation
- Remote accept, reset and inhibit inputs

Easy to Install

- TS35 ('top hat') DIN rail mounting
- Removable terminal connectors.
- Easy access to all terminals
- Additional units clip together

Comprehensive Operation

- 3 wire mV bridge, 2 and 3 wire 4-20 mA inputs
- DC operation
- 3 x alarm relays
- 1 x system fault relay
- Field inhibit input (mA versions)

Flexible Operation

- Fully user programmable scale, units and calibration
- Relays configurable as energized, de-energized, latching or non-latching, alarm relay on/off delay
- Compatible with a wide range of gas detectors

Unipoint Instrument

Order Number

Unipoint controller (mV input version)

2306B2000

Unipoint controller (mA input version)

2306B1000

Unipoint Accessories

Order Number

DIN rail mounted PSU. Input: 85-265 V_{AC}, 50/60Hz. Output: 24 V_{DC}, 1A CSA, UL/UR, CE approved

ZDINPSUX1

Unipoint Spares

Order Number

Unipoint terminal block (x2)

2306B3010

Unipoint DIN rail socket

2306B3020

Unipoint power connector

2306B3030

Safe Area and Intrinsically Safe Transmitters

Quick Reference Chart

Product	Gases Detected	Display	Certs.	Communications
Sensepoint	See Below	N	CSA, ATEX, IS	4-20 mA, 2/3 Wire
Satelite XT		Y	UL, ATEX	4-20 mA, LonWorks®
Midas		Y		4-20 mA, Modbus TCP
SPM		Y		4-20 mA

Toxic Gas Sensor	Sensepoint	Satelite XT	Midas	SPM
Ammonia (NH ₃)	X	X	X	X
Carbon Monoxide (CO)	X	X	X	
Chlorine (Cl ₂)	X	X	X	X
Hydrogen (H ₂)	X	X	X	
Hydrogen sulfide (H ₂ S)	X	X	X	X
Nitric oxide (NO)	X	X	X	
Oxygen (O ₂)	X	X	X	
Sulfur Dioxide (SO ₂)	X	X	X	X
Chlorine dioxide (ClO ₂)		X	X	X
Ethylene oxide (ETO)		X	X	
Hydrogen chloride (HCl)		X	X	X
Hydrogen cyanide (HCN)		X	X	X
Hydrogen fluoride (HF)		X	X	X
Nitrogen dioxide (NO ₂)		X	X	X
Ozone (O ₃)		X	X	X
Phosgene (CCl ₂ O)		X		X
Phosphine (PH ₃)		X	X	X
Other gasses (see product page)			X	X

LEL Sensor	Sensepoint	Satelite XT	Midas	SPM
Non-specific combustible	X	X		



Satellite XT

Gas Detector Transmitter

AsH₃, B₂H₆, Br, C₂H₂Cl₂, C₄F₆, C₅F₈, CCl₂O, CH₃F, Cl₂, ClF₃, ClO₂, CO, COCl₂, DCE, ETO, F₂, GeH₄, H₂, H₂S, H₂Se, HBr, HCl, HCN, HF, HMDS, LEL, N₂H₄, NF₃, NH₃, NO, NO₂, O₂, O₃, PH₃, SF₆, SiH₄, SO₂, TEOS, TMB, TMP



The MST Satellite XT is a universal transmitter, utilizing plug and play technology, to monitor up to 40 different gases. The Satellite XT comes in two versions, Analog and Digital. The Analog version provides a 4-20 mA output that can be used to interface to PLC's. The Digital version (FTT) utilizes the LonWorks® communication protocol and can be used to interface with other devices on a LonWorks® Network. Both versions feature an intuitive plain text menu interface, a large backlit LCD for information display, six key touch pad control for menu operation. Operating voltage 12-24 Vdc.

Note: Sensor Cell must be ordered separately. Specify sensor part number when ordering.

Advantages:

- Fast, reliable, specific gas detection
- Continuous real-time monitoring
- Interchangeable intelligent sensor cell
- No dynamic gas calibration required
- Generic sensor head electronics
- Low cost of ownership
- No moving parts to wear down or replace

Satellite XT - Analog Sensor Heads

Analog version transmitter. Provides a three wire 4-20 mA output.

Part Number

Satellite XT 4-20 mA	9602-0200
Satellite XT 4-20 mA – UL approved for Class I, Div. 2, Groups A, B, C and D – water tight threaded hub connector for IMC and rigid conduit	9602-0201
Satellite XT 4-20 mA/R	9602-0205
Satellite XT 4-20 mA/R – UL approved for Class I, Div. 2, Groups A, B, C and D – water tight threaded hub connector for IMC and rigid conduit	9602-0206
Satellite XT 4-20 mA combustible	9602-0250
Satellite XT 4-20 mA combustible – UL approved for Class I, Div. 2, Groups A, B, C and D – water tight threaded hub connector for IMC and rigid conduit	9602-0251

Note: Sensor cell must be ordered separately. Please specify sensor part number when ordering.

Satellite XT- Digital Sensor Heads

Digital version transmitter for use on a LonWorks® digital network.

Part Number

Satellite XT FTT – free topology, 12-24 Vdc	9602-0400
Satellite XT FTT - UL approved for Class I, Div. 2, Groups A, B, C and D – water tight threaded hub connector for IMC and rigid conduit	9602-0401
Satellite XT FTT/R	9602-0405
Satellite XT FTT/C - combustible	9602-0450
Satellite XT FTT/C - UL approved for Class I, Div. 2, Groups A, B, C and D – water tight threaded hub connector for IMC and rigid conduit	9602-0451

Note: Sensor cell must be ordered separately. Please specify sensor part number when ordering.

Satellite XT (continued)

Satellite XT Expansion Modules

The Satellite XT modules allow easy expansion of the Satellite for various applications. Addition of the Extractive Module allows sampling from remote locations up to 30 m from the monitor. The Pyrolyzer is used to monitor for gases that must be "cracked" into HF for detection by an electrochemical sensor.

Order the following parts for an Extractive System:

1. XT Satellite (see section 1 and 2)
2. XT Extractive Module
3. Sensor Cell
4. Sample and Exhaust tubing
5. End of Line Filters

Order the following parts for a Pyrolyzer System:

1. XT Satellite (see section 1 and 2)
2. XT Extractive Module
3. XT Pyrolyzer Module
4. Sensor Cell
5. Sample and Exhaust tubing
6. End of Line Filters

Note: See accessories section for sample tubing, exhaust tubing and end of line filters.



Satellite XT Expansion Modules	Part Number
Extractive module for use with electrochemical sensors	20404-0200
Extractive module for use with LEL sensors	20404-0250
Pyrolyzer module for nitrogen trifluoride (NF ₃)	20408-0110
Pyrolyzer module for 1,2-dichloroethene (DCE) (C ₂ H ₂ Cl ₂)	20408-0112
Pyrolyzer module for sulfur hexafluoride (SF ₆)	20408-0114
Pyrolyzer module for fluoromethane (CH ₃ F)	20408-0116
Pyrolyzer module for octafluorocyclopentene (C ₅ F ₈)	20408-0120
Pyrolyzer module for hexafluorobutadiene (C ₄ F ₆)	20408-0122

Mounting Accessories - DIN Rail (Standard Satellite Mounting)	Part Number
DIN rail mounting bracket (incl in purchase of Satellite)	9602.0050.10.01
DIN rail / PEM retrofit mounting	9602.0050.10.02
DIN rail, L-shaped mounting bracket	9602.0051.10.01

Mounting Accessories - PEM Mounting	Part Number
PEM mounting bracket	9602.0050.10.00
PEM, L-shaped mounting bracket	9602.0051.10.00

Sensor Extension Assemblies - Standard Electrochemical and O ₂	Part Number
Sensor extension assembly with standard bulkhead fitting. For use with Toxins and O ₂ only.	
Satellite sensor extension assembly - 3 ft.	9602.0092.00.01
Satellite sensor extension assembly - 6 ft.	9602.0090.00.01
Satellite sensor extension assembly - 10 ft.	9602.0091.00.01

Satellite XT (continued)

Sensor Extension Assemblies - LEL Satellite ONLY

Sensor extension assembly with LEL bulkhead fitting. For use with Satellite Combustible (LEL) only.

	Part Number
2M LEL extension assembly	9602.0093.00.01
3M LEL extension assembly	9602.0094.00.01

Duct Sampling Adaptors

	Part Number
Saddle for flat surface	9902-4200
Saddle 2 in.	9902-4110
Saddle 4 in.	9902-4000
Saddle 6 in.	9902-4010
Saddle 8 in.	9902-4020
Saddle 10 in.	9902-4030
Saddle 12 in.	9902-4040
Saddle 6 in. diameter 1.25 thread 45° mount	9902-4010-45
Saddle 8 in. diameter 1.25 thread 45° mount	9902-4020-45

Tubing and External Sample Line Filters

	Part Number
End of line particulate filter, disposable	780248
End of line particulate filter for corrosive gases, disposable <i>This disposable filter provides protection against particulate build up in the sample line when monitoring for corrosive gases.</i>	1991-0147
Union fitting - use to connect disposable filter to end of line	0235-0095
End of line particulate filter for corrosive gases, reusable <i>This reusable filter housing provides protection against particulate build up in the sample line when monitoring for corrosive gases. Replaceable filter element (P/N 0235-1072) purchased separately.</i>	1830-0055
Replacement "corrosive" filter elements (pk 100) - for use in 1830-0055 filter housing	0235-1072
Freon filter for nitrogen trifluoride (NF ₃) pyrolyzing gas detector <i>Note: Not for use with C₄F₆, C₅F₈, CH₃F, CH₂F₂ pyrolyzers.</i>	1830-0027
Freon filter for nitrogen trifluoride (NF ₃) pyrolyzing gas detector (extended life) <i>Note: Not for use with C₄F₆, C₅F₈, CH₃F, CH₂F₂ pyrolyzers.</i>	1830-0080
Tubing Teflon® FEP 1/4 in. OD x 1/8 in. ID (sample inlet) (per foot)	102599
Tubing Teflon® FEP 1/4 in. OD x 1/8 in. ID (sample inlet) (100 ft. continuous length)	1991-0136
Tubing polypropylene 1/4 in. OD x 3/16 in. ID (exhaust) (per foot)	100440
Tubing polypropylene 1/4 in. OD x 3/16 in. ID (exhaust) (100 ft. continuous length)	1991-0137

Junction Box for Satellite XT

Junction box with terminals for 2 or 6 Satellites.

	Part Number
Junction box - 2 devices	9630-0423
Junction box - 6 devices	9630-0424

Sensor Accessories

	Part Number
Calibration cap for Satellite XT, all gases except LEL, O ₂ , SO ₂ , NO ₂ , NO	9602.0095.40.00
Calibration cap for Satellite XT, for LEL, O ₂ , SO ₂ , NO ₂ , NO	180085

Satellite XT (continued)

New/Replacement Cells for the Satellite	Part Number
Arsine (AsH ₃) (2E) 0.03-1.00 ppm	9602-6000
Arsine (AsH ₃) (LT) 0.03-1.00 ppm	9602-6004
Ammonia (NH ₃) 5-100 ppm	9602-6704
Ammonia (NH ₃) 15-1000 ppm	9602-6705
Bromine (Br) 0.05-5.00 ppm	9602-6800
Carbon monoxide (CO) 10-500 ppm	9602-5400
Chlorine (Cl ₂) 0.15-5.00 ppm	9602-5300
Chlorine dioxide (ClO ₂) 0.03-1.00 ppm	9602-7400
Chlorine trifluoride (ClF ₃) 0.03-1.00 ppm	9602-7410
Diborane (B ₂ H ₆) 0.05-1.00 ppm	9602-6202
1,2 trans trichloroethylene (DCE) 0-1000 ppm (for pyrolyzer only)	9602-9600
Ethylene oxide (ETO) 0-20.0 ppm	9602-8000
Fluorine (F ₂) 0.05-5.00 ppm	9602-6400
Germane (GeH ₄) 0.1-5.0 ppm	9602-6902
Hexafluorobutadiene (C ₄ F ₆) 0-50 ppm (for pyrolyzer only)	9602-9732
Hexamethyldisilazane (HMDS) 5 - 500 ppm	9602-6714
Hexamethyldisilazane (HMDS) 0.010 - 0.500 % v/v	9602-6715
Hydrazine (N ₂ H ₄) 0.02 - 1.00 ppm	9602-7600
Hydrogen (H ₂) 0.010 - 1.000 % v/v	9602-5100
Hydrogen (H ₂) 0.05 - 4.00 % v/v	9602-5101
Hydrogen bromide (HBr) 1.0 - 30.0 ppm	9602-7000
Hydrogen chloride (HCl) 1.0 - 30.0 ppm	9602-5800
Hydrogen cyanide (HCN) 1.0 - 30.0 ppm	9602-5700
Hydrogen fluoride (HF) 0.5 - 10.0 ppm	9602-6500
Hydrogen selenide (H ₂ Se) 0.05 - 5.00 ppm	9602-5601
Hydrogen sulfide (H ₂ S) 2 - 100 ppm	9602-5200
Hydrogen sulfide (H ₂ S) Organic 0.5 - 30.0 ppm	9602-5201
Nitrogen trifluoride (NF ₃) 1 - 50 ppm (for pyrolyzer only)	9602-9700
Methyl fluoride (CH ₃ F) 0 - 0.0500 % v/v (for pyrolyzer only)	9602-9720
Nitrogen oxide (NO) 5 - 250 ppm	9602-7200
Nitrogen dioxide (NO ₂) 0.5 - 25.0 ppm	9602-7300
Oxygen (O ₂) 0.0 - 25.0 % v/v	9602-5500
Octafluorocyclopentene (C ₅ F ₈) 0.5 - 20.0 ppm (low flow pyro only)	9602-9730
Ozone (O ₃) 0.05 - 1.00 ppm (recommend 4 sensors/yr)	9602-7101

Note: Honeywell Analytics recommends replacing or calibrating / bump testing Satellite sensors every 6 months to ensure proper operation.

