Industrial Fixed Gas and Flame Detection
2022 Guide

Commercial in Confidence

Honeywell

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Revision History

Prepared by	Comment	From	To	Date
Duncan Gooch	Radu Iordache		4V0	4V1	1-Feb-22

1. Explosion-Proof Transmitters
Quick Reference Chart

Product	Display	Relays	Material	Communication	**Bluetooth®**
XNX™ Universal Transmitter	Y	DC	AL, SS	4-20 mA; HART; Modbus	N
Optima Excel Local Display (OELD)	Y	No	AL, SS	4-20 mA; HART passthrough	Y
Sensepoint XCD	Y	DC	AL, SS	4-20 mA; Modbus	N
Sensepoint XCD RTD	Y	DC	AL, SS	4-20 mA; Modbus	N
Sensepoint XCD RFD	Y	DC	AL, SS	4-20 mA; Modbus	N
Sensepoint XRL	N (Light Ring Only)	No	AL	4-20 mA; Modbus	Y
Series 3000 MKII/MKIII	Y	No	AL, SS	4-20 mA	N
705 Sensor	N	No	SS	mV	N
Optima Plus	N (Y w/ XNX or OELD)	No	SS	4-20 mA; HART	N (Y w/ OELD)

Toxic Gas Sensor	XNX™	XCD	XCD RTD	XRL	S3000
Ammonia (NH_3)	X		X	X*	X
Arsine (AsH_3)					
Boron Trichloride (BCl_3)					
Bromine (Br_2)					
Carbon Monoxide (CO)	X	X	X	X	X
Carbon Dioxide (CO_2)	X	X		X	
Chlorine (Cl_2)	X		X	X	X
Chlorine Dioxide (ClO_2)	X				X
Diborane (B_2H_6)					
Dichlorosilane (H_2SiCl_2)					
Ethylene Oxide (EtO)	X				X
Fluorine (F_2)					
Germane (GeH_4)					
Hydrogen (H_2)	X	X	X	X	X
Hydrogen Bromide (HBr)					
Hydrogen Chloride (HCl)	X				X
Hydrogen Cyanide (HCN)					X
Hydrogen Fluoride (HF)	X				X
Hydrogen Sulfide (H_2S)	X	X	X	X	X
Nitric Oxide (NO)	X		X		X
Nitrogen Dioxide (NO_2)	X	X	X	X	X
Oxygen (O_2)	X	X	X	X	X
Ozone (O_3)	X			X*	
Phosphine (PH_3)	X				X
Silane (SiH_4)					
Sulfur Dioxide (SO_2)	X		X	X	X

*Pending release

LEL Sensor	XNX™	XCD/XRL[1]	XCD RFD	705	OELD/Optima
Non-specific combustible	X	X	X	X	X
Butane (C_4H_{10})	X	X	X	X	X
Butyl Acetate ($C_6H_{12}O_2$)	X	X	X	X	X
Ethylene (C_2H_4)	X	X	X	X	X
Hexane (C_6H_{14})	X	X	X	X	X
Hydrogen (H_2)	X	X	X	X	
Methane (CH_4)	X	X	X	X	X
Pentane (C_5H_{12})	X	X	X	X	X
Propane (C_3H_8)	X	X	X	X	X
Toluene (C_7H_8)	X	X	X	X	X

Note:
1. XRL calibrated to Methane. Please contact HA customer service for other flammable gasses.

2. 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/DTM, 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) & Device Type Manager (DTM) 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) & Device Type Manager (DTM) 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 lamps, 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, IELDBus Foundation, CU-TREx and KTL approved for Hazardous Locations, Gas Performance and SIL 2 ratings among others
 - Class I, Div 1, Groups A, 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

2. XNX
Universal Transmitter

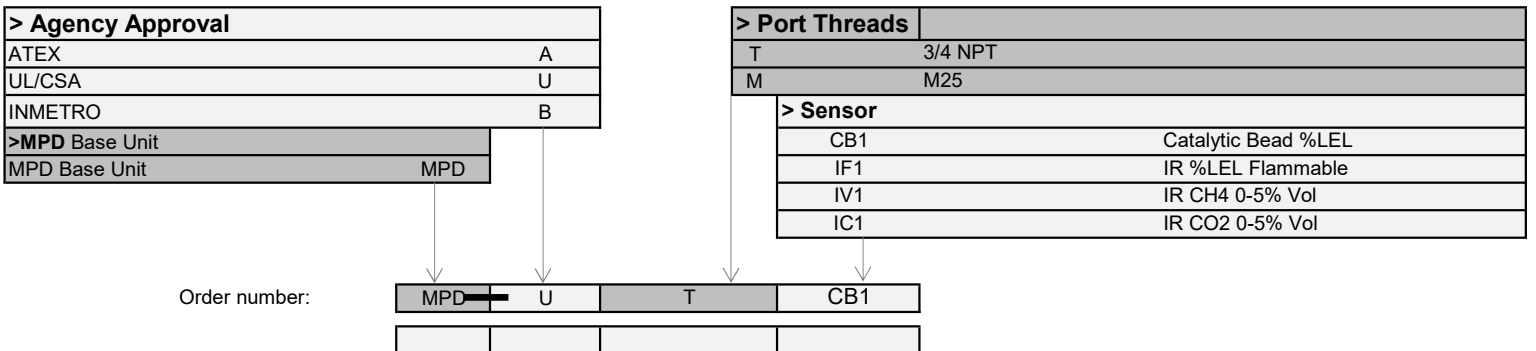## 2.1 XNX Order Number and Pricing Configurator

The XNX™ Universal Transmitter is designed for flexible integration, simple installation, user-friendly operation and straight-forward maintenance. The XNX supports a wide range of Sensors on a common platform and offers a modular choice of inputs and outputs.

> Sensor Personality	
Electrochemical	E
Infrared (Optima/Excel) or 4-20 mA input (Sensepoint, etc.)	I
milliVolt	V

> Enclosure Material	
Aluminum	A
Painted Stainless Steel	S

> Agency Approval & Thread Type	
ATEX/IEC M25	AM
UL/CSA 3/4" NPT	UT
INMETRO 3/4" NPT	BT

> XNX Base Unit	
XNX Base Unit	XNX

> Interface Options	
N	None
R	Relay
M	Modbus
F	Foundation Fieldbus

> Local HART	
N	None
H	Local HART® Port

> MPD Sensor and Range	
NNN	None*
	*for milliVolt versions only (must select 'V' sensor personality)
CB1	Catalytic Bead %LEL
IF1	IR %LEL Flammable
IV1	IR CH4 0-5% Vol/100% LEL
IC1	IR CO2 0-5% Vol

*Always used for "I" and "E" Sensor personality.

Order number:

XNX	UT	A	E	F	H	NNN

For example, the order number for an XNX (XNX-) configured for UL/CSA Approval and 3/4" NPT thread type (UT), Aluminum enclosure (A), Sensor personality (E-), Electrochemical Foundation Fieldbus interface (F), and Local HART (H) would be **XNX-UTAE-FHNNN**.

Multi-Purpose Detector (MPD)

The MPD (Multi-Purpose Detector), a low-cost Infrared or Catalytic bead sensing cell for monitoring flammable industrial gases in hazardous areas. Through the XNX, the MPD can support a variety of communications protocol used in industrial communications systems.

> Agency Approval	
ATEX	A
UL/CSA	U
INMETRO	B

>MPD Base Unit	
MPD Base Unit	MPD

> Port Threads	
T	3/4 NPT
M	M25

> Sensor	
CB1	Catalytic Bead %LEL
IF1	IR %LEL Flammable
IV1	IR CH4 0-5% Vol
IC1	IR CO2 0-5% Vol

Order number:

MPD	U	T	CB1

For example, the order number for an MPD (MPD-) configured for UL/CSA Approval (U), 3/4" NPT thread type (T), and Catalytic Bead %LEL Sensor (CB1) would be **MPD-UTC**.

2. XNX

Universal Transmitter

2.2 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	Description
XNXXSO1FM	Oxygen (O_2) 23% v/v fixed (FM approved)
XNXXSO1SS	Oxygen (O_2) 0-25% v/v
XNXXSC1SS	Carbon monoxide (CO) 0-300 ppm (100 to 500 ppm max scale for XNX, 100 ppm)
XNXXSC1FM	Carbon monoxide (CO) 0-300 ppm (100 to 1000 ppm, 100ppm) LDL 15 ppm (FM approved)
XNXXSH3SS	Hydrogen sulfide (H_2S) 0-15 ppm
XNXXSH1FM	Hydrogen sulfide (H_2S) 10-50 ppm (FM approved)
XNXXSH1SS	Hydrogen sulfide (H_2S) 0-15.0 ppm (10.0 to 50.0 ppm, 1 ppm)
XNXXSH2SS	Hydrogen sulfide (H_2S) 0-100 ppm (50 to 500 ppm, 10 ppm)
XNXXSL1SS	Chlorine (Cl_2) 0-5.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)
XNXXSL2SS	Chlorine (Cl_2) 0-5.00 ppm fixed range
XNXXSS1SS	Sulfur dioxide (SO_2) 0-15.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)
XNXXSS2SS	Sulfur dioxide (SO_2) 0-50.0 ppm (20.0 to 50 ppm, 10 ppm)
XNXXSX1SS	Chlorine dioxide (ClO_2) 0-1.00 ppm
XNXXSM1SS	Nitric oxide (NO) 0-100 ppm
XNXXSN1SS	Nitrogen dioxide (NO_2) 0-10.0 ppm (5.0 to 50.0 ppm, 5.0 ppm)
XNXXSG1SS	Hydrogen (H_2) 0-1000 ppm
XNXXSG2SS	Hydrogen (H_2) 0-10,000 ppm
XNXXSF1SS	Hydrogen fluoride (HF) 0-12.0 ppm
XNXXSA1SS	Ammonia (NH_3) 0-200 ppm (50 to 200 ppm, 50 ppm)
XNXXSA2SS	Ammonia (NH_3) 0-1000 ppm (200 to 1000 ppm, 50 ppm)
XNXXSP1SS	Phosphine (PH_3) 0-1.2 ppm
XNXXSR1SS	Hydrogen chloride (HCl) 0-10 ppm (10 to 20 ppm, 1 ppm)
XNXXSY1SS	Hydrogen cyanide (HCN) 0-30 ppm (Fixed Scale)
XNXXSE1SS	Ethylene oxide (EtO), 25.0ppm (user-selectable from 20.0ppm to 50.0ppm)
XNXXSZ1SS	Ozone (O_3), 0-0.400ppm (Fixed Scale)
XNXXSU1SS	Fluorine (F_2) 0-4 ppm (Fixed Scale)

MPD: Multi-Purpose Detector (mV) - UL/CSA (3/4 in. NPT)

Part Number	Description
MPD-UTCB1	XNX MPD UL/CSA catalytic bead Sensor 0-100% LEL
MPD-UTIF1	XNX MPD UL IR cartridge 0-100% LEL propane (C_3H_8) (flammables)
MPD-UTIV1	XNX MPD UL IR cartridge 0-100% LEL methane (CH_4)
MPD-UTIC1	XNX MPD UL/cUL IR cartridge carbon dioxide (CO_2) 0-5% VV

Note: When remote Mounting the MPD, Ferrite Bead (0060-1051) is required.

MPD: Multi-Purpose Detector (mV) - ATEX/IECEX (M25)

Part Number	Description
MPD-AMCB1	XNX MPD ATEX/IECEx catalytic bead Sensor 0-100% LEL
MPD-AMIF1	XNX MPD ATEX/IECEx IR cartridge 0-100% LEL propane (flammables)
MPD-AMIV1	XNX MPD ATEX/IECEx IR cartridge 0-100% LEL methane
MPD-AMIC1	XNX MPD ATEX/IECEx IR cartridge CO_2 0-5% VV

2. XNX
Universal Transmitter

2.3 XNX™ Accessories

XNX™ Accessories: For Use With All Versions of XNX

Part Number	Description
94000-A-1006	XNX Sunshade w/ Optima cut out
1226A0358	Pipe mount Kit
1226A0355	Ceiling mount bracket
S3KDMK	Duct mount Kit
1226A0354	Remote gassing Kit
2441-0022	UL/CSA aluminum 6 wire junction box assembly
2430-0021	UL/CSA aluminum 3 wire junction box assembly
00780-A-0100	ATEX/IECEx junction box assembly

XNX™ Accessories: For Use With MPD Catalytic and IR Cartridge Sensors

Part Number	Description
1226A0382	MPD interface adaptor (required with duct mount Kit for MPD) *Note: S3KDMK and 1226A0382 should be order together*
1226A0411	Calibration gas flow adaptor (for use with MPD)
02000-A-1645	Calibration gas flow adaptor (for use with Sensepoint Sensors)
00780-A-0035	Calibration gas flow adaptor (for use with 705 Sensors)
02000-A-1640	Weatherproof cap (for use with MPD and Sensepoint Sensors)
02000-A-1635	Weatherproof cap (for use with 705 Sensors)
02000-A-1642	Collecting cone (for use with MPD, Sensepoint and 705 Sensors)
0060-1051	Ferrite bead (for use with mV Sensors)

XNX™ Accessories: For Use With Toxic and Oxygen Sensors

Part Number	Description
S3KRMK	Remote EC Mounting Kit (50 Feet)
S3KRMK45	Remote EC Mounting Kit (150 Feet)
SPXCDWP	Enclosed weather protection housing with bump port
S3KWP	Weatherproof housing (for use with corrosives)
S3KCAL	Calibration gas flow adaptor (for use with EC Sensors)
SPXCDCC	Collecting cone for use with lighter than air gases Note: must be used with SPXCDWP weather protection housing.

Replacement Toxic and Oxygen Sensor Cartridges

Part Number	Description
XNXO1SS	Oxygen (O2) 0-25% v/v
XNXC1SS	Carbon monoxide (CO) 0-300 ppm (100 to 999 ppm, 100 ppm)
XNXH1SS	Hydrogen sulfide (H2S) 0-15 ppm (10 to 50 ppm, 1 ppm)
XNXH2SS	Hydrogen sulfide (H2S) 0-100 ppm (50 to 500 ppm, 10 ppm)
XNXH3SS	Hydrogen sulfide (H2S) 0-5 ppm (1.5 to 5 ppm, 0.1 ppm)
XNXL1SS	Chlorine (Cl2) 0-5.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)
XNXS1SS	Sulfur dioxide (SO2) 0-15.0 ppm (5.0 to 20.0 ppm, 5 ppm); 0-50.0 ppm (20.0 to 50.0 ppm, 10 ppm)
XNXX1SS	Chlorine dioxide (ClO2) 0-1.00 ppm
XNXM1SS	Nitric oxide (NO) 0-100 ppm
XNXN1SS	Nitrogen dioxide (NO2) 0-10.0 ppm (5.0 to 50.0 ppm, 5.0 ppm)
XNXG1SS	Hydrogen (H2) 0-1000 ppm

2. XNX

Universal Transmitter

Replacement Toxic and Oxygen Sensor Cartridges continued

Part Number	Description
XNXG2SS	Hydrogen (H2) 0-10,000 ppm
XNXA1SS	Ammonia (NH3) 0-200 ppm (50 to 200 ppm, 50 ppm)
XNXA2SS	Ammonia (NH3) 0-1000 ppm (200 to 1000 ppm, 50 ppm)
XNXP1SS	Phosphine (PH3) 0-1.2 ppm
XNXR1SS	Hydrogen chloride (HCl) 0-10 ppm (10 to 20 ppm, 1 ppm)
XNXY1SS	Hydrogen cyanide (HCN) 0-30.0 ppm
XNXF1SS	Hydrogen fluoride (HF) 0-12.0 ppm
XNXU1SS	Fluorine (F2) 0-4 ppm
XNXE1SS	Ethylene Oxide (EtO), 25.0ppm (user-selectable from 20.0ppm to 50.0ppm)
XNXZ1SS	Ozone (O3), 0.400ppm

Replaceable MPD Catalytic and IR Cartridges

Part Number	Description
1226A0359	Replacement catalytic bead Sensor 0-100% LEL
1226-0300	Replacement IR cartridge 0-100% LEL propane (C3H8) (flammables)
1226-0299	Replacement IR cartridge 0-100% LEL methane (CH4)
1226-0301	Replacement IR cartridge carbon dioxide (CO2) 0-5% VV

XNX™ Spares

Part Number	Description
1226-0257	M25 stopping plug with protective cap and O-ring (Stainless Steel)
1226-0258	3/4 in. NPT stopping plug with protective cap and O-ring (Stainless Steel)
0235-0238	Replacement O-ring for XNX front cover
1226A0302	Terminal block assembly 6-pin for XNX EC
1226A0304	Terminal block assembly 9-pin for XNX mV
1226A0305	IR terminal block assembly Kit includes: 9-pin and 2 pin blocks
1226A0306	Relay terminal block assembly Kit includes: 9-pin and 2-pin blocks
1226A0307	Terminal block assembly 10-pin for XNX Modbus
1226-0254	Magnetic wand/screwdriver
1226-0408	Small screwdriver (for use with relay board and IR personality board)
1226-0350	Sensor Retainer, includes set screw. (SS cover for EC sensor.)
1226A0303	Terminal block assembly 6-pin XNX Foundation Fieldbus

XNX™ PODs*

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

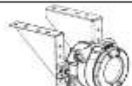*Terminal blocks are NOT included with PODs

2. XNX

Universal Transmitter

2.4 Calibration Kits and Components

XNX™ Calibration Kits and Components	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case	XNX Toxic Kit	998-100-004, S3KCAL, ZCALREG1 (.3 LPM), 998-100-003	XNXTOXKit
Tubing, flow adaptor, regulator, carrying case	XNX Toxic Kit (HCN, Cl2, HF, NH3, and HCl)		XNXTOXKIT2
Tubing, flow adaptor, regulator, carrying case	XNX Combustibles Kit	106459, 1226A0411, N600 1001 33 (.5 LPM), 998-100-003	XNXCOMBKit
XNX EC barrier service kit		1226A0057	1226A0368
3/4 inch EC potted assembly			1226A0369
Flow housing XNX S3K EC cell, teflon			SVIP3766-007
Flow housing XNX S3K MPD, IR, cat bead (500 cc/min flowrate)			SVIP3766-008

2.5 Accessory/Spare Images (For Reference)

Accessory/Spare		Part Number
	Pipe Mount Kit	1226A0358
	Remote EC Sensor Mounting Kit	S3KRMK
	Ceiling Mount Bracket Kit	1226A0355
	Duct Mount Kit	S3KDMK
	MPD Interface Adapter	1226A0382
	Calibration Gas Flow Adapter	1226A0411
		02000-A-1645
		00780-A-0035
	Calibration Cup	S3KCAL

Accessory/Spare		Part Number
	Weatherproof Cap	Included
		02000-A-1640
		02000-A-1640
		02000-A-1635
	Extreme Weather Protector	SPXCDWP
	Collecting Cone	S3KCC
		02000-A-1642
		02000-A-1642
		02000-A-1642
	Remote Gassing Kit	1226A0354
	Remote MPD Mounting	2441-0022
		00780-A0100

3. Sensepoint XRL
Bluetooth-Enabled Industrial Gas Transmitter

Sensepoint XRL is a fixed point gas leak detector that is designed to meet the needs of industrial applications. With over 50 years experience in gas leak detection, Honeywell offers a flexible range of highly-reliable sensing devices to meet those needs.

• Quick installation
• Rapid configuration
• Simple to operate
• Straightforward to maintain

Honeywell innovation enables customers to pair the gas detector with their mobile phone, and then use an app to perform many tasks related to installation, commissioning and maintenance.

reddot design award

iF DESIGN AWARD 2017

Bluetooth

GET IT ON Google Play

3.1 Instruments

Each Sensepoint XRL is supplied with registration sheet, 3/4 NPT or M20 metal stopping plug, Hex Allen key and quick start guide.
Sensepoint XRL is fully configurable via Bluetooth on your Android Smart Device.

NOTE: Chlorine (Cl$_2$) Versions are NOT suitable for use in Hazardous Locations

Sensepoint XRL, Bluetooth, Yellow, 4-20mA, cULus

Sensepoint XRL, Bluetooth, Yellow, 4-20mA, cULus	
Part Number	**Description**
SPLIO1BAXYNUZZ	SPXRL-BT-cULus-O$_2$ 25.0%VOL-mA-YEL
SPLIC1BAXYNUZZ	SPXRL-BT-cULus-CO 300ppm-mA-YEL
SPLIH1BAXYNUZZ	SPXRL-BT-cULus-H$_2$S 50ppm-mA-YEL
SPLIH2BAXYNUZZ	SPXRL-BT-cULus-H$_2$S 100ppm-mA-YEL
SPLIG1BAXYNUZZ	SPXRL-BT-cULus-H$_2$ 1000ppm-mA-YEL
SPLIN1BAXYNUZZ	SPXRL-BT-cULus-NO$_2$ 20.0ppm-mA-YEL
SPLIS1BAXYNUZZ	SPXRL-BT-cULus-SO$_2$ 50.0ppm-mA-YEL
SPLIF6BAXYNUZZ	SPXRL-BT-cULus-CH$_4$ 100%LEL-mA-YEL

Sensepoint XRL, Bluetooth, Charcoal Grey, 4-20mA, cULus

Sensepoint XRL, Bluetooth, Charcoal Grey, 4-20mA, cULus	
Part Number	**Description**
SPLIO1BAXCNUZZ	SPXRL-BT-cULus-O$_2$ 25.0%VOL-mA-CHR
SPLIC1BAXCNUZZ	SPXRL-BT-cULus-CO 300ppm-mA-CHR
SPLIH1BAXCNUZZ	SPXRL-BT-cULus-H$_2$S 50ppm-mA-CHR
SPLIH2BAXCNUZZ	SPXRL-BT-cULus-H$_2$S 100ppm-mA-CHR
SPLIG1BAXCNUZZ	SPXRL-BT-cULus-H$_2$ 1000ppm-mA-CHR
SPLIN1BAXCNUZZ	SPXRL-BT-cULus-NO$_2$ 20.0ppm-mA-CHR
SPLIS1BAXCNUZZ	SPXRL-BT-cULus-SO$_2$ 50.0ppm-mA-CHR
SPLIF6BAXCNUZZ	SPXRL-BT-cULus-CH$_4$ 100%LEL-mA-CHR

Sensepoint XRL, Bluetooth, Yellow, Modbus, cULus

Part Number	Description
SPLIO1BMXYNUZZ	SPXRL-BT-cULus-O_2 25.0%VOL-Modbus-YEL
SPLIC1BMXYNUZZ	SPXRL-BT-cULus-CO 300ppm-Modbus-YEL
SPLIH1BMXYNUZZ	SPXRL-BT-cULus-H_2S 50ppm-Modbus-YEL
SPLIH2BMXYNUZZ	SPXRL-BT-cULus-H_2S 100ppm-Modbus-YEL
SPLIG1BMXYNUZZ	SPXRL-BT-cULus-H_2 1000ppm-Modbus-YEL
SPLIN1BMXYNUZZ	SPXRL-BT-cULus-NO_2 20.0ppm-Modbus-YEL
SPLIS1BMXYNUZZ	SPXRL-BT-cULus-SO_2 50.0ppm-Modbus-YEL
SPLIF6BMXYNUZZ	SPXRL-BT-cULus-CH_4 100%LEL-Modbus-YEL

Sensepoint XRL, Bluetooth, Charcoal Grey, Modbus, cULus

Part Number	Description
SPLIO1BMXCNUZZ	SPXRL-BT-cULus-O_2 25.0%VOL-Modbus-CHR
SPLIC1BMXCNUZZ	SPXRL-BT-cULus-CO 300ppm-Modbus-CHR
SPLIH1BMXCNUZZ	SPXRL-BT-cULus-H_2S 50ppm-Modbus-CHR
SPLIH2BMXCNUZZ	SPXRL-BT-cULus-H_2S 100ppm-Modbus-CHR
SPLIG1BMXCNUZZ	SPXRL-BT-cULus-H_2 1000ppm-Modbus-CHR
SPLIN1BMXCNUZZ	SPXRL-BT-cULus-NO_2 20.0ppm-Modbus-CHR
SPLIS1BMXCNUZZ	SPXRL-BT-cULus-SO_2 50.0ppm-Modbus-CHR
SPLIF6BMXCNUZZ	SPXRL-BT-cULus-CH_4 100%LEL-Modbus-CHR

Sensepoint XRL, Bluetooth, Yellow, 4-20mA, ATEX/IECEx

Part Number	Description
SPLIO1BAXYMAZZ	SPXRL-BT-ATEX-O_2 25.0%VOL-mA-YEL
SPLIC1BAXYMAZZ	SPXRL-BT-ATEX-CO 300ppm-mA-YEL
SPLIH1BAXYMAZZ	SPXRL-BT-ATEX-H_2S 50ppm-mA-YEL
SPLIH2BAXYMAZZ	SPXRL-BT-ATEX-H_2S 100ppm-mA-YEL
SPLIG1BAXYMAZZ	SPXRL-BT-ATEX-H_2 1000ppm-mA-YEL
SPLIN1BAXYMAZZ	SPXRL-BT-ATEX-NO_2 20.0ppm-mA-YEL
SPLIS1BAXYMAZZ	SPXRL-BT-ATEX-SO_2 50.0ppm-mA-YEL
SPLIF6BAXYMAZZ	SPXRL-BT-ATEX-CH_4 100%LEL-mA-YEL

Sensepoint XRL, Bluetooth, Charcoal Grey, 4-20mA, ATEX/IECEx

Part Number	Description
SPLIO1BAXCMAZZ	SPXRL-BT-ATEX-O_2 25.0%VOL-mA-CHR
SPLIC1BAXCMAZZ	SPXRL-BT-ATEX-CO 300ppm-mA-CHR
SPLIH1BAXCMAZZ	SPXRL-BT-ATEX-H_2S 50ppm-mA-CHR
SPLIH2BAXCMAZZ	SPXRL-BT-ATEX-H_2S 100ppm-mA-CHR
SPLIG1BAXCMAZZ	SPXRL-BT-ATEX-H_2 1000ppm-mA-CHR
SPLIN1BAXCMAZZ	SPXRL-BT-ATEX-NO_2 20.0ppm-mA-CHR
SPLIS1BAXCMAZZ	SPXRL-BT-ATEX-SO_2 50.0ppm-mA-CHR
SPLIF6BAXCMAZZ	SPXRL-BT-ATEX-CH_4 100%LEL-mA-CHR

Sensepoint XRL, Bluetooth, Yellow, Modbus, ATEX/IECEx

Part Number	Description
SPLIO1BMXYMAZZ	SPXRL-BT-ATEX-O_2 25.0%VOL-Modbus-YEL
SPLIC1BMXYMAZZ	SPXRL-BT-ATEX-CO 300ppm-Modbus-YEL
SPLIH1BMXYMAZZ	SPXRL-BT-ATEX-H_2S 50ppm-Modbus-YEL
SPLIH2BMXYMAZZ	SPXRL-BT-ATEX-H_2S 100ppm-Modbus-YEL
SPLIG1BMXYMAZZ	SPXRL-BT-ATEX-H_2 1000ppm-Modbus-YEL
SPLIN1BMXYMAZZ	SPXRL-BT-ATEX-NO_2 20.0ppm-Modbus-YEL
SPLIS1BMXYMAZZ	SPXRL-BT-ATEX-SO_2 50.0ppm-Modbus-YEL
SPLIF6BMXYMAZZ	SPXRL-BT-ATEX-CH_4 100%LEL-Modbus-YEL

Sensepoint XRL, Bluetooth, Charcoal Grey, Modbus, ATEX/IECEx

Sensepoint XRL, Bluetooth, Charcoal Grey, Modbus, ATEX/IECEx	
Part Number	**Description**
SPLIO1BMXCMAZZ	SPXRL-BT-ATEX-O_2 25.0%VOL-Modbus-CHR
SPLIC1BMXCMAZZ	SPXRL-BT-ATEX-CO 300ppm-Modbus-CHR
SPLIH1BMXCMAZZ	SPXRL-BT-ATEX-H_2S 50ppm-Modbus-CHR
SPLIH2BMXCMAZZ	SPXRL-BT-ATEX-H_2S 100ppm-Modbus-CHR
SPLIG1BMXCMAZZ	SPXRL-BT-ATEX-H_2 1000ppm-Modbus-CHR
SPLIN1BMXCMAZZ	SPXRL-BT-ATEX-NO_2 20.0ppm-Modbus-CHR
SPLIS1BMXCMAZZ	SPXRL-BT-ATEX-SO_2 50.0ppm-Modbus-CHR
SPLIF6BMXCMAZZ	SPXRL-BT-ATEX-CH_4 100%LEL-Modbus-CHR

Sensepoint XRL, Bluetooth, Yellow, 4-20mA, Safe Area

Sensepoint XRL, Bluetooth, Yellow, 4-20mA, Safe Area (Not Suitable for Hazardous Locations)	
Part Number	**Description**
SPLRL1BAXYMNZZ	SPXRL-BT-M20 Safe Area-Cl_2 10.0ppm-mA-YEL
SPLRL1BAXYNNZZ	SPXRL-BT-NPT Safe Area-Cl_2 10.0ppm-mA-YEL

Sensepoint XRL, Bluetooth, Charcoal Grey, 4-20mA, Safe Area

Sensepoint XRL, Bluetooth, Charcoal Grey, 4-20mA, Safe Area (Not Suitable for Hazardous Locations)	
Part Number	**Description**
SPLRL1BAXCMNZZ	SPXRL-BT-M20 Safe Area-Cl_2 10.0ppm-mA-CHR
SPLRL1BAXCNNZZ	SPXRL-BT-NPT Safe Area-Cl_2 10.0ppm-mA-CHR

Sensepoint XRL, Bluetooth, Yellow, Modbus, Safe Area

Sensepoint XRL, Bluetooth, Yellow, Modbus, Safe Area (Not Suitable for Hazardous Locations)	
Part Number	**Description**
SPLRL1BMXYNNZZ	SPXRL-BT-M20 Safe Area-Cl_2 10.0ppm-Modbus-YEL
SPLRL1BMXYNNZZ	SPXRL-BT-NPT Safe Area-Cl_2 10.0ppm-Modbus-YEL

Sensepoint XRL, Bluetooth, Charcoal Grey, Modbus, Safe Area

Sensepoint XRL, Bluetooth, Charcoal Grey, Modbus, Safe Area (Not Suitable for Hazardous Locations)	
Part Number	**Description**
SPLRL1BMXCNNZZ	SPXRL-BT-M20 Safe Area-Cl_2 10.0ppm-Modbus-CHR
SPLRL1BMXCNNZZ	SPXRL-BT-NPT Safe Area-Cl_2 10.0ppm-Modbus-CHR

3.2 Accessories, Consumables & Spares

Accessories

Part Number	Description
SPXRLCAL	SPXRL-Calibration Cap
N600 1001 33	Regulator 715 0.5 LPM
998-100-004	Inert Tubing Tygon 3/16" ID X 5/16" OD
998-100-003	Carrying Case Cal Kit
SPXRLFLW	SPXRL-Flow Housing
SPXRLDMK	SPXRL-Duct Mount Kit
2308B0923	Pipe Mounting Bracket Kit
SPXCDWP	Sensepoint XRL optional weather protection
SPXCDCC	Collecting cone for use with lighter than air gases, must be used with SPXCDWP

Consumables (Modules and Spare Sensors)

Part Number	Description
SPXRLMAO1U	SPXRL-Module Set-cULus-mA - O_2
SPXRLMAC1U	SPXRL-Module Set-cULus-mA - CO
SPXRLMAH1U	SPXRL-Module Set-cULus-mA - H_2S Low Range
SPXRLMAH2U	SPXRL-Module Set-cULus-mA - H_2S High Range
SPXRLMAG1U	SPXRL-Module Set-cULus-mA - H_2
SPXRLMAS1U	SPXRL-Module Set-cULus-mA - SO2
SPXRLMAL1U	SPXRL-Module Set-cULus-mA - Cl2
SPXRLMAN1U	SPXRL-Module Set-cULus-mA - NO_2
SPXRLMAF1U	SPXRL-Module Set-cULus-mA - Flammable Cat
SPXRLMMO2U	SPXRL-Module Set-cULus-Modbus - O_2
SPXRLMMC1U	SPXRL-Module Set-cULus-Modbus - CO
SPXRLMMH1U	SPXRL-Module Set-cULus-Modbus - H_2S Low Range
SPXRLMMH2U	SPXRL-Module Set-cULus-Modbus - H_2S High Range
SPXRLMMG1U	SPXRL-Module Set-cULus-Modbus - H_2
SPXRLMMN1U	SPXRL-Module Set-cULus-Modbus - NO_2
SPXRLMMS1U	SPXRL-Module Set-cULus-Modbus - SO_2
SPXRLMML1U	SPXRL-Module Set-cULus-Modbus - Cl_2
SPXRLMMF1U	SPXRL-Module Set-ATEX/IECEx-mA - SO2
SPXRLMAO1A	SPXRL-Module Set-ATEX/IECEx-mA - O_2
SPXRLMAC1A	SPXRL-Module Set-ATEX/IECEx-mA - CO
SPXRLMAH1A	SPXRL-Module Set-ATEX/IECEx-mA - H_2S Low Range
SPXRLMAH2A	SPXRL-Module Set-ATEX/IECEx-mA - H_2S High Range
SPXRLMAG1A	SPXRL-Module Set-ATEX/IECEx-mA - H_2
SPXRLMAN1A	SPXRL-Module Set-ATEX/IECEx-mA - NO_2
SPXRLMAS1A	SPXRL-Module Set-ATEX/IECEx-mA - SO2
SPXRLMAF1A	SPXRL-Module Set-ATEX/IECEx-mA - Flammable Cat
SPXRLMAL1A	SPXRL-Module Set-ATEX/IECEx-mA - Cl2
SPXRLMMO2A	SPXRL-Module Set-ATEX/IECEx-Modbus - O_2
SPXRLMMC1A	SPXRL-Module Set-ATEX/IECEx-Modbus - CO
SPXRLMMH1A	SPXRL-Module Set-ATEX/IECEx-Modbus - H_2S Low Range
SPXRLMMH2A	SPXRL-Module Set-ATEX/IECEx-Modbus - H_2S High Range
SPXRLMMG1A	SPXRL-Module Set-ATEX/IECEx-Modbus - H_2
SPXRLMMN1A	SPXRL-Module Set-ATEX/IECEx-Modbus - NO_2
SPXRLMMS1A	SPXRL-Module Set-ATEX/IECEx-Modbus - SO_2
SPXRLMML1A	SPXRL-Module Set-ATEX/IECEx-Modbus - Cl_2
SPXRLMMF1A	SPXRL-Module Set-ATEX/IECEx-Modbus - Flammable Cat
SPXZZRLF6SS	SPXRL-Replacement Sensor - Flammable Cat
SPXCLZZO1SS	Sensepoint XCL/XRL Replacement Sensor - O_2
SPXCLRLC1SS	Sensepoint XCL/XRL Replacement Sensor - CO
SPXCLRLH1SS	Sensepoint XCL/XRL Replacement Sensor - H_2S (Low and High Range)
SPXCLRLG1SS	Sensepoint XCL/XRL Replacement Sensor - H_2
SPXCLRLN1SS	Sensepoint XCL/XRL Replacement Sensor - NO_2
SPXZZRLS1SS	Sensepoint XRL Replacement Sensor - SO_2
SPXZZRLL1SS	Sensepoint XRL Replacement Sensor - Cl_2