Satellite XT (continued)

New/Replacement Cells for the Satellite (continued)

	Part Number
Phosgene (COCl ₂) 0.05 - 1.00 ppm	9602-6600
Phosphine (PH ₃) (2E) 0.05 - 1.00 ppm	9602-6100
Phosphine (PH ₃) (LT) 0.05 - 1.00 ppm	9602-6102
Silane (SiH ₄) 1.0 - 50.0 ppm	9602-6301
Sulfur dioxide (SO ₂) 0.5 - 25.0 ppm	9602-5900
Sulfur hexafluoride (SF ₆) 0 - 0.500 % v/v (for pyrolyzer only)	9602-9710
Tetraethyl orthosilicate (TEOS) 5 - 100 ppm	9602-7500
Trimethylborate (TMB) 5 - 500 ppm	9602-7510
Trimethylphosphite (TMP) 1.0 - 20.0 ppm	9602-7800
Lower Explosive Limit (LEL) 0 - 100% LEL	9602-9900

Note: Honeywell Analytics recommends replacing or calibrating / bump testing Satellite sensors every 6 months to ensure proper operation.

Network Accessories

Microprocessor controlled modules. Operates on all Digital Satellite Systems (LonWorks®).	Part Number
Router FTT-10 / FTT-10	9675-0440
Terminator FTT-10	9630-0441
MST iDisplay surface mount	20650-0100

Intelligent I/O Modules

Microprocessor controlled modules. Operates on all Digital Satellite Systems (LonWorks®).	Part Number
Addressable relay output module – ROC	9660-0110
Supervisory bus module - provides self healing ring topology and hardware supervision. – SBS	9660-0120
8 channel discrete input module (2 groups of 4) – DIC	9660-0220
4 channel analog input module (2 groups of 2) – AIM	9660-0330

Power Supplies

LonWorks® linked power supply with repeater will power up to 30 Satellites. 24 V_{DC} power supplies for FTT Satellites, I/O Modules and alarm devices.

	Part Number
Power supply, 24 V _{DC} 120W for FTT Satellites, I/O modules, alarm devices, 5 Amps (104041)	9630-0414
Power supply, 24 V _{DC} 240W for FTT Satellites, I/O modules, alarm devices, 10 Amps (104042)	9630-0415
2A 24 V _{DC} power supply in vented NEMA 4 enclosure	MVIP3632-2A
5A 24 V _{DC} power supply in vented NEMA 4 enclosure	MVIP3632-5A
10A 24 V _{DC} power supply in vented NEMA 4 enclosure	MVIP3632-10A

Midas®

Extractive Gas Detector



AsH_3 , B_2H_6 , BCl_3 , BF_3 , Br_2 , C_4F_6 , C_5F_8 , CH_2F_2 , CH_3F , CH_4 , Cl_2 , ClO_2 , CO , CO_2 , ETO , F_2 , GeH_4 , H_2 , H_2Cl_2Si , H_2S , HBr , HCl , HCN , HF , NF_3 , NH_3 , NO , NO_2 , O_2 , O_3 , PH_3 , SF_6 , Si_2H_6 , SiH_4 , SO_2 , $TEOS$, WF_6



Extractive Midas® transmitters (universal) operate with sensor cartridges, for use as a local gas detector. Sensor Cartridges must be ordered separately. Units are powered by 24 Vdc or via Power over Ethernet (PoE). Transmitters provides 0-22 mA analog and Modbus/TCP Ethernet as standard outputs. Integral relays for A1, A2 and fault are included, and may be configured normally open or normally closed, latching or non-latching. Transmitters include (1) PG16 gland fitting for power in and relays out, 1/4 in. O.D.x 1/8 in. I.D. Sample Inlet tubing (10 ft. / 3 m), 1/4 in. O.D x 3/16 in. I.D. Exhaust tubing (10 ft. / 3 m), and a sample line tubing duct adapter (1283K1090).

Order the following parts for a complete Midas System

1. Midas or Midas Transmitter and Cartridge Kit (see section 2)
2. Sensor Cartridge (if combo kit not purchased)
3. Sample and Exhaust tubing
4. End of Line Filters

Extractive Transmitter for Universal Gas Detection

Order Number

Midas® extractive transmitter

MIDAS-T-001



Pyrolyzer Module for NF_3 Gas Detection (order separate transmitter unit)

Pyrolyzer Midas® transmitters provide detection of NF_3 specifically. Unit includes a snap on pyrolyzer module that operates with any Universal Midas® Extractive Transmitter (order separately) and (1) Freon in line filter. Units are powered via direct connection to transmitter unit.

Order Number

Midas® pyrolyzer module

MIDAS-T-00P

Note: Order the NF_3 cartridge (MIDAS-S-HFX) and ventilated top cover (MIDAS-A-039) separately.

High Temperature Pyrolyzer Module for Perfluoro Compounds (PFC) Gas Detection

Higher Temperature Pyrolyzer Midas® transmitters provide detection of C_4F_6 , C_5F_8 and other gases. Unit includes a snap on pyrolyzer module that operates with any Universal Midas® Extractive Transmitter (order separately). Units are powered via direct connection to transmitter unit. Pyrolyzer includes installation screws.

Order Number

Midas® high temperature pyrolyzer module

MIDAS-T-HTP

Note: Order transmitter unit, PFC cartridge (MIDAS-S-CFX) and ventilated top cover (MIDAS-A-039) separately.

LonWorks® Module for Midas® Transmitter Connection

Optional LonWorks® interface module that mounts to and connects with any single, universal Midas® extractive transmitter with or without Pyrolyzer (order these separately) to provide bi-directional LonWorks® connectivity; remote reset and remote control of the onboard relays. Unit is 24 Vdc powered and provides power and communications directly to the attached Midas® transmitter using special Ethernet cross over cable (supplied). Includes mounting bracket to the Midas® transmitter; rear panel installation screws are not supplied.

Order Number

Midas® LonWorks® interface module

MIDAS-T-LON

Quad LonWorks® Module for External Transmitter Connection

Optional Modbus/TCP to LonWorks® converter gateway that can connect up to 4 Midas® transmitters (with or without Pyrolyzers) to a LonWorks® network. Requires separate 24 Vdc power supply and Ethernet connector cables. Suitable for DIN rail mounting. Consult Honeywell Analytics for full technical details. Access to LonMaker programming is required (not included).

Order Number

Midas® quad LonWorks® module

MIDAS-A-035

Midas® Transmitter and Cartridge Combined Kits

A complete kit including one universal Midas® transmitter unit (MIDAS-T-001) and one Midas® sensor cartridge can be ordered as a combined package. Each cartridge is supplied with an extended 2 year warranty. This is the recommended kit for a new installation of a complete gas detection circuit. Cartridge and Transmitter are packaged separately for ease of installation. The detectable range is listed (outside of deadband). With the exception of O₂ (where ambient concentration is typically 20.9%), the sensors will display zero when no gas is present.

Note: Kit includes Midas transmitter and sensor cartridge. Order sample/exhaust tubing, end of line filters, pyrolyzers and other accessories separately. Midas kits MUST ship complete. If transmitter required before sensor cartridge please purchase separately.

		Part Number
Ammonia (NH ₃)	9-100 ppm	MIDAS-K-NH3
Arsine (AsH ₃)	18-200 ppb	MIDAS-K-ASH
Germane (GeH ₄)	70-800 ppb	
Boron trichloride (BCl ₃)	0.72-8 ppm	MIDAS-K-HCL
Dichlorosilane (H ₂ Cl ₂ Si)		
Hydrogen bromide (HBr)		
Hydrogen chloride (HCl)		
Boron trifluoride (BF ₃)	0.72-8 ppm	MIDAS-K-HFX
Hydrogen fluoride (HF)	1.05-12 ppm	
Nitrogen trifluoride (NF ₃) ** For use with MIDAS-T-00P ONLY	3.6-40 ppm	
Tungsten hexafluoride (WF ₆)	1.05-12 ppm	
Boron trifluoride (BF ₃), low level	0.18-2 ppm	MIDAS-K-HFL*
Hydrogen fluoride (HF), low level (LDL = 0.22 ppm)	0.18-2 ppm	
Tungsten hexafluoride (WF ₆), low level	0.18-2 ppm	
Bromine (Br ₂)	0.036-0.4 ppm	MIDAS-K-BR2
Chlorine dioxide (ClO ₂)		
Difluoromethane (CH ₂ F ₂) **must order MIDAS-T-HTP Pyro	16-240 ppm	MIDAS-K-CFX
Hexafluorobutadiene (C ₄ F ₆) **must order MIDAS-T-HTP Pyro	3-40 ppm	
Methyl fluoride (CH ₃ F) **must order MIDAS-T-HTP Pyro	8-120 ppm	
Octofluorocyclopentene (C ₅ F ₈) **must order MIDAS-T-HTP Pyro	3-40 ppm	
Sulfur hexafluoride (SF ₆) **must order MIDAS-T-HTP Pyro	700-8000 ppm	
Carbon dioxide (CO ₂)	0.15-2.0%	MIDAS-K-CO2
Carbon monoxide (CO)	9-100 ppm	MIDAS-K-COX
Chlorine (Cl ₂)	0.18-2 ppm	MIDAS-K-HAL
Fluorine (F ₂)	0.36-4 ppm	
Diborane (B ₂ H ₆)	36-400 ppb	MIDAS-K-B2H
Hydrogen (H ₂)	90-1000 ppm	MIDAS-K-H2X
Hydrogen cyanide (HCN)	1.8-20 ppm	MIDAS-K-HCN
Hydrogen sulfide (H ₂ S)	3.6-40 ppm	MIDAS-K-H2S
Hydrogen (H ₂)	6.5-100% LEL	MIDAS-K-LEL
Methane (CH ₄)		

**May require export license from the US Department of Commerce.*

Note: To detect NF₃, a separate pyrolyzer module (MIDAS-T-00P) must also be ordered.

Midas® (continued)

Midas® Transmitter and Cartridge Combined Kits (continued)		Part Number
Nitric oxide (NO)	9-100 ppm	MIDAS-K-NOX
Nitrogen dioxide (NO ₂)	1.05-12 ppm	MIDAS-K-NO2
Oxygen (O ₂)	0.2-25% v/v	MIDAS-K-O2X
Ozone (O ₃)	0.036-0.4 ppm	MIDAS-K-O3X
Phosphine (PH ₃)	110-1200 ppb	MIDAS-K-PH3
Silane (SiH ₄) (low level)	0.18-2 ppm	MIDAS-K-SHL
Silane (SiH ₄)	1.8-20 ppm	MIDAS-K-SHX
Disilane (Si ₂ H ₆)		
Sulfur dioxide (SO ₂)	0.7-8 ppm	MIDAS-K-SO2

Note: To detect NF₃, a separate pyrolyzer module (MIDAS-T-00P) must also be ordered.

Mounting Accessories	Order Number
Midas "L" bracket for vertical mounting	MIDAS-A-032
Midas DIN rail mounting kit	MIDAS-A-036
Flexible conduit 21 in. length	0235-0128
Flexible conduit 27 in. length	0235-0163
2A 24 V _{DC} power supply in vented NEMA 4 enclosure	MVIP3632-2A
5A 24 V _{DC} power supply in vented NEMA 4 enclosure	MVIP3632-5A
10A 24 V _{DC} power supply in vented NEMA 4 enclosure	MVIP3632-10A

Duct Sampling Adaptors	Order Number
Duct adapter for 1/4 in. O.D. tubing for 4-16 in. round ducts	1283K1090
Union fitting 1/4 in. tube, polypropylene	0235-0095

Tubing and External Sample Line Filters	Order Number
End of line particulate filter, disposable	780248
End of line particulate filter for corrosive gases, this disposable filter provides protection against particulate build up in the sample line when monitoring for corrosive gases.	1991-0147
Union fitting - use to connect disposable filter to end of line	0235-0095
End of line particulate filter for corrosive gases, this reusable filter housing provides protection against particulate build up in the sample line when monitoring for corrosive gases. Replaceable filter element (P/N 0235-1072) purchased separately.	1830-0055
Replacement "corrosive" filter elements (pk 100), for use in 1830-0055 filter housing	0235-1072
Freon filter for NF ₃ pyrolyzing gas detector	1830-0027
Freon filter for NF ₃ pyrolyzing gas detector (extended life)	1830-0080
<i>Note: Not for use with C₄F₆, C₅F₈, CH₃F, CH₂F₂ pyrolyzers.</i>	
Tubing Teflon® FEP 1/4 in. OD x 1/8 in. ID (sample inlet) (per ft.)	102599
Tubing Teflon® FEP 1/4 in. OD x 1/8 in. ID (sample Inlet) (100 ft. continuous length)	1991-0136
Tubing polypropylene 1/4 in. OD x 3/16 in. ID (exhaust) (per ft.)	100440
Tubing polypropylene 1/4 in. OD x 3/16 in. ID (exhaust) (100 ft. continuous length)	1991-0137

Midas® Sensor Cartridges

Several Midas® cartridges can be configured to read a number of different gases based on a common chemical family. Actual details for the sensor detection range are included in the sensor cartridge data sheet and the Midas® technical manual. Midas® sensor cartridges can be ordered as part of a Kit with the universal Midas® transmitter, or as a replacement part. The detectable range is listed. With the exception of O₂ (where ambient concentration is typically 20.9%), the sensors will display zero when no gas is present. All Cartridges with the format MIDAS-E-XXX are supplied with a 2 year (24 month) warranty.