Spares (Miscellaneous)

Part Number	Description
SPXRLSK1	SPXRL-Service Kit 2
SPXRLSCP	SPXRL-Sensor Cover Spare
SPXRLSCC	SPXRL-Sensor Trim Ring Spare-CHR
SPXRLSCY	SPXRL-Sensor Trim Ring Spare-YEL
SPXRLCOV	SPXRL-Top Cover Spare
SPXRLSPN	SPXRL-Stopping Plug-3/4" NPT
SPXRLSPM	SPXRL-Stopping Plug-M20

4. Sensepoint XCD

Industrial Gas Transmitter with Display

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 magnetic 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
• Global approvals for US, Canada, Latin America, Europe, China, Korea, and more
• Compliant with UL, INMETRO, ATEX, IECEx, CSA, KTL, PA, GB and CCCF standards

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

Easy to Use
• User friendly and intuitive tri-color backlit display with digits, bar graph and icons
• Fully configurable via magnetic switches
• Selectable sink or source 4-20 mA output
• Auto-inhibit during maintenance
• Modbus RTU communications for remote diagnostics/configuration

Product	Enclosure Material	Entry	Gas Range
Sensepoint XCD	L: LM25 S: Stainless Steel	M: M20 N: 3/4" NPT	X: User Adjustable 1: Fixed

S P X C D U L N F X M

Certification	Sensor Type	Communication
A: ATEX/IEC Ex U: UL/CSA/In metro	F: Flammable Catalytic Bead R: Flammable IR CH4 %LEL O: Oxygen H: Hydrogen Sulfide C: Carbon Monoxide G: Hydrogen P: Flammable IR Propane %LEL B: Carbon Dioxide IR 0-2.00%Vol N: Nitrogen Dioxide	M: Modbus RTU

4.1 INSTRUMENT

UL/c-UL/INMETRO Approvals (LM25)	
Part Number	Description
SPXCDULNFX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes catalytic sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDULNRX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes infrared methane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDULNPX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes infrared propane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDULNO1	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes oxygen EC sensor cartridge 0 to 25% v/v, includes nylon weather protection
SPXCDULNHX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes hydrogen sulfide EC sensor cartridge 0 to 50ppm, user selectable FSD between 10 and 100ppm (1 ppm resolution), includes nylon weather protection
SPXCDULNCX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes carbon monoxide EC sensor cartridge 0 to 300ppm, user selectable FSD between 100 and 1000ppm (100 ppm resolution), includes nylon weather protection
SPXCDULNNX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes nitrogen dioxide EC sensor cartridge 0 to 10ppm, user selectable FSD between 10 and 50ppm (5 ppm resolution), includes nylon weather protection
SPXCDULNG1	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes hydrogen EC sensor cartridge 0 to 1000ppm, includes nylon weather protection
SPXCDULNB1	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes infrared carbon dioxide sensor cartridge 0 to 2.0% v/v, includes nylon weather protection
SPXCDULNB2	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes infrared carbon dioxide sensor cartridge 0 to 5.0% v/v, includes nylon weather protection

UL/c-UL/INMETRO Approvals (LM25) with Modbus	
Part Number	Description
SPXCDULNFXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes
SPXCDULNRXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes infrared methane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDULNPXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes infrared propane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDULNO1M	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes oxygen EC sensor cartridge 0 to 25% v/v, includes nylon weather protection
SPXCDULNHXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes hydrogen sulfide EC sensor cartridge 0 to 50ppm, user selectable FSD between 10 and 100ppm (1 ppm resolution), includes nylon weather protection
SPXCDULNCXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes carbon monoxide EC sensor cartridge 0 to 300ppm, user selectable FSD between 100 and 1000ppm (100 ppm resolution), includes nylon weather protection
SPXCDULNNXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes nitrogen dioxide EC sensor cartridge 0 to 10ppm, user selectable FSD between 10 and 50ppm (5 ppm resolution), includes nylon weather protection
SPXCDULNG1M	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes hydrogen EC sensor cartridge 0 to 1000ppm, includes nylon weather protection
SPXCDULNB1M	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes infrared carbon dioxide sensor cartridge 0 to 2.0% v/v, includes nylon weather protection
SPXCDULNB2M	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted LM25, includes infrared carbon dioxide sensor cartridge 0 to 5.0% v/v, includes nylon weather protection

UL/c-UL/INMETRO Approvals (316SS)

Part Number	Description
SPXCDUSNFX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes catalytic
SPXCDUSNRX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes infrared
SPXCDUSNPX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes infrared propane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDUSNO1	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes oxygen EC sensor cartridge 0 to 25% v/v, includes nylon weather protection
SPXCDUSNHX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes hydrogen sulfide EC sensor cartridge 0 to 50ppm, user selectable FSD between 10 and 100ppm (1 ppm resolution), includes nylon weather protection
SPXCDUSNCX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes carbon monoxide EC sensor cartridge 0 to 300ppm, user selectable FSD between 100 and 1000ppm (100 ppm resolution), includes nylon weather protection
SPXCDUSNNX	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes nitrogen dioxide EC sensor cartridge 0 to 10ppm, user selectable FSD between 10 and 50ppm (5 ppm resolution), includes nylon weather protection
SPXCDUSNG1	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes hydrogen EC sensor cartridge 0 to 1000ppm, includes nylon weather protection
SPXCDUSNB1	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes infrared carbon dioxide sensor cartridge 0 to 2.0% v/v, includes nylon weather protection
SPXCDUSNB2	XCD Gas Detector, 4 to 20 mA output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes infrared carbon dioxide sensor cartridge 0 to 5.0% v/v, includes nylon weather protection

UL/c-UL/INMETRO Approvals (316SS) with Modbus

Part Number	Description
SPXCDUSNFXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes
SPXCDUSNRXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes infrared methane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDUSNPXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes infrared propane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDUSNO1M	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes oxygen EC sensor cartridge 0 to 25% v/v, includes nylon weather protection
SPXCDUSNHXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes hydrogen sulfide EC sensor cartridge 0 to 50ppm, user selectable FSD between 10 and 100ppm (1 ppm resolution), includes nylon weather protection
SPXCDUSNCXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes carbon monoxide EC sensor cartridge 0 to 300ppm, user selectable FSD between 100 and 1000ppm (100 ppm resolution), includes nylon weather protection
SPXCDUSNNXM	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes nitrogen dioxide EC sensor cartridge 0 to 10ppm, user selectable FSD between 10 and 50ppm (5 ppm resolution), includes nylon weather protection
SPXCDUSNG1M	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes hydrogen EC sensor cartridge 0 to 1000ppm, includes nylon weather protection
SPXCDUSNB1M	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes infrared carbon dioxide sensor cartridge 0 to 2.0% v/v, includes nylon weather protection
SPXCDUSNB2M	XCD Gas Detector, 4 to 20 mA and Modbus output, UL/c-UL/INMETRO, 2 x 3/4" NPT entries, painted 316SS, includes infrared carbon dioxide sensor cartridge 0 to 5.0% v/v, includes nylon weather protection

ATEX/IECEx/Asian Approvals (LM25)

Part Number	Description
SPXCDALMFX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes catalytic sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDALMRX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes infrared methane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDALMPX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes infrared propane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection

Part Number	Description
SPXCDALMO1	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes oxygen EC sensor cartridge 0 to 25% v/v, includes nylon weather protection
SPXCDALMHX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes hydrogen sulfide EC sensor cartridge 0 to 50ppm, user selectable FSD between 10 and 100ppm (1 ppm resolution), includes nylon weather protection
SPXCDALMCX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes carbon monoxide EC sensor cartridge 0 to 300ppm, user selectable FSD between 100 and 1000ppm (100 ppm resolution), includes nylon weather protection
SPXCDALMNX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes nitrogen dioxide EC sensor cartridge 0 to 10ppm, user selectable FSD between 10 and 50ppm (5 ppm resolution), includes nylon weather protection
SPXCDALMG1	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes hydrogen EC sensor cartridge 0 to 1000ppm, includes nylon weather protection
SPXCDALMB1	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes infrared carbon dioxide sensor cartridge 0 to 2.0% v/v, includes nylon weather protection
SPXCDALMB2	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes infrared carbon dioxide sensor cartridge 0 to 5.0% v/v, includes nylon weather protection

ATEX/IECEx/Asian Approvals (LM25) WITH Modbus

Part Number	Description
SPXCDALMFXM	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes catalytic sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDALMRXM	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes infrared methane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDALMPXM	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes infrared propane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDALMO1M	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes oxygen EC sensor cartridge 0 to 25% v/v, includes nylon weather protection
SPXCDALMHXM	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes hydrogen sulfide EC sensor cartridge 0 to 50ppm, user selectable FSD between 10 and 100ppm (1 ppm resolution), includes nylon weather protection
SPXCDALMCXM	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes carbon monoxide EC sensor cartridge 0 to 300ppm, user selectable FSD between 100 and 1000ppm (100 ppm resolution), includes nylon weather protection
SPXCDALMG1M	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes hydrogen EC sensor cartridge 0 to 1000ppm, includes nylon weather protection
SPXCDALMB1M	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes infrared carbon dioxide sensor cartridge 0 to 2.0% v/v, includes nylon weather protection
SPXCDALMB2M	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted LM25, includes infrared carbon dioxide sensor cartridge 0 to 5.0% v/v, includes nylon weather protection

ATEX/IECEx/China Approvals (316SS)

Part Number	Description
SPXCDASMFX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes catalytic sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDASMRX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes infrared methane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDASMPX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes infrared propane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDASMO1	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes oxygen EC sensor cartridge 0 to 25% v/v, includes nylon weather protection
SPXCDASMHX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes hydrogen sulfide EC sensor cartridge 0 to 50ppm, user selectable FSD between 10 and 100ppm (1 ppm resolution), includes nylon weather protection

Part Number	Description
SPXCDASMCX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes carbon monoxide EC sensor cartridge 0 to 300ppm, user selectable FSD between 100 and 1000ppm (100 ppm resolution), includes nylon weather protection
SPXCDASMNX	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes nitrogen dioxide EC sensor cartridge 0 to 10ppm, user selectable FSD between 10 and 50ppm (5 ppm resolution), includes nylon weather protection
SPXCDASMG1	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes hydrogen EC sensor cartridge 0 to 1000ppm, includes nylon weather protection
SPXCDASMB1	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes infrared carbon dioxide sensor cartridge 0 to 2.0% v/v, includes nylon weather protection
SPXCDASMB2	XCD Gas Detector, 4 to 20 mA output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes infrared carbon dioxide sensor cartridge 0 to 5.0% v/v, includes nylon weather protection

ATEX/IECEx/Asian Approvals (316SS) with Modbus

Part Number	Description
SPXCDASMFXM	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes catalytic sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDASMRXM	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes infrared methane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDASMPXM	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes infrared propane sensor cartridge 0 to 100%LEL, user selectable FSD between 20% and 100%LEL (10%LEL resolution), includes nylon weather protection
SPXCDASMO1M	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes oxygen EC sensor cartridge 0 to 25% v/v, includes nylon weather protection
SPXCDASMHXM	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes hydrogen sulfide EC sensor cartridge 0 to 50ppm, user selectable FSD between 10 and 100ppm (1 ppm resolution), includes nylon weather protection
SPXCDASMCXM	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes carbon monoxide EC sensor cartridge 0 to 300ppm, user selectable FSD between 100 and 1000ppm (100 ppm resolution), includes nylon weather protection
SPXCDASMG1M	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes hydrogen EC sensor cartridge 0 to 1000ppm, includes nylon weather protection
SPXCDASMB1M	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes infrared carbon dioxide sensor cartridge 0 to 2.0% v/v, includes nylon weather protection
SPXCDASMB2M	XCD Gas Detector, 4 to 20 mA and Modbus output, ATEX/IECEx/Asian approvals, 2 x M20 entries, painted 316SS, includes infrared carbon dioxide sensor cartridge 0 to 5.0% v/v, includes nylon weather protection

4.2 Accessories

Part Number	Description
Sensepoint XCD Accessoies	
S3KCAL	Calibration cap
SPXCDCC	Collecting cone for use with lighter than air gases, must be used with SPXCDWP
SPXCDDMK	Duct mounting kit
SPXCDMTBR	Mounting bracket (inc. bolts, nuts, brackets) for horizontal or vertical pipe, 1.6" to 3.1"
SPXCDSDP	Sunshade / deluge protection for use with XCD, XCD RFD, XCD RTD, S3K

4.3 Sensepoint XCD Transmitter ONLY

Part Number	Description
Sensepoint XCD Transmitter ONLY (without Sensor)	
SPXCDULNTXT	Sensepoint XCD Toxic Tx, UL, LM25
SPXCDULNTXTM	Sensepoint XCD Toxic Tx, UL, LM25, ModBus
SPXCDULNTXF	Sensepoint XCD Flam and IR Tx, UL, LM25,
SPXCDULNTXFM	Sensepoint XCD Flam and IR Tx, UL, LM25, Modbus
SPXCDUSNTXT	Sensepoint XCD Toxic Tx, UL, SS316
SPXCDUSNTXTM	Sensepoint XCD Toxic Tx, UL, SS316, ModBus
SPXCDUSNTXF	Sensepoint XCD Flam and IR Tx, UL, SS316
SPXCDUSNTXFM	Sensepoint XCD Flam and IR Tx, UL, SS316, Modbus

4.4 Sensepoint Replacement Toxic, Flammable and Oxygen Cartridges

Part Number	Description
Sensepoint XCD Replacement Toxic, Flammable and Oxygen Cartridges	
SPXCDXSFXSS	Flammable CAT 0-100%LEL (20 to 100%LEL, 10%LEL)
SPXCDXSRXSS	Methane IR 0-100%LEL (20 to 100%LEL, 10%LEL)
SPXCDXSO1SS	Oxygen 25.0% v/v only
SPXCDXSHXSS	Hydrogen Sulfide 0-50ppm (10.0 to 100.0ppm, 1ppm)
SPXCDXSCXSS	Carbon Monoxide 0-300ppm (100 to 1000ppm, 100ppm)
SPXCDXSNXSS	Nitrogen Dioxide 0-10ppm (10.0 to 50.0ppm, 5ppm)
SPXCDXSG1SS	Hydrogen 0-1000ppm only
SPXCDXSPXSS	Propane IR 0-100%LEL (20 to 100%LEL, 10%LEL)
SPXCDXSB1SS	Carbon Dioxide IR 0-2.00% v/v only
SPXCDXSB2SS	Carbon Dioxide IR 0-5.00% v/v only

4.5 Spares

Part Number	Description
Transmitter Spares	
SPXCDWP	Sensepoint XCD standard weather protection
SPXCDSRLS	Sensor retainer with locking screw
SPXCDAKS	Allen key for stopper
SPXCDHWES	Hex wrench for earth screw
SPXCDEBS	Earth bracket and screws
SPXCDMAG	Magnetic wand

4.6 Spares (Replacement Display Module)

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	
Part Number	**Description**
SPXCDDMT	Replacement display module for oxygen (O2) & toxic
SPXCDDMF	Replacement display module for FL & IR
SPXCDDMTM	Replacement display module (O2 & Toxic) with MODBUS
SPXCDDMFM	Replacement display module (FL & IR) with MODBUS

4.7 Spares (Replacement Terminal Module)

Each replacement terminal module includes pre-configured PCB (for Sensor and range), terminals, screws, 'U' clamp, plastic cover and fixing screws.

Replacement Power Module	
Part Number	**Description**
SPXCDTMF12	Replacement terminal module Cat&IR, 12-32 Vdc
SPXCDTMO12	Replacement terminal module O2, 12-32 Vdc
SPXCDTMT12	Replacement terminal moduel Toxic, 12-32 Vdc

4.8 Calibration Kits and Components

Part Number	Product
XCDTOXKit	XCD Toxic Kit*
XCDCOMBKit	XCD Combustibles Kit
XCDRTDKit	XCD RTD
XCDRFDKit	XCD RFD

XCDTOXKit should be used with XCD-Flammable IR

XCD Accessories

Part Number	Description
S3KCAL	Calibration cup (flow adapter) for Series 3000 and XNX EC toxic sensors
SPXCDCC	Collecting cone for use with lighter than air gases
SPXCDDMK	Duct mounting kit
SPXCDMTBR	Mounting bracket (inc. bolts, nuts, brackets)
SPXCDSDP	Sunshade / Deluge Protection
00780-A-0100	Honeywell Junction Box- Bartec OTB122 With Continuity Pl y

Calibration Cup
S3KCAL

Collecting Cone
SPXCDCC

Duct Mounting Kit
SPXCDDMK

Mounting Bracket
SPXCDMTBR

Sunshade / Deluge Protection
SPXCDSDP

Honeywell Junction Box
00780-A-0100

Legend	Part	Order Number	Description
1			O-ring front cover (2 pieces)
5			Terminal module screw (3 pieces)
7			Earth screw and bracket (2 pieces)
9	XCD Service Kit	SPXCDSERVK	O-ring weather housing
10			O-ring cartridge retainer (2 pieces)
11			O-ring on the cartridge (2 pieces)
15			Locking screw for front cover and sensor retainer (2 pieces)
16			Magnet (1 piece)
17	XCD Service Tool Kit	SPXCDTOOLK	Hex wrench for earth screw (1 piece)
18			Allen key for locking screws (1 piece)

2	Display Module	SPXCDDMF	Replacement display module for FLAM and IR
		SPXCDDMT	Replacement display module for O2 & Toxic
		SPXCDDMFM	Replacement display module FLAM and IR with Modbus
		SPXCDDMTM	Replacement display module O2 & Toxic with Modbus
		SPXCDDMFM12	Replacement display module FLAM and IR with Modbus, 12V version
		SPXCDDMTM12	Replacement display module O2 & Toxic with Modbus, 12V version
		SPXCDDMR	Replacement display module XCD RFD Flam & IR
		SPXCDDMRM	Replacement display module XCD RFD Flam & IR, Modbus
		SPXCDDM4	Replacement display module XCD RTD Toxic & O2
		SPXCDDM4M	Replacement display module XCD RTD Toxic & O2, Modbus
3	XCD Terminals Kit	SPXCDTMK	Terminal block for relays (green)
4			Terminal block power & signal (green)
6	Terminal Module (including the terminals: Legend-3 and -4)	SPXCDTMF	Replacement terminal module for FLAM and IR
		SPXCDTMO	Replacement terminal module for O2
		SPXCDTMT	Replacement terminal module for Toxic
		SPXCDTMF12	Replacement terminal module for FLAM and IR, 12V version
		SPXCDTMO12	Replacement terminal module for O2, 12V version
		SPXCDTMT12	Replacement terminal module for Toxic, 12V version
		SPXCDTMR	Replacement terminal Module XCD RFD
		SPXCDTM4	Replacement terminal module XCD RTD
8	Blanking Plug	SPXCDNPTP	3/4"NPT plug (Certified as part of Ex d enclosure)
		SPXCDM20P	M20 plug (Certified as part of Ex d enclosure)
12	Sensor Cartridge	Please see "Replacement Sensor Cartridges" part of	
13	Cartridge Retainer	SPXCDSRLS	Cartridge retainer with locking screw
14	Weather Proof Cap	SPXCDWP	Weather proof cap
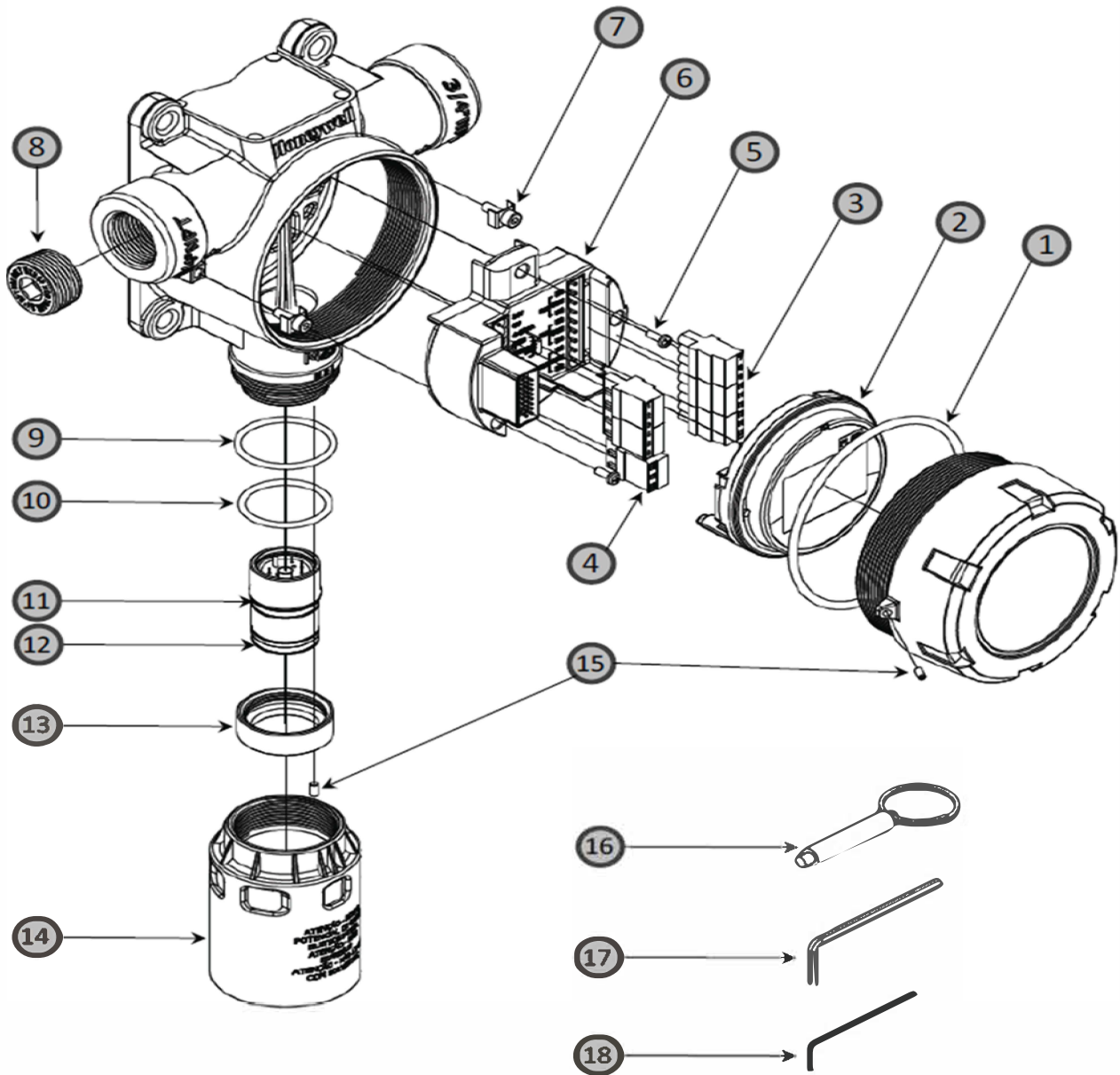
5. Sensepoint XCD RFD

Remote Flammable Transmitter

*LEL (*1–*8)*

The Sensepoint RFD is a remote flammable detection system for LEL monitoring applications. The XCD RFD combines the XCD transmitter with the 705 combustible 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, with optional Modbus RTU. 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" 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" 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
Certifications
 - cCSAus approved for Class I, Division 1, Groups B, C & D Hazardous Locations.
 - Performance approved to the following standards; C22.2-152, ANSI/ISA 121301

Transmitter Display   705 Sensor

Sensor Fitted to Remote Junction Box

5.1 Sensepoint XCD RFD Transmitter

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

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

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

Note: Transmitter Only - Order Sensor Separately.

Part Number	Description
SPXCDASMRFD	ATEX/IECEX & AP approved SP XCD RFD Transmitter with 316SS
SPXCDALMRFD	ATEX/IECEX & AP approved SP XCD RFD Transmitter with LM25
SPXCDASMRFDM	ATEX/IECEX & AP approved SP XCD RFD Transmitter, 316SS, 2x M20 and 1x M25 entries, with Modbus
SPXCDALMRFDM	ATEX/IECEX & AP approved SP XCD RFD Transmitter, LM25, 2x M20 and 1x M25 entries, with Modbus

5. Sensepoint XCD RFD

Remote Flammable Transmitter

5.2 Sensors

Sensors	
Part Number	**Description**
00705-A-1733	705 combustible sensor - aluminum - cat bead (SG16B) 0-100% LEL
00705-A-1735	705 high temperature combustible sensor - 150°C - UL / 3/4 in. NPT threads
SPXCDXSRFXSS	Sensepoint XCD RFD remote plug-in sensor and socket, flammable CAT 0-100%LEL, ATEX only
SPXCDXSRRXSS	Sensepoint XCD RFD remote plug-in sensor and socket, Methane IR 0-100%LEL, ATEX only
SPXCDXSRPXSS	Sensepoint XCD RFD remote plug-in sensor and socket, Propane IR 0-100%LEL, ATEX only
SPXCDXSRB1SS	Sensepoint XCD RFD remote plug-in sensor and socket, Carbon Dioxide IR 0-2.00%VOL only, ATEX only
2106B1202	Sensepoint 0-100% LEL combustible sensor

5.3 Kits

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

5.4 Accessories

Kits	
Part Number	**Description**
SPXCDMTBR	Pipe Mounting bracket (inc. fixings and hex wrench set) for horizontal or vertical pipe, 1.6" to 3.1"
SPXCDSDP	Sunshade / deluge protection
00780-A-0076	Weather protection stainless steel for 705 HT
02000-A-1640	Nylon weather protection for combustible Sensor
02000-A-1635	Weather protection housing
1283-1047	Duct mount adaptor assembly (requires 1283-1084)
1283-1084	Sensepoint adaptor interface Kit (requires 1283-1047)
00780-A-0035	Calibration gas flow adaptor (for use with 705 Sensors)

5.5 Spares

Spares	
Part Number	**Description**
SPXCDDMR	XCD RFD Flam & IR Display Module
SPXCDDMRM	XCD RFD Flam & IR ModBus Display Module
SPXCDTMR	XCD RFD Replacement Terminal Module

6. 705

Combustible Gas Detector

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

Approvals
• CSA & UL approved
(705 HT UL only)

6.1 INSTRUMENT

705 Combustible Gas Sensor Kit

Part Number	Description
2430K0001	705 Flammable Detector, SG16B Junction Box, WP

Note: Uses 00705-A-1733 sensor, and 2430-0021 3 wire junction box

6.2 ACCESSORIES

Accessories

Part Number	Description
2441-0022	UL/CSA Aluminium Junction Box Assembly
02000-A-1640	Weatherproof cap for use with combustible detector including remote gassing nozzle (for Sensepoint, Satellite (with adapter) and XNX MPD)
00780-A-0035	Flow Housing (full stainless steel, for high temp applications)
00780-A-0076	Stainless steel weather housing for Sensepoint HT or 705 HT (for use with in high temperature applications or with duct mounting kits)
02000-A-1635	Weatherproof cap for use with toxic detector including remote gassing nozzle (for Sensepoint, Satellite (with adapter) and XNX MPD)
02000-A-1642	Collecting cone for use with flammable detector (for Sensepoint, Satellite (with adapter) and XNX MPD)
1283-1047	Duct mount adaptor assembly (requires 1283-1084)
1283-1084	Sensepoint adaptor interface Kit (requires 1283-1047)
705CALKIT	Calibration Kit: Tubing, flow adaptor, regulator, carrying case Contains: 998-100-004, 00780-A-0035, 998-100-012 (1.5LPM) and 998-100-003

6.3 SPARES

Spares

Part Number	Description
00705-A-1733	705 Flammable Detector- Aluminium- UL- 3/4NPT- 0-100% LEL
00705-A-1735	705 High Temperature Flammable Detector - Aluminum - 150°C/302°F - UL - 3/4NPT

7. Sensepoint XCD RTD
Remote Toxic Detector

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 away 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 T85ºC Db, IP66, -40ºC < ta < +65ºC

Gain Added Flexibility, Reliability and Performance

- 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

- Optional Modbus RTU communications for remote configuration

Sensor Fitted to Remote Junction Box

Note: Conduit and fittings not included

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7. Sensepoint XCD RTD

Remote Toxic Detector

7.1 Instrument

Sensepoint XCD RTD: Class I, Div. 2 Explosion Proof Transmitter 4-20 mA, 3 Relays) and Sensepoint Toxic Sensor

Part Number	Description
SPXCDULNO2	Oxygen (O2) 0-25% v/v, aluminum enclosure
SPXCDUSNO2	Oxygen (O2) 0-25% v/v, stainless steel enclosure
SPXCDULNO2M	Oxygen (O2) 0-25% v/v, aluminum enclosure, Modbus
SPXCDUSNO2M	Oxygen (O2) 0-25% v/v, stainless steel enclosure, Modbus
SPXCDULNH2	Hydrogen sulfide (H2S) 0-50 ppm, aluminum enclosure
SPXCDUSNH2	Hydrogen sulfide (H2S) 0-50 ppm, stainless steel enclosure
SPXCDULNH2M	Hydrogen sulfide (H2S) 0-50 ppm, aluminum enclosure, Modbus
SPXCDUSNH2M	Hydrogen sulfide (H2S) 0-50 ppm, stainless steel enclosure, Modbus
SPXCDULNC2	Carbon monoxide (CO) 0-200 ppm, aluminum enclosure
SPXCDUSNC2	Carbon monoxide (CO) 0-200 ppm, stainless steel enclosure
SPXCDULNC2M	Carbon monoxide (CO) 0-200 ppm, aluminum enclosure, Modbus
SPXCDUSNC2M	Carbon monoxide (CO) 0-200 ppm, stainless steel enclosure, Modbus
SPXCDULNG2	Hydrogen (H2) 0-1,000 ppm, aluminum enclosure
SPXCDUSNG2	Hydrogen (H2) 0-1,000 ppm, stainless steel enclosure
SPXCDULNG2M	Hydrogen (H2) 0-1,000 ppm, aluminum enclosure, Modbus
SPXCDUSNG2M	Hydrogen (H2) 0-1,000 ppm, stainless steel enclosure, Modbus
SPXCDULNN2	Nitrogen dioxide (NO2) 0-10 ppm, aluminum enclosure
SPXCDUSNN2	Nitrogen dioxide (NO2) 0-10 ppm, stainless steel enclosure
SPXCDULNN2M	Nitrogen dioxide (NO2) 0-10 ppm, aluminum enclosure, Modbus
SPXCDUSNN2M	Nitrogen dioxide (NO2) 0-10 ppm, aluminum enclosure, Modbus
SPXCDULNA2	Ammonia (NH3) 0-50 ppm, aluminum enclosure
SPXCDUSNA2	Ammonia (NH3) 0-50 ppm, stainless steel enclosure
SPXCDULNA2M	Ammonia (NH3) 0-50 ppm, aluminum enclosure, Modbus
SPXCDUSNA2M	Ammonia (NH3) 0-50 ppm, stainless steel enclosure, Modbus
SPXCDULNL2	Chlorine (Cl2) 0-5 ppm, aluminum enclosure
SPXCDUSNL2	Chlorine (Cl2) 0-5 ppm, stainless steel enclosure
SPXCDULNL2M	Chlorine (Cl2) 0-5 ppm, aluminum enclosure, Modbus
SPXCDUSNL2M	Chlorine (Cl2) 0-5 ppm, stainless steel enclosure, Modbus
SPXCDULNS2	Sulfur dioxide (SO2) 0-15 ppm, aluminum enclosure
SPXCDUSNS2	Sulfur dioxide (SO2) 0-15 ppm, stainless steel enclosure
SPXCDULNS2M	Sulfur dioxide (SO2) 0-15 ppm, aluminum enclosure, Modbus
SPXCDUSNS2M	Sulfur dioxide (SO2) 0-15 ppm, stainless steel enclosure, Modbus
SPXCDULND2	Nitric oxide (NO) 0-100 ppm, aluminum enclosure
SPXCDUSND2	Nitric oxide (NO) 0-100 ppm, stainless steel enclosure
SPXCDULND2M	Nitric oxide (NO) 0-100 ppm, aluminum enclosure, Modbus
SPXCDUSND2M	Nitric oxide (NO) 0-100 ppm, stainless steel enclosure, Modbus