		Part Number
Ammonia (NH ₃)	9-100 ppm	MIDAS-E-NH3
Arsine (AsH ₃)	18-200 ppb	MIDAS-E-ASH
Germane (GeH ₄)	70-800 ppb	
Boron trichloride (BCl ₃)	0.72-8 ppm	MIDAS-E-HCL
Dichlorosilane (H ₂ Cl ₂ Si)		
Hydrogen bromide (HBr)		
Hydrogen chloride (HCl)		
Boron trifluoride (BF ₃)	0.72-8 ppm	MIDAS-E-HFX
Hydrogen fluoride (HF)	1.05-12 ppm	
Nitrogen trifluoride (NF ₃) ** For use with MIDAS-T-00P ONLY	3.6-40 ppm	
Tungsten hexafluoride (WF ₆)	1.05-12 ppm	
Boron trifluoride (BF ₃), low level	0.18-2 ppm	MIDAS-E-HFL *
Hydrogen fluoride (HF), low level (LDL = 0.22 ppm)	0.18-2 ppm	
Tungsten hexafluoride (WF ₆), low level	0.18-2 ppm	
Bromine (Br ₂)	0.036-0.4 ppm	MIDAS-E-BR2
Chlorine dioxide (ClO ₂)"		
Difluoromethane (CH ₂ F ₂)	16-240 ppm	MIDAS-E-CFX
Hexafluorobutadiene (C ₄ F ₆)	3-40 ppm	
Methyl fluoride (CH ₃ F)	8-120 ppm	
Octofluorocyclopentene (C ₅ F ₈)	3-40 ppm	
Sulfur hexafluoride (SF ₆)	700-8000 ppm	
Carbon dioxide (CO ₂)	0.15-2.0%	MIDAS-E-CO2
Carbon monoxide (CO)	9-100 ppm	MIDAS-E-COX
Chlorine (Cl ₂)	0.18-2 ppm	MIDAS-E-HAL
Fluorine (F ₂)	0.36-4 ppm	
Diborane (B ₂ H ₆)	36-400 ppb	MIDAS-E-B2H
Hydrogen (H ₂)	90-1000 ppm	MIDAS-E-H2X
Hydrogen cyanide (HCN)	1.8-20 ppm	MIDAS-E-HCN
Hydrogen sulfide (H ₂ S)	3.6-40 ppm	MIDAS-E-H2S
Hydrogen (H ₂)	6.5-100% LEL	MIDAS-E-LEL**
Methane (CH ₄)		

*May require export license from the US Department of Commerce.

**Note: MIDAS-E-LEL Cartridge carries a 2-year warranty but can be calibrated up to 5 years.

Midas® (continued)

Midas® Sensor Cartridges (continued)		Part Number
Nitric oxide (NO)	9-100 ppm	MIDAS-E-NOX
Nitrogen dioxide (NO ₂)	1.05-12 ppm	MIDAS-E-NO2
Oxygen (O ₂)	0.2-25% v/v	MIDAS-E-O2X
Ozone (O ₃)	0.036-0.4 ppm	MIDAS-E-O3X
Ozone (O ₃) (high level)	0.065-0.7 ppm	MIDAS-E-O3H
Phosphine (PH ₃)	110-1200 ppb	MIDAS-E-PH3
Silane (SiH ₄) (low level)	0.18-2 ppm	MIDAS-E-SHL
Silane (SiH ₄)	1.8-20 ppm	MIDAS-E-SHX
Disilane (Si ₂ H ₆)		
Sulfur dioxide (SO ₂)	0.7-8 ppm	MIDAS-E-SO2



SPM

Single Point Monitor

CCl₂O, Cl₂, ClO₂, H₂S, HCl, HCN, HF, NH₃, NO₂, O₃, PH₃, SO₂, Others (see tables)



Cut down interference from environmental conditions and other chemicals with the SPM's interference-free Chemcassette® detection technique. With heating and cooling options to suit various environmental conditions, the SPM can be used outside.

All versions of the Model SPM include calibration for one gas, dual-level alarms, LED Display, 4-20 mA isolated output and 10 amp relay contacts. Comes with accessory kit which includes 10 ft. of sample and exhaust tubing.

To order a complete system:

1. Select Base Unit (Section 1)
2. Select Base Unit Options (Section 2)
3. Select Dedicated unit or ChemKey calibration (Section 3)
4. Select Accessories and Installation Items (Section 4)
5. Additional Chemcassette® tape(s) per calibration (Chemcassette® Section)

Advantages

- Fast response monitor specific to target gas only
- Gas sensitivity to ppb levels with physical evidence
- Minimum maintenance and no dynamic calibration
- Customized for harsh industrial environments
- More than 50 gas calibrations available

Options

- Z-purge system
- Duty cycle
- ChemKey™
- RS422
- Remote reset
- Portable
- Extended sample
- Heater option (operate from -20°C to +40°C)

SPM Single Point Monitor (continued)

SPM Base Units	Order Number
SPM line-powered unit - Unit housed in a NEMA 4X enclosure with wall mounting kit. For 100-240 V _{AC} , 50/60 Hz operation.	870700
SPM Z-purged unit - unit suitable for Class I, Div. 2 operation, 100-240 V _{AC} , 50/60 Hz. Includes remote reset. <i>Note: For line powered and Z-Purge units that require other than 110 V_{AC} North America/100 V_{AC} Japan line cords, select the appropriate Line Cord from the Accessory section and add to the order at no charge.</i>	870850
Portable unit with NEMA 4X enclosure, 110 V _{AC} line charger, sealed batteries, handle and carrying strap <i>Note: For portable units that require other than 110 V_{AC} North America line charges, select the appropriate line charger from the accessory section and add to the order at no charge.</i>	870900

Options	Order Number
To order the following options, add the part numbers to above base unit.	
ChemKey capability. ChemKeys ordered separately.	870840
Extended sampling option (incl. 100 ft. of FEP Teflon tubing). <i>Note: This option not compatible with all gas types. Consult the SPM operating instructions or Honeywell Analytics technical sales to ensure compatibility.</i>	870933
Remote reset	870822
Digital RS422 output (battery and line powered)	870931
Digital RS422 output (z-purge only)	870995
Duty cycle option	870985
Handle (for non-portable units)	870965
Battery operated standalone RS232 printer and software	MVIP1163
SPM Vortex cooler option*	MVIP3331
110 V _{AC} thermostatically controlled heater (operation to -20C)*	MVIP778-001
220 V _{AC} thermostatically controlled heater (operation to -20C)*	MVIP1351
Sample line dryer. Requires purge air 1.5 LPM 120 PSIG max.*	MVIP2312
Sample humidifier*	Consult HA

Note: Some options are not compatible with others. Please contact Honeywell Analytics before ordering.

**Application specific - Contact Honeywell Analytics to confirm suitability for intended application.*

SPM Single Point Monitor (continued)

ChemKey Unit Calibration

The SPM Chemkey unit calibration allows the user the change monitored gases in the field simply by inserting the desired Chemkey and the appropriate Chemcassette. In order to use this feature the SPM must be ordered with the ChemKey Capability (PN-870840). The specific Chemcassette required for each calibration is listed in the table below:

*1 Uses aliphatic amines / ammonia (NH ₃) Chemcassette tape 700342 (EP) or 706042 (SP)	*12 Uses diisocyanates Chemcassette tape 700309 (EP) or 700506 (SP)
*2 Uses XP ammonia (NH ₃) Chemcassette tape 1740-9309	*13 Uses hydrazines (N ₂ H ₄) Chemcassette tape 700347 (EP) or 708013 (SP)
*3 Uses aromatic amines / PPD Chemcassette tape 700343 (EP) or 709528 (SP)	*14 Uses hydrides Chemcassette tape 700300 (EP) or 705502 (SP)
*4 Uses ammonia (NH ₃) Chemcassette tape 706002 (SP)	*15 Uses XPS hydrides Chemcassette tape 1740-9300
*5 Uses chlorine (Cl ₂) / oxidizers Chemcassette tape 704007 (SP)	*16 Uses hydrogen sulfide (H ₂ S) Chemcassette tape 700304 (EP) or 701012 (SP)
*6 Uses chlorine (Cl ₂) / chlorine dioxide (ClO ₂) Chemcassette tape 700302 (EP) or 704006 (SP)	*17 Uses hydrogen cyanide (HCN) Chemcassette tape 704510 (SP)
*7 Uses XP chlorine (Cl ₂) Chemcassette tape 1740-9308	*18 Uses hydrogen peroxide (H ₂ O ₂) Chemcassette tape 700509 (EP) or 700278 (SP)
*8 Uses bromine (Br ₂) Chemcassette tape 700313 (EP) or 711314 (SP)	*19 Uses phosgene (COCl ₂) Chemcassette tape 700307 (EP) or 702020 (SP)
*9 Uses fluorine (F) / oxidizers Chemcassette tape 1740-9306 (EP) or 1750-9306 (SP)	*20 Uses XPS phosgene (COCl ₂) Chemcassette tape 1740-9307
*10 Uses nitrogen dioxide (NO ₂) Chemcassette tape 700305 (EP) or 703012 (SP)	*21 Uses mineral acids Chemcassette tape 700337 (EP) or 705505 (SP)
*11 Uses ozone (O ₃) Chemcassette tape 704514 (SP)	*22 Uses XPS mineral acids Chemcassette tape 1740-9310
	*23 Uses sulfur dioxide (SO ₂) Chemcassette tape 705015 (SP)

Standard Gas Type Calibrations and Dual Alarm Settings

All calibrations include one Chemkey and one Chemcassete as specified in the Notes section (*).

Quantity Discounts for Additional ChemKey Calibrations

1 to 5
6 to 11
12 or more

Amines/Ammonia ChemKey	Order Number	Notes
Ammonia (NH ₃) with 12.5 / 25 ppm alarms	870861	*1
Ammonia (NH ₃) with 25.0 / 50.0 ppm alarms	930010-1	*1
n-butylamine (N-BA) with 5.0 / 10.0 ppm alarms	870949	*1
Dimethyl amine (DMA) with 2.5 / 5.0 ppm alarms	930018-3	*1
Dimethyl amine (DMA) with 2.5 / 5.0 ppm alarm	1971-0165	*1
Dimethyl amine (DMA) low level, 1.0 / 3.0 ppm alarms	930018-1	*1
Trimethyl amine (TMA) with 2.5 / 5.0 ppm alarms	930024-1	*1
Tetrakis(dimethylamido)titanium (TDMAT) with 0.6 / 1.2 ppm alarms	1971-0139	*1
Methylene dianiline (MDA) with 10 / 20 ppb alarms	930011-1	*3
p-phenylenediamine (PPD) with 10 / 20 ppb alarms	870935	*3
Toluene diamine (TDA) with 10 / 20 ppb alarms	930001-2	*3
Trimethyl amine (TMA) with 10 / 20 ppm alarms	870843	*4

SPM Single Point Monitor (continued)

Ammonia Extended Play ChemKey	Order Number	Notes
Ammonia (NH ₃) with 12.5 / 25 ppm alarms XP	1971-0204	*2
Dimethyl amine (DMA) with 2.5 / 5 ppm alarms	1971-0256	*2
TDMAT with 0.5 / 1.0 ppm alarms	1971-0254	*2

Note: Older units must have software upgraded to use these calibrations.

Chlorine/Oxidizers ChemKey	Order Number	Notes
Bromine (Br ₂) with 50 / 100 ppb alarms	870920	*8
Chlorine II (Cl ₂) with 0.25 / 0.50 ppm alarms	870918	*5
Chlorine II (Cl ₂) with 0.5 / 1.0 ppm alarms	930012-7	*5
Chlorine (Cl ₂) with 0.2 / 0.5 ppm alarm	930012-4	*6
Chlorine dioxide (ClO ₂) with 50 / 100 ppb alarms	870958	*6
Chlorine dioxide (ClO ₂) with 50 / 100 ppb alarms	1971-0199	*9
Chlorine dioxide (ClO ₂) with 100 / 200 ppb alarms	930025-2	*6
Fluorine (F ₂) with 0.5 / 1.0 ppm alarms (SW version >1.20)	1971-0144	*9
Fluorine (F ₂) low level with 0.1 / 0.2 ppm alarms (SW version >1.20)	1971-0145	*9
Nitrogen dioxide (NO ₂) with 0.5 / 1.0 ppm alarms	870981	*10
Nitrogen dioxide (NO ₂) with 1.5 / 3.0 ppm alarms	870893	*10
Nitrogen dioxide (NO ₂) with 2.5 / 5.0 ppm alarms	930004-1	*10
Nitrogen dioxide (NO ₂) with 1.5 / 3.0 ppm alarms	1971-0176	*9
Ozone (O ₃) with 50 / 100 ppb alarms	870895	*11

Chlorine Extended Play ChemKey	Order Number	Notes
Chlorine (Cl ₂) low level with 10 / 20 ppb alarms XP	1971-0193	*7
Chlorine (Cl ₂) Extended Play, 0.25 / 0.50 ppm alarms	1971-0173	*7

Note: Older units must have software upgraded to use these calibrations.