7. Sensepoint XCD RTD

Remote Toxic Detector

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

Part Number	Description
SPXCDULNO2R	Oxygen (O2) 0-25%, aluminum enclosure
SPXCDUSNO2R	Oxygen (O2) 0-25%, stainless steel enclosure
SPXCDULNO2RM	Oxygen (O2) 0-25%, aluminum enclosure, Modbus
SPXCDUSNO2RM	Oxygen (O2) 0-25%, stainless steel enclosure, Modbus
SPXCDULNH2R	Hydrogen sulfide (H2S) 0-50 ppm, aluminum enclosure
SPXCDUSNH2R	Hydrogen sulfide (H2S) 0-50 ppm, stainless steel enclosure
SPXCDULNH2RM	Hydrogen sulfide (H2S) 0-50 ppm, aluminum enclosure, Modbus
SPXCDUSNH2RM	Hydrogen sulfide (H2S) 0-50 ppm, stainless steel enclosure, Modbus
SPXCDULNC2R	Carbon monoxide (CO) 0-200 ppm, aluminum enclosure
SPXCDUSNC2R	Carbon monoxide (CO) 0-200 ppm, stainless steel enclosure
SPXCDULNC2RM	Carbon monoxide (CO) 0-200 ppm, aluminum enclosure, Modbus
SPXCDUSNC2RM	Carbon monoxide (CO) 0-200 ppm, stainless steel enclosure, Modbus
SPXCDULNG2R	Hydrogen (H2) 0-1,000 ppm, aluminum enclosure
SPXCDUSNG2R	Hydrogen (H2) 0-1,000 ppm, stainless steel enclosure
SPXCDULNG2RM	Hydrogen (H2) 0-1,000 ppm, aluminum enclosure, Modbus
SPXCDUSNG2RM	Hydrogen (H2) 0-1,000 ppm, stainless steel enclosure, Modbus
SPXCDULNN2R	Nitrogen dioxide (NO2) 0-10 ppm, aluminum enclosure
SPXCDUSNN2R	Nitrogen dioxide (NO2) 0-10 ppm, stainless steel enclosure
SPXCDULNN2RM	Nitrogen dioxide (NO2) 0-10 ppm, aluminum enclosure, Modbus
SPXCDUSNN2RM	Nitrogen dioxide (NO2) 0-10 ppm, stainless steel enclosure, Modbus
SPXCDULNA2R	Ammonia (NH3) 0-50 ppm, aluminum enclosure
SPXCDUSNA2R	Ammonia (NH3) 0-50 ppm, stainless steel enclosure
SPXCDULNA2RM	Ammonia (NH3) 0-50 ppm, aluminum enclosure, Modbus
SPXCDUSNA2RM	Ammonia (NH3) 0-50 ppm, stainless steel enclosure, Modbus
SPXCDULNL2R	Chlorine (Cl2) 0-5 ppm, aluminum enclosure
SPXCDUSNL2R	Chlorine (Cl2) 0-5 ppm, stainless steel enclosure
SPXCDULNL2RM	Chlorine (Cl2) 0-5 ppm, aluminum enclosure, Modbus
SPXCDUSNL2RM	Chlorine (Cl2) 0-5 ppm, stainless steel enclosure, Modbus
SPXCDULNS2R	Sulfur dioxide (SO2) 0-15 ppm, aluminum enclosure
SPXCDUSNS2R	Sulfur dioxide (SO2) 0-15 ppm, stainless steel enclosure
SPXCDULNS2RM	Sulfur dioxide (SO2) 0-15 ppm, aluminum enclosure, Modbus
SPXCDUSNS2RM	Sulfur dioxide (SO2) 0-15 ppm, stainless steel enclosure, Modbus
SPXCDULND2R	Nitric oxide (NO) 0-10 ppm, aluminum enclosure
SPXCDUSND2R	Nitric oxide (NO) 0-10 ppm, stainless steel enclosure
SPXCDULND2RM	Nitric oxide (NO) 0-10 ppm, aluminum enclosure, Modbus
SPXCDUSND2RM	Nitric oxide (NO) 0-10 ppm, stainless steel enclosure, Modbus

7. Sensepoint XCD RTD

Remote Toxic Detector

7.2 Replacement Sensors

XCD RTD Replacement Sensors: Sensepoint Toxic Sensors Class I, Div. 2 (3/4 in. NPT)

Part Number	Description
2106B1830	Oxygen (O2) 0-25% v/v Sensor
2106B1801	Hydrogen sulfide (H2S) 0-50 ppm, Sensor
2106B1806	Carbon monoxide (CO) 0-200 ppm, Sensor
2106B1816	Hydrogen (H2) 0-1,000 ppm, replacement Sensor
2106B1822	Nitrogen dioxide (NO2) 0-10 ppm, replacement Sensor
2106B1813	Ammonia (NH3) 0-50 ppm, replacement Sensor
2106B1810	Chlorine (Cl2) 0-5 ppm, replacement Sensor
2106B1820	Sulfur dioxide (SO2) 0-15 ppm, replacement Sensor
2106B1818	Nitric oxide (NO) 0-100 ppm, replacement Sensor

7.3 Replacement Spares

XCD RTD Spares Class I, Div. 2

Part Number	Description
SPXCDULNTX4	Sensepoint XCD RTD transmitter, 4-20 mA, 3 relays
SPXCDUSNTX4	Sensepoint XCD RTD transmitter, 4-20 mA, 3 relays, stainless steel
SPXCDULNTX4M	Sensepoint XCD RTD transmitter, 4-20 mA, 3 relays, Modbus
SPXCDUSNTX4M	Sensepoint XCD RTD transmitter, 4-20 mA, 3 relays, Modbus stainless steel
2106B1545	Oxygen (O2) electrochemical cell exchange Kit
2106B1546	Sulfur dioxide (SO2) electrochemical cell exchange Kit
2106B1547	Chlorine (Cl2) electrochemical cell exchange Kit
2106B1548	Carbon monoxide (CO) electrochemical cell exchange Kit
2106B1549	Hydrogen sulfide (H2S) electrochemical cell exchange Kit
2106B1594	Nitric oxide (NO) electrochemical cell exchange Kit
2106B1596	Ammonia (NH3) 0-50 ppm, electrochemical cell exchange Kit
2106B1597	Hydrogen (H2) 0-1,000 ppm, electrochemical cell exchange Kit
2106B1599	Nitrogen dioxide (NO2) 0-10 ppm, electrochemical cell exchange Kit
2430-0021	Sensepoint XCD RTD remote junction box, 3 terminal
SPXCDDM4	Replacement display module for RTD (4~20mA)
SPXCDDMR	Replacement display module for RFD (4~20mA)
SPXCDDM4M	Replacement display module for RTD (4~20mA), with MODBUS
SPXCDDMRM	Replacement display module for RFD (4~20mA), with MODBUS
1283-1047	Duct mount adaptor assembly (requires 1283-1084)
1283-1084	Sensepoint adaptor interface Kit (requires 1283-1047)
SPXCDTM4	XCD RTD Replacement Terminal Module

7.4 Accessories

Accessories

Part Number	Description
SPXCDMTBR	Pipe mounting bracket (inc. fixings and hex wrench set) for horizontal or vertical pipe, 1.6" to 3.1"
SPXCDSDP	Sunshade / deluge protection
02000-A-1635	Weather housing use with toxic Sensor
02000-A-1645	Flow housing assembly
2106B2114	Toxic calibration kit with calibration cover, removal tool, potentiometer adjustment tool Note: Flow housing (02000-A-1645) is required and must be ordered separately.

For all XCD calibration kits and components, please consult the XCD product page or Calibration Kits and Calibration gas pages.

8. Sensepoint
Flammable and Toxic Hazardous Area Approved Gas Detectors

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

Performance approvals include
European combustible EN60079-29-1
European toxic EN45544
Casing manufactured from PPS plastic

Wiring
Combustible 3 wire mV
Toxic 2 wire 4-20 mA

Mounting thread
M20, M25, 3/4" NPT

Ordering information
Select gas range and thread from the following tables.

8.1 Instruments

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

* please refer to the manual for gas specific unit and range
Note: For a complete sensor order correct number of BARTEC J.Box 00780-A-0100 and Weather Housing 02000-A-1640

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

Note: For a complete sensor order correct number of FEEL Exe J.Box 2052D0001 and Weather Housing 00780-A-0076

Sensepoint Toxic Sensor (ATEX/cCSAus Class I, Div. 2)	
Part Number	**Description**
2106B1700	Sensepoint H2S 0-20 ppm Toxic Sensor 3/4NPT
2106B1701	Sensepoint H2S 0-50 ppm Toxic Sensor 3/4NPT
2106B1702	Sensepoint H2S 0-100 ppm Toxic Sensor 3/4NPT
2106B1801	Sensepoint H2S 0-50 ppm Toxic Sensor 3/4NPT CSA

2106B1400	Sensepoint H2S 0-20 ppm Toxic Sensor M20
2106B1401	Sensepoint H2S 0-50 ppm Toxic Sensor M20
2106B1402	Sensepoint H2S 0-100 ppm Toxic Sensor M20
2106B1706	Sensepoint CO 0-200 ppm Toxic Sensor 3/4NPT
2106B1707	Sensepoint CO 0-500 ppm Toxic Sensor 3/4NPT
2106B1806	Sensepoint CO 0-200 ppm Toxic Sensor 3/4NPT CSA
2106B1405	Sensepoint CO 0-100 ppm Toxic Sensor M20
2106B1406	Sensepoint CO 0-200 ppm Toxic Sensor M20
2106B1407	Sensepoint CO 0-500 ppm Toxic Sensor M20
2106B1711	Sensepoint Cl2 0-15 ppm Toxic Sensor 3/4NPT
2106B1810	Sensepoint Cl2 0-5 ppm Toxic Sensor 3/4NPT CSA
2106B1410	Sensepoint Cl2 0-5 ppm Toxic Sensor M20
2106B1411	Sensepoint Cl2 0-15 ppm Toxic Sensor M20
2106B1713	Sensepoint NH3 0-50 ppm Toxic Sensor 3/4NPT
2106B1714	Sensepoint NH3 0-1000 ppm Toxic Sensor 3/4NPT
2106B1715	Sensepoint NH3 0-100 ppm Toxic Sensor 3/4NPT
2106B1813	Sensepoint NH3 0-50 ppm Toxic Sensor 3/4NPT CSA
2106B1413	Sensepoint NH3 0-50 ppm Toxic Sensor M20
2106B1414	Sensepoint NH3 0-1000 ppm Toxic Sensor M20
2106B1415	Sensepoint NH3 0-100 ppm Toxic Sensor M20
2106B1816	Sensepoint H2 0-1000 ppm Toxic Sensor 3/4NPT CSA
2106B1817	Sensepoint H2 0-10000ppm Toxic Sensor 3/4NPT CSA
2106B1416	Sensepoint H2 0-1000 ppm Toxic Sensor M20
2106B1417	Sensepoint H2 0-10000 ppm Toxic Sensor M20
2106B1818	Sensepoint NO 0-100 ppm Toxic Sensor 3/4NPT CSA
2106B1418	Sensepoint NO 0-100 ppm Toxic Sensor M20
2106B1820	Sensepoint SO2 0-15 ppm Toxic Sensor 3/4NPT CSA
2106B1420	Sensepoint SO2 0-15 ppm Toxic Sensor M20
2106B1421	Sensepoint SO2 0-50 ppm Toxic Sensor M20
2106B1822	Sensepoint NO2 0-10 ppm Toxic Sensor 3/4NPT CSA
2106B1422	Sensepoint NO2 0-10 ppm Toxic Sensor M20
2106B1732	Sensepoint O2 25% V/V Toxic Sensor 3/4NPT
2106B1832	Sensepoint O2 25% V/V Toxic Sensor 3/4NPT CSA
2106B1432	Sensepoint O2 25% V/V Toxic Sensor M20

Note: For a complete sensor order correct number of BARTEC J.Box 00780-A-0100 and Weather Housing 02000-A-1635

8.2 Accessories

Part Number	Description
00780-A-0100	Honeywell Junction Box- Bartec OTB122 With Continuity Plate 1 X 25mm - 3 X 20mm Entries - ATEX Approved
00780-A-0160	Right Angle Mounting Bracket For Junction Box 00780-A-0100
02000-A-1635	Weatherproof cap for use with toxic detector including remote gassing nozzle (for Sensepoint, Satellite (with adapter) and XNX MPD)
02000-A-1640	Weatherproof cap for use with combustible detector including remote gassing nozzle (for Sensepoint, Satellite (with adapter) and XNX MPD)
02000-A-1642	Collecting cone for use with flammable detector (for Sensepoint, Satellite (with adapter) and XNX MPD)
02000-A-1645	Flow Housing Assembly (for Sensepoint, Satellite (with adapter) and XNX MPD)
2106B1110	Catalytic Bridge To 4-20mA Converter
2106B2114	Sensepoint Toxic Calibration Kit including calibration cover, removal tool, potentiometer adjustment tool
2106D2055	M36/M40 thread adaptor
225-262-138	Cable gland and caps, 20mm, Nylon
2052D0001	ATEX Approved HT Junction Box, cast iron (-60 to 150C)
SNSPTCALKit	Calibration Kit: Tubing, flow adaptor, regulator, carrying case · Contains: 0310-2021 · 02000-A-1645 · 998-100-012 (1.5LPM) · 998-100-003
2106B1584	Sensepoint O2 Cell Conversion Kit (includes cell)

8.3 Replacement Sensor Kits

Kits include sensor cartridge, RFI screen, hydrophobic barrier, and o-ring

Part Number	Description
2106B1544	O2 Electrochemical Cell Exch Kit
2106B1546	SO2 Electrochemical Cell Exchange Kit
2106B1547	Cl2 Electrochemical Cell Exch Kit
2106B1548	CO Electrochemical Cell Exch Kit
2106B1549	H2S Electrochemical Cell Exch Kit
2106B1594	NO Electrochemical Cell Exchange Kit
2106B1595	NH3 0-1000 ppm Electrochemical Cell Exch Kit
2106B1596	NH3 0-50 ppm Electrochemical Cell Exch kit (uses 0-100 ppm NH3 sensor)
2106B1597	H2 0-1000 ppm Electrochemical Cell Exchange Kit
2106B1598	H2 10000 ppm Electrochemical Exchange Kit
2106B1599	NO2 0-10 ppm Electrochemical Exchange Kit

9. Sensepoint

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, indoors or out 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" 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.

9.1 INSTRUMENT

Each ATEX approved Sensepoint is supplied complete with pre-wired universal junction box (1 x threaded M20, 1x clearance 3/4"NPT, 1x clearance 1/2"NPT, 3 x approved stopping plugs, earth continuity plate), instruction manual and factory set gas sensor as listed below. Combustible: 3 wire mV - Toxic: 2 wire 4-20 mA

Sensepoint with Junction Box	
Part Number	**Description**
SPSTAXF1	0-100%LEL Methane
SPSTAXO2	0-25%v/v Oxygen
SPSTAXC1	0-200ppm Carbon Monoxide
SPSTAXC2	0-500ppm Carbon Monoxide
SPSTAXH1	0-50ppm Hydrogen Sulphide
SPSTAXH2	0-20ppm Hydrogen Sulphide
SPSTAXH3	0-100ppm Hydrogen Sulphide
SPSTAXG1	0-1,000ppm Hydrogen
SPSTAXG2	0-10,000ppm Hydrogen
SPSTAXL1	0-5ppm Chlorine
SPSTAXL2	0-15ppm Chlorine
SPSTAXS1	0-15ppm Sulphur Dioxide
SPSTAXS2	0-50ppm Sulphur Dioxide
SPSTAXN1	0-10ppm Nitrogen Dioxide
SPSTAXA1	0-50ppm Ammonia
SPSTAXA2	0-1000ppm Ammonia

9.2 ACCESSORIES, CONSUMABLES & SPARES

Accessories

Part Number	Description	
02000-A-1645	Calibration gas flow housing (for flammable and toxic)	
00780-A-0160	Right Angle Mounting Bracket For Junction Box 00780-A-0100	
02000-A-1635	Weatherproof cap for use with flammable detector including remote gassing nozzle	
02000-A-1640	Weatherproof cap for use with toxic/oxygen detector including remote gassing	
02000-A-1642	Collecting cone for use with flammable detector	
SNSPTCALKit	Calibration Kit: Tubing, flow adaptor, regulator, carrying case	Contains: 0310-2021 02000-A-1645 998-100-012 (1.5LPM) 998-100-003

Consumables (Spare Sensors)

Part Number	Description
SPSTAXF1SS	0-100%LEL Methane
SPSTAXO2SS	0-25%v/v Oxygen
SPSTAXC1SS	0-200ppm Carbon Monoxide
SPSTAXC2SS	0-500ppm Carbon Monoxide
SPSTAXH1SS	0-50ppm Hydrogen Sulphide
SPSTAXH2SS	0-20ppm Hydrogen Sulphide
SPSTAXH3SS	0-100ppm Hydrogen Sulphide
SPSTAXG1SS	0-1,000ppm Hydrogen
SPSTAXG2SS	0-10,000ppm Hydrogen
SPSTAXL1SS	0-5ppm Chlorine
SPSTAXL2SS	0-15ppm Chlorine
SPSTAXS1SS	0-15ppm Sulphur Dioxide
SPSTAXS2SS	0-50ppm Sulphur Dioxide
SPSTAXN1SS	0-10ppm Nitrogen Dioxide
SPSTAXA1SS	0-50ppm Ammonia
SPSTAXA2SS	0-1000ppm Ammonia

10. Safe Area XCD

Stand alone detector with true plug and play functionality

The Safe Area XCD with integrated horn and strobe allows the addition of audio and visual alarm indications to the XCD transmitter that incorporates relay outputs with 3/4" NPT threaded input ports. The Safe Area XCD includes the horn and light stack, 90° elbow, threaded nipple, strain relief, thread reducer, and a 0.67A 24VDC wall power supply. A stand alone solution for uncertified and general purpose areas.

Applications

- Warehouses/Shipping Areas
- Maintenance Garage
- Hospital/Ambulance Bay
- Battery Charging Rooms

Benefits

- Plug and play operation (120VAC)
- No additional wiring required
- Combustible/toxic gas detection
- 3 x 5 amp relays
- Battery Charging Rooms

The below are GENERAL PURPOSE application gas detectors that have an integral H/S and 24VDC PSU

Part Number	Description
SVIP3823-1	XCD CAT 0-100% LEL with Horn/Strobe
SVIP3823-2	XCD IR CH4 0-100% LEL with Horn/Strobe
SVIP3823-3	XCD IR Prop 0-100% LEL with Horn/Strobe
SVIP3823-4	XCD IR CO2 0-2% V/V with Horn/Strobe
SVIP3823-5	XCD ECC O2 25% V/V with Horn/Strobe
SVIP3823-6	XCD ECC H2S 0-50ppm with Horn/Strobe
SVIP3823-7	XCD ECC CO 0-300ppm with Horn/Strobe
SVIP3823-8	XCD ECC H2 0-1000ppm with Horn/Strobe
SVIP3823-9	XCD ECC NO2 0-10ppm with Horn/Strobe

11. Series 3000
Loop-Powered Gas Transmitter

The Series 3000 range of transmitters provide comprehensive monitoring of toxic and Oxygen gas hazards in potentially explosive atmospheres. Suitable for mounting both indoors and out, they are available in two versions; offering versatility. The Series 3000 MkII is contained in a flameproof housing, has an intrinsically safe Sensor connection and is for use in predominantly Zone 1 applications. However with the use of the optional remote mounting kit the sensor of the Series 3000 MkII can be mounted in a Zone 0 environment. The Series 3000 MkIII is for use with a separate suitable IS barrier (to be ordered separately) allowing the complete transmitter to be used in Zone 0 applications.

These low powered gas detectors all feature a loop powered 4-20 mA connection, making them ideal for both new and retrofit installations. Users can configure the detector through the use of the easy to read LCD and intuitive interface while fault diagnostic software and a programmable calibration period greatly simplify maintenance procedures.

The intrinsically safe smart sensors are supplied pre-configured and can be 'hot swapped' without having to remove power to the detector, saving time and money during commissioning and routine servicing. A remote sensor mounting kit is available that allows the sensor to be mounted up to 148' from the transmitter, making it ideal for operation in areas that are difficult to access.

Series 3000 MkII and MkIII are supplied with all necessary accessories for easy installation. The detector has 4 mounting lugs for surface mounting or and optional pipe mounting Kit. Electrical installation can be made using either conduit or Cable with suitable mechanical protection. Available in painted aluminium LM25 or stainless steel 316 with two ¾" NPT entries or two M20 entries with a suitable blanking plug (certification type dependent) included as standard. A weatherproof cap is also included for use in the harshest outdoor conditions.

Certifications
• UL/c-UL Class I, Div 1 & 2, Groups B, C & D;
Class II, Div 1, Groups E, F, G; Class II, Div 2,
Groups F & G, Class I Zone 1, Group 2B +
H2 Hazardous Locations

• ATEX: II 2 (1) G Ex d [ia] IIB+H2 T4
(Tamb -4°F to +131°F/-20°C to +55°C)
IECEx Ex d [ia] IIB + H2 T4

11.1 Series 3000 MkII Instrument

Series 3000 MkII transmitter (flameproof) is supplied complete with integral surface mounting lugs, 2 x 3/4"NPT or 2 x M20 conduit/cable entries (certification dependent), 1 x suitable blanking plug, 1 x hex wrench set, weatherproof cap, operating magnet, calibration and test certificate and instruction manual. Gas specific sensor and accessories to be ordered separately.

S3K MkII Transmitter	
Part Number	**Description**
S3KUL2	UL/cUL approved Series 3000 MkII toxic and oxygen transmitter, Aluminium LM25 and 2 x 3/4"NPT entries
S3KUS2	UL/cUL approved Series 3000 MkII toxic and oxygen transmitter, Stainless Steel 316 and 2 x 3/4"NPT entries
S3KAL2	ATEX/IECEx approved Series 3000 MkII toxic and oxygen transmitter, Aluminium LM25 and 2 x M20 entries
S3KAS2	ATEX/IECEx approved Series 3000 MkII toxic and oxygen transmitter, Stainless Steel 316 and 2 x M20 entries
S3KNL2	INMETRO approved Series 3000 MkII toxic and oxygen transmitter, Aluminium LM25 and 2 x M20 entries
S3KNS2	INMETRO approved Series 3000 MkII toxic and oxygen transmitter, Stainless Steel 316 and 2 x M20 entries

11.2 Series 3000 MkIII Instrument

Series 3000 MkIII transmitter (Intrinsically Safe) is supplied complete with integral surface mounting lugs, 2 x 3/4"NPT or 2 x M20 conduit/
cable entries (certification dependent), 1 x suitable blanking plug, 1 x hex wrench set, weatherproof cap, operating magnet, calibration and test certificate and
instruction manual. Gas specific sensor and accessories to be ordered separately.

S3K MkIII Transmitter	
Part Number	Description
S3KUL3	UL/cUL approved Series 3000 MkIII toxic and oxygen transmitter, Aluminium LM25 and 2 x 3/4"NPT entries
S3KUS3	UL/cUL approved Series 3000 MkIII toxic and oxygen transmitter, Stainless Steel 316 and 2 x 3/4"NPT entries
S3KAL3	ATEX/IECEx approved Series 3000 MkIII toxic and oxygen transmitter, Aluminium LM25 and 2 x M20 entries
S3KAS3	ATEX/IECEx approved Series 3000 MkIII toxic and oxygen transmitter, Stainless Steel 316 and 2 x M20 entries

11.3 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 and MkIII
transmitters. Featuring a field replaceable Sensor, these Sensors are shipped pre-calibrated to the range listed below.

Smart Sensor Cartridges	
Part Number	Description
XNXXSO1SS	XNX/S3K Sensor oxygen (O2) 0-25% v/v
XNXXSC1SS	XNX/S3K Sensor carbon monoxide (CO) 0-300 ppm (100 to 500 ppm, 100 ppm)
XNXXSH1SS	XNX/S3K Sensor hydrogen sulfide (H2S) 0-15 ppm (10 to 50 ppm, 1 ppm)
XNXXSH2SS	XNX/S3K Sensor hydrogen sulfide (H2S) 0-100 ppm (50 to 500 ppm, 10 ppm)
XNXXSL1SS	XNX/S3K Sensor chlorine (Cl2) 0-5.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)
XNXXSS1SS	XNX Sensor sulfur dioxide (SO2) 0-15.0 ppm (5.0 to 20.0 ppm, 5.0 ppm)
XNXXSX1SS	XNX Sensor chlorine (Cl2) dioxide 0-1.00 ppm
XNXXSM1SS	XNX Sensor nitrogen monoxide (NO) 0-100 ppm
XNXXSN1SS	XNX Sensor nitrogen dioxide (NO2) 0-11.0 ppm (5.0 to 50.0 ppm, 5.0 ppm)
XNXXSG1SS	XNX Sensor hydrogen (H2) 0-1000 ppm
XNXXSG2SS	XNX Sensor hydrogen (H2) 0-10,000 ppm
XNXXSF1SS	XNX Sensor hydrogen fluoride (HF) 0-12.0 ppm
XNXXSA1SS	XNX Sensor ammonia (NH3) 0-200 ppm (50 to 200 ppm, 50 ppm)
XNXXSA2SS	XNX Sensor ammonia (NH3) 0-1000 ppm (200 to 1000 ppm, 50 ppm)
XNXXSP1SS	XNX Sensor phosphine (PH3) 0-1.2 ppm
XNXXSR1SS	XNX Sensor hydrogen chloride (HCl) 0-10 ppm (10 to 20 ppm, 1 ppm)
XNXXSY1SS	XNX/S3K Sensor Hydrogen Cyanide 0-30.0ppm
XNXXSE1SS	XNX/S3K Sensor Ethylene Oxide (EtO), 25.0ppm (user-selectable from 20.0ppm to 50.0ppm)
XNXXSU1SS	XNX/S3K Sensor Fluorine 4ppm
XNXXSZ1SS	XNX/S3K Sensor Ozone (O3) 0.004ppm

11.4 Accessories

Accessories		
Part Number	Description	
S3KCAL	Calibration cup (flow adaptor)	
SPXCDCC	Collecting cone (for carbon monoxide (CO) and hydrogen (H2) only) must be used with SPXCDWP	
S3KDMK	Duct Mounting Kit (for carbon monoxide (CO), hydrogen (H2) and hydrogen sulfides (H2S) only) (For flat surfaces only)	
S3KRMK	Remote EC Mounting Kit (50 Feet)	
S3KRMK45	Remote EC Mounting Kit (150 Feet)	
SPXCDSDP	Sunshade and Deluge protection (XCD, XCD RFD, XCD RTD, S3K MKII, S3K MKIII)	
SGPTPRMTL1	Single channel zener barrier MTL7728+	
SGPTPRMTL2	2 channel zener barrier MTL7787+	
SGPTPRMTL3	Galvanic Isolator MTL 5042	
SGPTPRPFG1	Galvanic Isolator P&F KFD2-STC4-EX1	
SGPTPRCBLG	Hummel cable gland HSK-K-Ex, blue, M20x1.5, elongated (15mm). Part number 1.291.2002.30, including locking nut Part number 1.262.2001.50.	
XNXTOXKit	Calibration Kit: Tubing, flow adaptor, regulator, carrying case	Contains: 998-100-004 S3KCAL ZCALREG1 (.3LPM) 998-100-003
XNXTOXKIT2	Calibration Kit: Tubing, flow adaptor, regulator, carrying case	Gasses: HCN, Cl2, HF, NH3, and HCl

11.5 Spares (Miscellaneous)

Spares (Miscellaneous)

Part Number	Description
SPPPMADP	3/4 in. NPT to M20 adaptor
SPPPMLHW	Large hex wrench (for Mounting bracket)
SPXCDMAG	Magnet/screwdriver *Note: S3KMAG is Obsolete. Replaced by SPXCDMAG*
SPPMMTBR	Mounting bracket (inc. fittings and hex wrench set)
S3KDM	Mk II Replacement display module
S3KTM	Mk II Replacement terminal module
SPPPMSHW	Small hex wrench (for Sensor retaining screw)
S3KWP	Weatherproof housing with bump test port
S3KDM3	Mk III Replacement display module
S3KTM3	Mk III Replacement terminal module
S3KM20P	M20 Blanking Plug
S3KNPTP	3/4"NPT Blanking Plug

11.7 S3K replacement Toxic and Oxygen (O2) Sensor Cells

Cell Exchange Kits

Part Number	Description
XNXO1SS	Oxygen 0-25%v/v
XNXC1SS	Carbon Monoxide 0-300ppm (100 to 999ppm, 100ppm)
XNXH1SS	Hydrogen Sulfide 0-15ppm (10 to 50ppm, 1ppm)
XNXH2SS	Hydrogen Sulfide 0-100ppm (50 to 500ppm, 10ppm)
XNXL1SS	Chlorine 0-5.0ppm (5.0 to 20.0ppm, 5.0ppm)
XNXS1SS	Sulphur Dioxide 0-15.0ppm (5.0 to 20.0ppm, 5.0ppm)
XNXX1SS	Chlorine Dioxide 0-1.00ppm
XNXM1SS	Nitrogen Monoxide 0-100ppm
XNXN1SS	Nitrogen Dioxide 0-11.0ppm (5.0 to 50.0ppm, 5.0ppm)
XNXG1SS	Hydrogen 0-1000ppm
XNXG2SS	Hydrogen 0-10,000ppm
XNXZ1SS	Ozone (O3) 0-0.4 ppm
XNXR1SS	Hydrogen Chloride 0-10ppm (11.0 to 20.0ppm, 1.0ppm)
XNXA1SS	Ammonia 0-200ppm (50 to 200ppm, 50ppm)
XNXA2SS	Ammonia 0-1000ppm (200 to 1000ppm, 50ppm)
XNXP1SS	Phosphine (PH3), 1.2ppm (Fixed Scale)
XNXE1SS	Ethylene Oxide (ETO), 25.0ppm (20.0 to 50.0ppm)
XNXU1SS	Fluorine (F2) 4ppm
XNXY1SS	Hydrogen Cyanide 0-30ppm

12. Infrared Transmitters

Quick Reference Chart

Product	Gases Detected	Display	Material	Communication
Optima Plus	See Below	Requires OELD or XNX	SS316	HART over 4-20 mA (w/XNX), Modbus (w/XNX)
Optima Plus with HART		Requires OELD or XNX	SS316	HART over 4-20 mA
Searchline Excel		Requires OELD or XNX	SS316	HART over 4-20 mA (w/XNX), Modbus (w/XNX)
Searline Excel Plus or Edge		Requires OELD	SS316	HART over 4-20 mA, Modbus, Bluetooth
Searchline Excel XD		Requires OELD or XNX	SS316	HART over 4-20 mA (w/XNX), Modbus (w/XNX)

Gas Detected	Optima Plus	Searchline Excel	Searchline Excel Plus or Edge	Searchline Excel XD
Universal Hydrocarbon			X	
Methane (CH4)	X	X	X	X
Ethane (C2H6)	X	X	X	
Propane (C3H8)	X	X	X	
Butane (C4H10)	X	X	X	
Pentane (C5H12)	X	X	X	
Ethylene (C2H4)	X	X	X	
Methanol (CH3OH)	X	X		
Ethanol (CH3CH2OH)	X	X		
Ethylene / Ethene (C2H4)	X	X	X	
Methane (CH4) 100% UEG	X			
Ethane (C2H6) 100% UEG	X			
Propane (C3H8) 100% UEG	X			
Butane (C4H10) 100% UEG	X			
Ethylene/Ethene (C2H4) 100% UEG	X			
Special and Custom Calibrations (See data sheet)	X			

13. OELD

Optima Excel Local Display

The Optima Excel Local Display (OELD) is a smart junction box for the Searchpoint Optima Plus and Searchline Excel infrared detectors for flammable hydrocarbons.

The OELD includes an LCD screen for gas information, a "traffic light" indicator for at-a-glance detector status, and Bluetooth® connectivity for simplified, non-intrusive maintenance.

Simply pair the OELD with our intrinsically safe, ruggedized smartphone; then use the OELD smartphone app to interact with the gas detector up to 32 feet away.

For maximum flexibility, the gas detector can be mounted either directly or remotely to OELD to suit any situation.

13.1 Instrument

OELD

Part Number	Description
OELDBXXXXXADNUL	OELD Smart Junction Box, Display, C1D1 Z1, Aluminum, 3/4"NPT,
OELDBXXXXXSDNUL	OELD Smart Junction Box, Display, C1D1 Z1, 316SST, 3/4"NPT, cULus
OELDBXXXXXADMAL	OELD Smart Junction Box, Display, Ex d, Aluminum, M25,ATEX/IECEx
OELDBXXXXXSDMAL	OELD Smart Junction Box, Display, Ex d, 316SST, M25, ATEX/IECEx
188-200-010	Android Hand-Held Smart Device. CID1, Zone 1, ATEX, IECEx, NEC

13.2 Options

Accessories and Spares

Part Number	Description
188-200-070	Rugged Hand-Held Smart Device Yellow Leather Case
188-200-080	Rugged Hand-Held Smart Device Yellow Leather Case
188-200-090	Rugged Hand-Held Smart Device Clip for Case or Cradle
188-200-100	Rugged Hand-Held Smart Device Docking Station
188-200-110	Rugged Hand-Held Smart Device Charging Cable
188-200-120	Rugged Hand-Held Smart Device EU/UK/US/AU Charger
188-200-130	Rugged Hand-Held Smart Device Vehicle Charger
1226A0358	OELD/XNX Pole/Pipe Mount Kit
1226A0355	OELD/XNX Ceiling Mounting Kit
94000-A-1006	OELD/XNX Sunshade Kit
OELDVSK01	OELD General Service Kit includes O-rings and Fixings
OELDVSK02	OELD Terminal Block Set
OELDVSK04	OELD M25 Stopping Plug
OELDVSK05	OELD ¾"NPT Stopping Plug
OELDVSK16	OELD Electronics Module
OELDVSK08	OELD Plastic Locating Post for Electronics Module

14. Searchpoint Optima Plus

Infrared Flammable 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

Certifications
• UL / CSA: Class 1, Div 1, groups B, C, and D (-40°C to +65°C)
• IECEx: Ex d IIC tb IIIC T86°C (Tamb -40°C to +55°C) or
T96°C (Tamb -40°C to +65°C) IP66/67
• ATEX: BAS99ATEX2259X
II 2 GD Ex d IIC Gb Ex tb IIIC Db
T96°C (Tamb -40°C to +65°C)
T86°C (Tamb -40°C to +55°C)
• IP 66/67
• FM ANSI/ISA-14.13.01
• EN 60079-29-1 (BVS 03 ATEX G 016 X), CSA C22.2 152

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 P2 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

14.1 Hydrocarbon Instruments

Note: A compatible calibration must be ordered with every Optima Plus. Please refer to the next section for available calibrations.

Certified: UL/Inmetro

Part Number	Description
2108N4100N	Optima Plus Gas Detector, hydrocarbon version, 4 to 20mA output, UL/INMETRO, 3/4" NPT thread spigot, electro polished 316SS, includes polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N4100H	Optima Plus Gas Detector, hydrocarbon version, HART® over 4 to 20mA output, UL/INMETRO, 3/4" NPT thread spigot, electro polished 316SS, includes polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N4110N	Optima Plus Gas Detector, hydrocarbon version, 4 to 20mA output, UL/INMETRO, 3/4" NPT thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N4110H	Optima Plus Gas Detector, hydrocarbon version, HART® over 4 to 20mA output, UL/INMETRO certified, 3/4" NPT thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N5100N	Optima Plus Gas Detector, hydrocarbon version for sampling systems, 4 to 20mA output, UL/INMETRO, 3/4" thread spigot, electro polished 316SS, includes black anodized aluminum flow housing
2108N5100H	Optima Plus Gas Detector, hydrocarbon version for sampling systems, HART® over 4 to 20mA output, UL/INMETRO, 3/4" thread spigot, electro polished 316SS, includes black anodized aluminum flow housing
2108N5110N	Optima Plus Gas Detector, hydrocarbon version, 4 to 20mA output, UL/INMETRO, 3/4" thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather housing and LNP Faradex deluge/solar sunshade. Only use with gas calibrations 0 to 100%v/v Methane (2108D3050), 0 to 400,000ppm propane (2108D3100) or 0 to 600,000 ppm propane (2108D3102)
2108N5110H	Optima Plus Gas Detector, hydrocarbon version, HART® over 4 to 20mA output, UL/INMETRO, 3/4" thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather housing and LNP Faradex deluge/solar sunshade. Only use with gas calibrations 0 to 100%v/v Methane (2108D3050), 0 to 400,000ppm propane (2108D3100) or 0 to 600,000 ppm propane (2108D3102)

Certified: FM/CSA

Part Number	Description
2108N4200N	Optima Plus Gas Detector, hydrocarbon version, 4 to 20mA output, FM/CSA, 3/4" NPT thread spigot, electro polished 316SS, includes polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N4200H	Optima Plus Gas Detector, hydrocarbon version, HART® over 4 to 20mA output, FM/CSA, 3/4" NPT thread spigot, electro polished 316SS, includes polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N4210N	Optima Plus Gas Detector, hydrocarbon version, 4 to 20mA output, FM/CSA, 3/4" NPT thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N4210H	Optima Plus Gas Detector, hydrocarbon version, HART® over 4 to 20mA output, FM/CSA certified, 3/4" NPT thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N5200N	Optima Plus Gas Detector, hydrocarbon version for sampling systems, 4 to 20mA output, FM/CSA, 3/4" thread spigot, electro polished 316SS, includes black anodized aluminum flow housing
2108N5200H	Optima Plus Gas Detector, hydrocarbon version for sampling systems, HART® over 4 to 20mA output, FM/CSA, 3/4" thread spigot, electro polished 316SS, includes black anodized aluminum flow housing

Certified: ATEX/IECEx

Part Number	Description
2108N4000N	Optima Plus Gas Detector, hydrocarbon version, 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes polyester mesh dust barrier, nylon weather protection housing and LNP Faradex
2108N4000H	Optima Plus Gas Detector, hydrocarbon version, HART® over 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N4001N	Optima Plus Gas Detector, ethylene version, 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes polyester mesh dust barrier, nylon weather protection housing and LNP Faradex
2108N4001H	Optima Plus Gas Detector, ethylene version, HART® over 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N4010N	Optima Plus Gas Detector, hydrocarbon version, 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N4010H	Optima Plus Gas Detector, hydrocarbon version, HART® over 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N4011N	Optima Plus Gas Detector, ethylene version, 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N4011H	Optima Plus Gas Detector, ethylene version, HART® over 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather protection housing and LNP Faradex deluge/sunshade
2108N5000N	Optima Plus Gas Detector, hydrocarbon version for sampling systems, 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes black anodized aluminum flow housing
2108N5000H	Optima Plus Gas Detector, hydrocarbon version for sampling systems, HART® over 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes black anodized aluminum flow housing
2108N5001N	Optima Plus Gas Detector, ethylene version for sampling systems, 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes black anodized aluminum flow housing
2108N5001H	Optima Plus Gas Detector, ethylene version for sampling systems, HART® over 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes black anodized aluminum flow housing
2108N5010N	Optima Plus Gas Detector, hydrocarbon version, 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather housing and LNP Faradex deluge/solar sunshade. Only use with gas calibrations 0 to 100%v/v Methane (2108D3050), 0 to 400,000ppm propane (2108D3100) or 0 to 600,000 ppm propane (2108D3102)
2108N5010H	Optima Plus Gas Detector, hydrocarbon version, HART® over 4 to 20mA output, ATEX/IECEx, M25 thread spigot, electro polished 316SS, includes pre-fitted remote gassing cell, polyester mesh dust barrier, nylon weather housing and LNP Faradex deluge/solar sunshade. Only use with gas calibrations 0 to 100%v/v Methane (2108D3050), 0 to 400,000ppm propane (2108D3100) or 0 to 600,000 ppm propane (2108D3102)

14.2 Ethylene Instruments

Note: A compatible calibration must be ordered with every Optima Plus. Please refer to the next section for available calibrations.

Ethylene Optima Instruments: UL/INMETRO certified

Part Number	Description
2108N4101N	Ethylene calibration, with dust barrier, weather housing, deluge/heat shade, UL/INMETRO
2108N4101H	Ethylene calibration, with dust barrier, weather housing, deluge/heat shade, HART® output, UL/INMETRO
2108N4111N	Ethylene calibration with dust barrier, weather housing, deluge/heat shade, including remote gassing cell, UL/INMETRO
2108N4111H	Ethylene calibration with dust barrier, weather housing, deluge/heat shade, HART® output, including remote gassing cell, UL/INMETRO
2108N5101N	Ethylene calibration, for use in remote sampling systems complete with flow housing, UL/INMETRO
2108N5101H	Ethylene calibration, for use in remote sampling systems complete with flow housing, HART® output, UL/INMETRO

Ethylene Optima Instruments: ATEX/IECEx certified

Part Number	Description
2108N4001N	Ethylene calibration, with dust barrier, weather housing, deluge/heat shade, ATEX
2108N4001H	Ethylene calibration, with dust barrier, weather housing, deluge/heat shade, HART® output, ATEX
2108N4011N	Ethylene calibration with dust barrier, weather housing, deluge/heat shade, including remote gassing cell,
2108N4011H	Ethylene calibration with dust barrier, weather housing, deluge/heat shade, HART® output, including remote gassing cell, ATEX
2108N5001N	Ethylene calibration, for use in remote sampling systems complete with flow housing, ATEX
2108N5001H	Ethylene calibration, for use in remote sampling systems complete with flow housing, HART® output, ATEX

14.3 Optima Sampling System Options

Optima Sampling System Options

Part Number	Description
SVIP3722-1P	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)
SVIP3722-2P	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)

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

14.4 Remote and Duct Mounting Optima options

Remote and Duct Mounting Optima options

Part Number	Description
2441-0022	6 wire junction box (UL certified)
1283K2240	Universal duct mounting kit - UL/CSA Version - **Right angle junction box not included**
1283A2266	Right angle junction box for use with 1283K2240
04200-A-1015	Optima duct mounting Kit - use only with ATEX/IECEx Versions

14.5 Junction Box Interfaces

OELD

Part Number	Description
OELDBXXXXXADNUL	OELD ALU LUI C1D1Z1 NPT CULUS
OELDBXXXXXSDNUL	OELD SST LUI C1D1Z1 NPT CULUS

14.6 Accessories

Accessories

Part Number	Description			
94000-A-1006	XNX Sunshade w/ Optima cut out			
2108B0259	Dust barrier			
2108B0276	Weather housing			
2108B0280	Storm baffle			
2108B0282	Optima Plus flow housing			
2108B0282ST	Optima Plus flow housing, SST			
2108D0258	Optima Plus gassing cover			
2108B0272	Optima Plus calibration cap			
2108D0275	Optima Plus deluge / heat shade			
04230-A-1001	Hand held interrogator ATEX certified (4V0 software) for Optima, Optima Plus and Excel			
2104B2351	Hand held interrogator UL certified (4V0 software) for Optima, Optima Plus and Excel			
2104B2354	Hand held interrogator CSA certified (4V0 software) for Optima, Optima Plus and Excel			
2108B1455	Hand held EEPROM upgrade (4V0)			
04230-A-1025	SHC protection device module and lead			
2104B6250	SHC calibrator connector system 10 m			
00780-A-0100	Junction box-Bartec DE1155 with continuity plate 1 x 25 mm-3 x 20 mm entries (ATEX certified)			
04200-A-1040	Optima junction box adaptor plate			
2441-0001	Stainless steel tag, 3.0 in. x 0.5 in. , #10(m5) screw			
2992-0038	Adapter M25 female to 3/4 in. NPT male stainless steel			
157-001-075	Adapter M20 male to 3/4 in. NPT female stainless steel			
2108B0701	Optima Plus current source to sink			
972-080-009	Nut retng Optima Plus weather baffle			
2108D0271	Optima Plus gassing pipe			
402-060-291	Cover 5.26 x 19.5 mm black vinyl			
SVIP3699	Optima stainless gassing tip kit, contains 2 tips, 2 o-rings, and 2 caps			
OPTIMARGCCALKit	Product: RGC	Calibration Kit: Tubing, regulator (Gassing cover not required with RGC)	Contains: 998-100-004, ZCALREG1 (.3LPM)	
OPTIMACALKit	Product: Non-RGC	Calibration Kit: Tubing, gas cover, regulator	Contains: 998-100-004, 2108D0258, 998-100-002 (2LPM), With GAS CELL	

14.7 Additional Gases or Gas Ranges That Can Be Detected Using Optima Plus

Target Gas	Optima Plus Gas Reference Calibration	Target Gas	Optima Plus Gas Reference Calibration
152A Difuoroethane (C2H4F2)	Band C	Difluoroethane (C2H4F2)	Band B
Aeron A-31 isobutane (C4H10)	Butane (C4H10)	Dimethyl ether (C2H6O)	Butane (C4H10)
Aeron A-46 LPG (C3H8)	Butane (C4H10)	Ethylene dichloride (EDC)	Band D
Allyl alcohol (C3H6O)	Band C	Ethylene oxide (C2H4O)	Band C
Amyl alcohol (C5H11OH)	Band C	IsoButylene (C4H8)	Band B
Benzene (C6H6)	Ethylene (C2H4) 0-100% LEL	Iso-hexane (C6H14)	Hexane (C6H14) 0-100 LEL
Butadiene dimer (C8H12)	Ethylene (C2H4) 0-100% (leak detection only)	Methyl ethyl ketone (C4H8O)	Butanone (C4H8O) 0-100% LEL
Butadiene-1,2 (C4H6)	Ethylene (C2H4) 0-100% (leak detection only)	Polypropylene ((C3H6)n)	Propylene ((C3H6)n) 0-100% LEL
Butene (C4H8)	Band C	Styrene (C8H8)	Ethylene (C2H4) 0-100% LEL (leak detection only)
Cyclopentane (C5H10)	Band C	Tetrahydrofuran (C4H8O)	Band B
Dichloro-ethane (C2H4Cl2)	Band D	Turpentine (C10H16)	Band B
AVTUR JP8	Band B	Xylene (C8H10)	Band C

14.8 Gases Unable To Be Detected Using Optima Plus

Gas	Gas	Gas	Gas
1,3 Butadiene (C4H6) 100% LEL	Dimethyl disulphide	Methyl chloride (CH3Cl)	Propane (C3H8) 25% LEL
Acetic acid (C2H4O2)	Enflurane (C3H2ClF5O)	Methyl flouride (CH3F)	Propane (C3H8) 5% v/v
Acetonitrile (C2H3N)	Ethane (C2H6) 10% v/v	Methyl mercaptan (CH4S)	Pyridine (C5H5N)
Alphamethylstyrene (AMS, C9H1	Ethanol (C2H6O) 5,000 ppm	Methylchloroformate (C2H3ClO2)	Sevoflurane ethyl-ether (C4H3F7O)
Aniline (C6H5NH2)	Ethylchloroformate (C3H5ClO2)	Methylene chloride (CH2Cl2)	Sulfuric acid (H2SO4)
Bromopropane (C3H7Br)	Ethylene (C2H4) 15,000 ppm	Morpholine (C4H9NO)	Toluene (C7H8) 10,000 ppm
Butyl isocyanate (C5H9NO)	Halothane (C2HBrClF3)	N-butane (C4H10) 5% v/v	Tri-chloro-ethylene (C2HCl3)
Chloroform (CHCl3)	Hexane (C6H14) 2,000 ppm	Pentane (C5H12) 3,000 ppm	VCM (C2H3Cl)
Desflurane (C3H2F6O)	I-butane (C4H10) 10% v/v	Phenol (C6H5OH)	Vinylidene
Dichloromethane (CH2Cl2)	Isoflurane ether (C3H2ClF5O)	Propan (C3H8O) 100% UEG	
Dicyclopentadiene (C10H12)	Methane (CH4) 40% LEL	Propane (C3H8) 2,000 ppm	

15. Searchpoint Optima Plus

Calibrations

15.1 Calibrations for Hydrocarbon Searchpoint Optima Plus Instruments

One of the following calibrations must accompany each order for Searchpoint Optima Plus.

Gas Curves (UL/CSA/INMETRO): Calibrated using EN50054 LEL Values

	Table Name	Full Scale	LEL (%V/V)	3rd Party Approved	Part Number
Standard Gases	Methane	100%LEL	5	Y	2108D3001
	Ethane	100%LEL	3		2108D3002
	Propane	100%LEL	2	Y	2108D3004
	Butane	100%LEL	1.5	Y	2108D3005
Special Gases	Propene	100%LEL	2		2108D3006
	Acetone	100%LEL	2.15		2108D3012
	Butan-1-ol	100%LEL	1.4		2108D3018
	Butyl acetate	100%LEL	1.2		2108D3020
	Butanone	100%LEL	1.8		2108D3023
	Cyclohexane	100%LEL	1.2		2108D3024
	Cyclohexanone	100%LEL	1.3		2108D3026
	Ethanol	100%LEL	3.3		2108D3028
	Ethyl acetate	100%LEL	2.1		2108D3030
	Heptane	100%LEL	1.1		2108D3032
	Hexane	100%LEL	1.2		2108D3034
	Methanol	100%LEL	5.5		2108D3040
	Toluene	100%LEL	1.2		2108D3042
	o-Xylene	100%LEL	1		2108D3044
	Diethyl ether	100%LEL	1.7		2108D3048
	p-Xylene	100%LEL	1		2108D3054
	Pentanes	100%LEL	1.4		2108D3056
	Dimethyl ether	100%LEL	3		2108D3059
	N,N-Dimethyl formamide (DMF)	100%LEL	2.2		2108D3064
	Propane	100%LEL	2	Y	2108D3073

Gas Curves (ATEX/IECEx): Calibrated using EN60079-20-1:2010 LEL Values

	Table Name	Full Scale	LEL (%V/V)	3rd Party Approved	Part Number
Standard Gases	Methane	100%LEL	4.4	Y	2108D3170
	Propane	100%LEL	1.7	Y	2108D3172
	Butane	100%LEL	1.4	Y	2108D3173
Special Gases	Acetone	100%LEL	2.5	Y	2108D3013
	Butyl acetate	100%LEL	1.2	Y	2108D3021
	Ethanol	100%LEL	3.1	Y	2108D3029
	Hexane	100%LEL	1	Y	2108D3035
	Propan-2-ol	100%LEL	2	Y	2108D3037
	o-Xylene	100%LEL	1	Y	2108D3045
	Octane	100%LEL	0.8		2108D3062
	Isobutane	100%LEL	1.3		2108D3070
	Chloroethane	100%LEL	3.6		2108D3084
	1,2-Dichloroethane	100%LEL	6.2		2108D3090
	Dimethyl ether	100%LEL	2.7	Y	2108D3098
	Propene	100%LEL	2	Y	2108D3174

Gas Curves (ATEX/IECEx): Calibrated using EN61779 LEL Values continued

	Table Name	Full Scale	LEL (%V/V)	3rd Party Approved	Part Number
Standard Gases	Ethane	100%LEL	2.5		2108D3171
Special Gases	Butan-1-ol	100%LEL	1.7	Y	2108D3019
	Butanone	100%LEL	1.8	Y	2108D3023
	Cyclohexane	100%LEL	1.2		2108D3025
	Cyclohexanone	100%LEL	1	Y	2108D3027
	Ethyl acetate	100%LEL	2.2	Y	2108D3031
	Heptane	100%LEL	1.1	Y	2108D3033
	Propyl acetate	100%LEL	1.7		2108D3039
	Methanol	100%LEL	5.5	Y	2108D3041
	Toluene	100%LEL	1.1	Y	2108D3043
	Diethyl ether	100%LEL	1.7		2108D3049
	p-Xylene	100%LEL	1	Y	2108D3055
	Pentanes	100%LEL	1.4		2108D3056
	i-Propyl Acetate	100%LEL	1.8		2108D3078
	Propan-1-ol	100%LEL	2.2		2108D3085

Additional Ranges Offered

	Table Name	Full Scale	LEL (%V/V)	3rd Party Approved	Part Number
Special Gases	Hexamethy disiloxane (HMDS)	100%LEL	1.3		2108D3017
	Propan-2-ol	100%LEL	2		2108D3036
	Propyl acetate	100%LEL	1.8		2108D3038
	Benzin 60/95	100%LEL	1	Y	2108D3047
	Methane V/V	100%V/V	NA		2108D3050
	Decamethy tetrasiloxane (DCMTS	100%LEL	0.9		2108D3060
	Octane	100%LEL	1		2108D3061
	Octamethyl tetrasiloxane (OMTS)	100%LEL	0.9		2108D3063
	Methyl isobutyl Ketone (MIBK)	100%LEL	1.2		2108D3068
	Isobutane	100%LEL	1.8		2108D3069
	1-Pentene	100%LEL	1.4		2108D3077
	1-Octene	100%LEL	0.7		2108D3081
	1-Hexene	100%LEL	1.2		2108D3083
	Methane 100k	100k ppm	NA		2108D3087
	Ethylene 100k	100k ppm	NA		2108D3088
	Propane 100k	100k ppm	NA		2108D3089
	Propene 50k	50k ppm	NA		2108D3092
	3-Ethoxy-1-Propanol	100%LEL	1.3		2108D3094
	Propane 10k	10k ppm	NA	Y	2108D3096
	Propane 400k	400k ppm	NA		2108D3100
	Propylene Glycol Methyl Ether Acetate (PGMEA)	100%LEL	1.3		2108D3101
	Propane 600k	600k ppm	NA		2108D3102
	Propane 20k	20k ppm	NA		2108D3105
	Butane 18k	18k ppm	NA		2108D3107
	Methyl I amyl Ketone (MIAK)	100%LEL	1.3		2108D3108
	Band A	100%LEL	NA		2108D3150
	Band B	100%LEL	NA		2108D3151
	Band C	100%LEL	NA		2108D3152
	Band D	100%LEL	NA		2108D3153
	Propane 5k	5k ppm	NA	Y	2108D3175

15.2 Calibrations for Ethylene Searchpoint Optima Plus Instruments

Gas Curves (UL/CSA/INMETRO): Calibrated using EN50054 LEL Values

	Table Name	Full Scale	LEL (%V/V)	3rd Party Approved	Part Number
Standard Gases	Ethylene	100%LEL	2.7	Y	2108D3225
Special Gases	Benzene	100%LEL	1.2		2108D3227
	Styrene	100%LEL	1.1		2108D3228
	Buta-1,3-diene	100%LEL	1.4		2108D3229

Gas Curves (ATEX/IECEx): Calibrated using EN60079-20-1:2010 LEL Values

	Table Name	Full Scale	LEL (%V/V)	3rd Party Approved	Part Number
Standard Gases	Ethylene	100%LEL	2.3	Y	2108D3240
Special Gases	Benzene	100%LEL	1.2		2108D3227
	Buta-1,3-diene	100%LEL	1.4		2108D3229

Gas Curves (ATEX/IECEx): Calibrated using EN61779 LEL Values

	Table Name	Full Scale	LEL (%V/V)	3rd Party Approved	Part Number
Standard Gases	Styrene	100%LEL	1.1		2108D3228

16a. Searchline Excel™ Plus & Edge

Open Path Flammable Gas

Searchline Excel™ Plus & Searchline Excel™ Edge are the next generation open path flammable gas detectors. The Searchline Excel™ Plus is a medium range detector from 2 to 120 meters . The Searchline Excel™ Edge is a long range detector from 60 to 330 meters. Both come standard with HART® over the 4-20 mA analog output, Modbus, and Bluetooth®. The relays for Alarm 1, Alarm 2 and Fault are included, and may be configured normally open or normally closed, latching or non-latching. The new Searchline Excel features a multi-colored, highly visible LED halo to indicate status locally eliminating the need for an additional device. The Searchline Excel Plus & Edge come with global certifications and approvals simplifying the ordering process.

The following parts are included with each Tx and Rx:
1. Universal Mounting Bracket (1)
2. Plastic Sunshade (1)
3. Plastic Antenna Cover (1)

16a.1 Transmitter (Tx) & Receiver (Rx) Pair

Instruments	
Part Number	**Description**
SLXL-PSMGXX	Searchline Excel Plus Mid Range (2-120 m) Stainless Steel w/ M25 entries
SLXL-PSNGXX	Searchline Excel Plus Mid Range (2-120 m) Stainless Steel w/ 3/4" NPT entries
SLXL-ESMGXX	Searchline Excel Edge Long Range (60-330 m) Stainless Steel w/ M25 entries
SLXL-ESNGXX	Searchline Excel Edge Long Range (60-330 m) Stainless Steel w/ 3/4" NPT entries

16a.2 Accessories, Special Calibrations

Accessories	
Part Number	**Description**
2017B0299	Alignment Scope for Searchline Excel Plus & Edge; including carry case
2017B0113	Stainless Steel Sunshade for Searchline Excel Plus & Edge
2017B0185	Gassing Cell for Searchline Excel Plus & Edge
2017B0218	Test Filters for Searchline Excel Plus & Edge
2017B0226	Height Extender Pole for use with Test Filters
2331B1020	Large mounting plate to suit larger poles
2331B1102	Pole mount kit for Excel Plus & Edge standard adjustable mounting bracket
2331B1112	Pole mount kit for Excel Plus & Edge large adjustable mounting bracket
Special Calibrations	
Part Number	**Description**
2017D0900	Searchline Excel Plus & Edge alternative calibration - Methane
2017D0901	Searchline Excel Plus & Edge alternative calibration - Ethane
2017D0902	Searchline Excel Plus & Edge alternative calibration - Propane
2017D0903	Searchline Excel Plus & Edge alternative calibration - Butane
2017D0904	Searchline Excel Plus & Edge alternative calibration - Pentane
2017D0905	Searchline Excel Plus & Edge alternative calibration - Ethylene
2017D0906	Searchline Excel Plus & Edge alternative calibration - Propylene

16a.3 Spares, Service, Hand-Held Devices

Spares	
Part Number	**Description**
2017B1070	Standard Universal Mount SS for Searchline Excel Plus & Edge
2017B1071	Standard Plastic Sunshade for Searchline Excel Plus & Edge
2331B1150	Terminal block set (5 pack)
2331B1160	Antenna cover (5 pack)
SLXL-PSMGTX	Searchline Excel Plus Tx SS M25 - Includes Mount and Sunshade
SLXL-PSNGTX	Searchline Excel Plus Tx SS 3/4" NPT - Includes Mount and Sunshade
SLXL-PSMGRX	Searchline Excel Plus Rx SS M25 - Includes Mount and Sunshade
SLXL-PSNGRX	Searchline Excel Plus Rx SS 3/4" NPT - Includes Mount and Sunshade
SLXL-ESMGTX	Searchline Excel Edge Tx SS M25 - Includes Mount and Sunshade
SLXL-ESNGTX	Searchline Excel Edge Tx SS 3/4" NPT - Includes Mount and Sunshade
SLXL-ESMGRX	Searchline Excel Edge Rx SS M25 - Includes Mount and Sunshade
SLXL-ESNGRX	Searchline Excel Edge Rx SS 3/4" NPT - Includes Mount and Sunshade
Hand-Held Devices	
Part Number	**Description**
188-200-010	Rugged Android Hand-Held Smart Device. CID1, Zone 1, ATEX, IECEx, NEC, with Camera
188-200-020	Rugged Android Hand-Held Smart Device. CID1, Zone 1, ATEX, IECEx, NEC, without Camera
188-200-030	Rugged Android Hand-Held Smart Device. CID2, Zone 2, ATEX, IECEx, NEC, with Camera
188-200-040	Rugged Android Hand-Held Smart Device. CID2, Zone 2, ATEX, IECEx, NEC, without Camera
188-200-050	Rugged Android Hand-Held Smart Device with Camera
188-200-060	Rugged Android Hand-Held Smart Device without Camera
188-200-070	Rugged Hand-Held Smart Device Yellow Leather Case
188-200-080	Rugged Hand-Held Smart Device Cradle
188-200-090	Rugged Hand-Held Smart Device Clip for Case or Cradle
188-200-100	Rugged Hand-Held Smart Device Docking Station
188-200-110	Rugged Hand-Held Smart Device Charging Cable
188-200-120	Rugged Hand-Held Smart Device EU/UK/US/AU Charger
188-200-130	Rugged Hand-Held Smart Device Vehicle Charger

16b. Searchline Excel Infrared
Infrared Open Path Flammable Gas Detector

C3H8, C4H10, C5H12, CH3CH2OH, CH3OH, CH4

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: 16ft-131ft (5-40 m)
• Medium Range: 131ft-393ft (40-120 m)
• Long Range: 393ft-656ft (120-200 m)

Hazardous Area Certifications include
• European: ATEX
• North American: UL
• Canadian: CSA

Performance Approvals include
• Canada – CSA
• USA - FM

Certifications
• UL Class 1 Div 1 Groups B, C + D and Class 1 Zone 1, AEx d IIB + H2 (Tamb -40ºC to +65ºC), CSA Class 1 Div 1 Groups B, C + D, T5 and Exd IIC FM Class 1 Div 1 Groups B, C + D (Tamb -40ºC to +65ºC)
• EExd IIC T5 (-40ºC to +65ºC) EExd IIC T6 (-40ºC to +40ºC) II 2G
• IP Rating IP66 and IP67

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

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All Excels P/N 02104-N-XXXX come with: Transmitter, Receiver, Mounting Bracket & Hardware for both, Mounting plate for both, UL/CSA/FM/INMETRO versions includes 1 sunshield (ATEX version has NO sunshield included).

16b.1 UL/CSA/FM Certified

Searchline Excel Short Range 5 m – 40 m (15 ft.- 130 ft.), UL/CSA/FM Certified; 1 Sunshield included

Part Number	Description
02104-N-5010	Short range TX/RX 5 m to 40 m UL current source
02104-N-5040	Short range TX/RX 5 m to 40 m UL current sink
02104-N-6010	Short range TX/RX 5 m to 40 m CSA/FM current source
02104-N-6040	Short range TX/RX 5 m to 40 m CSA/FM current sink

Searchline Excel Medium Range 40 m – 120 m (130 ft.- 390 ft.), UL/CSA/FM Certified; 1 Sunshield included

Part Number	Description
02104-N-5020	Medium range TX/RX 40 m to 120 m UL current source
02104-N-5050	Medium range TX/RX 40 m to 120 m UL current sink
02104-N-6020	Medium range TX/RX 40 m to 120 m CSA/FM current source
02104-N-6050	Medium range TX/RX 40 m to 120 m CSA/FM current sink

Searchline Excel Long Range 120 m – 200 m (390 ft.- 650 ft.), UL/CSA/FM Certified; 1 Sunshield included

Part Number	Description
02104-N-5030	Long range TX/RX 120 m to 200 m UL current source
02104-N-5060	Long range TX/RX 120 m to 200 m UL current sink
02104-N-6030	Long range TX/RX 120 m to 200 m CSA/FM current source
02104-N-6060	Long range TX/RX 120 m to 200 m CSA/FM current sink

Installation Hardware Kit (UL/CSA/FM Certified)

Part Number	Description
2992K0088	Excel installation hardware kit (SEE PAGE 55 FOR DETAILS)

16b.2 Receiver Junction Box (UL/CSA/FM Certified) for Termination/Communication to Excel

Receiver Junction Box (UL/CSA/FM Certified) for Termination/Communication to Excel

Part Number	Description
OELDBXXXXXADNUL	OELD ALU LUI C1D1Z1 NPT CULUS
OELDBXXXXXSDNUL	OELD SST LUI C1D1Z1 NPT CULUS
XNX-UTAI-NNNNN	XNX transmitter, HART® over 4-20 mA output, UL/CSA/FM approved, 5 x 3/4 in. NPT entries, painted LM25, configured for Searchline Excel.
XNX-UTAI-NHNNN	XNX transmitter, HART® over 4-20 mA output, UL/CSA/FM approved, 5 x 3/4 in. NPT entries, painted LM25, with local HART® interface port, configured for Searchline Excel.
XNX-UTAI-MNNNN	XNX transmitter, HART® over 4-20 mA output, UL/CSA/FM approved, 5 x 3/4 in. NPT entries, painted LM25, with Modbus®output, configured for Searchline Excel.
XNX-UTAI-FNNNN	XNX transmitter, Foundation Fieldbus output, UL/CSA/FM approved, 5 x 3/4 in. NPT entries, painted LM25, configured for Searchline Excel.
XNX-UTSI-NNNNN	XNX transmitter, HART® over 4-20 mA output, UL/CSA/FM approved, 5 x 3/4 in. NPT entries, painted 316 stainless steel, configured for Searchline Excel.
XNX-UTSI-NHNNN	XNX transmitter, HART® over 4-20 mA output, UL/CSA/FM approved, 5 x 3/4 in. NPT entries, painted 316 stainless steel, with local HART® interface port, configured for Searchline Excel.
XNX-UTSI-MNNNN	XNX transmitter, HART® over 4-20 mA output, UL/CSA/FM approved, 5 x 3/4 in. NPT entries, painted 316 stainless steel, with Modbus® output, configured for Searchline Excel.
XNX-UTSI-FNNNN	XNX transmitter, Foundation Fieldbus output, UL/CSA/FM approved, 5 x 3/4 in. NPT entries, painted 316 stainless steel, configured for Searchline Excel.

16b.3 INMETRO Certified

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

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

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

16b.4 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	**Description**
02104-N-XSAAUS	Short range system 5 m to 40 m ATEX complete TXR and RXR system, installation hardware Kit, SS316 Mounting

Searchline Excel Medium Range 40 m – 120 m (130 ft.- 390 ft.), ATEX Certified	
Part Number	**Description**
02104-N-XMAAUS	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

Searchline Excel Long Range 120 m – 200 m (390 ft.- 650 ft.), ATEX Certified	
Part Number	**Description**
02104-N-XLAAUS	Long range system 120 m to 200 m ATEX complete TXR and RXR system, installation hardware Kit, SS316 Mounting

16b.5 Excel Calibration Gas Table

Table 1: Excel calibration gas table. Additional costs for non-standard calibrations. A calibration must be ordered with every Excel. See table below for calibrations.

Gas Calibrations	
Part Number	**Description**
2104D5026	Methane (CH4) / LEL.m (standard calibration)
2104D5002	Ethane (C2H6) / LEL.m
2104D5003	Propane (C3H8) / LEL.m
2104D5004	Butane (C4H10) / LEL.m
2104D5005	Pentane (C5H12) / LEL.m
2104D5021	Ethylene (C2H4) / LEL.m (standard calibration)
2104D5022	Propylene (C3H6) / LEL.m
2104D5023	Butadiene (C4H6) / LEL.m

16b.6 Alignment Kits For Use With XNX™ Universal Transmitter & OELD

Alignment Kits For Use With XNX™ Universal Transmitter	
Part Number	**Description**
02104-N-4006X	Short range Excel and XNX alignment and conformity Kit including telescope, carry case and test filters (SHC1 not included)
02104-N-4007X	Long/medium range Excel and XNX alignment and conformity Kit including telescope, carry case and test filters (SHC1 not included)

Note: Alignment kits use bayonet mounting style for current offerings

16b.7 Searchline Excel Alignment Kits For Use With DX100

Searchline Excel Alignment Kits For Use With DX100	
Part Number	**Description**
02104-N-4006	Short range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for ATEX approved systems
02104-N-4007	Long and medium range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for ATEX approved systems
02104-N-5006	Short range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for UL approved systems
02104-N-5007	Long and medium range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for UL approved systems
02104-N-6006	Short range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for CSA approved systems
02104-N-6007	Long and medium range alignment and conformity kit including handheld interrogator, telescope, carry case and test filters for CSA approved systems

16b.8 Accessories

Handheld Interrogator and accessories	
Part Number	**Description**
04230-A-1001	Hand Held Interrogator ATEX Certified (4V0 software) for Optima, Optima Plus and Excel
2104B2351	Hand Held Interrogator UL Certified (4V0 software) for Optima, Optima Plus and Excel
2104B2354	Hand Held Interrogator CSA Certified (4V1 software) for Optima, Optima Plus and Excel
2108B1455	Hand Held EEPROM upgrade (4V0)
04230-A-1025	SHC protection device module and lead
2104B6250	SHC Calibrator Connector System 10m
2104B6251	SHC calibrator connector system 6 m
2104B6252	SHC calibrator connector system 3 m

Installation Accessories

Part Number	Description
2104D0295	Sun/heat shade (deluge cover)
94000-A-1017	Extra large sun/heat shade and snow deluge cover
90082-A-5020	Excel snow blower cover, short range
90082-A-5024	Excel snow blower cover, medium/long range
2441-0022	UL/CSA aluminum 6 wire junction box assembly
2992A0071	Conduit assembly for Excel UL certified
02104-N-9870	Upgrade to stainless steel glands

Gas Test Equipment

Part Number	Description
2104N2999	Excel test filters Kit type B, C, D, E, F, G, H and manual
2104B2326	Gassing Cell

16b.9 Spares

Spares

Part Number	Description
2104B2391	Short Range Telescope (bayonet fitting)
2104B2322	Medium / Long Range Telescope (callipers)
210-190-003	Short range alignment case
2104B0300	Searchline Excel Isolation Kit Short Range
2104B0310	Searchline Excel Isolation Kit Medium/Long Range
2104B2301	Mounting Bracket Short Range & Insul. Kit
2104B2302	Mounting Bracket Long Range & Insul. Kit
2104D0237	Mounting Plate

Spare Transmitters and Receivers

Note: All receivers require a calibration curve

Part Number	Description
2104B3001	Short Range Transmitter UL
2104B3011	Medium Range Transmitter UL
2104B3021	Long Range Transmitter UL
2104B3101	Short Range Receiver UL Source
2104B3102	Short Range Receiver UL Sink
2104B3111	Medium Range Receiver UL Source
2104B3112	Medium Range Receiver UL Sink
2104B3121	Long Range Receiver UL Source
2104B3122	Long Range Receiver UL Sink
2104B3201	Short Range Transmitter CSA/FM
2104B3211	Medium Range Transmitter CSA/FM
2104B3221	Long Range Transmitter CSA/FM
2104B3301	Short Range Receiver CSA/FM Source
2104B3302	Short Range Receiver CSA/FM Sink
2104B3311	Medium Range Receiver CSA/FM Source
2104B3312	Medium Range Receiver CSA/FM Sink
2104B3321	Long Range Receiver CSA/FM Source
2104B3322	Long Range Receiver CSA/FM Sink

2104B2071	Short Range Transmitter ATEX	
2104B2081	Medium Range Transmitter ATEX	
2104B2091	Long Range Transmitter ATEX	
2104B2111	Short Range Receiver ATEX Source	
2104B2112	Short Range Receiver ATEX Sink	
2104B2131	Medium Range Receiver ATEX Source	
2104B2132	Medium Range Receiver ATEX Sink	
2104B2151	Long Range Receiver ATEX Source	
2104B2152	Long Range Receiver ATEX Sink	
2104B3401	Short Range Transmitter Inmetro	
2104B3411	Medium Range Transmitter Inmetro	
2104B3421	Long Range Transmitter Inmetro	
2104B3501	Short Range Receiver Inmetro Source	
2104B3502	Short Range Receiver Inmetro Sink	
2104B3511	Medium Range Receiver Inmetro Source	
2104B3512	Medium Range Receiver Inmetro Sink	
2104B3521	Long Range Receiver Inmetro Source	
2104B3522	Long Range Receiver Inmetro Sink	
Note: All receivers require a calibration curve		

Excel Installation Hardware Kit: see page 51

Part Number	Description	Qty.
2992K0088	Excel Installation Hardware Kit	
2430-0021	NEMA 4x j box 3 terminal	1
0900-0071	Bolt m10 x 25 x 1.5 mm hex head ss	2
106092-L9	Washer lock split m10 ss	2
2992A0071	Flexible coupling assembly	2
2440G0006	Excel kit w/dx100 or XNX assy spec	1
200180	Box carton no.189 13x11x5 high	1
200008	Bag poly zip 6 x 9 .002	1
200009	Write-on zip poly bag 3x5 2 mil	1

17. Searchline Excel Cross-Duct

Infrared Flammable 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 1.6 ft – 8.2 ft (0.5 m – 2.5 m) width and Long Range for ducts 8.2 ft – 16.4 ft (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.