Diisocyanates ChemKey	Order Number	Notes
CHDI with 5 / 20 ppb alarms	870947	*12
HDI with 5 / 20 ppb alarms	870863	*12
HMDI with 5 / 20 ppb alarms	870945	*12
IPDI with 5 / 20 ppb alarms	870943	*12
MDI with 5 / 20 ppb alarms	870904	*12
MDI-II with 5 / 20 ppb alarms (for particles > 1 micron)	870842	*12
NDI with 5 / 20 ppb alarms	870941	*12
PPDI with 5 / 20 ppb alarms	870865	*12
TDI with 5 / 20 ppb alarms	870914	*12
TMDI with 5 / 20 ppb alarms	870971	*12
TMXDI with 5 / 20 ppb alarms	870962	*12
XDI with 5 / 20 ppb alarms	870969	*12

SPM Single Point Monitor (continued)

Hydrazines ChemKey	Order Number	Notes
Monomethylhydrazine (MMH) with 100 / 200 ppb alarms	870873	*13
Monomethylhydrazine (MMH) LL with 5 / 10 ppb alarms	1971-0034	*13
Hydrazine (N ₂ H ₄) with 50 / 100 ppb alarms	870875	*13
Hydrazine (N ₂ H ₄) LL with 5 / 10 ppb alarms	1971-0073	*13
Unsymmetrical dimethylhydrazine (UDMH) with 247 / 500 ppb alarms	870877	*13
Unsymmetrical dimethylhydrazine (UDMH) with 5 / 10 ppb alarms	870858	*13

Hydrides ChemKey	Order Number	Notes
Arsine (AsH ₃) with 25 / 50 ppb alarms	870916	*14
Diborane (B ₂ H ₆) with 50 / 100 ppb alarms	870867	*14
Disilane (Si ₂ H ₆) with 2.5 / 5.0 ppm alarms	870869	*14
Hydrogen selenide (H ₂ Se) with 25 / 50 ppb alarms	870887	*14
Phosphine (PH ₃) with 150 / 300 ppb alarms	870899	*14
Silane (SiH ₄) with 2.5 / 5.0 ppm alarms	870902	*14
Stibine (SbH ₃) with 50 / 100 ppb alarms	870906	*14
Tertiary butyl arsine (TBA) with 25 / 50 ppb alarms	870844	*14
Tertiary butyl phosphine (TBP), 150 / 300 ppb alarms	870979	*14
Hydrogen sulfide (H ₂ S) with 5 / 10 ppm alarms	870889	*16
Hydrogen sulfide (H ₂ S) LL with 15 / 30 ppb alarms	870990	*16

Hydrides Extended Play ChemKey	Order Number	Notes
Arsine (AsH ₃) with 25 / 50 ppb alarms XP	1971-0107	*15
Arsine (AsH ₃) LL with 2 / 4 ppb alarms XP	1971-0123	*15
Diborane (B ₂ H ₆) with 50 / 100 ppb alarms XP	1971-0110	*15
Phosphine (PH ₃) with 150 / 300 ppb alarms XP	1971-0108	*15
Silane (SiH ₄) with 2.5 / 5.0 ppm alarms XP	1971-0109	*15
Tertiary butyl arsine (TBA) with 25 / 50 ppb alarms XP	1971-0183	*15
Tertiary butyl phosphine (TBP) with 150 / 300 ppb alarms XP	1971-0184	*15
Germane (GeH ₄) with 200 / 400 ppb alarms XP	1971-0156	*15
Hydrogen sulfide (H ₂ S) LL with 4 / 80 ppb alarms XP	1971-0157	*15
Hydrogen sulfide (H ₂ S) with 5 / 10 ppm alarms XP	1971-0158	*15
Hydrogen sulfide (H ₂ S) with 5 / 10 ppm alarms XP Dry	1971-0159	*15
Hydrogen selenide (H ₂ Se) with 25 / 50 ppb alarms XP	1971-0168	*15

Note: Unit must be upgraded to use these calibrations.

Hydrogen Cyanide ChemKey	Order Number	Notes
Hydrogen cyanide (HCN) with 2.3 / 4.7 ppm alarms	870881	*17

Hydrogen Peroxide ChemKey	Order Number	Notes
Hydrogen peroxide (H ₂ O ₂) with 0.5 / 1.0 ppm alarms	870885	*18

SPM Single Point Monitor (continued)

Mineral Acids ChemKey	Order Number	Notes
Hydrogen chloride (HCl) with 2.5 / 5.0 ppm alarms	870883	*21
Hydrogen chloride (HCl) low level, 120 / 240 ppb alarms	930009-2	*21
Boron trifluoride (BF ₃) low level, 500 / 750 ppb alarms	1971-0162	*21
Hydrogen bromide (HBr) with 1.5 / 3.0 ppm alarms	870879	*21
Hydrogen fluoride (HF) with 1.5 / 3.0 ppm alarms	870910	*21
Nitric acid (HNO ₃) with 1.0 / 2.0 ppm alarms	870891	*21
Sulfuric acid (H ₂ SO ₄) with 125 / 250 ppb alarms	870912	*21

Mineral Acids Extended Play ChemKey	Order Number	Notes
Boron trifluoride (BF ₃) with 0.5 / 1.0 ppm alarms XP	1971-0233	*22
Hydrogen bromide (HBr) LL with 250 / 500 ppb alarms XP	1971-0237	*22
Hydrogen bromide (HBr) with 1.0 / 2.0 ppm alarms XP	1971-0230	*22
Hydrogen chloride (HCl) LL with 100 / 200 ppb alarms XP	1971-0239	*22
Hydrogen chloride (HCl) with 1.0 / 2.0 ppm alarms XP	1971-0226	*22
Hydrogen fluoride (HF) LL with 250 / 500 ppb alarms XP (export restrictions)	1971-0241	*22
Hydrogen fluoride (HF) with 1.0 / 2.0 ppm alarms XP	1971-0222	*22

Note: Older units must have software upgraded to use these calibrations.

Phosgene ChemKey	Order Number	Notes
Phosgene (COCl ₂) with 200 / 400 ppb alarms	930014-4	*19
Phosgene (COCl ₂) with 50 / 100 ppb alarms	930014-7	*19
Phosgene (COCl ₂) with 50 / 100 ppb alarms	870897	*19

Phosgene Extended Play ChemKey	Order Number	Notes
Phosgene (COCl ₂) Extended Play, 50 / 100 ppb alarms	1971-0118	*20

Note: Older units must have software upgraded to use these calibrations.

Sulfur Dioxide ChemKey	Order Number	Notes
Sulfur dioxide (SO ₂) with 1.0 / 2.0 ppm alarms	870908	*23
Sulfur dioxide (SO ₂) LL with 125 / 250 ppb alarms	1971-0262	*24

SPM Single Point Monitor (continued)

Dedicated Unit Calibration

SPM units with dedicated unit calibration are configured at the factory to monitor for a specific gas type and alarm level combination. The SPM must be returned to a factory service center should the user need to change gas types or alarm levels. The specific Chemcassette required for each calibration is listed in the table below:

*1 Uses aliphatic amines / ammonia (NH ₃) Chemcassette tape 700342 (EP) or 706042 (SP)	*13 Uses hydrazines (N ₂ H ₄) Chemcassette tape 700347(ep) or 708013 (SP)
*2 Uses XP ammonia (NH ₃) Chemcassette tape 1740-9309	*14 Uses hydrides Chemcassette tape 700300 (EP) or 705502 (SP)
*3 Uses aromatic amines / PPD Chemcassette tape 700343 (EP) or 709528 (SP)	*15 Uses XPS hydrides Chemcassette tape 1740-9300
*4 Uses ammonia (NH ₃) Chemcassette tape 706002 (SP)	*16 Uses hydrogen sulfide (H ₂ S) Chemcassette tape 700304 (EP) or 701012 (SP)
*5 Uses chlorine (Cl ₂) / oxidizers Chemcassette tape 704007 (SP)	*17 Uses hydrogen cyanide (HCN) Chemcassette tape 704510 (SP)
*6 Uses chlorine (Cl ₂) / chlorine dioxide (ClO ₂) Chemcassette tape 700302 (EP) or 704006 (SP)	*18 Uses hydrogen peroxide (H ₂ O ₂) Chemcassette tape 700509 (EP) or 700278 (SP)
*7 Uses XP chlorine (Cl ₂) Chemcassette tape 1740-9308	*19 Uses phosgene (COCl ₂) Chemcassette tape 700307 (EP) or 702020 (SP)
*8 Uses bromine (Br ₂) Chemcassette tape 700313 (EP) or 711314 (SP)	*20 Uses XPS phosgene (COCl ₂) Chemcassette tape 1740-9307
*9 Uses fluorine (F) / oxidizers Chemcassette tape 1740-9306 (EP) or 1750-9306 (SP)	*21 Uses mineral acids Chemcassette tape 700337 (EP) or 705505 (SP)
*10 Uses nitrogen dioxide (NO ₂) Chemcassette tape 700305 (EP) or 703012 (SP)	*22 Uses XPS mineral acids Chemcassette tape 1740-9310
*11 Uses ozone (O ₃) Chemcassette tape 704514 (SP)	*23 Uses sulfur dioxide (SO ₂) Chemcassette tape 705015 (SP)
*12 Uses diisocyanates Chemcassette tape 700309 (EP) or 700506 (SP)	*24 Uses sulfur dioxide (SO ₂) LL Chemcassette tape 700350 (EP) or 705027 (SP)

Standard Gas Type Calibrations and Dual Alarm Settings

All calibrations include one Chemcassette as specified in the Notes section (*).

Amines/Ammonia Dedicated Calibration	Order Number	Notes
Ammonia (NH ₃) with 12.5 / 25 ppm alarms	870860	*1
Ammonia (NH ₃) with 25.0 / 50.0 ppm alarms	930010-3	*1
Trimethyl amine (TMA) with 2.5 / 5.0 ppm alarms	930024-2	*1
Tetrakis (dimethylamino) titanium (TDMAT) with 0.6 / 1.2 ppb alarms	1971-0138	*1
Dimethyl amine (DMA) with 2.5 / 5.0 ppm alarms	1971-0166	*1
Dimethyl amine (DMA) with 2.5 / 5.0 ppm alarms	930018-4	*1
n-butylamine (N-BA) with 2.5 / 5.0 ppm alarms	870948	*1
Dimethyl amine (DMA) low level, 1.0 / 3.0 ppm alarms	930018-2	*1
Methylene dianiline (MDA) with 10 / 20 ppb alarms	930011-2	*3
p-phenylenediamine (PPD) with 10 / 20 ppb alarms	870934	*3
Toluene diamine (TDA) with 10 / 20 ppb alarms	930001-1	*3
Trimethyl amine (TMA) with 4.9 / 10 ppm alarms	870839	*4

Ammonia Extended Play Dedicated Calibration	Order Number	Notes
Ammonia (NH ₃) with 12.5 / 25 ppm alarms (XP Calibration)	1971-0203	*2
Dimethyl amine (DMA) with 2.5 / 5 ppm alarms	1971-0257	*2
TDMAT with 0.5 / 1.0 ppm alarms	1971-0255	*2

Note: Older units must have software upgraded to use these calibrations.

SPM Single Point Monitor (continued)

Chlorine/Oxidizers Dedicated Calibration	Order Number	Notes
Bromine (Br ₂) with 50 / 100 ppb alarms	870919	*8
Chlorine II (Cl ₂) with 0.25 / 0.50 ppm alarms	870917	*5
Chlorine II (Cl ₂) with 0.5 / 1.0 ppm alarms	930012-6	*5
Chlorine (Cl ₂) with 0.2 / 0.5 ppm alarms	930012-5	*6
Chlorine dioxide (ClO ₂) with 50 / 100 ppb alarms	870967	*6
Chlorine dioxide (ClO ₂) with 50 / 100 ppb alarms	1971-0198	*9
Chlorine dioxide (ClO ₂) with 100 / 200 ppb alarms	930025-1	*6
Fluorine (F ₂) with 0.5 / 1.0 ppm alarms	1971-0142	*9
Fluorine (F ₂) low level with 0.1 / 0.2 ppm alarms	1971-0143	*9
Nitrogen dioxide (NO ₂) with 0.5 / 1.0 ppm alarms	870980	*10
Nitrogen dioxide (NO ₂) with 1.5 / 3.0 ppm alarms	870892	*10
Nitrogen dioxide (NO ₂) with 2.5 / 5.0 ppm alarms	930004-2	*10
Nitrogen dioxide (NO ₂) with 1.5 / 3.0 ppm alarms	1971-0175	*9
Ozone (O ₃) with 50 / 100 ppb alarms	870894	*11

Chlorine Extended Play Dedicated Calibration	Order Number	Notes
Chlorine (Cl ₂) with 0.25 / 0.50 ppm alarms XP	1971-0172	*7
Chlorine (Cl ₂) low level with 10 / 20 ppb alarms XP	1971-0192	*7

Note: Older units must have software upgraded to use these calibrations.

Diisocyanates Dedicated Calibration	Order Number	Notes
CHDI with 5 / 20 ppb alarms	870946	*12
HDI with 5 / 20 ppb alarms	870862	*12
HMDI with 5 / 20 ppb alarms	870944	*12
IPDI with 5 / 20 ppb alarms	870942	*12
MDI with 5 / 20 ppb alarms	870903	*12
NDI with 5 / 20 ppb alarms	870940	*12
PPDI with 5 / 20 ppb alarms	870864	*12
TDI with 5 / 20 ppb alarms	870913	*12
TMDI with 5 / 20 ppb alarms	870970	*12
TMXDI with 5 / 20 ppb alarms	870961	*12
XDI with 5 / 20 ppb alarms	870968	*12
MDI-2 with 5 / 20 ppb alarm	870841	*12

Hydrazines Dedicated Calibration	Order Number	Notes
Monomethylhydrazine (MMH) with 100 / 200 ppb alarms	870872	*13
Monomethylhydrazine (MMH) LL with 5 / 10 ppb alarms	1971-0033	*13
Hydrazine (N ₂ H ₄) with 50 / 100 ppb alarms	870874	*13
Hydrazine (N ₂ H ₄) LL with 5 / 10 ppb alarms	1971-0074	*13
Unsymmetrical dimethylhydrazine (UDMH) with 247 / 500 ppb alarms	870876	*13
Unsymmetrical dimethylhydrazine (UDMH) with 5 / 10 ppb alarms	870854	*13

SPM Single Point Monitor (continued)

Hydrides Dedicated Calibration	Order Number	Notes
Arsine (AsH ₃) with 25 / 50 ppb alarms	870915	*14
Diborane (B ₂ H ₆) with 50 / 100 ppb alarms	870866	*14
Disilane (Si ₂ H ₆) with 2.5 / 5.0 ppm alarms	870868	*14
Hydrogen selenide (H ₂ Se) with 25 / 50 ppb alarms	870886	*14
Phosphine (PH ₃) with 150 / 300 ppb alarms	870898	*14
Silane (SiH ₄) with 2.5 / 5.0 ppm alarms	870901	*14
Stibine (SbH ₃) with 50 / 100 ppb alarms	870905	*14
Tertiary butyl arsine (TBA) with 25 / 50 ppb alarms	870838	*14
Tertiary butyl phosphine (TBP), 150 / 300 ppb alarms	870978	*14
Hydrogen sulfide (H ₂ S) with 5 / 10 ppm alarms	870888	*16
Hydrogen sulfide (H ₂ S) LL with 15 / 30 ppb alarms	870989	*16

Hydrides Extended Play Dedicated Calibration	Order Number	Notes
Arsine (AsH ₃) with 25 / 50 ppb alarms XP	1971-0111	*15
Arsine (AsH ₃) LL with 2 / 4 ppb alarms XP	1971-0122	*15
Diborane (B ₂ H ₆) with 50 / 100 ppb alarms XP	1971-0113	*15
Phosphine (PH ₃) with 150 / 300 ppb alarms XP	1971-0112	*15
Silane (SiH ₄) with 2.5 / 5.0 ppm alarms XP	1971-0114	*15
Tertiary butyl arsine (TBA) with 25 / 50 ppb alarms XP	1971-0182	*15
Tertiary butyl phosphine (TBP) with 150 / 300 ppb alarms XP	1971-0185	*15
Hydrogen selenide (H ₂ Se) with 25 / 50 ppb alarms XP	1971-0167	*15
Germane (GeH ₄) with 200 / 400 ppb alarms XP	1971-0189	*15
Hydrogen sulfide (H ₂ S) dry with 5.0 / 10.0 ppm alarms XP	1971-0188	*15
Hydrogen sulfide (H ₂ S) low level with 4 / 80 ppb alarms XP	1971-0190	*15
Hydrogen sulfide (H ₂ S) with 5.0 / 10.0 ppm alarms XP	1971-0191	*15

Note: Older units must have software upgraded to use these calibrations.

Hydrogen Cyanide Dedicated Calibration	Order Number	Notes
Hydrogen cyanide (HCN) with 2.3 / 4.7 ppm alarms	870880	*17

Hydrogen Peroxide Dedicated Calibration	Order Number	Notes
Hydrogen peroxide (H ₂ O ₂) with 0.5 / 1.0 ppm alarms	870884	*18

Phosgene Dedicated Calibration	Order Number	Notes
Phosgene (COCl ₂) with 50 / 100 ppb alarms	870896	*19
Phosgene (COCl ₂) with 50 / 100 ppb alarms	930014-6	*19

Phosgene Extended Play Dedicated Calibration	Order Number	Notes
Phosgene (COCl ₂) with 50 / 100 ppb alarms XP	1971-0119	*20

Note: Older units must have software upgraded to use these calibrations.

SPM Single Point Monitor (continued)

Mineral Acids Dedicated Calibration	Order Number	Notes
Hydrogen chloride (HCl) with 2.5 / 5.0 ppm alarms	870882	*21
Hydrogen chloride (HCl) low level, 120 / 240 ppb alarms	930009-3	*21
Hydrogen bromide (HBr) with 1.5 / 3.0 ppm alarms	870878	*21
Boron trifluoride (BF ₃) low level with 500 / 750 ppb alarms	1971-0163	*21
Hydrogen fluoride (HF) with 1.5 / 3.0 ppm alarms	870909	*21
Nitric acid (HNO ₃) with 1.0 / 2.0 ppm alarms	870890	*21
Sulfuric acid (H ₂ SO ₄) with 125 / 250 ppb alarms	870911	*21

Mineral Acids Extended Play Dedicated Calibration	Order Number	Notes
Hydrogen fluoride (HF) with 1.5 / 3.0 ppm alarms XP	1971-0223	*22
Hydrogen fluoride (HF) LL with 250 / 500 ppb alarms XP (export restrictions)	1971-0242	*22
Hydrogen chloride (HCl) with 1.0 / 2.0 ppm alarms XP	1971-0227	*22
Hydrogen chloride (HCl) Low Level with 100 / 200 ppb alarms XP	1971-0240	*22
Hydrogen bromide (HBr) with 1.0 / 2.0 ppm alarms XP	1971-0231	*22
Hydrogen bromide (HBr) Low Level with 250 / 500 ppb alarms XP	1971-0238	*22
Boron trifluoride (BF ₃) with 0.5 / 1.0 ppm alarms XP	1971-0236	*22

Note: Older units must have software upgraded to use these calibrations.

Sulfur Dioxide Dedicated Calibration	Order Number	Notes
Sulfur dioxide (SO ₂) with 1.0 / 2.0 ppm alarms	870907	*23
Sulfur dioxide (SO ₂) LL with 125 / 250 ppb alarms	1971-0261	*24

External Particulate Filters	Order Number
The following list contains external particulate filters that are approved for use on all Honeywell Analytics equipment. These external filters (end of line) provide protection against particulate build up in the sample line. (1) filter is required for each sample line. All end of line filters are consumable items and should be replaced at the intervals specified in the specific product manual.	
End of line particulate filter, disposable <i>For use as end of line filter for non-corrosive gases.</i>	780248
End of line particulate filter for corrosive gases, disposable <i>This disposable filter provides protection against particulate build up in the sample line when monitoring for corrosive gases.</i>	1991-0147
Union fitting <i>Used to connect disposable filter to end of line.</i>	0235-0095
End of line particulate filter for corrosive gases, reusable <i>This reusable filter housing provides protection against particulate build up in the sample line when monitoring for corrosive gases. Replaceable filter element (P/N 0235-1072) purchased separately.</i>	1830-0055
Replacement corrosive filter elements (pk 100) <i>For use in 1830-0055 filter housing.</i>	0235-1072

Note: Some gas type/filter combinations are not compatible. Consult the product manual or Honeywell Analytics technical sales to ensure compatibility

SPM Single Point Monitor (continued)

SPM Line Cords	Order Number
240 V _{AC} , 50 / 60 Hz (Australia)	870951-1
240 V _{AC} , 50 / 60 Hz (UK)	870951-2
240 V _{AC} , 50 / 60 Hz (Danish)	870951-3
240 V _{AC} , 50 / 60 Hz (Swiss)	870951-4
240 V _{AC} , 50 / 60 Hz (Europe)	870951-5

SPM Battery Chargers	Order Number
220-240 V _{AC} (Europe)	870955-1
100 V _{AC} , 50 Hz (Japan)	870955-2
220-240 V _{AC} (UK)	870955-3
220-240 V _{AC} (Swiss)	870955-4
220-240 V _{AC} (Danish)	870955-5
220-240 V _{AC} (Italian)	870955-6
220-240 V _{AC} (Australia)	870955-7
110 V _{AC} +12 V _{DC} 1.5 Amp	870836

Note: SPM battery charger assemblies include the appropriate line cord.

SPM Mounting Accessories	Order Number
Pole mounting kit	870952
Bracket, wall mounting feet, with hardware	102982-L9

SPM Miscellaneous Accessories	Order Number
Test card assembly	870801
Alarm horn 110 V _{AC}	870016
Alarm horn 220 V _{AC}	870017
Remote LED display with relays 117 / 230 V _{AC} , 50 / 60 Hz. Application specific. Contact Honeywell Analytics before ordering to obtain pricing.	Consult HA
Loop Powered, LCD Displays - specify range for the target gas at time of order	104163

Note: If the SPM is used with more than one gas range a 0-100% range (percent of scale) is suggested.

Refrigeration Equipment

Application Guide

Honeywell Analytics offers the Manning line of gas detection for industrial refrigeration applications. Our solutions provide ambient monitoring solutions for ammonia and other refrigerants using Electrochemical, Infrared, and Semiconductor technologies to monitor all of your areas of need including processing areas, coolers, freezers, vent relief stacks and engine rooms. In addition we offer both digital and analog controllers to complete the safety system or offer Modbus output to take the transmitter output directly to a PLC solution.

If your application includes:

We recommend:

- Freezers
- Coolers
- Refrigerated Docks and related areas

EC-F9-NH3-0/100-ATMOS-N1

Electrochemical sensor, ammonia (NH₃), 0-100 ppm, ATMOS, NEMA 1 enclosure
Part no. M-509332

- Processing Areas
- Washdown Areas
- Outdoors
- Rooftop Air Handlers and related areas

EC-F9-NH3-0/100-ATMOS-ST

Electrochemical sensor, ammonia (NH₃), 0-100 ppm, ATMOS, stainless steel enclosure
Part no. M-509342

- Engine Room Detection, low level

EC-F9-NH3-0/250-N1

Electrochemical sensor, ammonia (NH₃), 0-250 ppm, NEMA 1 enclosure
Part no. M-600342

- Engine Room Detection, high level

IR-F9-NH3-0/2%-N1

AirScan™ Infrared sensor, ammonia (NH₃), 0-20,000 ppm, NEMA 1 enclosure
Part no. M-512345

- Vent Line Relief Monitoring

VL-F7-NH3-N4-LPA-MK

Solid state ammonia Vent Line sensor, linear pre-amp, with mounting kit
Part no. M-510000

- Gas Detection System

Digital Gas Controller

HA71 in NEMA 4X enclosure - 16 channel
Part no. HA71N4

AirAlert-96d Gas Detection Controller - 96 channel
Part no. M-509850

- Identification of leaks, incident response

Portable Leak Finder

EC-P2 (base unit with accessories - Smart Cell not included)
Part no. 10214

Ammonia (NH₃) 0-500 ppm
Part no. 10168

Ammonia (NH₃) 0-2,000 ppm
Part no. 10169

- Occupied spaces

Notification Device

Horn/strobe 24 VD, 2 wire
Part no. M-512790



The EC-F9 is designed for use in NH₃ monitoring applications. All units are available in NEMA 1 painted steel or stainless enclosure, with or without ATMOS technology. ATMOS technology allows for operation in environments with temperatures as low as -50°F.

The Manning EC-F9-NH₃ with SensorCheck™ features industry-leading performance gas detection technology and adds a built-in system to monitor and predict the sensor's electrical viability.

Available with an optional LCD that allows real time display of gas concentration. The easy to read display allows for quick visual error events upon startup and troubleshooting and can be calibrated without a voltmeter. The EC-F9-NH₃ with LCD is designed to work in the harshest environments including chemical washdown.

Ammonia Specific

- Rapid response to ammonia
- Internal monitoring of 4-20 mA loop circuitry continuity

Versatility

- Can be used with any Honeywell Analytics readout
- Standard range of 100 ppm can be rescaled for higher ranges
- Provides a linear output of 4-20 mA as a function of refrigerant concentration

Easy Maintenance

- Quick and easy calibration
- Realtime calibration eliminates maintenance downtime

Long sensor life

- Quick and easy calibration

ATMOS™ Technology

- Allows for operation down to -50°F and in condensing humidity environments or during washdown
- Automatically adapts to its environment and provides accurate and reliable performance under the harshest conditions

SensorCheck™ Technology

- Checks operating parameters of sensors and sends a notification output signal if an anomaly is identified
- Tests the sensor every 24 hours for electrical viability
- Indication can be detected by a Manning gas monitor or PLC

Housing

- NEMA 1 #16 gauge heavy-duty steel enclosure
- Explosion-proof design available

EC-F9 (continued)

EC-F9-NH3-0/100	Model Number	Order Number
Ammonia, 0-100 ppm, NEMA 1 enclosure	EC-F9-NH3-0/100-N1	M-509320
Ammonia, 0-100 ppm, LCD, NEMA 1 enclosure	EC-F9-NH3-0/100-LCD-N1	M-511276
Ammonia, 0-100 ppm, ATMOS, NEMA 1 enclosure	EC-F9-NH3-0/100-ATMOS-N1	M-509332
Ammonia, 0-100 ppm, ATMOS, LCD, NEMA 1 enclosure	EC-F9-NH3-0/100-ATMOS-LCD-N1	M-600453
Ammonia, 0-100 ppm, stainless steel enclosure	EC-F9-NH3-0/100-ST	M-509338
Ammonia, 0-100 ppm, LCD, stainless steel enclosure	EC-F9-NH3-0/100-LCD-ST	M-511917
Ammonia, 0-100 ppm, ATMOS, stainless steel enclosure	EC-F9-NH3-0/100-ATMOS-ST	M-509342
Ammonia, 0-100 ppm, ATMOS, LCD, stainless steel enclosure	EC-F9-NH3-0/100-ATMOS-LCD-ST	M-600456