It is important to ensure the suitability of an application for Searchline Excel Cross-Duct before ordering. Target gas can be Methane or gas mixtures where methane is the main constituent (>70%) and the balance is C2 - C6 hydrocarbons. 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. Hazardous area approvals include European (ATEX) and North American (UL). Receiver output is 3 wire 4-20mA selectable sink or source.

Certifications
• UL: Class 1 Groups B, C, D and Class 1 Zone 1 AEx d IIB + Hydrogen (Amb -40°C to +65°C)
• ATEX & IECEx:
II 2G, Ex d IIC T5 (Tamb -40°C to +65°C)
II 2G, Ex d IIC T6 (Tamb -40°C to +40°C)
• Independently assessed to IEC61508
• IP Rating IP66 and IP67

17.1 Instrument

Excel Cross-Duct Short Range 0.5m - 2.5m

Part Number	Description
2104N1010	Excel cross-duct gas detection system, short range (0.5 to 2.5m), 4 to 20mA (source) and Modbus outputs, UL, fully wired with flexible conduit, electro polished 316SS. Includes detection block, single tile heated reflector panel and 316SS mounting plate. Methane calibration only. Note Duct Mounting Kit [2440K0004] must be ordered
2104N4214	Excel cross-duct gas detection system, short range (0.5 to 2.5m), 4 to 20mA (source) and Modbus outputs, ATEX/IECEx, fully wired with flexible conduit, electro polished 316SS. Includes detection block, single tile heated reflector panel, Ex e junction box with M20/M25 cable entries and 316SS mounting plate. Methane calibration only.

Excel Cross-Duct Long Range 2.5m - 5.0m

Part Number	Description
2104N4224	Excel cross-duct gas detection system, long range (2.5 to 5.0m), 4 to 20mA (source) and Modbus outputs, ATEX/IECEx, fully wired with flexible conduit, electro polished 316SS. Includes detection block, quad tile heated reflector panel, Ex e junction box with M20/M25 cable entries and 316SS mounting plate. Methane calibration only.

17.2 Accessories

Installation Accessories

Part Number	Description
2440K0004	Duct mounting kit for use with UL approved short range cross duct systems. Comprises DX100M, junction box and flexible conduit. See below BOM table.
2440K0005	Duct Mounting Kit for use with UL approved short range cross duct systems. Comprises 8 terminal junction box and flexible conduit (2).
2104B2557	Cross duct adapter plate for OELD & XNX
2441-0027	8 terminal junction box for remote mounted cross duct systems (3 x 3/4"NPT entries)
00780-A-0100	Honeywell Junction Box- Bartec OTB122 With Continuity Plate 1 X 25mm - 3 X 20mm Entries - ATEX Approved

Hand Held Interrogators

Part Number	Description
04230-A-1001	Hand held interrogator ATEX certified (4V0 software) for Optima, Optima Plus and Excel
2104B2351	Hand held interrogator UL certified (4V0 software) for Optima, Optima Plus and Excel
2108B1455	Hand held EEPROM upgrade (4V0)
04230-A-1025	SHC protection device module and lead
2104B6250	SHC Calibrator connector system 10 m

Junction Box Interfaces

Part Number	Description
OELDBXXXXXADNUL	OELD ALU LUI C1D1Z1 NPT CULUS
OELDBXXXXXSDNUL	OELD SST LUI C1D1Z1 NPT CULUS
2104B2382	DX100M XPROOF junction box UL with Modbus capability

Note: Must order adapter plate (2104B2557) when ordering the OELD smart junction box

Gas Test Equipment

Part Number	Description
2104N3000	Excel test filters Kit type A, B, C, D, E, F, G, H and manual

17.3 Spares

Installation Accessories

Part Number	Description
2108D0271	Remote gassing pipe

Duct Mounting Kit BOM

Part Number	Description	Qty.
2440K0004	Duct Mounting Kit for use with UL approved short range cross duct systems. Comprises 8 terminal junction box and flexible conduit (2).	
0235-0163	COUPLING FLEX 27" 1/2 NPT EXPRF	2
105437	FITTING REDUCER 3/4NPT TO 1/2NPT	1
104626	FITTING UNION X-PROOF 1/2 NPT M-F	1
0235-0129	UNION 90 DEG 1/2NPT F TO 3/4NPT M	1
200227-L9	ADHESIVE THREAD LUBRICANT	1
2104B2382	DX100 (M) XPROOF TERMINATION	1
2440A0004	DUCT MOUNT EXCEL UL KIT ASSY	1
2440-0005	DX100 TERMINATION LABEL EXCEL	1
106091-L9	BOLT M100 20.000 H HH SS NF	2
106092-L9	WASHER LOCK SPLIT M10 SS	2
106639	BAG 3 X 4 POLY ZIP-LOK	2
201059-L9	BOX 14 X 12 X 10	1
200008	BAG POLY ZIP 6 X 9 .002	1

18. 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 IR1 (1.1 – 3.5 μ)			√	
	WideBand IR2 (3.0 – 5.0 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	√	√	√	
	SIL 2 Compliant	√	√		
TEST LAMPS	TL-2055	√	√	√	
	TL-1055	√	√	√	
	FS-846-B				√
MOUNT	SM4	√	√	√	√

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

19. 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	●	●	●	○
	Power Plants	●	●	●	○
OIL, GAS and 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	●	●	●	○
GENERAL	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

20. Model FS24X QuadBand™

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

The 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 FS24X is a quantum leap in flame and fire detection. Sophisticated software algorithms and dual microprocessors ensure that the FS24X has the highest fire detection performance combined with optimal false alarm rejection.

110° field of view with a detection range greater than 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° cone-of-vision (90° 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 source)
• Alarm, Fault and Fire Verification relays
• Automatic optical path and electronic self
• Widest operating temperature range
• Patented* Electronics Module for components protection with easy plug-in terminations and field installation
• Two 3/4" NPT OR 25 mm conduit entries
• Low Power Consumption
• High RFI and EMI immunity

Benefits
• Detects hydrocarbon and non-hydrocarbon 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

Certifications
• FM:
Class I, Div. 1 & 2, Groups B, C, & D
Class II, Div. 1 & 2, Groups E, F, & G
Class III
• ATEX: II 2 G D
Ex d IIC T4 (Ta: -60 to +110ºC), T5 (Ta: -60 to +90ºC), T6 (Ta: -60 to +75ºC)
• CE:
Complies with EN6000-6-4, EN50130-4, & EN54-10:2002 + A1:2005
• SIL Rating:
FMEDA meets IEC 61508 safety requirements

20.1 FS24X-211 Series with 110° Field of View, Standard Temp Range -40° to 85°C

Part Number	Description
FS24X-211 Series with 110° field of view, standard temp range -40° to 85°C	
Part Number	**Description**
FS24X-211-21-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾"NPT entries FM, cFM, IECEx & ATEX approved
FS24X-211-22-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved
FS24X-211-23-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries FM, cFM, IECEx & ATEX approved
FS24X-211-24-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries FM, cFM, IECEx & ATEX approved
FS24X-211-21-4	QuadBand™ IR3+ detector, 110° field of view, copper-free aluminum encl., (2) 3/4 in. NPT entries INMETRO approved
FS24X-211-22-4	QuadBand™ IR3+ detector, 110° field of view, 316 stainless steel encl., (2) 3/4 in. NPT entries INMETRO approved
FS24X-211-23-4	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries INMETRO approved
FS24X-211-24-4	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries INMETRO

20.2 FS24X-212 Series

Part Number	Description
FS24X-211 Kits	
Part Number	**Description**
FS24X-212-21-1	FS24X-211-21-1 QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾"NPT entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-22-1	FS24X-211-22-1 QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-23-1	FS24X-211-23-1 QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-24-1	FS24X-211-24-1 QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-21-4	FS24X-211-24-1 QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-22-4	FS24X-211-24-1 QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-23-4	FS24X-211-23-1 QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-212-24-4	FS24X-211-24-1 QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.

20.3 FS24X-911 Series with 90° field of view, standard temp range -60° to 85°C

Part Number	Description
FS24X-911 Series with 90° field of view, standard temp range -60° to 85°C	
FS24X-911-21-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾"NPT entries FM, cFM, IECEx & ATEX approved
FS24X-911-22-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved
FS24X-911-23-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries FM, cFM, IECEx & ATEX approved
FS24X-911-24-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries FM, cFM, IECEx & ATEX approved
FS24X-911-21-5	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾"NPT entries, for High Background IR Applications, FM, cFM, IECEx, ATEX, & INMETRO approved
FS24X-911-22-5	QuadBand™ IR3+ Detector, 316 Stainless Steel encl., (2) 3/4 in. NPT entries, for High Background IR Applications, FM, cFM, IECEx, ATEX, & INMETRO approved
FS24X-911-23-5	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries, for High Background IR Applications, FM, cFM, IECEx, ATEX, & INMETRO approved
FS24X-911-24-5	QuadBand™ IR3+ Detector, 316 Stainless Steel encl., (2) M25 entries, for High Background IR Applications, FM, cFM, IECEx, ATEX, & INMETRO approved
FS24X-911-21-6	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾"NPT entries FM, cFM, IECEx & ATEX and EN54-10 approved
FS24X-911-22-6	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX and EN54-10 approved
FS24X-911-23-6	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries FM, cFM, IECEx, ATEX and EN54-10 approved
FS24X-911-24-6	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl. (2) M25 entries FM, cFM, IECEx & ATEX and EN54-10 approved

20.4 FS24X-912 Series (HART)

FS24X-912 Series	
Part Number	**Description**
FS24X-912-21-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾"NPT entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors factory installed.
FS24X-912-22-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) ¾" NPT entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors factory installed.
FS24X-912-23-1	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors factory installed.
FS24X-912-24-1	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) M25 entries FM, cFM, IECEx & ATEX approved with FSX-A014R Optional Registered HART Module for FS24X Detectors factory installed.
FS24X-912-21-5	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) ¾"NPT entries, for High Background IR Applications, FM, cFM, IECEx, ATEX, & INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors factory installed.
FS24X-912-23-5	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries, for High Background IR Applications, FM, cFM, IECEx, ATEX, & INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors factory installed.
FS24X-912-24-5	QuadBand™ IR3+ Detector, 316 Stainless Steel encl., (2) M25 entries FM, for High Background IR Applications, FM, cFM, IECEx, ATEX, & INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors factory installed.
FS24X-912-21-4	QuadBand™ IR3+ detector, 90° field of view, copper-free aluminum encl., (2) 3/4 in. NPT entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-912-22-4	QuadBand™ IR3+ detector, 90° field of view, 316 stainless steel encl., (2) 3/4 in. NPT entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-912-23-4	QuadBand™ IR3+ Detector, Copper-Free Aluminum Encl., (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors Factory installed.
FS24X-912-24-4	QuadBand™ IR3+ Detector, 316 Stainless Steel Encl., (2) M25 entries INMETRO approved with FSX-A014R Optional Registered HART Module for FS24X Detectors

20.5 Replacement Detector Modules FS24X

Replacement Detector Modules FS24X	
Part Number	**Description**
FS24X-911-10	FS24X Replacement Module for 911 & 211* - standard temp range
FS24X-912-10	FS24X Replacement Module w/HART - standard temp range

*After installed, removed grill from enclosure lid. Consult HA technical team.

20.6 Accessories FS24X

Part Number	Description
Accessories	
SM4	Stainless Steel Swivel mounting assembly for FS24X, FS20X, SS4, SS2 detectors
PSU-12	Universal charger for Fire Sentry Test Lamps and Interface Kits. For 110-240 VAC with international plugs
TL-2055	IR Test lamp for testing FSX detectors, explosion proof version. Incl universal charger
TL-1055	IR Test lamp for testing FSX detectors, non-explosion proof version. Incl universal charger
SH-001	Sunshield for SS2, SS4 & FS24X Detectors, 316 Stainless Steel
FSX-A014R	Optional Registered HART Module for FS24X Detectors

20.7 Spare Parts FS24X

Part Number	Description
Spare Parts	
FSX-A009	Stainless Steel Grill Kit for FS24X-2 (110°) Detectors, for -5 version only
FSX-A010	Stainless Steel Grill Kit for FS24X-9 (90°) Detectors, for -5 version only
FSX-A006	Replacement IR Bulb TL1055/TL2055
PW-3123-0005	Battery Pack for FT-2145/TL-1055/TL-2055 Test Lamp, 12VDC, 2200mA, NiMH
FSC-3479-0001	O-ring, 102x3, NBR 70, O-Ring for all SS and AL housings for C1D1

21. Model FS20X
Multi-Spectrum Fire and Flame Detector UV/Dual IR/VIS

The 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 SS4 detector, the FS20X detector represents a quantum leap in integrating Infrared and Ultraviolet sensing technologies. The FS20X is a fire and flame detector with a proven UV solar-blind Sensor.

The 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° 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

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

Certifications
• FM: Class I, Div. 1 & 2, Groups B, C, & D; Class II, Div. 1 & 2, Groups E, F, & G; Class III
• ATEX: II 2 G D; Ex d IIC T4 (Ta: -40 to +110ºC), T5 (Ta: -40 to +75ºC), T6 (Ta: -40 to +60ºC)
• CE: Complies with EN6100-6-4 & EN50130-4, EN54-10:2002 + A1:2005

21.1 FS20X-211 Series, standard temp range -40° to 85°C

Part Number	Description
FS20X-211 Series, standard temp range -40° to 85°C	
FS20X-211-21-2	Dual IR/UV Detector Copper-Free Aluminum Encl. with (2) ¾" NPT entries, FM, cFM for Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III
FS20X-211-22-2	Dual IR/UV Detector 316 Stainless Steel Encl. with (2) ¾"NPT entries, FM, cFM for Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III
FS20X-211-23-3	Dual IR/UV Detector Copper-Free Aluminum Encl. with (2) M25 entries, FM, cFM, ATEX, IECEx for Class I, Zone 1
FS20X-211-24-3	Dual IR/UV Detector 316 Stainless Steel Encl. with (2) M25 entries, FM, cFM, ATEX, IECEx for Class I, Zone 1
FS20X-211-21-4	Dual IR/UV Detector Copper-Free Aluminum Encl. with (2) 3/4 in. NPT entries, INMETRO
FS20X-211-22-4	Dual IR/UV Detector 316 Stainless Steel Encl. with (2) 3/4 in. NPT entries, INMETRO
FS20X-211-23-4	Dual IR/UV Detector Copper-Free Aluminum Encl. with (2) M25 entries, INMETRO
FS20X-211-24-4	Dual IR/UV Detector 316 Stainless Steel Encl. with (2) M25 entries, INMETRO

21.2 FS20X-212 Series w/HART, standard temp range -40° to 85°C

Part Number	Description
FS20X-212 Series, standard temp range -40° to 85°C	
FS20X-212-21-2	Dual IR/UV copper-free aluminum encl. with (2) 3/4 in. entries, FM/cFM, HART module factory installed
FS20X-212-22-2	Dual IR/UV 316 stainless steel encl. with (2) 3/4 in. entries, FM/cFM, HART module factory installed
FS20X-212-23-3	Dual IR/UV copper-free aluminum encl. with (2) M25 entries, ATEX/IECEx, HART module factory installed
FS20X-212-24-3	Dual IR/UV 316 stainless steel encl. with (2) M25 entries, ATEX/IECEx, HART module factory installed
FS20X-212-21-4	Dual IR/UV copper-free aluminum encl. with (2) 3/4 in. NPT entries, INMETRO. HART Module factory installed
FS20X-212-22-4	Dual IR/UV stainless steel encl. with (2) 3/4 in. NPT entries, INMETRO. HART Module factory installed
FS20X-212-23-4	Dual IR/UV copper-free aluminum encl. with (2) M25 entries, INMETRO, HART module factory installed
FS20X-212-24-4	Dual IR/UV 316 stainless steel encl. with (2) M25 entries, INMETRO, HART module factory installed

21.3 Accessories FS20X

Part Number	Description
FS20X Accessories	
FSX-A014	Optional HART Module for FS20X Detectors
FVR-01	Field of View Restrictor
PSU-12	Universal charger for Fire Sentry Test Lamps and Interface Kits. For 110-240 VAC with international plugs
SH-001	Sunshield for SS2, SS4 & FS24X Detectors, 316 Stainless Steel
SM4	Stainless Steel Swivel mounting assembly for FS24X, FS20X, SS4, SS2 detectors
TL-1055	IR Test lamp for testing FSX detectors, non-explosion proof version. Incl universal charger
TL-2055	IR Test lamp for testing FSX detectors, explosion proof version. Incl universal charger

21.4 Replacement Detector Module for FS20X

Replacement Detector Module for FS20X	
Part Number	**Description**
FS20X-211-10	FS20X Replacement Detector Module
FS20X-212-10	FS20X Replacement Detector Module w/HART

21.5 Spare Parts FS20X

Spare Parts	
Part Number	**Description**
FSX-A006	Replacement IR Bulb for TL1055 and TL2055
FSX-A011	Grill Kit for the FS20X
PW-3123-0005	Battery Pack for FT-2145/TL-1055/TL-2055 Test Lamp, 12VDC, 2200mA, NiMH
FSC-3479-0001	O-ring, 102x3, NBR 70, O-Ring for all SS and AL housings for C1D1

22. FS10 Fire Detection Systems

For Liquid

A high-speed microprocessor based fire detection and process control system specially designed for liquid and powder coating applications, the 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 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 pant spray booths

 - Sees through paint, powder or oil residue on Detector's lens

 - Digital communications with RS-485 interface

Certifications

 - Explosion-Proof; Class I, Div. 1 & 2, Groups B, C, & D Class II, Div. 1 & 2, Groups E, F, & G, Class III
 - FM, CE

22.1 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 Vdc.

Card Controller with FS10 Electro-Optical Fire Detector	
Part Number	**Description**
Option-2FL	2FL system: liquid paint spray line applications with two (2) fire signal relay levels
Option-2GF	2GF system: general finishing applications with process control and fire alarm signal relays
Option-2WE	2WE system: powder coating and paint spray line applications with two (2) fire signal relay levels
Option-2WL	2WL system: paint spray line applications with three (3) fire signal relay levels
Option-2GE	2GE system: powder coating and paint spray line applications with two (2) fire signal relay levels
BP-1	Backplane for 1 card controller
BP-2	Backplane for 2 card controllers
BP-4-L9	Backplane for 4 card controllers

22. FS10 Fire Detection Systems

For Liquid Paint Spray and Electrostatic Powder Coating

22.2 Spare Parts - FS10 Wall Mount Controller and Card Controller

Spare Parts - FS10 Wall Mount Controller and Card Controller	
Part Number	**Description**
SW-5143-001	Replacement keypad for FS10 wall mount
FS10-CARD-2FL	Liquid paint spray line applications with two (2) fire signal relay levels
FS10-CARD-2GE	Powder coating and paint spray line applications with two (2) fire signal relay levels
FS10-CARD-2GF	General finishing applications with process control and fire alarm signal relays
FS10-CARD-2WL	Paint spray line applications with three (3) fire signal relay levels
FS10-Detector	Model FS10 fire Detector for use with wall mount controller or card controller
FS10-DET-MODULE	Replacement electronics module for fire detector for the above systems

22.3 Detector Cables

Card Controller with FS10 Electro-Optical Fire Detector	
Part Number	**Description**
CAB-50	50 ft. card controller cable. Connects fire detector to controller
CAB-100	100 ft. card controller cable. Connects fire detector to controller

22.4 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, B, C, & D.

FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors	
Part Number	**Description**
FS10-R30	Copper-free aluminum housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (latching alert and alarm relays)
FS10-R30-SS	316 stainless steel housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (latching alert and alarm relays)
FS10-R30-EC	Copper-free aluminum housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (latching alert and alarm relays), Normally Energized with Normally Closed Contacts
FS10-R45	Copper-free aluminum housing 45 ft. sensitivity (latching alarm relays)
FS10-R45-SS	316 stainless steel housing 45 ft. sensitivity (latching alarm relays)
FS10-RN30	Copper-free aluminum housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (non-latching alert and alarm relays)
FS10-RN30-SS	316 stainless steel housing incl ALERT / FIRE EARLY WARNING relay, 30 ft. sensitivity (non-latching alert and alarm relays)
FS10-RN45	Copper-free aluminum hsg 45 ft. sensitivity (non-latching alarm relays)
FS10-RN45-SS	316 Stainless steel housing 45 ft. sensitivity (non-latching alarm relays)

22. FS10 Fire Detection Systems

For Liquid Paint Spray and Electrostatic Powder Coating

22.5 Spare Parts - FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors

Spare Parts - FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors	
Part Number	**Description**
FS10-R30-MOD	Replacement electronics module for Model FS10-R30 stand alone fire Detector (latching alert and alarm relays)
FS10-R30-EC-MOD	Replacement electronics module for Model FS10-R30 stand alone fire Detector (latching alert and alarm relays), Normally Energized with Normally Closed Contacts
FS10-R45-MOD	Replacement electronics module for Model FS10-R45 stand alone fire Detector (latching alarm relay)
FS10-RN30-MOD	Replacement electronics module for Model FS10-RN30 stand alone fire Detector (non-latching alert and alarm relays)
FS10-RN45-MOD	Replacement electronics module for Model FS10-RN45 stand alone fire Detector (non-latching alarm relay)

22.6 Spare Parts - FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors

Card Controller with FS10 Electro-Optical Fire Detector	
Part Number	**Description**
FS10R-GR-Kit	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
RS-232 Cable	RS232 computer Cable for connection from FS7-130-SX, S7-2175, option-1 or option-2 controllers or interface box to PC
PSU-12	110/220 Vac, 50-60 HZ input /15 Vdc output : universal Charger for interface box or DD Series, FT Series and TL Series test lamps

22.7 Accessories - FS10 Stand Alone (Unitized) and Controller Based Electro-Optical Fire Detectors

FS10 Stand Alone (Unitized) Electro-Optical Fire Detectors	
Part Number	**Description**
SM4	Stainless steel swivel mount allows Detector to be pointed in any direction
FS-846-B	Test lamp Battery operated for testing FS10 fire Detectors up to 10 ft.
EXPL-1	EXTENSION POLE FOR DPC-12 Extension Pole for placing and removing Disposable Protective Covers on FS10 Detectors
DPC-12	Disposable protective covers keeps powder or paint off the window lens of the FS10 fire Detector (12 per bag) (for use with FS10 only)
DASA1-P	Air shield for powder applications protects FS10 fire Detector window lens from powder build-up. Supplied with fitting for 1/4 in. tubing (can also be used with FS24X, FS20X, SS4, and SS2)
DASA6-N	Air shield for powder applications protects FS10 Fire Detector window lens from powder build-up. Supplied with fitting for 6 mm tubing
FSC-3479-0001	O-ring, 102x3, NBR 70, O-Ring for all SS and AL housings for C1D1

23. FS7
Multi-Spectrum Fire and Flame Detector

The Fire Sentry FS7 Flame Detector provides and intelligent two-stage response to semiconductor wet bench fires:

Stage 1: Alert. This is the first-stage response to a small fire with a heat energy output of 3 kW (the equivalent of a 4-inch diameter polypropylene pool fire). This fire may self-extinguish.

Stage 2: Alarm. If the fire does not self-extinguish, and grows to the Factory Mutual specified heat energy threshold of 13 kW (the equivalent of an 8-inch diameter polypropylene pool fire), the second stage response is activated.

The Fire Sentry FS7-2173 is used with Fire Sentry FS7-130-SX Controller. Controller supplies power to detectors monitors the status of all detectors and communicates with the detectors via the digital RS-485 communication channel. Fire Sentry FS7-2173 is supplied with a standard 20 ft. cable connector. Detectors are connected to the controller using the self-locking connectors and Fire Sentry junction boxes. This allows for fast and easy connections eliminating wiring problems. Each detector can store up to six time and date stamped FirePics™ (pre-event multi-spectral sensor array data) in non-volatile memory. Controller can also store event history table in the non-volatile memory, which contains the time and date stamped alert, alarm and fault histories. FirePics™ and event histories can be retrieved from the controller.

Additional Features and Benefits
• Multi-Spectral digital electro-optical radiant energy infrared fire detector
• Unique two-stage fire detection response
• Immune to false alarm sources
• NOT affected by absorbing smoke, gasses or chemical vapors
• NOT sensitive to background radiant energy from electric heaters and ovens
• Detects hydrocarbon and non-hydrocarbon fires

• Rugged leak-proof, heat-sealed, acid resistant, injection-molded polypropylene housing
• Wide 120° field-of-view
• Digital communication with RS-485 interface
• FirePic™; time and date-stamped digital fire signatures
• Built-in detector automatic self test
• Unitized model design for stand-alone operation

23.1 Detectors

Part Number	Description
FS7 - Detectors	
FS7-2173	Viton O-ring. For use with FS7-130-SX Controller
FS7-2173-2RP	Non-Latching Alert and Alarm relays. Viton O-ring.
FS7-2173-2RP-K	Non-Latching Alert and Alarm relays. Kal-rez O-ring.
FS7-2173-KALO	Kal-rez O-ring. For use with FS7-130-SX Controller

23.2 Controller Systems

Controller Systems FS7

Part Number	Description
FS7-130-SX	Multi-Zone Compact Controller, designed to be installed in Fire Panels, which monitors up to 12 Model FS7-2173 Fire Detectors. Programmable for up to 4 zones with relay outputs for ALERT and ALARM. Requires 24 VDC.

23.3 Accessories

FS7 - Accessories

Part Number	Description
FS-746-B	Test Lamp. Battery operated for testing FS7 Fire Detectors up to 10 ft.
FT-S7	Test Lamp. Battery operated for testing FS7 Fire Detectors up to 2 ft.
FS7-2179	Junction Box for connecting Model FS7-2173 Fire Detectors in a daisy chain or star configuration. Complete with (4) Lemo female connectors. Required for Model FS7-130-SX applications.

23.4 Interconnection Cables

FS7 - Interconnection Cables

Part Number	Description
CBMM-5	5 ft. cable with Male/Male Lemo connectors, (Junction Box to Junction Box).
CBMM-10	10 ft. cable with Male/Male Lemo connectors, (Junction Box to Junction Box).
CBMO-20	20 ft. cable with Male Lemo connector/open pigtail, (Junction Box to Model FS7-130-SX Controller or Model S7-2175 Control Panel).
CBMO-50	50 ft. cable with Male Lemo connector/open pigtail, (Junction Box to Model FS7-130-SX Controller or Model S7-2175 Control Panel).

23.5 Spare Parts

Spare Parts

Part Number	Description
PSU-12	110/220 VAC, 50-60 HZ Input /15 VDC Output : Universal Charger for Interface Box or DD Series, FT Series and TL Series Test Lamps
PW-3123-0002	Replacement Battery for FT-S7 Tester (1 required)
PL-3563-0004	Wall Mount, S7/FS7 Detector

24. Series FSL100

Flame Detectors

The FSL100 series is the latest generation range of Mid market Flame Detectors from Honeywell Analytics. The range consists of UV, UVIR and IR3 flame detectors. All utilize sophisticated sensing and signal analysis to detect fires quickly while also rejecting false alarms. The FSL100 may be small and lightweight for easy installation but they are designed to work in tough environments both in and out of doors as well as potentially explosive atmospheres. With a large field of view they can detect a range of different types of fire including hydrocarbon and non hydrocarbon sources.

Note: A swivel mount should be ordered with each Flame Detector.

24.1 UV (Ultraviolet) Flame Detector

UV (Ultraviolet) Flame Detector	
Part Number	Description
FSL100-UV	UV flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2 EN54-10 (HIGH sensitivity) certificate. FM3260 approval. Red Housing
FSL100-UV-W	UV flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2 EN54-10 (HIGH sensitivity) certificate FM3260 approval. White Housing.

24.2 UVIR (Ultraviolet & Infrared) Flame Detector

UVIR (Ultraviolet & Infrared) Flame Detector	
Part Number	Description
FSL100-UVIR	UV/IR flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2
FSL100-UVIR-W	UV/IR flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2

24.3 IR3 (3 Infrared bands) Flame Detector

IR3 (3 Infrared bands) Flame Detector	
Part Number	Description
FSL100-IR3	Triple IR flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2
FSL100-IR3-W	Triple IR flame detector. Suitable for ATEX zone 2/22; FM 3611 Class 1,2&3 Div2

24.4 Accessories

Accessories	
Part Number	Description
FSL100-SM21	FSL100 Optional swivel mount
FSL100-TL	FSL100 test lamp, incl. universal charger and carrying case; non EX
FSL100-TLX	FSL100 test lamp, incl. carrying case; intrinsically safe

Note: FSL100-TL is a rechargeable, hand-held IR and UV radiation source designed to test Honeywell FSL100 series flame detectors used in safe areas only. The range is approx. 4 meters (13 ft).

24.5 Spare Parts

Accessories	
Part Number	Description
FSL100-TLBT	12 Vdc battery for FSL-TL test lamp
FSL100-TLBU	H3 light bulb for FSL-TL test lamp
FSL100-TLCH	Universal charger kit for FSL-TL test lamp

25. RAEGuard 2 PID

Transmitter

RAEGuard 2 PID

The RAEGuard 2 PID is a fixed photoionization detector (PID) that measures a broad range of volatile organic compounds (VOCs).

The RAEGuard 2 PID operates on 10 to 28 VDC and provides an analog (4-20mA) three-wire signal output, and RS-485 Modbus digital signal output.

Calibration and maintenance have been greatly simplified as the digital PID sensor module can be easily removed in hazardous locations without tools for calibration or maintenance.

Ships with calibration certificate. Sensor lifespan - 2 years. Warranty - 2 years on lamp; 1 year on sensor, electronics, and pump.

25.1 INSTRUMENT
RAEGuard 2 PID

All kits include: RAEGuard 2 PID fixed head. DigiPID sensor module, magnetic key, hex service tool, 5 pack of external dust filters (water trap filters), and user manual.