EC-F9-NH3-0/200	Model Number	Order Number
Ammonia, 0-200 ppm, NEMA 1 enclosure	EC-F9-NH3-0/200-N1	M-600341
Ammonia, 0-200 ppm, stainless steel enclosure	EC-F9-NH3-0/200-ST	M-600348
Ammonia, 0-200 ppm, ATMOS, NEMA 1 enclosure	EC-F9-NH3-0/200-ATMOS-N1	M-600352
Ammonia, 0-200 ppm, ATMOS, stainless steel enclosure	EC-F9-NH3-0/200-ATMOS-ST	M-600359

EC-F9-NH3-0/250	Model Number	Order Number
Ammonia, 0-250 ppm, NEMA 1 enclosure	EC-F9-NH3-0/250-N1	M-600342
Ammonia, 0-250 ppm, LCD, NEMA 1 enclosure	EC-F9-NH3-0/250-LCD-N1	M-511174
Ammonia, 0-250 ppm, ATMOS, NEMA 1 enclosure	EC-F9-NH3-0/250-ATMOS-N1	M-600353
Ammonia, 0-250 ppm, ATMOS, LCD, NEMA 1 enclosure	EC-F9-NH3-0/250-ATMOS-LCD-N1	M-511017
Ammonia, 0-250 ppm, stainless steel enclosure	EC-F9-NH3-0/250-ST	M-600349
Ammonia, 0-250 ppm, ATMOS, stainless steel enclosure	EC-F9-NH3-0/250-ATMOS-ST	M-600360
Ammonia, 0-250 ppm, ATMOS, LCD, stainless steel enclosure	EC-F9-NH3-0/250-ATMOS-LCD-ST	M-512185

EC-F9 (continued)

EC-F9-NH3-0/500	Model Number	Order Number
Ammonia, 0-500 ppm, NEMA 1 enclosure	EC-F9-NH3-0/500-N1	M-600343
Ammonia, 0-500 ppm, LCD, NEMA 1 enclosure	EC-F9-NH3-0/500-LCD-N1	M-510929
Ammonia, 0-500 ppm, ATMOS, NEMA 1 enclosure	EC-F9-NH3-0/500-ATMOS-N1	M-600354
Ammonia, 0-500 ppm, ATMOS, LCD, NEMA 1 enclosure	EC-F9-NH3-0/500-ATMOS-LCD-N1	M-510997
Ammonia, 0-500 ppm, stainless steel enclosure	EC-F9-NH3-0/500-ST	M-510741
Ammonia, 0-500 ppm, LCD, stainless steel enclosure	EC-F9-NH3-0/500-LCD-ST	M-512693
Ammonia, 0-500 ppm, ATMOS, stainless steel enclosure	EC-F9-NH3-0/500-ATMOS-ST	M-600361
Ammonia, 0-500 ppm, ATMOS, LCD, stainless steel enclosure	EC-F9-NH3-0/500-ATMOS-LCD-ST	M-510998

EC-F9-NH3-0/1000	Model Number	Order Number
Ammonia, 0-1,000 ppm, NEMA 1 enclosure	EC-F9-NH3-0/1000-N1	M-509334
Ammonia, 0-1,000 ppm, stainless steel enclosure	EC-F9-NH3-0/1000-ST	M-509341
Ammonia, 0-1,000 ppm, LCD, NEMA 1 enclosure	EC-F9-NH3-0/1000-LCD-N1	M-511108
Ammonia, 0-1,000 ppm, ATMOS, NEMA 1 enclosure	EC-F9-NH3-0/1000-ATMOS-N1	M-509337
Ammonia, 0-1,000 ppm, ATMOS, stainless steel enclosure	EC-F9-NH3-0/1000-ATMOS-ST	M-509345
Ammonia, 0-1,000 ppm, ATMOS, LCD, stainless steel enclosure	EC-F9-NH3-0/1000-ATMOS-LCD-ST	M-512505

EC-F9-NH3 Replacements	Model Number	Order Number
Ammonia transmitter	EC-F9-RT-NH3	M-600450
Ammonia transmitter with ATMOS	EC-F9-RT-NH3	M-511102
Replacement ammonia cell	EC-F2-RC-NH3	M-507975
Replacement ammonia high range cell	EC-F2-RC-NH3	M-600043
Replacement ammonia cell	EC-F2-NH3-RC-EXP	M-600045

EC-F2



CO, H₂S, H₂, SO₂, O₃, O₂



The EC Series gas detectors are fixed point gas detection units which utilize Electrochemical sensor technology. The EC-F2 units can be configured to monitor CO, H₂S, H₂, NO₂, and O₃. All units are available in an aluminum or stainless enclosure, with our without ATMOS™ technology. ATMOS technology allows for operation in environments with temperatures as low as -50°F

User Friendly

- No moving parts
- Factory calibrated
- Requires minimal adjustments after installation

Reliable

- Highly resistant to EMI/RFI
- Available in three ranges
- Minor response to common interference gases
- Negligible response to extreme changes in relative humidity

ATMOS™ Technology

- Allows for operation down to -50°F and in condensing humidity environments or during washdown
- Automatically adapts to its environment and provides accurate and reliable performance under the harshest conditions

Housing

- NEMA 1 #16 gauge heavy-duty steel enclosure
- NEMA 4 available

EC-F2 Carbon Monoxide (CO)

Model Number

Order Number

Carbon monoxide (CO), 0-200 ppm, ATMOS, NEMA 1 enclosure	EC-F2-CO-0/200-ATMOS-N1	M-600179
Carbon monoxide (CO), 0-200 ppm, ATMOS, stainless steel enclosure	EC-F2-CO-0/200-ATMOS-ST	M-600256
Carbon monoxide (CO), 0-200 ppm, NEMA 1 enclosure	EC-F2-CO-0/200-N1	M-600050
Carbon monoxide (CO), 0-200 ppm, stainless steel enclosure	EC-F2-CO-0/200-ST	M-600441

EC-F2 Hydrogen Sulfide (H₂S)

Model Number

Order Number

Hydrogen sulfide (H ₂ S), 0-50 ppm, NEMA 1 enclosure	EC-F2-H2S-0/50-N1	M-600062
Hydrogen sulfide (H ₂ S), 0-50 ppm, ATMOS, NEMA 1 enclosure	EC-F2-H2S-0/50-ATMOS-N1	M-600183
Hydrogen sulfide (H ₂ S), 0-50 ppm, ATMOS, stainless steel enclosure	EC-F2-H2S-0/50-ATMOS-ST	M-600211
Hydrogen sulfide (H ₂ S), 0-50 ppm, NEMA 1 enclosure, low heat	EC-F2-H2S-0/50-N1-LH	M-600265

EC-F2 Hydrogen (H₂)

Model Number

Order Number

Hydrogen (H ₂), 0-2,000 ppm, NEMA 1 enclosure	EC-F2-H2-0/2000-N1	M-600059
Hydrogen (H ₂), 0-2,000 ppm, ATMOS, NEMA 1 enclosure	EC-F2-H2-0/2000-ATMOS-N1	M-511357

EC-F2 Oxygen (O₂)

Model Number

Order Number

Oxygen (O ₂), 0-25%, NEMA 1 enclosure	EC-F2-O2-0/25%-N1	M-600071
Oxygen (O ₂), 0-25%, ATMOS, NEMA 1 enclosure	EC-F2-O2-0/25%-ATMOS-N1	M-600186

EC-F2 Ozone (O₃)	Model Number	Order Number
Ozone (O ₃), 0-1 ppm, NEMA 1 enclosure	EC-F2-O3-0/1-N1	M-600074
Ozone (O ₃), 0-1 ppm, ATMOS, NEMA 1 enclosure	EC-F2-O3-0/1-ATMOS-N1	M-600187

EC-F2 Sulfur Dioxide (SO₂)	Model Number	Order Number
Sulfur dioxide (SO ₂), 0-10 ppm, NEMA 1 enclosure	EC-F2-SO2-0/10-N1	M-600077
Sulfur dioxide (SO ₂), 0-10 ppm, ATMOS, NEMA 1 enclosure	EC-F2-SO2-0/10-ATMOS-N1	M-600188
Sulfur dioxide (SO ₂), 0-10 ppm, ATMOS, stainless steel enclosure	EC-F2-SO2-0/10-ATMOS-ST	M-600336

EC-F2 Replacements	Model Number	Order Number
Replacement ammonia (NH ₃) transmitter (specify range)	EC-F2-RT-NH3	M-512358
Replacement ammonia (NH ₃) cell	EC-F2-RC-NH3	M-507975
Replacement ammonia (NH ₃) high range cell	EC-F2-RC-NH3-HR	M-600043
Replacement carbon monoxide (CO) cell	EC-F2-RC-CO	M-600052
Replacement carbon monoxide (CO) transmitter	EC-F2-RT-CO	M-511877
Replacement hydrogen (H ₂) cell	EC-F2-RC-H2	M-600061
Replacement ammonia (NH ₃) transmitter, ATMOS (specify range)	EC-F2-RT-NH3-ATMOS	M-511013
Replacement oxygen (O ₂) cell	EC-F2-RC-O2	M-600073
Replacement ozone (O ₃) cell	EC-F2-RC-O3	M-600076
Replacement sulfur dioxide (SO ₂) cell	EC-F2-RC-SO2	M-600079

EC-F3



O₂



The Manning EC-F3 exhibits excellent accuracy and precision, with negligible response to common interference gases and dramatic changes in relative humidity.

User Friendly

- No moving parts or filters to replace
- Factory calibrated
- Requires minimal adjustments after installation

Reliable

- Very long life (10 years at 20.9% O₂)
- Not influenced by carbon dioxide, carbon monoxide, hydrogen sulfide, nitrous oxide, sulfur dioxide or hydrogen
- Automatic temperature compensation
- Fast response (90% in 60 seconds)
- Sealed disposable cell

Oxygen Specific

- Rapid response to oxygen

Easy Maintenance

- Sealed disposable cell
- Quick and easy calibration

Versatile

- Can be used with any Honeywell Analytics readout

Housing

- NEMA 1 #16 gauge heavy-duty steel enclosure
- NEMA 4 packaging available
- Explosion-proof design available

EC-F3 Oxygen

Model Number

Order Number

Oxygen, 0-25%, NEMA 1 enclosure	EC-F3-O2-0/25%-N1	M-600080
Oxygen, 0-25%, ATMOS, NEMA 1 enclosure	EC-F3-O2-0/25%-ATMOS-N1	M-600274
Oxygen, 0-25%, stainless steel enclosure	EC-F3-O2-0/25%-ST	M-600402
Oxygen, 0-25%, ATMOS, stainless steel enclosure	EC-F3-O2-0/25%-ATMOS-ST	M-600203
Oxygen, 15-25%, NEMA 1 enclosure	EC-F3-O2-15/25%-N1	M-600081
Oxygen, 15-25%, ATMOS, NEMA 1 enclosure	EC-F3-O2-15/25%-ATMOS-N1	M-600222
Oxygen, 15-25%, stainless steel enclosure	EC-F3-O2-15/25%-ST	M-600437
Oxygen, 15-25%, ATMOS, stainless steel enclosure	EC-F3-O2-15/25%-ATMOS-ST	M-600194

EC-F3 Replacements

Model Number

Order Number

Replacement oxygen sensor	EC-F3-O2-RS	M-600083
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IR-F9

R-404a, R-22, R-507, R-134a, R-407a, R-410a, R-422d, NH₃, CO₂



The AirScan™ IR-F9 is an infrared diffusion design sensor that allows all points of detection to be monitored simultaneously. The IR-F9 responds to refrigerants in the range of 0-3,000 ppm and features SensorCheck™ technology that continually monitors sensor performance. The IR-F9 is available in an aluminum or stainless enclosure, with or without ATMOS™ technology. ATMOS technology allows for operation in environments with temperatures as low as -60°F (-50°C).

Refrigerant Specific

- Rapid response to refrigerants including R-404a, R-22, R-507, R-134a, R-407a, R-410a, R-422d, NH₃ and CO₂
- Internal monitoring of 4-20 mA loop circuitry continuously

Diffusion-Design Sensor

- Has no moving parts and doesn't require pumps or filters
- All points of detection can be monitored continuously at an affordable cost

Versatility

- Can be used with any Honeywell Analytics readout
- Standard range of 0-3,000 ppm, can be rescaled for lower trip points
- Provides a linear output of 4-20 mA as a function of refrigerant concentration
- Simple, real-time calibration eliminates maintenance downtime
- Automatically adapts to fluctuating temperatures

Long-Lasting Performance

- Unique internal reference channel compensates for dust particles, source degradation, humidity and temperature fluctuation, food odours, chemical cleaners, etc.

ATMOS™ Technology

- Allows for operation down to -60°F (-50°C) and in condensing humidity environments or during washdown (super heat)
- Automatically adapts to its environment and provides accurate and reliable performance under the harshest conditions

SensorCheck™ Technology

- Checks operating parameters of sensors and sends a notification output signal if an anomaly is identified
- Tests the sensor every 24 hours for electrical viability
- Indication can be detected by a Manning gas monitor or PLC

Housing

- High-mass metal bench provides structural and thermal stability and greater immunity to vibration
- Superior EMI/RFI shielding

IR-F9 (continued)

AirScan™ IR-F9 R134a	Model Number	Order Number
R134a 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R134a-0/1000-N1	M-512203
R134a 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R134a-0/1000-ATMOS-ST	M-512444
R134a 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R134a-0/3000-N1	M-600472
R134a 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R134a-0/3000-ATMOS-N1	M-511474

AirScan™ IR-F9 R22	Model Number	Order Number
R22 0-500 ppm, NEMA 1 enclosure, CARB compliant	IR-F9-R22-0/500-N1	M-600421
R22 0-500 ppm, ATMOS, NEMA 1 enclosure, CARB compliant	IR-F9-R22-0/500-ATMOS-N1	M-600394
R22 0-500 ppm, ATMOS, stainless steel enclosure, CARB compliant	IR-F9-R22-0/500-ATMOS-ST	M-600393
R22 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R22-0/1000-N1	M-510845
R22 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R22-0/1000-ATMOS-N1	M-510851
R22 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R22-0/3000-N1	M-600396
R22 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R22-0/3000-ATMOS-N1	M-600428
R22 0-3,000 ppm, stainless steel enclosure	IR-F9-R22-0/3000-ST	M-600446
R22 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R22-0/3000-ATMOS-ST	M-600471
R22 0-3,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R22-0/3000-ATMOS-SH-ST	M-700000

AirScan™ IR-F9 R422d	Model Number	Order Number
R422d 0-500 ppm, NEMA 1 enclosure, CARB compliant	IR-F9-R422d-0/500-N1	M-700016
R422d 0-500 ppm, stainless steel enclosure, CARB compliant	IR-F9-R422d-0/500-ST	M-700017
R422d 0-500 ppm, ATMOS, NEMA 1 enclosure, CARB compliant	IR-F9-R422d-0/500-ATMOS-N1	M-700018
R422d 0-500 ppm, ATMOS, stainless steel enclosure, CARB compliant	IR-F9-R422d-0/500-ATMOS-ST	M-700019
R422d 0-500 ppm, ATMOS, super heat, NEMA 1 enclosure, CARB compliant	IR-F9-R422d-0/500-ATMOS-SH-N1	M-700020
R422d 0-500 ppm, ATMOS, super heat, stainless steel enclosure, CARB compliant	IR-F9-R422d-0/500-ATMOS-SH-ST	M-700021
R422d 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R422d-0/1000-N1	M-700026
R422d 0-1,000 ppm, stainless steel enclosure	IR-F9-R422d-0/1000-ST	M-700027
R422d 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R422d-0/1000-ATMOS-N1	M-700028
R422d 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R422d-0/1000-ATMOS-ST	M-700029
R422d 0-1,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R422d-0/1000-ATMOS-SH-ST	M-700030
R422d 0-1,000 ppm, commercial enclosure	IR-F9-R422d-0/1000-COM	M-700031
R422d 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R422d-0/3000-N1	M-700035
R422d 0-3,000 ppm, stainless steel enclosure	IR-F9-R422d-0/3000-ST	M-700036
R422d 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R422d-0/3000-ATMOS-N1	M-700037
R422d 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R422d-0/3000-ATMOS-ST	M-700038
R422d 0-3,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-R422d-0/3000-ATMOS-SH-N1	M-700039
R422d 0-3,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R422d-0/3000-ATMOS-SH-ST	M-700040

IR-F9 (continued)

AirScan™ IR-F9 R404a	Model Number	Order Number
R404a 0-500 ppm, NEMA 1 enclosure	IR-F9-R404a-0/500-N1	M-512259
R404a 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R404a-0/1,000-N1	M-510844
R404a 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R404A-0/1000-ATMOS-N1	M-700003
R404a 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R404A-0/1000-ATMOS-ST	M-512443
R404a 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R404a-0/3000-N1	M-600422
R404a 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R404a-0/3000-ATMOS-N1	M-600469
R404a 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R404A-0/3000-ATMOS-ST	M-512522

AirScan™ IR-F9 R407a	Model Number	Order Number
R407a 0-500 ppm, NEMA 1 enclosure	IR-F9-R407a-0/500-N1	M-700045
R407a 0-500 ppm, stainless steel enclosure	IR-F9-R407a-0/500-ST	M-700046
R407a 0-500 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R407a-0/500-ATMOS-N1	M-700047
R407a 0-500 ppm, ATMOS, stainless steel enclosure	IR-F9-R407a-0/500-ATMOS-ST	M-700048
R407a 0-500 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-R407a-0/500-ATMOS-SH-N1	M-700049
R407a 0-500 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R407a-0/500-ATMOS-SH-ST	M-700050
R407a 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R407a-0/1000-N1	M-700055
R407a 0-1,000 ppm, stainless steel enclosure	IR-F9-R407a-0/1000-ST	M-700056
R407a 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R407a-0/1000-ATMOS-N1	M-700057
R407a 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R407a-0/1000-ATMOS-ST	M-700058
R407a 0-1,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-R407a-0/1000-ATMOS-SH-N1	M-700059
R407a 0-1,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R407a-0/1000-ATMOS-SH-ST	M-700060
R407a 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R407a-0/3000-N1	M-700065
R407a 0-3,000 ppm, stainless steel enclosure	IR-F9-R407a-0/3000-ST	M-700066
R407a 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R407a-0/3000-ATMOS-N1	M-700067
R407a 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R407a-0/3000-ATMOS-ST	M-700068
R407a 0-3,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-R407a-0/3000-ATMOS-SH-N1	M-700069
R407a 0-3,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R407a-0/3000-ATMOS-SH-ST	M-700070

AirScan™ IR-F9 R410a	Model Number	Order Number
R410a 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R410a-0/1000-N1	M-700075
R410a 0-1,000 ppm, stainless steel enclosure	IR-F9-R410a-0/1000-ST	M-700076
R410a 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R410a-0/1000-ATMOS-N1	M-700077
R410a 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R410a-0/1000-ATMOS-ST	M-700078
R410a 0-1,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-R410a-0/1000-ATMOS-SH-N1	M-700079
R410a 0-1,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R410a-0/1000-ATMOS-SH-ST	M-700080
R410a 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R410a-0/3000-N1	M-700085
R410a 0-3,000 ppm, stainless steel enclosure	IR-F9-R410a-0/3000-ST	M-700086
R410a 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R410a-0/3000-ATMOS-N1	M-700087
R410a 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R410a-0/3000-ATMOS-ST	M-700088
R410a 0-3,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-R410a-0/3000-ATMOS-SH-N1	M-700089
R410a 0-3,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R410a-0/3000-ATMOS-SH-ST	M-700090

IR-F9 (continued)

AirScan™ IR-F9 R507a	Model Number	Order Number
R507a 0-500 ppm, NEMA 1 enclosure	IR-F9-R507a-0/500-N1	M-600416
R507a 0-500 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R507a-0/500-ATMOS-N1	M-512247
R507a 0-500 ppm, ATMOS, stainless steel enclosure	IR-F9-R507a-0/500-ATMOS-ST	M-600414
R507a 0/1,000 ppm, NEMA 1 enclosure	IR-F9-R507a-0/1000-N1	M-512283
R507a 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R507a-0/1000-ATMOS-N1	M-511471
R507a 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R507a-0/1000-ATMOS-ST	M-700006
R507a 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R507a-0/3000-N1	M-600417
R507a 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R507a-0/3000-ATMOS-N1	M-600410
R507a 0-3,000 ppm, stainless steel enclosure	IR-F9-R507a-0/3000-ST	M-511611
R507a 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R507a-0/3000-ATMOS-ST	M-600415

AirScan™ IR-F9 Carbon Dioxide	Model Number	Order Number
Carbon dioxide 0-10,000 ppm, NEMA 1 enclosure	IR-F9-CO2-1%-N1	M-511793
Carbon dioxide, 0-10,000 ppm, ATMOS, NEMA 1	IR-F9-CO2-1%-ATMOS-N1	M-511821
Carbon dioxide, 0-10,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-CO2-0/1%-ATMOS-SH-N1	M-511866
Carbon dioxide, 0-10,000 ppm, stainless steel enclosure	IR-F9-CO2-1%-ST	M-512127
Carbon dioxide, 0-10,000 ppm, ATMOS, stainless steel enclosure	IR-F9-CO2-1%-ATMOS-ST	M-511858
Carbon dioxide, 0-10,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-CO2-1%-ATMOS-SH-ST	M-512193
Carbon dioxide 0-30,000 ppm, NEMA 1 enclosure	IR-F9-CO2-3%-N1	M-511825
Carbon dioxide, 0-30,000 ppm, ATMOS, NEMA 1	IR-F9-CO2-3%-ATMOS-N1	M-511828
Carbon dioxide, 0-30,000 ppm, ATMOS, super heat, NEMA 1	IR-F9-CO2-3%-ATMOS-SH-N1	M-511829
Carbon dioxide, 0-30,000 ppm, ATMOS, stainless steel enclosure	IR-F9-CO2-3%-ATMOS-ST	M-512094

AirScan™ IR-F9 Ammonia	Model Number	Order Number
Ammonia, 0-20,000 ppm, NEMA 1 enclosure	IR-F9-NH3-0/2%-N1	M-512345
Ammonia, 0-20,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-NH3-0/2%-ATMOS-N1	M-512342
Ammonia, 0-20,000 ppm, stainless steel enclosure	IR-F9-NH3-0/2%-ST	M-512352
Ammonia, 0-20,000 ppm, ATMOS, stainless steel enclosure	IR-F9-NH3-0/2%-ATMOS-ST	M-512353
Ammonia, 0-20,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-NH3-0/2%-ATMOS-SH-ST	M-700005



EC-P2

Portable Single-Gas Leak Detector

Alcohol, Br₂, CH₂O, Cl₂, ClO₂, CO, ETO, F₂, H₂, H₂O₂, H₂S, HCl, HCN, Hydride gases, NH₃, NO, NO₂, O₂, O₃, PH₃, SO₂



The EC-P2 portable gas leak detector is a versatile tool for performing regular leak checking in gas storage areas, around process equipment and piping or confined spaces prior to entry. Designed for easy one-hand operation, the EC-P2 contains an internal sample pump and a flexible sampling wand to allow pinpoint location of a leak source. A large backlit LCD display shows gas concentration reading in real time and advanced features include data logging to an Excel spreadsheet, 0-1.0 V_{DC} analog output capability, and a sampling mode for taking a single reading in a controlled, repeatable manner.

Easy to Use

- Datalogs can be imported into Excel spreadsheet
- RS-232 output of stored gas values
- Optional analog output 0 to 1.0 V_{DC}
- 12,000 data points of memory

Durability and Reliability

- Rugged internal pump
- Excellent accuracy and repeatability

Safety

- Two adjustable concentration alarms, zero drift caution
- Low flow and low battery alarms

Enhanced Technology

- Electrochemical sensors provide maximum sensitivity with minimal interference
- Smart-Cell gas data retention

Long Battery Life

- Primary power source is "D" alkaline battery has approximately 75 hours of runtime
- Standby power source is a rechargeable NiCad battery that provides approximately six hours of additional runtime

Instrument (Smart Cell not included)

Order Number

EC-P2 (base unit with accessories)

10214

Gas	Range	Standard	Order Number
Ammonia (NH ₃)	0-500 ppm	200 ppm	10168
Ammonia (NH ₃)	0-2,000 ppm	1,000 ppm	10169
Bromine (Br ₂)	0-5 ppm	2 ppm	10170
Chlorine (Cl ₂)	0-200 ppm	20 ppm	10216
Chlorine (Cl ₂)	0-5 ppm	2 ppm	10172
Chlorine dioxide (ClO ₂)	0-5 ppm	2 ppm	10173-L9
Carbon monoxide (CO)	0-1,000 ppm	200 ppm	10171
Ethylene oxide (ETO)	0-200 ppm	20 ppm	10944
Fluorine (F ₂)	0-5 ppm	2 ppm	10174-L9
Hydrogen (H ₂)	0-2,000 ppm	2,000 ppm	10176
Hydrogen peroxide (H ₂ O ₂)	0-100 ppm	20 ppm	10178-L9
Hydrogen sulfide (H ₂ S)	0-200 ppm	20 ppm	10179-L9
Formaldehyde (CH ₂ O)	0-200 ppm	20 ppm	10175-L9
Hydrogen chloride (HCl)	0-200 ppm	20 ppm	10177
Hydrogen cyanide (HCN)	0-200 ppm	20 ppm	11044
Nitric oxide (NO)	0-500 ppm	200 ppm	10180-L9
Nitrogen dioxide (NO ₂)	0-200 ppm	20 ppm	10181-L9
Oxygen (O ₂)	0-25%	25%	10182-L9
Ozone (O ₃)	0-200 ppm	20 ppm	10183-L9
Ozone (O ₃)	0-5 ppm	2 ppm	11023-L9
Alcohol	0-500 ppm	200 ppm	10167-L9
Hydride gases	0-2,000 ppb	1,000 ppb	10945-L9
Phosphine (PH ₃)	0-2,000 ppm	1,000 ppm	11187
Sulfur dioxide (SO ₂)	0-500 ppm	20 ppm	10184

EC-P2 (continued)

EC-P2 Accessories	Order Number
Battery compartment cap assembly	10262
Calibration "T", with quick-disconnect fitting	10283
Charger, 110 V _{AC}	10292
Charger, 220 V _{AC}	10293-L9
Display board assembly	10682-L9
Extension wand	10599-L9
Filter disks, package of 10	10308-L9
Outlet tube barb fitting	10313-L9
Quick-disconnect inlet fitting	10314-L9
Pump	10381
Sensor keeper	10417
NiCad battery, with solder tabs	10827-L9
Regulator 1.0 LPM #518 (for 58/103L cylinders)	10597-L9
Regulator 1.0 LPM #418 (for 17/29L cylinders)	10687-L9



Horns & Strobes



The SpectraAlert Advance series of notification is designed to simplify installations, with features such as plug in design, 11 field selectable candela settings, and 4 color lens options.