Kits	
Part Number	**Description**
H-D03-0009-000	Kit, RAEGuard 2 PID, UL, 0.01 – 100 ppm isobutylene equivalent
H-D03-0004-000	Kit, RAEGuard 2 PID, ATEX/IECEx, 0.01 – 100 ppm isobutylene equivalent
H-D03-0010-000	Kit, RAEGuard 2 PID, UL, 0.1 – 1000 ppm isobutylene equivalent
H-D03-0005-000	Kit, RAEGuard 2 PID, ATEX/IECEx, 0.1 – 1000 ppm isobutylene equivalent
H-D03-0012-000	Kit, RAEGuard 2 PID, UL, 1 – 1000 ppm isobutylene equivalent Note: Correction factors and relays are not available for this detection range
H-D03-0008-000	Kit, RAEGuard 2 PID, ATEX/IECEx, 1 – 1000 ppm isobutylene equivalent Note: Correction factors and relays are not available for this detection range

25.2 Accessories

Accessories	
Part Number	**Description**
D03-3018-005	Rain guard D03-2023-000, filter assembly, (Pack of 5)
490-0163-000	Water collecting, coalescing filter, glass and steel

25.3 Consumables

Consumables

| Part Number	Description
C01-2034-005	DigiPID internal teflon dust filter (Pack of 5)
490-0011-005	DigiPID external dust filter (named water trap filter in manual; Pack of 5)
033-3035-000	DigiPID external dust pre-filter
C01-2017-010	DigiPID Teflon UV electrode shield (Pack of 10)
050-0000-005	DigiPID lamp, 10.6 ev, 1/2"
490-0164-010	Filter replacements (Pack of 10) for 490-0163-000
081-0002-000	Kit, Lamp Cleaning

25.4 Spares

Spares

Part Number	Description
H-D03-0013-000	RAEGuard 2 Fixed Head - UL (No Sensor module) (Includes RAEGuard 2 fixed head, ATEX safety barrier magnetic key, hex service tool, user manual)
H-D03-0007-000	RAEGuard 2 Fixed Head - ATEX (No Sensor module) (Includes RAEGuard 2 fixed head, ATEX safety barrier magnetic key, hex service tool, user manual)
D03-3001-001	RAEGuard 2 PID Display Module Assembly
C01-0001-000	DigiPID sensor module, ATEX/IECEx/UL, 0.01 - 100 ppm isobutylene
C01-0002-000	DigiPID sensor module, ATEX/IECEx/UL, 0.1 - 1000 ppm isobutylene
C01-0004-000	DigiPID sensor module, ATEX/IECEx/UL, 1 - 1000 ppm isobutylene equivalent ***Note: Correction factors and relays are not available for this detection range**
D03-2006-102	Mesh screws for use in RAEGuard safety barrier adapter UL (pack of 2)
C01-3007-100	DigiPID replacement sensor Kit - Teflon construction with 3 electrodes
C01-3007-200	DigiPID replacement sensor kit with stainless steel UV shield
C01-3012-000	DigiPID flowthough adapter - Stainless steel (included standard with all DigiPID sensor modules)
D03-3002-000	Pump Assy, RAEGuard 2 PID
0310-2021	Tubing, Tygon, FEP lined, 1/4 OD by 1/8 ID *(per linear foot)*
033-3032-000	Magnet Key, RAEGuard and RAEGuard 2

25.5 Gas Test Equipment

Part Number	Description
600-0069-000	Isobutylene, 10 ppm (balance air), 34 liter cylinder, Male threads on cyl, CGA-600 Reg
600-0001-000	Isobutylene, 50 ppm (balance air), 34 liter cylinder, Male threads on cyl, CGA-600 Reg
600-0002-000	Isobutylene, 100 ppm (balance air), 34 liter cylinder, Male threads on cyl, CGA-600 Reg
600-0002-001	Isobutylene, 100 ppm, 103 liter cylinder (58 liter regulator), C-10 Reg
600-0024-000	Dry Air, 0 ppm, 34 liter cylinder, CGA-600 Reg
600-0051-000	Hydrogen Sulfide, 10 ppm H2S (balance N2), 58 liter cylinder, C-10 Reg
600-0052-000	Carbon Monoxide, 50 ppm CO (balance air), 34 liter cylinder, CGA-600 Reg
600-0053-000	Sulfur Dioxide, 5 ppm SO2 (balance N2), 58 liter cylinder, C-10 Reg
600-0061-000	Oxygen, 20.9% (balance N2), 34 liter cylinder, CGA-600 Reg
600-0061-001	Oxygen, 19% (balance N2), 34 liter cylinder, CGA-600 Reg
600-0062-000	Nitrogen, 100% N2, 34 liter cylinder, CGA-600 Reg
600-0063-000	Benzene, 5 ppm (balance air), 34 liter cylinder, CGA-600 Reg
600-0088-000	Butadiene, 5 ppm (balance air), 34 liter cylinder, CGA-600 Reg
600-0070-000	LEL Pentane, 25% (balance air), 34 liter cylinder, CGA-600 Reg
600-0071-000	LEL Methane, 50% (balance air), 34 liter cylinder, CGA-600 Reg
600-0137-000	Methane, 20% (balance N2), 34 liter cylinder, CGA-600 Reg
600-0071-020	LEL Methane, 20% (balance air), 34 liter cylinder, CGA-600 Reg
002-3011-000	Constant-flow regulator, 0.5 liter/min (Female threaded regulator: for use with 34 liter steel cylinder only), CGA-600 Reg
007-3021-000	Constant-flow regulator, 1 liter/min (Male threaded regulator: for use with 34 liter aluminum cylinder and all 58, C-10 Reg
500-0034-000	Calibration Kit case (no gas or regulator) holds two 34 or 58 liter cylinders
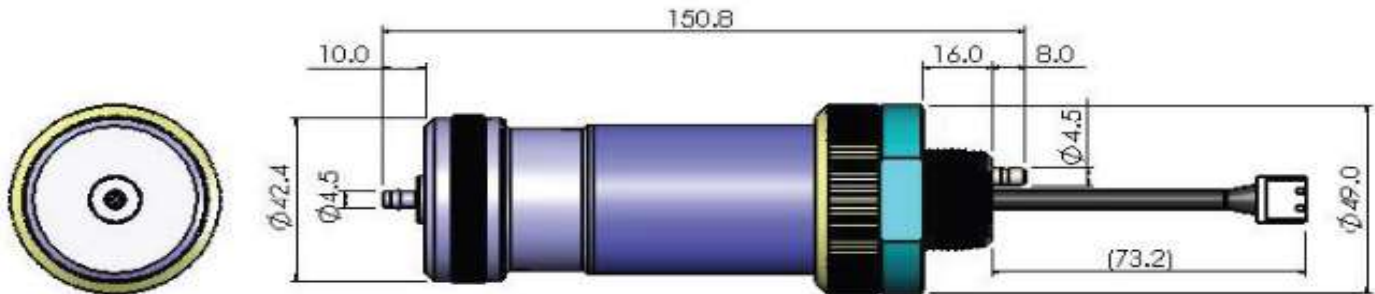
DigiPID Replacement Sensor Module

26. RAEGuard 2 PID
Transmitter

RAEGuard 2 PID

The RAEGuard 2 PID is a fixed photoionization detector (PID) that measures a broad range of volatile organic compounds (VOCs).

The RAEGuard 2 PID operates on 10 to 28 VDC and provides an analog (4-20mA) three-wire signal output, and RS-485 Modbus digital signal output.

Calibration and maintenance have been greatly simplified as the digital PID sensor module can be easily removed in hazardous locations without tools for calibration or maintenance.

Ships with calibration certificate. Sensor lifespan - 2 years. Warranty - 2 years on lamp; 1 year on sensor, electronics, and pump.

26.1 INSTRUMENT
RAEGuard 2 PID Diffusion

All kits include: RAEGuard 2 PID fixed head. DigiPID sensor module, magnetic key, hex service tool, PID sensor cover, and user manual.

Kits	
Part Number	Description
H-D03-0001-000	KIT,R2G DIFF,0.01-100PPM,FGM-2001,HON
H-D03-0002-000	KIT,R2G DIFF,0.1-1000PPM,FGM-2002,HON
H-D03-0015-000	KIT,R2G DIFF,0.01-100PPM,FGM-2001,UL,HONHON
H-D03-0016-000	KIT,R2G DIFF,0.1-1000PPM,FGM-2002,UL,HON

26.2 Accessories

Accessories	
Part Number	Description
D03-3015-000	CALIBRATION CAP ASSY,RAEGUARD 2 PID
D03-0304-000	ACCESSORY KIT,DIFFUSION WATERPROOF,RAEGUARD 2 PID

26.3 Consumables

Consumables	
Part Number	Description
C01-2022-000	Mesh filter,digi PID
C01-2023-000	Dust cover,digi PID
033-3035-000	DigiPID external dust pre-filter
C01-2017-010	DigiPID Teflon UV electrode shield (Pack of 10)
050-0000-005	DigiPID lamp, 10.6 ev, 1/2"
081-0002-000	Kit, Lamp Cleaning

26.4 Spares

| Spares	
Part Number	Description
C01-0902-011	SENSOR MODULE,0-100PPM,DIGI PID,WITH PACKAGE
C01-0902-012	MODULE,0-1000PPM,DIGI PID,WITH PACKAGE
C01-2021-000	Sensor cover,digi
033-3032-000	Magnet Key,

26.5 Gas Test Equipment

Part Number	Description
Spares	
600-0069-000	Isobutylene, 10 ppm (balance air), 34 liter cylinder, Male threads on cyl, CGA-600 Reg
600-0001-000	Isobutylene, 50 ppm (balance air), 34 liter cylinder, Male threads on cyl, CGA-600 Reg
600-0002-000	Isobutylene, 100 ppm (balance air), 34 liter cylinder, Male threads on cyl, CGA-600 Reg
600-0002-001	Isobutylene, 100 ppm, 103 liter cylinder (58 liter regulator), C-10 Reg
600-0024-000	Dry Air, 0 ppm, 34 liter cylinder, CGA-600 Reg
600-0051-000	Hydrogen Sulfide, 10 ppm H2S (balance N2), 58 liter cylinder, C-10 Reg
600-0052-000	Carbon Monoxide, 50 ppm CO (balance air), 34 liter cylinder, CGA-600 Reg
600-0053-000	Sulfur Dioxide, 5 ppm SO2 (balance N2), 58 liter cylinder, C-10 Reg
600-0061-000	Oxygen, 20.9% (balance N2), 34 liter cylinder, CGA-600 Reg
600-0061-001	Oxygen, 19% (balance N2), 34 liter cylinder, CGA-600 Reg
600-0062-000	Nitrogen, 100% N2, 34 liter cylinder, CGA-600 Reg
600-0063-000	Benzene, 5 ppm (balance air), 34 liter cylinder, CGA-600 Reg
600-0088-000	Butadiene, 5 ppm (balance air), 34 liter cylinder, CGA-600 Reg
600-0070-000	LEL Pentane, 25% (balance air), 34 liter cylinder, CGA-600 Reg
600-0071-000	LEL Methane, 50% (balance air), 34 liter cylinder, CGA-600 Reg
600-0137-000	Methane, 20% (balance N2), 34 liter cylinder, CGA-600 Reg
600-0071-020	LEL Methane, 20% (balance air), 34 liter cylinder, CGA-600 Reg
002-3011-000	Constant-flow regulator, 0.5 liter/min (Female threaded regulator: for use with 34 liter steel cylinder
007-3021-000	Constant-flow regulator, 1 liter/min (Male threaded regulator: for use with 34 liter aluminum cylinder
500-0034-000	Calibration Kit case (no gas or regulator) holds two 34 or 58 liter cylinders
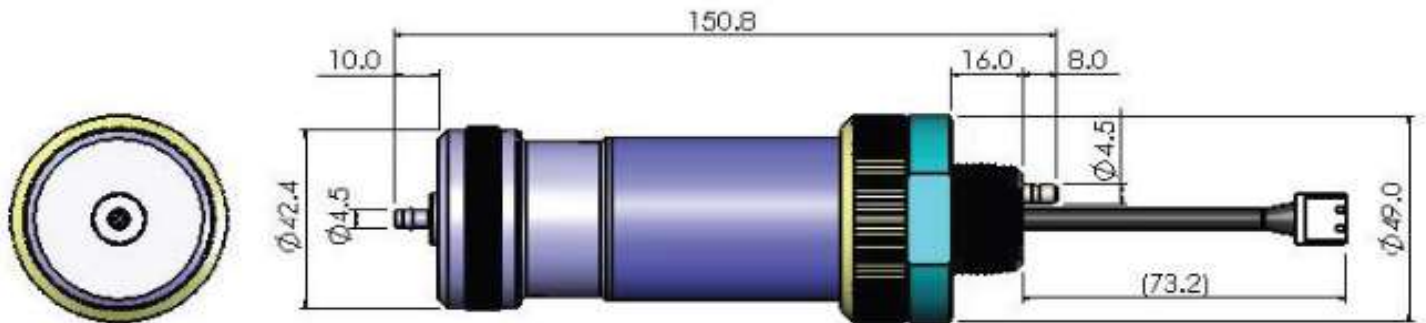
27. Searchzone Sonik^{TM}

The Honeywell Searchzone Sonik is a robust and reliable gas leak detector that will efficiently "hear" the loss of containment of any high-pressure gas within it's detection zone. An advanced, SIL 2 certified, hazardous area ultrasonic gas leak detector, the Searchzone Sonik responds to the ultrasonic sound pressure level produced by pressurized gas leaks and is unaffected environmental conditions.

Searchzone Sonik is factory calibrated. Its robust sealed design with no moving parts and the piezo-based sensor allow for mounting in any orientation, even in the harshest environments. The gas leak detector will respond quickly to a gas leak within a sensing range radius of typically 65ft (20m), dependent upon background noise. The intelligent background noise detection system allows the detector to be set up for maximum sensitivity while avoiding nuisance alarms. This way you have confidence that you'll always stay safe and ultrasound.

27.1 Instruments

Instruments	
Part Number	**Description**
SZSK-SNGXX	Searchzone Sonik Ultrasonic Gas Leak Detector, SST, 3/4NPT with adjustable mount and sunshade
SZSK-SMGXX	Searchzone Sonik Ultrasonic Gas Leak Detector, SST, M25 with adjustable mount and sunshade

27.2 Accessories, Consumables & Spares

Accessories	
Part Number	**Description**
2331B1102	Pole mount kit for Searchzone Sonik standard adjustable mounting bracket
2331B1112	Pole mount kit for Searchzone Sonik large adjustable mounting bracket
2331B1131	Searchzone Sonik SST sunshade
2331B1000	Searchzone Sonik Hand Held Test Unit
2331B1020	Large mounting plate to suit larger poles
188-200-010	Rugged Android Hand-Held Smart Device. CID1, Zone 1, ATEX, IECEx, NEC, with Camera
188-200-020	Rugged Android Hand-Held Smart Device. CID1, Zone 1, ATEX, IECEx, NEC, without Camera
188-200-030	Rugged Android Hand-Held Smart Device. CID2, Zone 2, ATEX, IECEx, NEC, with Camera
188-200-040	Rugged Android Hand-Held Smart Device. CID2, Zone 2, ATEX, IECEx, NEC, without Camera
188-200-050	Rugged Android Hand-Held Smart Device with Camera
188-200-060	Rugged Android Hand-Held Smart Device without Camera
188-200-070	Rugged Hand-Held Smart Device Yellow Leather Case
188-200-080	Rugged Hand-Held Smart Device Cradle
188-200-090	Rugged Hand-Held Smart Device Clip for Case or Cradle
188-200-100	Rugged Hand-Held Smart Device Docking Station
188-200-110	Rugged Hand-Held Smart Device Charging Cable
188-200-120	Rugged Hand-Held Smart Device EU/UK/US/AU Charger
188-200-130	Rugged Hand-Held Smart Device Vehicle Charger

Spares (Miscellaneous)	
Part Number	**Description**
2331B1100	Standard mounting plate
2331B1130	Plastic sunshade
2331B1150	Terminal block set (5 pack)
2331B1160	Antenna cover (5 pack)

28. Gas Detection Controllers
Quick Reference Chart

Honeywell Analytics offers a family of gas detection controllers that monitor 1, 2, 4, 8, 16, or 64 points of gas detection. Our digital gas controllers are designed to work in the harshest industrial environments.

Product	Max. # of Points	Certification	Configurations	Communication
Touchpoint Plus (TPPL)	16 inputs, 48 outputs	UL CSA ATEX FM	Wall Mount	4-20 mA Modbus (RTU & TCP) RS-485 Ethernet Configurable Relays
Touchpoint Pro (TPPR)	64 inputs, 128 outputs	UL CSA ATEX FM	Rack Mount Wall Mount Floor standing cabinet	4-20 mA Modbus (RTU & TCP) RS-485 Ethernet Configurable Relays
HA20	2 inputs, 8 outputs	Class I, Div. 2 NEMA 4X NEMA 7X	Wall Mount	4-20 Ma 2 Relays Standard 6 Additional Relays Optional
HA40	4 inputs, 8 outputs	Class I, Div. 2 NEMA 4X NEMA 7X	Wall Mount	4-20 mA Modbus 2 Relays Standard 6 Additional Relays Optional
HA72	64 inputs, 128 outputs	Class I, Div. 2 NEMA 4X	Rack Mount Panel Mount Wall Mount	Ethernet RS-485 Modbus 4-20 mA Configurable Relays
XNX-IR (controller/repeater)	1 channel	Class I, Div. 1	Wall Mount	Modbus 4-20 mA HART Fieldbus Configurable Relays
Unipoint	1 input	Safe Area	DIN Rail	4 Relays

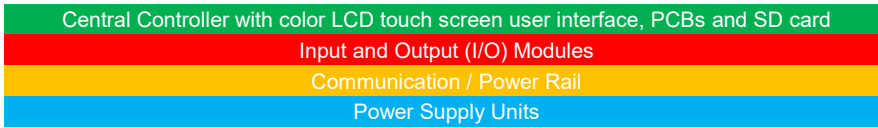Systems no longer available. Spares only.

29. Touchpoint Pro
Gas Control System

The Touchpoint Pro Gas Control System is a safe area, modular flame/gas detection control system.

Any Touchpoint Pro gas control system can be built from just four main building blocks:

Central Controller with color LCD touch screen user interface, PCBs and SD card
Input and Output (I/O) Modules
Communication / Power Rail
Power Supply Units

All four blocks can be mounted easily in 19" racks, wall mount enclosures or floor standing cabinets. Ideal for centralized and distributed system and designed for ease of expansion. The Touchpoint Pro controller can also be used standalone or integrated into a gas and fire system packaged.

Touchpoint Pro is an intelligent controller that accepts inputs from flammable and toxic gas detectors and output devices like strobes or valves.

Available outputs include relays and industry standard digital protocols. Easy plug-in Input Module types are Analogue Input Module mV Bridge, Analogue Input Module 4-20mA and Digital Input Module. Available output module types are Relay Output Modules.

The Touchpoint Pro system is easy to install and to configure. The channels can be configured by using the touch screen user interface or optional TPPR PC Configuration Software. A preloaded Sensor Catalog includes all relevant parameters of the Honeywell Analytics' devices. Only three parameters must be programmed and the rest will be loaded automatically.

Approvals:

•Compliance with EMC/RFI (EN 50270:2006) and LVD (EN 61010-1:2010) CSA-C22.2 No. 61010-1-04, UL Std. No. 61010-1 (2nd Edition)

•ATEX Performance Approvals - EN 50271:2010; EN 60079-29-1; EN 45544-1 /-2 /-3; EN 50104:2010 C22.2 No. 152-M1984, FM Std. 6310 and 6320

•IEC/EN 61508 and EN 50402 SIL2 certification

29. Touchpoint Pro
Gas Control System

29.1 Cabinet Controllers (for Green Field Sites)

Use the TPPR Control System Configurators and build your system.

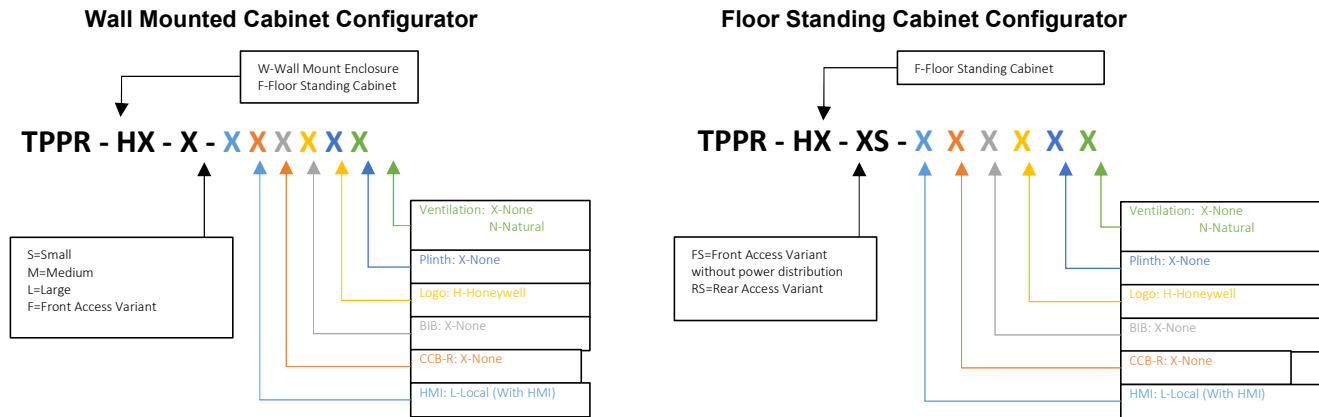To configure a Touchpoint Pro cabinet system please select:
1. Enclosure; Use Configurators Below to Build Part Number - 31.2
3. Input and Output (I/O) Modules & Communication / Power Rail - 31.3
2. Power Supply Units (PSU) - 31.4

For example, the part numbers for Wall Mount Controller with 10 Way Communications/Power Rail, 10A Power Supply Unit and equipped with three Analogue Input Modules mV-Bridge and three Relay Output Modules.

• TPPR-HW-S-LXXHXX
• TPPR-W-010-1
• TPPR-M-AAANNNXXXX-DX

Online Configuration Tool: *https://touchpointprosalestool.honeywellanalytics.com*

Wall Mounted Cabinet Configurator

| W-Wall Mount Enclosure |
| F-Floor Standing Cabinet |

TPPR - HX - X - X X X X X X

S=Small
M=Medium
L=Large
F=Front Access Variant

Ventilation: X-None
 N-Natural

Plinth: X-None

Logo: H-Honeywell

BIB: X-None

CCB-R: X-None

HMI: L-Local (With HMI)

Floor Standing Cabinet Configurator

| F-Floor Standing Cabinet |

TPPR - HX - XS - X X X X X X

FS=Front Access Variant without power distribution
RS=Rear Access Variant

Ventilation: X-None
 N-Natural

Plinth: X-None

Logo: H-Honeywell

BIB: X-None

CCB-R: X-None

HMI: L-Local (With HMI)

29.2 TPPR Enclosure Combinations – TPPR-H-Enclosures

29.2.1 TPPR-H-Wall Mount Enclosure

TPPR-H Small Wall Mount Enclosures

Part Number	Description
TPPR-HW-S-LXXHXX	Wall Mount Controller 600Hx600Wx300D includes HMI, PCBs, SD Card
TPPR-HW-S-LRXHXX	Wall Mount Controller 600Hx600Wx300D includes HMI, PCBs, SD Card, Redundant Control Centre Board
TPPR-HW-S-LXMHXX	Wall Mount Controller 600Hx600Wx300D includes HMI, PCBs, SD Card, Modbus® Interface Board
TPPR-HW-S-LRMHXX	Wall Mount Controller 600Hx600Wx300D includes HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board
TPPR-HW-S-LXXXXX	Wall Mount Controller 600Hx600Wx300D includes HMI, PCBs, SD Card, w/o HON
TPPR-HW-S-LRXXXX	Wall Mount Controller 600Hx600Wx300D includes HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo
TPPR-HW-S-LXMXXX	Wall Mount Controller 600Hx600Wx300D includes HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo

TPPR-HW-S-LRMXXX	Wall Mount Controller 600Hx600Wx300D includes HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo
TPPR-HW-S-RXXHXX	Wall Mount Remote Unit 600Hx600Wx300D w/o HMI, PCBs, SD Card
TPPR-HW-S-RXXXXX	Wall Mount Remote Unit 600Hx600Wx300D w/o HMI, PCBs, SD Card, w/o HON Logo

TPPR-H Medium Wall Mount Enclosures

Part Number	Description
TPPR-HW-M-LXXHXX	Wall Mount Controller 800Hx600Wx300D includes HMI, PCBs, SD Card
TPPR-HW-M-LRXHXX	Wall Mount Controller 800Hx600Wx300D includes HMI, PCBs, SD Card, Redundant Control Centre Board
TPPR-HW-M-LXMHXX	Wall Mount Controller 800Hx600Wx300D includes HMI, PCBs, SD Card, Modbus® Interface Board
TPPR-HW-M-LRMHXX	Wall Mount Controller 800Hx600Wx300D includes HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board
TPPR-HW-M-LXXXXX	Wall Mount Controller 800Hx600Wx300D includes HMI, PCBs, SD Card, w/o HON
TPPR-HW-M-LRXXXX	Wall Mount Controller 800Hx600Wx300D includes HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo
TPPR-HW-M-LXMXXX	Wall Mount Controller 800Hx600Wx300D includes HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo
TPPR-HW-M-LRMXXX	Wall Mount Controller 800Hx600Wx300D includes HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo
TPPR-HW-M-RXXHXX	Wall Mount Remote Unit 800Hx600Wx300D w/o HMI, PCBs, SD Card
TPPR-HW-M-RXXXXX	Wall Mount Remote Unit 800Hx600Wx300D w/o HMI, PCBs, SD Card, w/o HON

TPPR-H Large Wall Mount Enclosures

Part Number	Description
TPPR-HW-L-LXXHXX	Wall Mount Controller 1200Hx800Wx300D includes HMI, PCBs, SD Card
TPPR-HW-L-LRXHXX	Wall Mount Controller 1200Hx800Wx300D includes HMI, PCBs, SD Card, Redundant Control Centre Board
TPPR-HW-L-LXMHXX	Wall Mount Controller 1200Hx800Wx300D includes HMI, PCBs, SD Card, Modbus® Interface Board
TPPR-HW-L-LRMHXX	Wall Mount Controller 1200Hx800Wx300D includes HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board
TPPR-HW-L-LXXXXX	Wall Mount Controller 1200Hx800Wx300D includes HMI, PCBs, SD Card, w/o
TPPR-HW-L-LRXXXX	Wall Mount Controller 1200Hx800Wx300D includes HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo
TPPR-HW-L-LXMXXX	Wall Mount Controller 1200Hx800Wx300D includes HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo
TPPR-HW-L-LRMXXX	Wall Mount Controller 1200Hx800Wx300D includes HMI, PCBs, SD Card,Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo

TPPR-Z Wall Mount Remote Unit Stainless Steel Div2/Zone2

Part Number	Description
TPPR-Z-Div2Z2-SM-H	Wall Mount Remote Unit Stainless Steel Div2/Zone2 780Hx510Wx300D w/o HMI, PCBs, SD Card, 9 Way Communication Power Rail
TPPR-Z-Div2Z2-SM-X	Wall Mount Remote Unit Stainless Steel Div2/Zone2 780Hx510Wx300D w/o HMI, PCBs, SD Card, w/o HON Logo, 9 Way Communication Power Rail

29.2.2 TPPR-H-Floor Standing Cabinets

TPPR-H Floor Standing Cabinets - Front Access

Without ventilation, without plinth

Part Number	Description
TPPR-HF-F-LXXHXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o ventilation
TPPR-HF-F-LRXHXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o ventilation
TPPR-HF-F-LXMHXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o ventilation
TPPR-HF-F-LRMHXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface
TPPR-HF-F-LXXXXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, w/o ventilation
TPPR-HF-F-LRXXXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, w/o
TPPR-HF-F-LXMXXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, w/o
TPPR-HF-F-LRMXXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, w/o ventilation

Without ventilation, without plinth, without power distribution

Part Number	Description
TPPR-HF-FS-LXXHXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o ventilation, w/o power distribution
TPPR-HF-FS-LRXHXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o ventilation, w/o power distribution
TPPR-HF-FS-LXMHXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o ventilation, w/o power distribution
TPPR-HF-FS-LRMHXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o ventilation, w/o power distribution
TPPR-HF-FS-LXXXXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, w/o ventilation, w/o power distribution
TPPR-HF-FS-LRXXXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, w/o ventilation, w/o power distribution
TPPR-HF-FS-LXMXXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, w/o ventilation, w/o power distribution
TPPR-HF-FS-LRMXXX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, w/o ventilation, w/o power distribution

Without Ventilation and with plinth

Part Number	Description
TPPR-HF-F-LXXHPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, w/o ventilation
TPPR-HF-F-LRXHPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o ventilation
TPPR-HF-F-LXMHPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o ventilation
TPPR-HF-F-LRMHPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o ventilation
TPPR-HF-F-LXXPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, w/o ventilation
TPPR-HF-F-LRXXPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, w/o ventilation
TPPR-HF-F-LXMXPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, w/o ventilation
TPPR-HF-F-LRMXPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, w/o ventilation

Without ventilation, with plinth, without power distribution

Part Number	Description
TPPR-HF-FS-LXXHPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, w/o ventilation, w/o power distribution
TPPR-HF-FS-LRXHPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o ventilation, w/o power distribution
TPPR-HF-FS-LXMHPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o ventilation, w/o power distribution
TPPR-HF-FS-LRMHPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o ventilation, w/o power distribution
TPPR-HF-FS-LXXXPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, w/o ventilation, w/o power distribution
TPPR-HF-FS-LRXXPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, w/o ventilation, w/o power distribution
TPPR-HF-FS-LXMXPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, w/o ventilation, w/o power distribution
TPPR-HF-FS-LRMXPX	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, w/o ventilation, w/o power distribution

Natural Ventilation and without plinth

Part Number	Description
TPPR-HF-F-LXXHXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, natural ventilation
TPPR-HF-F-LRXHXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, natural ventilation
TPPR-HF-F-LXMHXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, natural ventilation
TPPR-HF-F-LRMHXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, natural ventilation
TPPR-HF-F-LXXXXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, natural ventilation
TPPR-HF-F-LRXXXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, natural ventilation
TPPR-HF-F-LXMXXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, natural ventilation
TPPR-HF-F-LRMXXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, natural ventilation

Natural ventilation, without plinth, without power distribution

Part Number	Description
TPPR-HF-FS-LXXHXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, natural ventilation, w/o power distribution
TPPR-HF-FS-LRXHXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, natural ventilation, w/o power distribution
TPPR-HF-FS-LXMHXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, natural ventilation, w/o power distribution
TPPR-HF-FS-LRMHXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, natural ventilation, w/o power distribution
TPPR-HF-FS-LXXXXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, natural ventilation, w/o power distribution
TPPR-HF-FS-LRXXXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, natural ventilation, w/o power distribution
TPPR-HF-FS-LXMXXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, natural ventilation, w/o power distribution
TPPR-HF-FS-LRMXXN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, natural ventilation, w/o power distribution

Natural ventilation, with plinth

Part Number	Description
TPPR-HF-F-LXXHPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, natural ventilation
TPPR-HF-F-LRXHPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, natural ventilation
TPPR-HF-F-LXMHPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, natural ventilation
TPPR-HF-F-LRMHPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, natural ventilation
TPPR-HF-F-LXXXPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, natural ventilation
TPPR-HF-F-LRXXPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, natural ventilation
TPPR-HF-F-LXMXPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, natural ventilation
TPPR-HF-F-LRMXPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, natural ventilation

Natural ventilation, with plinth, w/o power distribution

Part Number	Description
TPPR-HF-FS-LXXHPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, natural ventilation, w/o power distribution
TPPR-HF-FS-LRXHPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, natural ventilation, w/o power distribution
TPPR-HF-FS-LXMHPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, natural ventilation, w/o power distribution
TPPR-HF-FS-LRMHPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, natural ventilation, w/o power distribution
TPPR-HF-FS-LXXXPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, natural ventilation, w/o power distribution
TPPR-HF-FS-LRXXPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, natural ventilation, w/o power distribution
TPPR-HF-FS-LXMXPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, natural ventilation, w/o power distribution
TPPR-HF-FS-LRMXPN	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, natural ventilation, w/o power distribution

Forced ventilation, without plinth

Part Number	Description
TPPR-HF-F-LXXHXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, forced ventilation
TPPR-HF-F-LRXHXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, forced ventilation
TPPR-HF-F-LXMHXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, forced ventilation
TPPR-HF-F-LRMHXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, forced ventilation
TPPR-HF-F-LXXXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, forced ventilation
TPPR-HF-F-LRXXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, forced ventilation
TPPR-HF-F-LXMXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, forced ventilation
TPPR-HF-F-LRMXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, forced ventilation

Forced ventilation, without plinth, without power distribution

Part Number	Description
TPPR-HF-FS-LXXHXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, forced ventilation, w/o power distribution
TPPR-HF-FS-LRXHXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, forced ventilation, w/o power distribution
TPPR-HF-FS-LXMHXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, forced ventilation, w/o power distribution
TPPR-HF-FS-LRMHXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, forced ventilation, w/o power distribution
TPPR-HF-FS-LXXXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, forced ventilation, w/o power distribution
TPPR-HF-FS-LRXXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, forced ventilation, w/o power distribution
TPPR-HF-FS-LXMXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, forced ventilation, w/o power distribution
TPPR-HF-FS-LRMXF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, forced ventilation, w/o power distribution

Forced Ventilation and with plinth

Part Number	Description
TPPR-HF-F-LXXHPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, forced ventilation
TPPR-HF-F-LRXHPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, forced ventilation
TPPR-HF-F-LXMHPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, forced ventilation
TPPR-HF-F-LRMHPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, forced ventilation
TPPR-HF-F-LXXXPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, forced ventilation
TPPR-HF-F-LRXXPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, forced ventilation
TPPR-HF-F-LXMXPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, forced ventilation
TPPR-HF-F-LRMXPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, forced ventilation

Forced ventilation, with plinth, without power distribution

Part Number	Description
TPPR-HF-FS-LXXHPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, forced ventilation, w/o power distribution
TPPR-HF-FS-LRXHPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, forced ventilation, w/o power distribution
TPPR-HF-FS-LXMHPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, forced ventilation, w/o power distribution
TPPR-HF-FS-LRMHPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, forced ventilation, w/o power distribution
TPPR-HF-FS-LXXXPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, forced ventilation, w/o power distribution
TPPR-HF-FS-LRXXPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, forced ventilation, w/o power distribution
TPPR-HF-FS-LXMXPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, forced ventilation, w/o power distribution
TPPR-HF-FS-LRMXPF	Floor Standing Cabinet with Front Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, forced ventilation, w/o power distribution

TPPR-H Floor Standing Cabinets - Rear Access

Without Ventilation and without plinth

Part Number	Description
TPPR-HF-R-LXXHXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o ventilation
TPPR-HF-R-LRXHXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o ventilation
TPPR-HF-R-LXMHXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o ventilation
TPPR-HF-R-LRMHXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o ventilation
TPPR-HF-R-LXXXXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, w/o ventilation
TPPR-HF-R-LRXXXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, w/o ventilation
TPPR-HF-R-LXMXXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, w/o ventilation
TPPR-HF-R-LRMXXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, w/o ventilation

Without ventilation, without plinth, without power distribution

Part Number	Description
TPPR-HF-RS-LXXHXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o ventilation; w/o
TPPR-HF-RS-LRXHXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o ventilation, w/o distribution
TPPR-HF-RS-LXMHXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o ventilation, w/o power distribution
TPPR-HF-RS-LRMHXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o ventilation, w/o power distribution
TPPR-HF-RS-LXXXXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, w/o ventilation, w/o power distribution
TPPR-HF-RS-LRXXXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, w/o ventilation, w/o power distribution
TPPR-HF-RS-LXMXXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, w/o ventilation, w/o power distribution
TPPR-HF-RS-LRMXXX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, w/o ventilation, w/o power distribution

Without ventilation, with plinth

Part Number	Description
TPPR-HF-R-LXXHPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, w/o ventilation
TPPR-HF-R-LRXHPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o ventilation
TPPR-HF-R-LXMHPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o ventilation
TPPR-HF-R-LRMHPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o ventilation
TPPR-HF-R-LXXXPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, w/o ventilation
TPPR-HF-R-LRXXPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, w/o ventilation
TPPR-HF-R-LXMXPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, w/o ventilation
TPPR-HF-R-LRMXPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, w/o ventilation

Without ventilation, with plinth, without power distribution

Part Number	Description
TPPR-HF-RS-LXXHPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, w/o ventilation, w/o power distribution
TPPR-HF-RS-LRXHPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o ventilation, w/o power distribution
TPPR-HF-RS-LXMHPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o ventilation, w/o power distribution
TPPR-HF-RS-LRMHPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o ventilation, w/o power distribution
TPPR-HF-RS-LXXXPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, w/o ventilation, w/o power distribution
TPPR-HF-RS-LRXXPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, w/o ventilation, w/o power distribution
TPPR-HF-RS-LXMXPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, w/o ventilation, w/o power distribution
TPPR-HF-RS-LRMXPX	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, w/o ventilation, w/o power distribution