4-wire used when horn/strobe wired separately
 2-wire used when both horn/strobe wired simultaneously

Horn & Strobe	Order Number
Horn/strobe 24 V _{DC} , 4 wire	P4W-P
Horn/strobe 24 V _{DC} , 2 wire	P2W-P
Horn/strobe 24 V _{DC} , 2 wire, high candela	P2WH-P
Horn/strobe 24 V _{DC} , 2 wire, outdoor	P2WK-P
Horn/strobe 24 V _{DC} , 2 wire, outdoor, high candela	P2WHK-P
Horn/strobe 24 V _{DC} , 2 wire, ceiling mount	PC2W-P
Horn/strobe 24 V _{DC} , 2 wire, ceiling mount, high candela	PC2WH-P
Speaker/strobe, selectable candela, white, outdoor	SPSWK-P
Mount 4 multi-tone strobe	WH-126143

Horn & Strobe Accessories	Order Number
120 V _{AC} mounting plate adaptor (for use with 2-wire horn/strobes)	MP120K
Lens - blue, wall mount	LENS-B
Lens - red, wall mount	LENS-R
Lens - amber, wall mount	LENS-A
Lens - green, wall mount	LENS-G

Strobe	Order Number
Strobe, standard candela, white, ceiling mount	SCW-P
Strobe, standard candela, white, wall mount	SW-P
Strobe, high candela, white, wall mount	SWH-P
Strobe, high candela, white, wall mount, outdoor	SWHK-P
Beacon, Class I, Div. 1 24 V _{DC} , red	SVIP3532-2

Horn	Part Number
Horn, 120 V _{AC} , indoor application	M-503973
Horn (NEMA 4X), 120 V _{AC} , indoor or outdoor application	M-503974
Explosion proof horn, 120 V _{AC} , Class I Div. 1	M-501767
Horn, Class I, Div. 1 24 V _{DC}	SVIP3532-1

Power Supplies & Additional Accessories

Power Supplies & Additional Accessories	Order Number
24 V _{DC} -6.5A power supply, no enclosure	M-600268
Relay plug, terminates 4/20 signal at sensor providing relay output. 3 A @ 24 V _{DC} rating	M-600008
GM-JR-PS GM-JR power supply, 24 V _{DC} , 1A	M-600031
Power supply, 24 V _{DC} , 6.5 A, NEMA 12	M-600400
Liquid crystal display for use with EC-F9	M-510150
DRM, dual relay module	M-511300
UPS750VA 120V APC Smart-UPS XL 750 VA	M-507960
UPS1000VA 120V APC Smart-UPS XL 1000 VA	M-508370
UPSAPCBP, battery unit for APC Smart-UPS	UPSAPCB
120 V _{AC} adapter mounting plate	MP120K
Transformer 50 VA	VA201TA50
Transformer 100 VA	T100VA
Class II Transformer 100 VA	T100VAC2
Transformer 200 VA	T200VA
Class II Transformer 200 VA	T200VAC2
Transformer 300 VA	T300VA
Class II Transformer 300 VA	T300VAC2
12/24 V _{DC} Power Supply	HPTV5DC8
12/24 V _{DC} power supply, UL/cUL listed	HPV5DC8UL
24 V _{DC} / V _{AC} power supply, 6.5A UL listed	PS-24-150-N12
APC Smart-UPS XL 750 VA USB and serial 120V	UPS750VA120V
APC Smart-UPS XL 1000 VA USB and serial 120V	UPS1000VA120V
UPSAPCBP, battery unit for APC Smart-UPS	UPSAPCBP
SS tag kit, 3.0 x 0.5 in. #10 (M5) screw (Tag list and text must be supplied with PO)	2441-0001

Calibration Reference Guide

Product Line	Description	Flow Rate
XNX - EC	XNX transmitter for use with electrochemical sensors	300 - 375 ml/min
XNX - MPD	XNX transmitter for use with multi-purpose detector	0.5 liter/min
Apex	Apex toxic and combustible gas detector	0.7 - 1.0 liter/min
XCD	Sensepoint XCD - zero gas (Air or N ₂)	0.5 - 1.0 liter/min
XCD	Sensepoint XCD - O ₂ , H ₂ , H ₂ S and CO	0.5 - 1.0 liter/min
XCD	Sensepoint XCD - flammable cat	1.0 - 1.5 liter/min
XCD	Sensepoint XCD - flammable IR	0.4 - 0.6 liter/min
XCD	Sensepoint XCD - IR CO ₂	0.4 - 0.6 liter/min
Series 3000	Series 3000 toxic and oxygen sensors	300 - 375 ml/min
705	705 and 705HT flammable sensors	1.5 liter/min
Sensepoint	Sieger Sensepoint flammable	1.0 - 1.5 liter/min
Sensepoint	Sieger Sensepoint toxic	1.0 - 1.5 liter/min
Satellite XT	Satellite XT	0.3 liter/min
Midas	Midas	0.5 liter/min
Optima Plus	Optima Plus with remote gassing cell	0.3 liter/min
Optima Plus	Optima Plus with gassing cover	2.0 liter/min
Optima Plus	Optima Plus with flow housing	2.0 liter/min
EC-F9	Manning EC-F9 NH ₃	0.75 - 1.0 liter/min
EC-F2	Manning EC-F2	0.75 - 1.0 liter/min
EC-F3	Manning EC-F3 O ₂ sensor	0.75 - 1.0 liter/min
IR-F9	Manning IR-F9	0.75 - 1.0 liter/min

Calibration Kits, Components, and Gas

XNX™	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case	XNX Toxic Kit	998-100-004, S3KCAL, ZCALREG1 (.3 LPM), 998-100-003	XNXTOKKIT
Tubing, flow adaptor, regulator, carrying case	XNX Combustibles Kit	106459, 1226A0411, N600 1001 33 (.5 LPM), 998-100-003	XNXCOMBKIT

XCD	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case	XCD Toxic Kit*	998-100-004, S3KCAL, 998-100-015, 998-100-003	XCDTOXKIT
Tubing, flow adaptor, regulator, carrying case	XCD Combustibles Kit	998-100-004, S3KCAL, 998-100-012, 998-100-003	XCDCOMBKIT
Calibration cover, potentiometer, adjustment tool, flow housing, regulator, tubing	XCD RTD	2106B2114, 02000-A-1645, 998-100-003, 998-100-012, 998-100-004	XCDRTDKIT
Tubing, flow adaptor, regulator, carrying case	XCD RFD	998-100-004, 00780-A-0035, 998-100-003, 998-100-012, 998-100-003	XCDRFDKIT

*XCDTOXKIT should be used with XCD-Flammable IR

Optima	Product	Contains	Part Number
Tubing, gas cover, regulator	RGC	998-100-004, ZCALREG1 (.3LPM)	OPTIMARGCCALKIT
Tubing, gas cover, regulator	Non-RGC	998-100-004, 2108D0258, 998-100-002 (2LPM), With GAS CELL	OPTIMACALKIT

Excel	Product	Contains	Part Number
Test filters			2104N2999

Series 3000	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case		998-100-004, S3KCAL, ZCALREG1(.3LPM), 998-100-003	XNXTOKKIT

705	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case		998-100-004, 00780-A-0035, 998-100-012 (1.5LPM), 998-100-003	705CALKIT

Sensepoint	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case		0310-2021, 02000-A-1645, 998-100-012 (1.5LPM), 998-100-003	SNSPTCALKIT

Note: Cal kits do not include gas. Gas must be ordered separately and will arrive separately.

Satellite	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case	EC	0310-2021, 9602.0095.40.00, ZCALREG1(.3LPM), 998-100-003	SATECCALKIT
Tubing, flow adaptor, regulator, carrying case	LEL	998-100-004, 180085(O2, LEL, SO2, NO2, NO), ZCALREG1(.3LPM), 998-100-003	SATLELCALKIT

Calibration Kits, Components, and Gas

Midas	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case		102599, N600 1001 10, 998-100-003	MIDASCALKIT
APEX	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case		998-100-004, 2110B2140, 998-100-015(1LPM), 998-100-003	APEXCALKIT
Accessories and Components	Product	Contains	Part Number
Inert tubing Tygon 3/16 in. ID x 5/16 in. OD	FEP lined Tygon tubing by ft.	5 ft. recommended	998-100-004
Tubing Tygon 1/4 in. ID x 7/16 in. OD	Tygon tubing by ft.	6 ft. recommended	106459
1/4 in. OD x 1/8 in. ID FEP tubing	FEP lined Tygon tubing by ft.		102599
Regulator series 715, 1.5 LPM	Regulator 1.5 LPM		998-100-012
Regulator series 715, 1 LPM	Regulator 1 LPM		998-100-015
Regulator series 715, .5 LPM	Regulator .5 LPM		N600 1001 33
Pre-set 0.3 Lpm flow regulator	Regulator 0.3 LPM		ZCALREG1
Regulator demand on flow	Demand flow regulator		N600 1001 10
Carrying case cal kit	Cal kit carry case		998-100-003
Calibration cup (flow adaptor)	Calibration cup		S3KCAL
Optima plus gassing cover (red)	Optima gassing cover		2108D0258
S/Line Excel test filters PK8 VAR	Excel test filters		2104N2999
Housing sample flow SS	Flow housing ss		00780-A-0035
S2K flow housing assembly	Flow housing		02000-A-1645

Note: Cal kits do not include gas. Gas must be ordered separately and will arrive separately.

Calibration Gases

Toxic Gases

For Use With	Gas Type	Concentration	Cylinder Size	Thread Size	Part Number
XNX/XCD/S3K	SO ₂	5 ppm	34 L	5/8 in. x 18 in.	GFV450
XNX/XCD/S3K	SO ₂	10 ppm	58 L	5/8 in. x 18 in.	GFV177
XNX/XCD/S3K	SO ₂	25 ppm	58 L	5/8 in. x 18 in.	571361
XNX/XCD/S3K	H ₂ S / N ₂	10 ppm	58 L	5/8 in. x 18 in.	2992-0033
XNX/XCD/S3K	H ₂ S / N ₂	25 ppm	58 L	5/8 in. x 18 in.	998-024-003
XNX/XCD/S3K	H ₂ S / Air	25 ppm	58 L	5/8 in. x 18 in.	998-024-001
XNX/XCD/S3K	H ₂ S / N ₂	50 ppm	58 L	5/8 in. x 18 in.	998-024-004
XNX/XCD/S3K	NH ₃ / N ₂	50 ppm	58 L	5/8 in. x 18 in.	2992-0015
XNX/XCD/S3K	NH ₃ / Air	100 ppm	58 L	5/8 in. x 18 in.	M-501041
XNX/XCD/S3K	Cl ₂	2 ppm	58 L	5/8 in. x 18 in.	GFV253
XNX/XCD/S3K	Cl ₂ / N ₂	5 ppm	58 L	5/8 in. x 18 in.	571084
XNX/XCD/S3K	Cl ₂	10 ppm	58 L	5/8 in. x 18 in.	GFV252
XNX/XCD/S3K	NO ₂ / N ₂	5 ppm	58 L	5/8 in. x 18 in.	2992-0008
XNX/XCD/S3K	NO / N ₂	100 ppm	58 L	5/8 in. x 18 in.	2992-0035
XNX/XCD/S3K	Nitrogen	99.8% V/V	58 L	5/8 in. x 18 in.	2992-0011
XNX/XCD/S3K	H ₂	500 ppm	103 L	5/8 in. x 18 in.	1991-0159
XNX/XCD/S3K	H ₂ / Air	1000 ppm	58 L	5/8 in. x 18 in.	2992-0016
XNX/XCD/S3K	H ₂ / Air	5000 ppm	58 L	5/8 in. x 18 in.	571820
XNX/XCD/S3K	CO / Air	50 ppm	103 L	5/8 in. x 18 in.	GFV265
XNX/XCD/S3K	CO / Air	100 ppm	103 L	5/8 in. x 18 in.	GFV237
XNX/XCD/S3K	CO / Air	250 ppm	103 L	5/8 in. x 18 in.	2302D0753
XNX/XCD/S3K	CO / Air	500 ppm	103 L	5/8 in. x 18 in.	571069
XNX/XCD/S3K	Zero Air	N/A	103 L	5/8 in. x 18 in.	998-023-001
XNX/XCD/S3K	CO ₂ / Air	1% V/V	103 L	5/8 in. x 18 in.	2992-0029
XNX/XCD/S3K	CO ₂ / Air	2.5% V/V	103 L	5/8 in. x 18 in.	N600 1001 38
XNX/XCD/S3K	HCL / N ₂	5 ppm	58 L	5/8 in. x 18 in.	1991-0164
XNX/XCD/S3K	HCL	10 ppm	58 L	5/8 in. x 18 in.	GFV233
XNX/XCD/S3K	PH ₃ / N ₂	.5 ppm	58 L	5/8 in. x 18 in.	1991-0165

Combustible Gases

For Use With	Gas Type	Concentration	Cylinder Size	Thread Size	Part Number
XNX/XCD/S3K	CH ₄ / N ₂	50% V/V	58 L	5/8 in. x 18 in.	2992-0012
XNX/XCD/S3K	Methane	50% LEL	103 L	5/8 in. x 18 in.	998-022-001
XNX/XCD/S3K	Ethylene	50% LEL	103 L	5/8 in. x 18 in.	998-022-004
XNX/XCD/S3K	Propane	50% LEL	103 L	5/8 in. x 18 in.	998-022-002
XNX/XCD/S3K	Pentane	25% LEL	103 L	5/8 in. x 18 in.	1991-0183

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