Natural ventilation, without plinth

Part Number	Description
TPPR-HF-R-LXXHXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, natural ventilation
TPPR-HF-R-LRXHXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, natural ventilation
TPPR-HF-R-LXMHXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, natural ventilation
TPPR-HF-R-LRMHXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, natural ventilation
TPPR-HF-R-LXXXXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, natural ventilation
TPPR-HF-R-LRXXXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, natural ventilation
TPPR-HF-R-LXMXXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, natural ventilation
TPPR-HF-R-LRMXXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, natural ventilation

Natural ventilation, without plinth, without power distribution

Part Number	Description
TPPR-HF-RS-LXXHXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, natural ventilation, w/o power distribution
TPPR-HF-RS-LRXHXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, natural ventilation, w/o power distribution
TPPR-HF-RS-LXMHXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, natural ventilation, w/o power distribution
TPPR-HF-RS-LRMHXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, natural ventilation, w/o power distribution
TPPR-HF-RS-LXXXXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, natural ventilation, w/o power distribution
TPPR-HF-RS-LRXXXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, natural ventilation, w/o power distribution
TPPR-HF-RS-LXMXXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, natural ventilation, w/o power distribution
TPPR-HF-RS-LRMXXN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, natural ventilation, w/o power distribution

Natural ventilation, with plinth

Part Number	Description
TPPR-HF-R-LXXHPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, natural ventilation
TPPR-HF-R-LRXHPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, natural ventilation
TPPR-HF-R-LXMHPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, natural ventilation
TPPR-HF-R-LRMHPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, natural ventilation
TPPR-HF-R-LXXXPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, natural ventilation
TPPR-HF-R-LRXXPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, natural ventilation
TPPR-HF-R-LXMXPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, natural ventilation
TPPR-HF-R-LRMXPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, natural ventilation

Natural Ventilation and with plinth, without power distribution

Part Number	Description
TPPR-HF-RS-LXXHPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, natural ventilation, w/o power distribution
TPPR-HF-RS-LRXHPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, natural ventilation, w/o power distribution
TPPR-HF-RS-LXMHPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, natural ventilation, w/o power distribution
TPPR-HF-RS-LRMHPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, natural ventilation, w/o power distribution
TPPR-HF-RS-LXXXPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, natural ventilation, w/o power distribution
TPPR-HF-RS-LRXXPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, natural ventilation, w/o power distribution
TPPR-HF-RS-LXMXPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, natural ventilation, w/o power distribution
TPPR-HF-RS-LRMXPN	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, natural ventilation, w/o power distribution

Forced ventilation, without plinth

Part Number	Description
TPPR-HF-R-LXXHXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, forced ventilation
TPPR-HF-R-LRXHXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, forced ventilation
TPPR-HF-R-LXMHXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, forced ventilation
TPPR-HF-R-LRMHXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, forced ventilation
TPPR-HF-R-LXXXXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, forced ventilation
TPPR-HF-R-LRXXXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, forced ventilation
TPPR-HF-R-LXMXXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, forced ventilation
TPPR-HF-R-LRMXXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, forced ventilation

Forced ventilation, without plinth, without power distribution

Part Number	Description
TPPR-HF-RS-LXXHXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, forced ventilation, w/o power distribution
TPPR-HF-RS-LRXHXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, forced ventilation, w/o power distribution
TPPR-HF-RS-LXMHXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, forced ventilation, w/o power distribution
TPPR-HF-RS-LRMHXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, forced ventilation, w/o power distribution
TPPR-HF-RS-LXXXXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, forced ventilation, w/o power distribution
TPPR-HF-RS-LRXXXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, w/o HON Logo, forced ventilation, w/o power distribution
TPPR-HF-RS-LXMXXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, w/o HON Logo, forced ventilation, w/o power distribution
TPPR-HF-RS-LRMXXF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, w/o HON Logo, forced ventilation, w/o power distribution

Forced ventilation, with plinth

Part Number	Description
TPPR-HF-R-LXXHPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, forced ventilation
TPPR-HF-R-LRXHPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, forced ventilation
TPPR-HF-R-LXMHPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, forced ventilation
TPPR-HF-R-LRMHPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, forced ventilation
TPPR-HF-R-LXXXPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, forced ventilation
TPPR-HF-R-LRXXPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, forced ventilation
TPPR-HF-R-LXMXPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, forced ventilation
TPPR-HF-R-LRMXPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, forced ventilation

Forced ventilation, with plinth, without power distribution

Part Number	Description
TPPR-HF-RS-LXXHPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, with 100mm plinth, forced ventilation, w/o power distribution
TPPR-HF-RS-LRXHPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, forced ventilation, w/o power distribution
TPPR-HF-RS-LXMHPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, forced ventilation, w/o power distribution
TPPR-HF-RS-LRMHPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, forced ventilation, w/o power distribution
TPPR-HF-RS-LXXXPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, w/o HON Logo, with 100mm plinth, forced ventilation, w/o power distribution
TPPR-HF-RS-LRXXPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, with 100mm plinth, w/o HON Logo, forced ventilation, w/o power distribution
TPPR-HF-RS-LXMXPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, forced ventilation, w/o power distribution
TPPR-HF-RS-LRMXPF	Floor Standing Cabinet with Rear Access 2000Hx800Wx600D includes Controller with HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus® Interface Board, with 100mm plinth, w/o HON Logo, forced ventilation, w/o power distribution

29.3 TPPR-M Input and Output Modules

TPPR-M Input and Output Configurator (I/O Configurator)

TPPR-M														
	10 Way Communication/Power Rail (Select up to maximum 10 I/Os)													
	Consists of a DIN Rail blank panel, 1 Ring Coupling Module and 10 Backplanes													
	Input and Output Modules (I/O Module)													
	X	None												
	A	Analogue Input Module mV-Bridge (4 channels per module)												
	C	Analogue Input Module 4-20mA (4 channels per module)												
	H	Digital Input Module (4 channels per module)												
	N	Relay Output Module (4 channels per module)												
	M	Analogue Output Module												
						Customer Set-up								
						D	Unconfigured							
						S	Custom * per I/O Module							
							Optional Terminal Block							
							X	None						
							T	Terminal Blocks * per I/O Module						
TPPR-M	A	A	A	N	N	N	X	X	X	X	S	T		

TPPR-M														
	9 Way Communication/Power Rail (Select up to maximum 9 I/Os)													
	R	Consists of a DIN Rail blank panel, 2x Ring Coupling Modules and 9 Backplanes; with additional Ring Coupling Module for redundant communications.												
		Input and Output Modules (I/O Module)												
		X	None											
		A	Analogue Input Module mV-Bridge (4 channels per module)											
		C	Analogue Input Module 4-20mA (4 channels per module)											
		H	Digital Input Module (4 channels per module)											
		N	Relay Output Module (4 channels per module)											
		M	Analogue Output Module											
							Customer Set-up							
							D	Unconfigured						
							S	Custom *per I/O Module						
								Optional Terminal Block						
								X	None					
								T	Terminal Blocks * per I/O Module					
TPPR-M	R	A	A	A	A	A	A	A	A	A	S	X		

TPPR-M				
		9 Way Communication/Power Rail (Select up to maximum 9 I/Os)		
	H	Consists of a DIN Rail blank panel, 1x Ring Coupling Modules, 1x DIM, and 9 Backplanes; with additional DIM for remote PSU failure monitoring.		
		Input and Output Modules (I/O Module)		
		X	None	
		A	Analogue Input Module mV-Bridge (4 channels per module)	
		C	Analogue Input Module 4-20mA (4 channels per module)	
		H	Digital Input Module (4 channels per module)	
		N	Relay Output Module (4 channels per module)	
		M	Analogue Output Module	
			Customer Set-up	
			D	Unconfigured
			S	Custom *per I/O Module
				Optional Terminal Block
				X	None
				T	Terminal Blocks * per I/O Module
TPPR-M	**H**	**A A A A A A A A A**	**S**	**X**

TPPR-M				
		8 Way Communication/Power Rail (Select up to maximum 8 I/Os)		
	R H	Consists of a DIN Rail blank panel, 2x Ring Coupling Modules, 1x DIM, and 8 Backplanes; with additional Ring Coupling Module for redundant communications and additional DIM for remote PSU failure monitoring.		
		Input and Output Modules (I/O Module)		
		X	None	
		A	Analogue Input Module mV-Bridge (4 channels per module)	
		C	Analogue Input Module 4-20mA (4 channels per module)	
		H	Digital Input Module (4 channels per module)	
		N	Relay Output Module (4 channels per module)	
		M	Analogue Output Module	
			Customer Set-up	
			D	Unconfigured
			S	Custom *per I/O Module
				Optional Terminal Block
				X	None
				T	Terminal Blocks * per I/O Module
TPPR-M	**R H**	**A A A A A A A A A**	**S**	**X**

29.4 TPPR-W PSUs

Part Number	Description
TPPR-W-000-1	2 Way DC Distribution Only
TPPR-W-000-2	4 Way DC Distribution Only
TPPR-W-000-3	8 Way DC Distribution Only
TPPR-W-005-1	5A PSU Only
TPPR-W-010-1	10A PSU Only
TPPR-W-020-1	20A PSU Only
TPPR-W-005-2	5A PSU + UPS
TPPR-W-010-2	10A PSU + UPS
TPPR-W-020-2	20A PSU + UPS
TPPR-W-005-3	2 x 5A PSU + RDN
TPPR-W-010-3	2x 10A PSU + RDN
TPPR-W-020-3	2x 20A PSU + RDN + 4 Way DC Distribution
TPPR-W-005-4	2x 5A PSU + RDN + UPS
TPPR-W-010-4	2x 10A PSU + RDN + UPS
TPPR-W-020-4	2x 20A PSU + RDN + UPS + 8 Way DC Distribution
TPPR-W-020-5	20A PSU + 8 Way DC Distribution
TPPR-W-020-6	20A PSU + UPS + 8 Way DC Distribution
TPPR-W-040-1	2x 20A + RDN + Power Distribution
TPPR-W-040-2	2x 20A + RDN + UPS + Power Distribution
TPPR-W-040-3	2x20A + Fault Tolerant + Power Distribution
TPPR-W-040-4	2x 20A + Fault Tolerant + UPS + Power Distribution
TPPR-W-060-1	3x 20A + Power Distribution
TPPR-W-060-2	3x 20A + UPS + Power Distribution
TPPR-W-060-3	60A + Fault Tolerant + Power Distribution
TPPR-W-060-4	60A + Fault Tolerant + UPS + Power Distribution
TPPR-W-080-1	80A + Power Distribution
TPPR-W-080-2	80A + UPS + Power Distribution
TPPR-W-080-3	80A + Fault Tolerant + Power Distribution
TPPR-W-080-4	80A + Fault Tolerant + UPS + Power Distribution
TPPR-W-100-1	100A + Power Distribution
TPPR-W-100-2	100A + UPS + Power Distribution
TPPR-W-100-3	100A + Fault Tolerant + Power Distribution

29. Touchpoint Pro
Gas Control System

29.5 Define TPPR System for 19" Rack System (for Brown Field sites)

Use the Touchpoint Pro Part Number and Pricing Configurator design to build flexible 19'' Rack Control Systems.

For example, the part number for a 19" Rack Controller with a Redundant Control Center Board, a Modbus® Interface Board and a 7 Way Communication/Power Rail, 5A Power Supply Unit and equipped with four Analog Input Modules 4-20mA and three Relay Output Modules.
• TPPR-S-RLRM-3A-CCCCNNNXX-XD

TPPR System Part Number and Pricing Generator enables to build up any system.
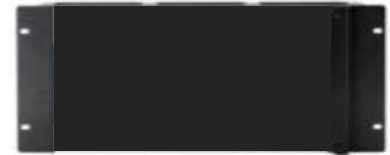Follow each step and select the components.
This will enable you to generate the final part number for your required system.
1. Define TPPR rack mounted option with or without User Interface
2. Select the Redundant Control Centre Board for a unit with User Interface if a dual redundant system is required
3. Select the Modbus® Interface Board for a unit with User Interface if a Modbus® Interface is required.
4. Select the Communication / Power Rail size.
5. Defining the Power Supply Configuration per I/O cluster.
6. Defining the Power Supply Configuration per I/O cluster.
7. Select if a Honeywell or customer logo is required.
8. Select the system configuration.

19'" Rack 5U HMI Interface

19'" Rack 5U Remote Unit

29a. TPPR Control System Part Number and Pricing Generator																		
TPPR-S																		
	19" Rack controller or Remote Unit (See above pictures for reference)																	
	RL	19" Rack 5U Controller includes HMI, PCBs, SD card																
	RR	19" Rack 5U Remote Unit **without** HMI, PCBs, SD card																
		Redundant Control Centre Board (Select if a dual redundant system is required)																
		X	None															
		R	Yes (for TPPR-S-RL selection only)															
			Bus Interface Board															
			X	None														
			M	Modbus® Interface Board (for TPPR-S-RL selection only)														
				5, 7 or 9 Way Communication/Power Rail (Select the appropriate option for your PSU and I/O module combination)														
				Consists of a DIN Rail blank panel, 1 Ring Coupling Module and 5, 7 or 9 Backplanes														
				2	5 Way Communication/Power Rail; select up to maximum 5 I/O Modules													
				3	7 Way Communication/Power Rail; select up to maximum 7 I/O Modules													
				4	9 Way Communication/Power Rail; select up to maximum 9 I/O Modules													
					Power Configuration (Select the Power Supply options and I/O configuration needed)													
					X	None; select up to maximum 9 I/O Modules in any combination												
					A	5A; select up to maximum 7 I/O Modules in any combination												
					B	10A; select up to maximum 7 I/O Modules in any combination												
					C	20A; select up to maximum 5 I/O Modules in any combination												
					U	5A + UPS; select up to maximum 5 I/O Modules in any combination												
					V	10A + UPS; select up to maximum 5 I/O Modules in any combination												
						Input and Output Module (I/O module)												
						The maximum numbers of I/O Modules depend on Communication/Power Rail and Power Configuration selection. Please include a code for each I/O module, including X=NONE, to make a total of 9 codes. The rail will be populated in the order given below:												
						X	None											
						A	Analogue Input Module mV-Bridge (4 channels per module)											
						C	Analogue Input Module 4-20mA (4 channels per module)											
						H	Digital Input Module (4 channels per module)											
						N	Relay Output Module (4 channels per module)											
						M	Analogue Output Module											
															Customer Logo			
															X	None		
															Customer Set up			
																D	Unconfigured	
																S	Custom * per I/O Module	
TPPR-S	RL	R	M	3	A	C	C	C	C	N	N	N	X	X	—	X	D	
*Contact HA customer service																		

29. Touchpoint Pro

Gas Control System

31.5 Build your own TPPR System (for Integrators/OEMs)
Any Touchpoint Pro system can be built from the individual components below.

To configure a Touchpoint Pro system please select:
1. User interface
2. Input and Output (I/O) Modules
3. Power Supply Units (PSU)
4. Communication / Power Rail version

Optional: Select the Redundant Control Centre Board for the Controller if a dual redundant system is required.

Optional: Select the Modbus® Interface Board for the Controller if a Modbus® Interface is required.

Use the individual component part numbers to supply a variety of systems for many different applications.

For example, the part numbers for a Wall Mount Controller with 10 Way Communications/Power Rail, 10A Power Supply Unit and equipped with three Analog Input Modules mV-Bridge and three
Relay Output Modules.
• TPPR-V-1210 • 3x TPPR-V-1010 • TPPR-V-0704
• TPPR-V-0540 • 3x TPPR-V-1040 • TPPR-V-0503

29.6 Touchpoint Pro User Interface Options

19'' Rack enclosure versions and Front Panel 5U Controller

Part Number	Description
TPPR-V-0602	19" Rack 5U Controller includes HMI, PCBs, SD Card
TPPR-V-0612	19" Rack 5U Remote Unit w/o HMI, PCB, SD Card
TPPR-V-0606	19" Rack 5U Controller includes HMI, PCBs, SD Card, Redundant Control Centre Board
TPPR-V-0607	19" Rack 5U Controller includes HMI, PCBs, SD Card, Modbus Interface Board
TPPR-V-0608	19" Rack 5U Controller includes HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus Interface Board
TPPR-V-0852	Front Panel 5U Controller includes HMI, PCBs, SD Card
TPPR-V-0856	19" Rack 5U Controller includes HMI, PCBs, SD Card, Modbus Interface Board
TPPR-V-0857	19" Rack 5U Controller includes HMI, PCBs, SD Card, Redundant Control Centre Board, Modbus Interface
TPPR-V-0858	Front Panel 5U Controller includes HMI, PCBs, SD Card

Standard Wall Mount enclosure versions

Part Number	Description
TPPR-V-1210	Wall Mount Controller, 600Hx600Wx300D, includes HMI, PCBs, SD Card; with pre-drilled mounting plate
TPPR-V-1215	Wall Mount Remote Unit, 600Hx600Wx300D, w/o HMI, PCBs, SD Card; with pre-drilled mounting plate
TPPR-V-1220	Wall Mount Controller, 800Hx600Wx300D, includes HMI, PCBs, SD Card; with pre-drilled mounting plate
TPPR-V-1225	Wall Mount Remote Unit, 800Hx600Wx300D, w/o HMI, PCBs, SD Card; with pre-drilled mounting plate
TPPR-V-1230	Wall Mount Controller, 1200Hx800Wx300D, includes HMI, PCBs, SD Card; with pre-drilled mounting plate

Wall Mount Stainless Steel Div2/Zone2 Remote Units

Part Number	Description
TPPR-V-1241	Wall Mount Stainless Steel Div2/Zone2 Remote Unit, 780Hx510Wx300D, w/o HMI, PCBs, SD Card; with pre-drilled mounting plate

Floor Standing Cabinet versions

Part Number	Description
TPPR-V-1250	Floor Standing Cabinet with Front Access, 2000Hx800Wx600D, includes Controller with HMI, PCBs, SD Card; w/o ventilation; with pre-drilled mounting
TPPR-V-1252	Floor Standing Cabinet with Front Access, 2000Hx800Wx600D, includes Controller with HMI, PCBs, SD Card; natural ventilation; with pre-drilled mounting
TPPR-V-1254	Floor Standing Cabinet with Front Access, 2000Hx800Wx600D, includes Controller with HMI, PCBs, SD Card; forced ventilation; with pre-drilled mounting
TPPR-V-1260	Floor Standing Cabinet with Rear Access, 2000Hx800Wx600D, includes Controller with HMI, PCBs, SD Card; w/o ventilation; with pre-drilled mounting
TPPR-V-1262	Floor Standing Cabinet with Rear Access, 2000Hx800Wx600D, includes Controller with HMI, PCBs, SD Card; natural ventilation; with pre-drilled mounting
TPPR-V-1264	Floor Standing Cabinet with Rear Access, 2000Hx800Wx600D, includes Controller with HMI, PCBs, SD Card; forced ventilation; with pre-drilled mounting

29.7 Touchpoint Pro COMPONENTS

Input and Output Modules (I/O Modules)

Part Number	Description
TPPR-V-1000	Analogue Input Module 4-20mA (4 channels per module)
TPPR-V-1010	Analogue Input Module mV-Bridge (4 channels per module)
TPPR-V-1020	Analogue Output Module 4-20mA
TPPR-V-1030	Digital Input Module (4 channels per module)
TPPR-V-1040	Relay Output Module (4 channels per module)

Communication/Power Rail

For 19'' Rack enclosure versions

Part Number	Description
TPPR-V-0520	5 Way Communication/Power Rail
TPPR-V-0525	7 Way Communication/Power Rail
TPPR-V-0530	9 Way Communication/Power Rail

For standard Wall Mount and Floor Standing Cabinet versions

Part Number	Description
TPPR-V-0540	10 Way Communication/Power Rail
TPPR-V-0542	9 Way Communication/Power Rail with additional DIM

Power Supplies

Power Supplies

Part Number	Description
TPPR-V-0500	Power Supply Redundancy Module 40A
TPPR-V-0501	UPS 20A DC Module
TPPR-V-0502	5A, 120W, 24 Vdc PSU
TPPR-V-0503	10A, 240W, 24 Vdc PSU
TPPR-V-0504	20A, 480W, 24 Vdc PSU

Bus Interface Board (Optional)

Part Number	Description
TPPR-V-2130	Modbus® Interface Board

Redundant Control System (Optional)

Part Number	Description
TPPR-V-2120	Redundant Control Centre Board

Software

Part Number	Description
TPPR-V-1111	PC Config SW licenses 12 months
TPPR-V-2223	WebServer SW licenses 12 months

29.8 Touchpoint Pro ACCESSORIES AND SPARES

Part Number	Description
TPPR-V-0405	27Ah 24V Battery (2x27Ah 12V in series)
TPPR-V-0406	12Ah 24V Battery (2x12Ah 12V in series)
TPPR-V-2600	Battery Backup Enclosure (for two batteries - 12 Ah size or 27 Ah size)
TPPR-V-1050	Ring Coupling Module (RCM)
TPPR-V-0842	SD Card (4 GB)
TPPR-V-0703	DIN Rail Blank Panel 430mm for 19" Rack 5U version
TPPR-V-0704	DIN Rail Blank Panel 487mm for Standard Cabinet versions
TPPR-V-0705	DIN Rail Blank Panel 630mm for Standard Cabinet versions
TPPR-V-0706	DIN Rail Blank Panel 540mm for Standard Cabinet versions
TPPR-V-0708	DIN Rail Blank Panel 230mm for Standard Cabinet versions
TPPR-V-1270	Blank Gland Plate for 600Wx300D Wall Mount enclosure versions
TPPR-V-1271	Gland Plate with standard knock-outs for 600Wx300D Wall Mount enclosure
TPPR-V-1272	Gland Plate with custom knock-outs for 600Wx300D Wall Mount enclosure
TPPR-V-1275	Blank Gland Plate for 800Wx300D Wall Mount enclosure versions
TPPR-V-1276	Gland Plate with standard knock-outs for 800Wx300D Wall Mount enclosure
TPPR-V-1277	Gland Plate with custom knock-outs for 800Wx300D Wall Mount enclosure
TPPR-V-1280	Blank Gland Plate for Stainless Steel, Div2/Zone2, 510Wx300D enclosure
TPPR-V-1285	Blank Gland Plate for 800Wx600D Floor Standing Cabinets
TPPR-V-1290	Mild Steel Viewing Window for all Standard Wall Mount Controllers and Floor Standing cabinet versions, IP54, RAL 7035

TPPR-V-1291	Plinth 100Hx800W for Floor Standing Cabinet
TPPR-V-1292	Plinth Sides 100Hx600D for Floor Standing Cabinet
TPPR-V-1293	Mild Steel Bezel with PUR Gasket
TPPR-V-1211	Mounting plate Blank 600Hx600W Mild Steel
TPPR-V-1221	Mounting plate blank 800Hx600W Mild Steel
TPPR-V-1231	Mounting plate blank 1200Hx800W Mild Steel
TPPR-V-1267	Mounting plate blank 2000Hx800W Mild Steel
TPPR-V-1243	Mounting plate blank 780Hx510W Stainless Steel Div2/Zone2
TPPR-V-1294	Lifting Eyes for Floor Standing Cabinet
TPPR-V-1295	Wall Mounting Brackets for Standard Wall Mount Enclosure
TPPR-V-1298	Wall Mounting Brackets for Floor Standing Cabinet
TPPR-V-1995	24V DC LED Light w Movement Sensor Floor Cabinet
TPPR-V-1996	Roof Outlet Vent Floor Cabinet Natural or Forced Ventilation
TPPR-V-1997	Door Inlet Vent Floor Cabinet Natural or Forced Ventilation
TPPR-V-1998	Thermostat Floor Cabinet Forced Ventilation
TPPR-V-1999	24V DC Filter Fan Floor Cabinet Forced Ventilation
TPPR-V-1984	Enclosure Breather Drain

30. Touchpoint Plus

Controller

Touchpoint Plus is an easily configurable, wall mounted control system that supports up to eight channels of gas detection with a further eight channels available through an optional expansion unit. It accepts inputs from 2 or 3-wire mA or mV field devices.

Its intuitive, multilingual interface simplifies operation and reduces training requirements. The full color traffic light style status indication provides clarity from a distance.

Touchpoint Plus includes a comprehensive set of outputs as standard including common alarms and dedicated drives for remote audiovisual indicators.

30.1 Instrument

Touchpoint Plus Base Units

Standard Supply: Touchpoint Plus base unit is supplied complete with pre-assembled I/O modules, 7" color LCD, touch screen, industrial
enclosure, 150W power supply (only for AC version), backplane, 13 cable entries with blanking plugs, earth terminals, certificate of inspection & test (including system configuration information), tool set for access security screw, and instruction manual. Units are 100%

Touchpoint Plus Expansion Unit

The optional expansion unit holds the same modules and optional backup battery as the Touchpoint Plus base unit, but has no controller or user interface. The main module can appect power in and CAN connection only. The Touchpoint Plus base unit and the extension unit support up to 16 channels of gas detections.

30.2 Ordering Information

Ordering Information

*Refer to the list or contact product management for non-listed configurations
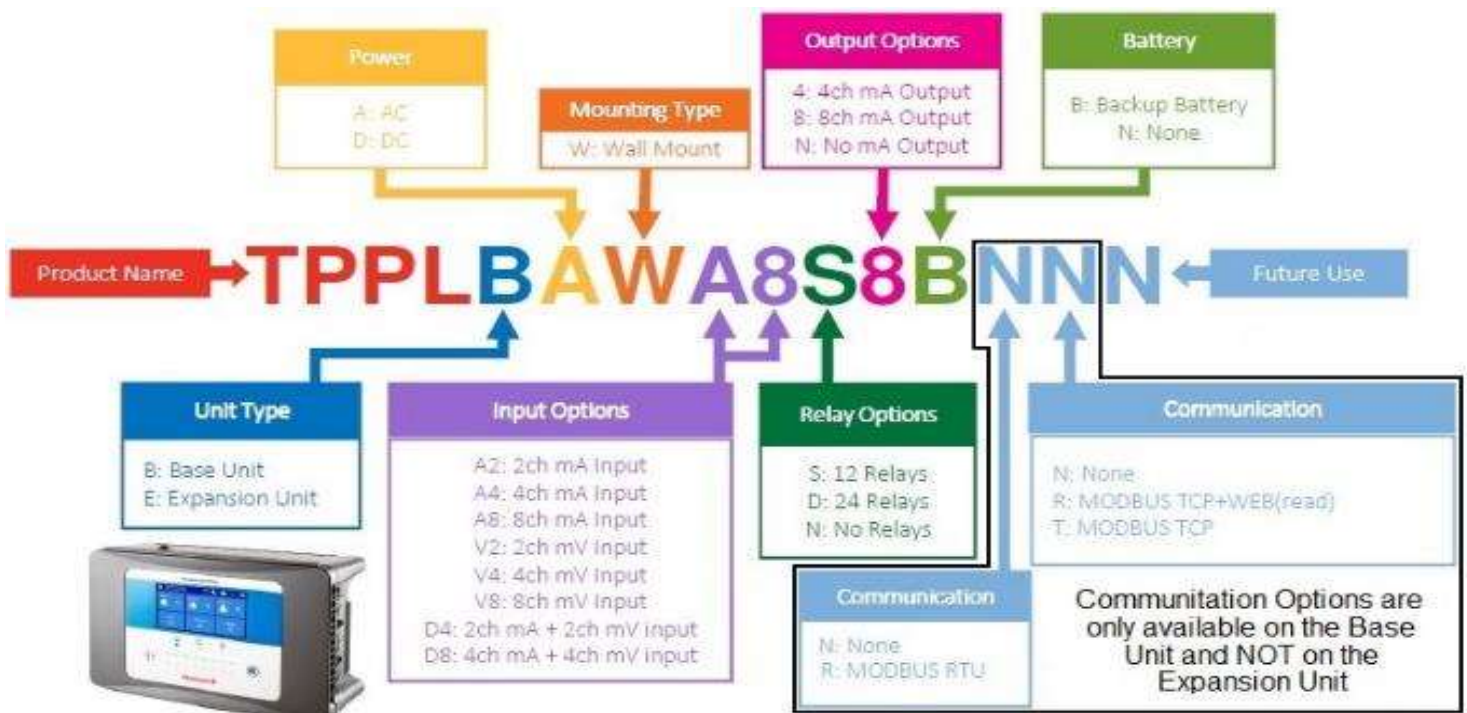
30.3 Touchpoint Plus Ordering and Pricing Generator

Touchpoint Plus Ordering and Pricing Generator enables to build up any system.
Follow each step and select the components and prices.

			TPPL	X	X	X	XX	X	X	X	X	X	X	Components	Example
				B										Touchpoint Plus base control unit for up to 8 channels	
				E										Touchpoint Plus expansion unit for up to 8 channels	
					A									AC supply	
					D									DC supply	
						W								Wall mounted enclosure	
							A2							2 x mA inputs	
							A4							4 x mA inputs	
							A8							8 x mA inputs	
							V2							2 x mV inputs	
							V4							4 x mV inputs	
							V8							8 x mV inputs	
							D4							2 x mA, 2 x mV Inputs	
							D8							4 x mA, 4 x mV Inputs	
								N						including Master 1, Master 2 and Master Fault	
								S						12 programmable relays	
								D						24 programmable relays	
									N						
									4					4 x repeated mA outputs	
									8					8 x repeated mA outputs	
										N				Without battery backup	
										B				With battery backup	
											N			Future option	
											R			With RS485 Modbus RTU*	
												N		Future option	
												T		With Modbus TCP*	
												R		With Modbus TCP + Web monitoring*	
													N	Future option	
Example:			TPPL	B	A	W	A8	N	N	N	N	N	N		

*only available with Touchpoint Plus base controller

TPPLBAWA8SNNNNN:

For example, the part number for Touchpoint Plus base control unit for up to 8 channels with AC supply and wall mount enclosure.
Supplied complete with 8x mA inputs and 12 programmable relays and with battery backup.

30. Touchpoint Plus

Controller

Part Number Examples

Note: Listed below are examples of commonly ordered instrument configurations. To create a custom Touchpoint Plus control unit, use the configurable table AND contact Honeywell Analytics to confirm configuration is valid and available.

Part Number	Description
TPPLBAWA2NNNNNN	Touchpoint Plus base control unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 2x mA inputs, including Master 1, Master 2 and Master Fault.
TPPLBAWV2NNNNNN	Touchpoint Plus base control unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 2x mV inputs, including Master 1, Master 2 and Master Fault.
TPPLBAWA4NNNNNN	Touchpoint Plus base control unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 4x mA inputs, including Master 1, Master 2 and Master Fault.
TPPLBAWV4NNNNNN	Touchpoint Plus base control unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 4x mV inputs, including Master 1, Master 2 and Master Fault.
TPPLBAWD4NNNNNN	Touchpoint Plus base control unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 2x mA and 2x mV inputs, including Master 1, Master 2 and Master Fault.
TPPLBAWA8NNNNNN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 8x mA inputs, including Master 1, Master 2 and Master Fault.
TPPLBAWV8NNNNNN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 8x mV inputs, including Master 1, Master 2 and Master Fault.
TPPLBAWD8NNNNNN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 4x mA and 4x mV inputs, including Master 1, Master 2 and Master Fault.
TPPLBAWA8DNBNNN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 8x mA inputs, 24 programmable relays, and with battery backup.
TPPLBAWV8DNBNNN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 8x mV inputs, 24 programmable relays, and with battery backup.

TPPLBAWA8DNNNRN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 8x mA inputs, 24 programmable relays, with Modbus TCP and Web monitoring
TPPLBAWD8SNBRNN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 4x mA and 4x mV inputs, 12 programmable relays, with battery backup and with Modbus RTU.
TPPLBAWA8D8NNNN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 8x mA inputs, 24 programmable relays, and with 8x repeated mA outputs.
TPPLBAWV8D8NNNN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 8x mV inputs, 24 programmable relays, and with 8x repeated mA outputs.
TPPLBAWD8D8NNNN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 4x mA and 4x mV inputs, 24 programmable relays, and with 8x repeated mA outputs.
TPPLBAWA8D8BNNN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 8x mA inputs, 24 programmable relays, 8x repeated mA outputs, and with battery backup.
TPPLBAWV8D8BNNN	Touchpoint Plus base Control Unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 8x mV inputs, 24 programmable relays, 8x repeated mA outputs, and with battery backup.
TPPLEAWA8SNNNNN	Touchpoint Plus expansion unit for up to 8 channels with AC supply and wall mounted enclosure. Supplied complete with 8x mA inputs, and with 12 programmable relays.

Note: Listed above are examples of commonly ordered instrument configurations. To create a custom Touchpoint Plus control unit, use the configurable table AND contact Honeywell Analytics to confirm configuration is valid and available.

30.4 Accessories

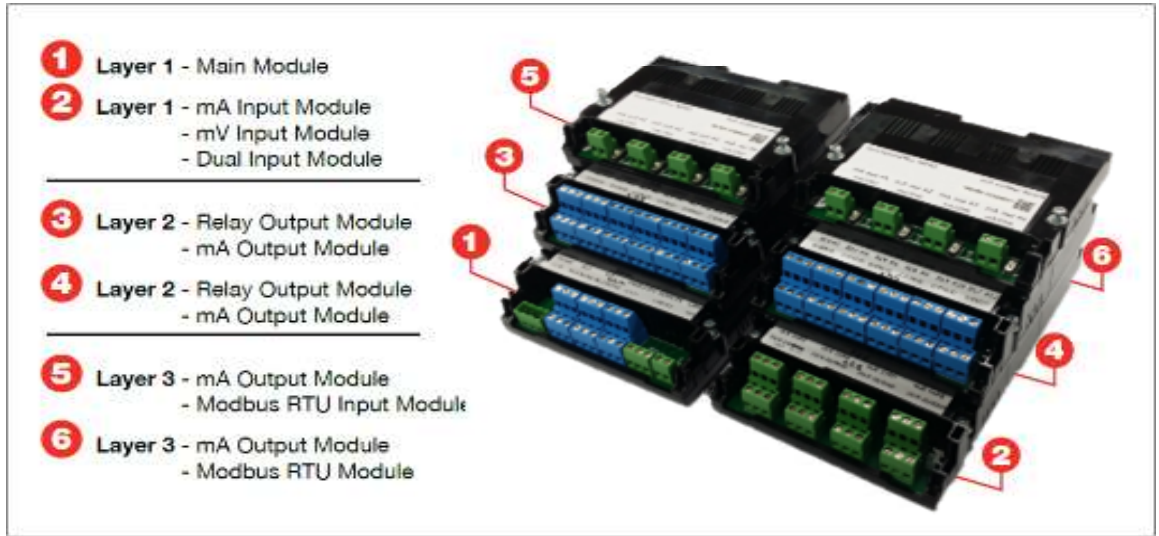| Part Number	Description
Accessories	
TPPLOWMB	Wall Mounting Bracket
TPPLOMGND	Metal grounding for cable gland
TPPLOGLD	Cable glands (13 pcs.)
TPPLOGLDA	Cable glands adaptor for M20 (13 pcs.)
TPPLOSDC	SD Card

30.5 Spare Parts

Part Number	Description
Spare Parts	
TPPLSDPM	UI PCB Module
TPPLSMPM	Main PCB Module
TPPLSLTSM	LCD + Touch Screen Module
TPPLSBPM	Back Plane Module
TPPLSSAM	SMPS Assembly Module(150W,110/220VAC)
TPPLSIBB	Backup battery pack
TPPLSMAAI2	2x mA Input Module
TPPLSMAAI4	4x mA Input Module
TPPLSMAAI8	8x mA Input Module
TPPLSMAVI2	2x mV Input Module
TPPLSMAVI4	4x mV Input Module
TPPLSMAVI8	8x mV Input Module
TPPLSMACI4	2x mA + 2x mV Dual Input Module
TPPLSMACI8	4x mA + 4x mV Dual Input Module
TPPLSMAROC	12x Relays
TPPLSMAAO4	4x mA Output Module
M-700123	Light stack assembly with red lens, horn (85-103 dB), voltage rating, 24VDC
M-700327	LED Light Module, 24V AC/DC, green, for use with M-700123
M-700328	LED Light Module, 24V AC/DC, blue, for use with M-700123
M-700329	LED Light Module, 24V AC/DC, clear, for use with M-700123
M-700330	LED Light Module, 24V AC/DC, yellow, for use with M-700123
M-700331	LED Light Module, 24V AC/DC, amber, for use with M-700123
M-700332	Vertical Stack Light Mounting Base w/cap
M-700333	Vertical Stack Light Mounting Base

Note:

- Main board must be installed Layer 1 left side

- Input board must be installed Layer 1 right side

- Relay output can be position layer 2 (max two boards)

- mA output board can be positioned layer 3 (max two boards) or can be layer 2 if no Relay output board selected.

- Main Module in Expansion Unit (Power and CAN only)

① Layer 1 - Main Module

② Layer 1 - mA Input Module
    - mV Input Module
    - Dual Input Module

③ Layer 2 - Relay Output Module
    - mA Output Module

④ Layer 2 - Relay Output Module
    - mA Output Module

⑤ Layer 3 - mA Output Module
    - Modbus RTU Input Module

⑥ Layer 3 - mA Output Module
    - Modbus RTU Module

31. HA72
Digital Gas Controllers

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 of multiple devices

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

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

31.1 HA72 Controller with Enclosure Options

HA72 Controller with Enclosure Options	
Part Number	**Description**
72-01	HA-72PM panel mount rack (includes bezel/rack hardware)
72-02	HA-72RM/1 one ST-72SM in full width 19 in. rack (64 channels)
72-03	HA-72RM/2 two ST-72SM's in full width 19 in. rack (128 channels)
72-04	HA-72N4 ST-72 in NEMA 4X large fiberglass enclosure
72-05	HA-72SS ST-72 in NEMA 4X 316 stainless steel enclosure
72-07	HA-72CP ST-72 in NEMA 4X compact non metallic enclosure

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

31. HA72

Digital Gas Controllers

31.2 Input and Output Options

Input and Output Options	
Part Number	**Description**
10-0332	Auxiliary standard alarm relay board
10-0344	I²C analog 16 input board including EXC terminals
10-0348	I²C analog 16 output board
10-0345	I²C discrete alarm relay board (16, 5A Form C relays)
10-0350	I²C programmable alarm relay board (16, 5A Form C relays)
10-0368	RS485 isolated expansion board
10-0347	I²C bridge Sensor / mA input board (accepts up to 8 10-0192 modules)
10-0192	Dual bridge Sensor module (requires 10-0347)

31.3 Expansion Plates

Expansion Plates	
Part Number	**Description**
0010-0321	85-240 Vac universal input 150 watt 24 Vdc Power supply (6.2 Amps)
0010-1269	100-240 Vac universal input 600 watt 24 Vdc Power supply (27.0 Amps)

31.4 Spares

Spares	
Part Number	**Description**
10-0331	Replacement HA-72 main I/O
10-0373	Replacement complete HA-72 front panel electronic nest assembly; 10-0373 is display stack with front panel and ribbon cable only
10-0374	Replacement HA-72 front graphic panel
1000-1992	Replacement main I/O fuse ; 5 X20 mm / 2 Amp
0010-1287	6 foot long 40 pin I/O ribbon Cable
0010-1002	16 in. long 40 pin I/O ribbon Cable
0010-1110	6 in. long I²C Cable
0010-1180	10 in. long I²C Cable
0010-1188	6 foot long I²C Cable

32. 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.

32.1 Instrument

Unipoint	
Part Number	**Description**
2306B2000	Unipoint controller (mV input version)
2306B1000	Unipoint controller (mA input version)

32.2 Accessories

Accessories	
Part Number	**Description**
ZDINPSUX1	DIN rail mounted PSU. Input: 85-265Vac, 50/60Hz. Output: 24Vdc, 1A CSA, UL/UR, CE approved

32.3 Spares

Spares	
Part Number	**Description**
2306B3010	Unipoint terminal block (x2)
2306B3020	Unipoint DIN rail socket
2306B3030	Unipoint power connector

33. Safe Area and I.S. Transmitters
Quick Reference Chart

Product	Gases Detected	Display	Certs.	Communication
Sensepoint	See Below	N (Y w/ XCD RFD)	CSA, ATEX, IS	4-20 mA, 2/3 Wire
Satelite XT		Y	N/A	4-20 mA, LonWorks®, Relay
Midas		Y	ETL	4-20 mA, Modbus TCP
SPM Flex		Y	ETL	4-20 mA, Modbus TCP, Relay
XCD Safe Area	Reference XCD Safe Area Sheet	Y	Class 1, Div. 2 Comp.	4-20 mA, Modbus RTU, Relay
Series 3000	See Below	Y	UL, ATEX, IS	4-20 mA

Toxic Gas Sensor	Sensepoint	Satelite XT	Series 3000	Midas	SPM Flex
Ammonia (NH3)	X	X	X	X	X
Carbon Monoxide (CO)	X	X	X	X	
Chlorine (Cl2)	X	X	X	X	X
Hydrogen (H2)	X	X	X	X	
Hydrogen sulfide (H2S)	X	X	X	X	X
Nitric oxide (NO)	X	X	X	X	
Oxygen (O2)	X	X	X	X	
Sulfur Dioxide (SO2)	X	X	X	X	X
Chlorine dioxide (ClO2)		X	X	X	X
Ethylene oxide (ETO)		X	X	X	
Hydrogen chloride (HCl)		X	X	X	X
Hydrogen cyanide (HCN)		X	X	X	X
Hydrogen fluoride (HF)		X	X	X	X
Nitrogen dioxide (NO2)		X	X	X	X
Ozone (O3)		X	X	X	X
Phosgene (CCl2O)		X			X
Phosphine (PH3)		X	X	X	X
Other gases (see page)			X	X	X

LEL Sensor	Sensepoint	Satelite XT	Series 3000	Midas	SPM Flex
Non-specific combustible	X	X	X	X*	

*ETL certified to 25% LEL

34. Satellite XT

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 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

34.1 Satellite XT - Analog Sensor Heads

Analog version transmitter. Provides a three wire 4-20 mA output. Sensor cell must be ordered separately. Please specify sensor part number when ordering. First sensor ordered with new Satellite receives Plan B pricing when available.

Satellite XT - Analog Sensor Heads	
Part Number	**Description**
9602-0200	Satellite XT 4-20mA
9602-0201	Satellite XT 4-20mA with UL fitting not certified to UL
9602-0205	Satellite XT 4-20mA/R
9602-0206	Satellite XT 4-20 mA/R UL with UL fitting not certified to UL
9602-0250	Satellite XT 4-20mA/C
9602-0251	Satellite XT 4-20mA/C UL with UL fitting not certified to UL

Note: Sensor cell must be ordered separately. Please specify Sensor part number when ordering. First Sensor ordered with new Satellite receives Plan B pricing when available.

34.2 Satellite XT- Digital Sensor Heads

Digital version transmitter for use on a LonWorks® digital network. Sensor cell must be ordered separately. Please specify sensor part number when ordering.
First sensor ordered with new Satellite receives Plan B pricing when available.

Satellite XT- Digital Sensor Heads	
Part Number	**Description**
9602-0400	Satellite XT FTT
9602-0401	Satellite XT FTT UL with UL fitting not certified to UL
9602-0405	Satellite XT FTT/R
9602-0450	Satellite XT FTT/C
9602-0451	Satellite XT FTT/C UL with UL fitting not certified to UL

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

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 3)
2. Sensor Cell
3. Sample and Exhaust tubing
4. End of Line Filters

Order the following parts for a Pyrolyzer System

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

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

34.3 Satellite XT with Expansion Modules

Satellite XT - Analog Sensor Heads with Extractive Module

Part Number	Description
9602-0200-EXT	Satellite XT 4-20mA
9602-0201-EXT	Satellite XT 4-20mA with UL fitting not certified to UL
9602-0205-EXT	Satellite XT 4-20mA/R
9602-0206-EXT	Satellite XT 4-20 mA/R UL with UL fitting not certified to UL
9602-0250-EXT	Satellite XT 4-20mA/C
9602-0251-EXT	Satellite XT 4-20mA/C UL with UL fitting not certified to UL

Note: Sensor cell must be ordered separately. Please specify Sensor part number when ordering. First Sensor ordered with new Satellite receives Plan

Digital version transmitter for use on a LonWorks® digital network. Sensor cell must be ordered separately. Please specify sensor part number when ordering.

Satellite XT- Digital Sensor Heads with Extractive Module

Part Number	Description
9602-0400-EXT	Satellite XT FTT
9602-0401-EXT	Satellite XT FTT UL with UL fitting not certified to UL
9602-0405-EXT	Satellite XT FTT/R
9602-0450-EXT	Satellite XT FTT/C
9602-0451-EXT	Satellite XT FTT/C UL with UL fitting not certified to UL

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

34.4 Satellite XT Expansion Modules and Pyrolyzers

Satellite XT Expansion Modules

Part Number	Description
20404-0200	Extractive Module for use with Electrochemical Sensors
20404-0250	Extractive Module for use with LEL Sensors
20404-0250	*Extractive Module for use with SF6 Sensor and Pyrolyzer combination
20408-0110-LC	Pyrolyzer Module for NF3 with Line Cord
20408-0112-LC	Pyrolyzer Module for 1.2-DCE with Line Cord
20408-0114-LC	Pyrolyzer Module for SF6 with Line Cord
20408-0116-LC	Pyrolyzer Module for CH3F with Line Cord
20408-0120-LC	Pyrolyzer Module for C5F8 with Line Cord
20408-0122-LC	Pyrolyzer Module for C4F6 with Line Cord
9602.0014.10.00	Internal wiring including plug for the Satellite XT. Allows the extractive module to be attached. Must order with pyrolyzer and pumped extractive module.
20408-4010	*Humidifier for pyrolizer
9604-4010	*Moisture Exchanger for humidifier 20408-4010 (nafion), 2 required

*Required for SF6 detection

34.4 Mounting Accessories - DIN Rail (Standard Satellite Mounting)

Mounting Accessories - DIN Rail (Standard Satellite Mounting)	
Part Number	Description
9602.0050.10.02	Din Rail / PEM retrofit mounting (9602-0050-10-02)
9602.0051.10.02	Din Rail, L-Shaped mounting bracket

34.5 Mounting Accessories - PEM Mounting

Mounting Accessories - PEM Mounting	
Part Number	Description
9602.0050.10.00	PEM Mounting Bracket (9602-0050-10-00)
9602.0051.10.00	PEM, L-Shaped Mounting Bracket (9602-0051-10-00)

34.6 Sensor Extension Assemblies - Standard Electrochemical and O2

Sensor extension assembly with standard bulkhead fitting. For use with Toxins and O2 only.

Sensors Extension Assemblies	
Part Number	Description
9602.0092.00.01	Satellite Sensor Extension Assembly - 3Ft. (9602-0090-03)
9602.0090.00.01	Satellite Sensor Extension Assembly - 6Ft. (9602-0090-06)
9602.0091.00.01	Satellite Sensor Extension Assembly - 10Ft. (9602-0090-10)

34.7 Sensor Extension Assemblies - LEL Satellite ONLY

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

Sensor Extension Assemblies - LEL Satellite ONLY	
Part Number	Description
9602.0093.00.01	2M LEL extension assembly
9602.0094.00.01	3M LEL extension assembly

34.8 Duct Sampling Adaptors

Duct Sampling Adaptors	
Part Number	Description
9902-4200	Saddle for Flat Surface (980067)
9902-4110	Saddle 2" (980058)
9902-4000	Saddle 4" (980059)
9902-4010	Saddle 6" (980060)
9902-4020	Saddle 8" (980061)
9902-4030	Saddle 10" (980062)
9902-4040	Saddle 12" (980063)

34.9 Tubing and External Sample Line Filters

Tubing and External Sample Line Filters	
Part Number	Description
780248	End of line particulate filter, disposable
1991-0147	End of line particulate filter for corrosive gases, disposable *This disposable filter provides protection against particulate build up in the sample line when monitoring for corrosive gases.*
0235-0095	Union fitting - use to connect disposable filter to end of line
1830-0055	End of line particulate filter for corrosive gases, reusable *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.*
0235-1072	Replacement "corrosive" filter elements (pk 100) - for use in 1830-0055 filter housing
1830-0027	Freon filter for nitrogen triflouride (NF3) pyrolyzing gas Detector *Note: Not for use with C4F6, C5F8, CH3F, CH2F2 pyrolyzers.*
1830-0080	Freon filter for nitrogen triflouride (NF3) pyrolyzing gas Detector (extended life) *Note: Not for use with C4F6, C5F8, CH3F, CH2F2 pyrolyzers.*
102599	Tubing Teflon® FEP 1/4 in. OD x 1/8 in. ID (sample inlet) (per foot)
1991-0136	Tubing Teflon® FEP 1/4 in. OD x 1/8 in. ID (sample inlet) (100 ft. continuous length)
100440	Tubing polypropylene 1/4 in. OD x 3/16 in. ID (exhaust) (per foot)
1991-0137	Tubing polypropylene 1/4 in. OD x 3/16 in. ID (exhaust) (100 ft. continuous length)

34.10 Junction Box for Satellite XT

Junction box with terminals for 2 or 6 Satellites.

Junction Box for Satellite XT	
Part Number	**Description**
9630-0423	Junction box - 2 devices
9630-0424	Junction box – 6 devices

34.11 Sensor Accessories

Sensor Accessories	
Part Number	**Description**
9902-0051	90 degree sensor bracket for ambient monitoring. Can be used to mount remote sensor.
9602.0095.40.00	Calibration Cap for Satellite XT, all gases except LEL, O2, SO2, NO2, NO
180085	Calibration Cap for Satellite XT, for LEL, O2, SO2, NO2, NO
871911-TEC	Flow through housing for Satellite XT. Extension cable assembly required.

34.12 New/Replacement Cells for the Satellite

Replacement Cells for the Satellite	
Part Number	**Description**
9602-7101	Ozone (O3) 0.05 - 1.00 ppm (recommend 4 Sensors/yr)
9602-9600	1,2 trans trichloroethylene (DCE) 0-1000 ppm (for pyrolyzer only)
9602-6000	Arsine (AsH3) (2E) 0.03-1.00 ppm
9602-6004	Arsine (AsH3) (LT) 0.03-1.00 ppm
9602-6202	Diborane (B2H6) 0.05-1.00 ppm
9602-6800	Bromine (Br) 0.05-5.00 ppm
9602-9732	Hexafluorobutadiene (C4F6) 0-50 ppm (for pyrolyzer only)
9602-9730	Octafluorocyclopentene (C5F8) 0.5 - 20.0 ppm (low flow pyro only)
9602-9720	Methyl fluoride (CH3F) 0 - 0.0500 % v/v (for pyrolyzer only)
9602-5300	Chlorine (Cl2) 0.15-5.00 ppm
9602-7410	Chlorine trifluoride (CIF3) 0.03-1.00 ppm
9602-7400	Chlorine dioxide (ClO2) 0.03-1.00 ppm
9602-6600	Phosgene (COCl2) 0.05 - 1.00 ppm
9602-6400	Fluorine (F2) 0.05-5.00 ppm
9602-6902	Germane (GeH4) 0.1-5.0 ppm
9602-5100	Hydrogen (H2) 0.010 - 1.000 % v/v
9602-5101	Hydrogen (H2) 0.05 - 4.00 % v/v
9602-5601	Hydrogen selenide (H2Se) 0.05 - 5.00 ppm
9602-7000	Hydrogen bromide (HBr) 1.0 - 30.0 ppm
9602-5800	Hydrogen chloride (HCl) 1.0 - 30.0 ppm
9602-5700	Hydrogen cyanide (HCN) 1.0 - 30.0 ppm
9602-6500	Hydrogen fluoride (HF) 0.5 - 10.0 ppm
9602-6715	Hexamethyldisilazane (HMDS) 0.010 - 0.500 % v/v
9602-6714	Hexamethyldisilazane (HMDS) 5 - 500 ppm
9602-9700	Nitrogen trifluoride (NF3) 1 - 50 ppm (for pyrolyzer only)
9602-6704	Ammonia (NH3) 5-100 ppm
9602-6705	Ammonia (NH3) 15-1000 ppm
9602-6100	Phosphine (PH3) (2E) 0.05 - 1.00 ppm
9602-6102	Phosphine (PH3) (LT) 0.05 - 1.00 ppm
9602-9710	Sulfur hexafluoride (SF6) 0 - 0.500 % v/v (for pyrolyzer only)
9602-6301	Silane (SiH4) 1.0 - 50.0 ppm
9602-8000	Ethylene oxide (ETO) 0-20.0 ppm
9602-7200	Nitrogen oxide (NO) 5 - 250 ppm
9602-7300	Nitrogen dioxide (NO2) 0.5 - 25.0 ppm
9602-5900	Sulfur dioxide (SO2) 0.5 - 25.0 ppm
9602-9900	Lower Explosive Limit (LEL) 0 - 100% LEL
9602-5501	Oxygen (O2) 0.0 - 25.0 % v/v, 2 year warranty from dispatch

34.13 Network Accessories

Microprocessor controlled modules. Operates on all Digital Satellite Systems (LonWorks®).

Network Accessories	
Part Number	**Description**
9630-0441	Terminator FTT-10
20650-0100	MST iDisplay Surface Mount

34.14 Intelligent I/O Modules

Microprocessor controlled modules. Operates on all Digital Satellite Systems (LonWorks®).

Network Accessories	
Part Number	**Description**
9660-0110	Addressable Relay Output Module – ROC
9660-0120	Supervisory Bus Module - Provides self healing ring topology & hardware supervision. – SBS
9660-0220	8 Channel Discrete Input Module (2 groups of 4) – DIC
9660-0330	4 Channel Analog Input Module (2 groups of 2)– AIM
9660-0440	Programmable Logic Module

34.15 Power Supplies

LonWorks® linked Powersupply with repeater will Power up to 30 Satellites. 24 Vdc Power supplies for FTT Satellites, I/O Modules and alarm devices.

Network Accessories	
Part Number	**Description**
9630-0414	Powersupply, 24 Vdc 120W for FTT Satellites, I/O modules, alarm devices, 5 Amps (104041)
9630-0415	Powersupply, 24 Vdc 240W for FTT Satellites, I/O modules, alarm devices, 10 Amps (104042)
MVIP3632-2A	2A 24 Vdc Powersupply in NEMA 4 enclosure
MVIP3632-5A	5A 24 Vdc Powersupply in NEMA 4 enclosure

35. Midas® Gas Detector
Transmitter and Sensor Combination

AsH3, B2H6, BCl3, BF3, Br2, C4F6, C5F8, CH2F2, CH3F, CH4, Cl2, ClO2, CO, CO2, ETO, F2, GeH4, H2, H2Cl2Si, H2S, HBr, HCl, HCN, HF, NF3, NH3, NO, NO2, O2, O3, PH3, SF6, Si2H6, SiH4, SO2, TEOS, WF6

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 24VDC or via Power over Ethernet PoE. Transmitters provides 0-22mA analog and Modbus/TCP Ethernet as standard outputs. Integral relays for A1, A2 and fault are included, and may be wired normally open or normally closed, latched or unlatched. Transmitters include Manual, Quick Start Guide, and (1) PG16 gland fitting for power in and relays out, 1/4" O.D.x 1/8" I.D. Sample Inlet tubing (10') [3m], 1/4" O.D x 3/16" I.D. Exhaust tubing (10') [3m], and a sample line tubing duct adapter (1283K1090). Order a sensor cartridge separately for each transmitter.

Order the following parts for a complete Midas® System:
1. Midas® or Midas® transmitter and cartridge kit
2. Sensor cell (if combo kit not purchased)
3. Sample and exhaust tubing
4. End of line filters

35.1 Transmitter Modules (sensor cartridge must be ordered separately)

Midas® Extractive Transmitter for Universal Gas Detection

Part Number	Description
MIDAS-T-004	MIDAS Extractive Transmitter (Generation 2)
MIDAS-T-004G	Midas® Extractive Transmitter (Generation 2) Gray Cover

High Temperature Pyrolyzer Module for Perfluoro Compounds (PFC) Gas Detection (order separate transmitter unit)

Higher Temperature Pyrolyzer MIDAS® transmitters provide detection of C4F6, C5F8 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. Consult Honeywell Analytics for additional gases detectable with this option. Pyrolyzer includes Pyrolyzer Quick Start Guide and installation screws. Order the PFC cartridge (MIDAS-E-XCF) separately. Order the ventilated top cover (MIDAS-A-103) separately.

MIDAS-T-NP1: The Midas Pyrolyzer allows for the detection of NF3 and other CFX gases. Cost of ownership is low, as the Pyrolyzer has a field replaceable heater assembly with a lifespan of greater than two years. Additionally, the enhanced version of the Midas Pyrolyzer delivers:

• Improved detection accuracy of gas concentrations
• Lowered operation temperature that saves power and reduces system stress
• Reduced startup time to reach thermal stable state / be ready for gas detection

Midas® High Temperature Pyrolyzer Module

Part Number	Description
MIDAS-T-NP1	MIDAS High Temperature Pyrolyzer Module

Note: If used with MIDAS-T-001 ensure latest software version is in use.

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 24V DC powered and provides power and communications directly to the attached Midas® transmitter using special ethernet cross over cable (supplied). Includes Quick Start Guide and mounting bracket to the Midas® transmitter; rear panel installation screws are not supplied.

LonWorks Module for Midas® Transmitter Connection	
Part Number	**Description**
MIDAS-T-LON	MIDAS LonWorks Interface Module

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 24V DC 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).

Quad LonWorks Module for External Transmitter Connection	
Part Number	**Description**
MIDAS-A-035	MIDAS Quad LonWorks Module

35.2 Midas® Transmitter & Cartridge Combined Kits

A complete kit including one universal MIDAS® transmitter unit (MIDAS-T-004) and one MIDAS® sensor cartridge can be ordered as a combined package. Each cartridge is supplied a 2 year warranty. This is the recommended kit for a new installation. 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.

Note: Midas® kits MUST ship complete.

Midas® Sensor Kits		
Part Number	**Description**	**Range**
MIDAS-K-NH3	Ammonia (NH_3)	9-100 ppm
MIDAS-K-ASH	Arsine (AsH_3), Germane (GeH4)	18-200 ppb 70-800 ppb
MIDAS-K-HCL	Boron Trichloride (BCl_3), Dichlorosilane (H_2Cl_2Si), Hydrogen Bromide (HBr), Hydrogen Chloride (HCl)	0.72-8 ppm
MIDAS-K-HFL	Boron Trfluoride (BF_3), Hydrogen Fluoride (HF) Low Level (LDL = 0.22 ppm), Tungsten Hexafluoride (WF_6) (Low)	0.18-2 ppm
MIDAS-K-HFX	Boron Trifluoride (BF_3), Hydrogen Fluoride (HF), Tungsten Hexafluoride (WF_6)	0.72-8 ppm 1.05-12 ppm 1.05-12 ppm
MIDAS-K-BR2	Bromine (Br_2), Chlorine Dioxide (ClO_2)	0.036-0.4 ppm
MIDAS-K-CO2	Carbon Dioxide (CO_2)	0.15-2.0%
MIDAS-K-COH	Carbon Monoxide (CO) - Hydrogen resistant	9-100 ppm
MIDAS-K-COX	Carbon Monoxide (CO)	9-100 ppm
MIDAS-K-COS	Carbonyl Sulfide (COS)	0-100 ppm
MIDAS-K-HAL	Chlorine (Cl_2), Fluorine (F_2)	0.18-2 ppm 0.36-4 ppm
MIDAS-K-HFU	Boron Trifluoride (BF_3) Hydrogen Fluoride (HF) Tungsten Hexafluoride (WF_6)	0.37-2 ppm 0.42-2 ppm 0.37-2 ppm

MIDAS-K-B2H	Diborane (B_2H_6)	36-400 ppb
MIDAS-K-H2X	Hydrogen (H_2)	90-1000 ppm
MIDAS-K-HCN	Hydrogen Cyanide (HCN)	1.8-20 ppm
MIDAS-K-H2S	Hydrogen Sulfide (H_2S)	3.6-40 ppm
MIDAS-K-IPA	IPA	0-800ppm
MIDAS-K-LEB	Methylpropane (C_4H_{10})	0-100%LEL
MIDAS-K-LEL	Hydrogen (H_2), Methane (CH_4), Propane (C_3H_8)	6.5-100% LEL
MIDAS-K-LEO	Octane (C_8H_{18})	0-100%LEL
	Butane (C_4H_{10})	0-100%LEL
MIDAS-K-NOX	Nitric Oxide (NO)	9-100 ppm
MIDAS-K-NO2	Nitrogen Dioxide (NO_2)	1.05-12 ppm
MIDAS-K-O2S	Oxygen (O_2), 3 year warranty	0.2-25% v/v
MIDAS-K-O3X	Ozone (O_3)	0.036-0.4 ppm
MIDAS-K-PH3	Phosphine (PH_3)	110-1200 ppb
MIDAS-K-SF6	Sulfur Hexafluoride (SF_6)	0-1000 ppm
MIDAS-K-SHL	Silane (SiH_4) (Low Level)	0.18-2 ppm
MIDAS-K-SHX	Silane (SiH_4), Disilane (Si_2H_6)	1.8-20 ppm
MIDAS-K-SO2	Sulfur Dioxide (SO_2)	0.7-8 ppm
MIDAS-K-TEO	TEOS	3.6-40 ppm
	Cyclopentyl Methyl Ether ($C_6H_{12}O$)	0-40 ppm
MIDAS-K-XCF	Difluoromethane (CH_2F_2) - Requires Pyrolyzer	0-40 ppm
	Hexafluorobutadiene (C_4F_6) - Requires Pyrolyzer	0-240 ppm
	Octofluorocyclopentene (C_5F_8) - Requires Pyrolyzer	0-40 ppm
MIDAS-K-XHF	Nitrogen Trifluoride (NF_3) - Requires Pyrolyzer	3-40 ppm
	Methyl Fluoride (CH_3F) - Requires Pyrolyzer	6-120 ppm

35.3 Accessories and Options

Accessories and Options	
Part Number	**Description**
0235-0128	Flexible Conduit 21" - length
0235-0163	Flexible Conduit 27" - length
MIDAS-A-010	Replacement RJ45 restraining strap
MIDAS-A-032	MIDAS "L" Bracket for Vertical Mounting
MIDAS-A-036	MIDAS DIN Rail Mounting Kit
MIDAS-A-102	MIDAS Generation 1 Replacement Cover (Black)
MIDAS-A-103	Midas Vented Cover (Black) Generation 2
MVIP3632-2A	2A 24VDC power supply in NEMA 4 enclosure
MVIP3632-5A	5A 24VDC power supply in NEMA 4 enclosure

Sample Tubing & Adapters	
Part Number	**Description**
1991-0136	Inlet Tubing, FEP Teflon 100' 1/4 x 1/8
1991-0137	Exhaust Tubing, Poly 100' 1/4" OD
102599	Tubing Teflon® FEP 1/4" OD x 1/8" ID (Sample inlet) (per Foot)
100440	Tubing Polypropylene 1/4" OD X 3/16" ID (Exhaust) (per Foot)
1283K1090	Duct Adapter for 1/4" O.D. tubing for 4-16" round ducts
0235-0095	Union Fitting 1/4" tube, polypropylene

35.4 Consumables

Consumables	
Part Number	**Description**
MIDAS-A-007	Replacement MIDAS internal sample pump and mounting bracket
MIDAS-A-009	Replacement Internal Air Filter for MIDAS Universal Gas Detector
MIDAS-A-103	MIDAS vented cover, black (Gen 2)
1283B1300	Heater Service pack for MIDAS-T-03P
1830-0080	Freon Filter for NF_3 Pyrolyzing Gas Detector (extended life). Note: Not for use with C_4F_6, C_5F_8, CH_3F, CH_2F_2 pyrolyzers
1830-0027	Freon Filter for NF_3 Pyrolyzing Gas Detector. Note: Not for use with C_4F_6, C_5F_8, CH_3F, CH_2F_2 pyrolyzers
0235-1072	Replacement "Corrosive" Filter Elements (pk 100) For use in 1830-0055 filter housing
780248	End of Line Particulate Filter. For use as End of Line filter for Non-Corrosive
1830-0055	End of Line Particulate Filter for Corrosive Gases, Reusable. 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
1991-0147	End of Line Particulate Filter for Corrosive Gases, Disposable. This disposable filter provides protection against particulate build up in the sample line when monitoring for Corrosive Gases.

35.5 Sensor Cartridges for Midas®

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.

Midas® Sensor Cartridges		
Part Number	**Description**	**Range**
MIDAS-E-NH3	Ammonia (NH_3)	9-100 ppm
MIDAS-E-ASH	Arsine (AsH_3) Germane (GeH_4)	18-200 ppb 0-800 ppb
MIDAS-E-HCL	Boron Trichloride (BCl_3), Dichlorosilane (H_2Cl_2Si), Hydrogen Bromide (HBr), Hydrogen Chloride (HCl)	0.72-8 ppm
MIDAS-E-HFL	Boron Trfluoride (BF_3), Hydrogen Fluoride HF (low level), Tungsten Hexafluoride (WF_6) (Low) *May require export license from the US Department of Commerce*	0.18-2 ppm

MIDAS-E-HFX	Boron Trifluoride (BF_3)	0.72-8 ppm
	Hydrogen Fluoride (HF)	1.05-12 ppm
	Nitrogen Trifluoride (NF_3) - Requires Pyrolyzer	3.6-40 ppm
	Tungsten Hexafluoride (WF_6)	1.05-12 ppm
MIDAS-E-BR2	Bromine (Br_2), Chlorine Dioxide (ClO_2)	0.036-0.4 ppm
MIDAS-E-CFX	Difluoromethane (CH_2F_2) - Requires Pyrolyzer	16-240 ppm
	Hexafluorobutadiene (C_4F_6) - Requires Pyrolyzer	3-40 ppm
	Methyl Fluoride (CH_3F) - Requires Pyrolyzer	8-120 ppm
	Octofluorocyclopentene (C_5F_8) - Requires Pyrolyzer	3-40 ppm
MIDAS-E-CO2	Carbon Dioxide ECC cartridge	0.15-2.00 % v/v
MIDAS-E-COX	Carbon Monoxide (CO)	9-100 ppm
MIDAS-E-COH	Carbon Monoxide (CO) - Hydrogen resistant	9-100 ppm
MIDAS-E-HAL	Chlorine (Cl_2)	0.18-2 ppm
	Fluorine (F_2)	0.36-4 ppm
MIDAS-E-B2H	Diborane (B_2H_6)	0036-0.4 ppm
MIDAS-E-H2X	Hydrogen (H_2)	90-1000 ppm
MIDAS-E-HCN	Hydrogen Cyanide (HCN)	1.8-20 ppm
MIDAS-E-H2S	Hydrogen Sulphide (H_2S)	3.6-40 ppm
MIDAS-E-LEL	Hydrogen (H_2), Methane (CH_4), Propane (C_3H_8)	6.5-100% LEL
	Note: MIDAS-E-LEL Cartridge carries a 2-years warranty but can be calibrated up to 5 years.	
MIDAS-E-LEB	Methylpropane (C_4H_{10})	0-100%LEL
MIDAS-E-LEO	Octane (C_8H_{18})	0-100%LEL
	Butane (C_4H_{10})	0-100%LEL
MIDAS-E-LEX	Propane (C_3H_8)	0%-100% LEL
MIDAS-E-NOX	Nitric Oxide (NO)	9-100 ppm
MIDAS-E-NO2	Nitrogen Dioxide (NO_2)	1.05-12 ppm
MIDAS-L-O2S	Oxygen (O_2), 3 year warranty	0.2-25% v/v
MIDAS-E-O3X	Ozone (O_3)	0.036-0.4 ppm
MIDAS-E-O3H	Ozone (O_3) High Level)	0.036-0.7 ppm
MIDAS-E-PH3	Phosphine (PH_3)	110-1200 ppb
MIDAS-E-SHL	Silane (SiH_4) (Low Level)	0.18-2 ppm
MIDAS-E-SHX	Silane (SiH_4), Disilane (Si_2H_6)	1.8-20 ppm
MIDAS-E-SO2	Sulphur Dioxide (SO_2)	0.7-8 ppm
MIDAS-E-TEO	TEOS	3.6-40 ppm
	Cyclopentyl Methyl Ether ($C_6H_{12}O$)	0-40ppm
MIDAS-E-XCF	Difluoromethane (CH_2F_2) - Requires Pyrolyzer	0-40 ppm
	Hexafluorobutadiene (C_4F_6) - Requires Pyrolyzer	0-240 ppm
	Octofluorocyclopentene (C_5F_8) - Requires Pyrolyzer	0-40 ppm
MIDAS-E-XHF	Nitrogen Trifluoride (NF_3) - Requires Pyrolyzer	0-40ppm,
	Methyl Fluoride (CH_3F) - Requires Pyrolyzer	0-120ppm
MIDAS-I-SF6	Sulfur Hexafluoride (SF_6)	0-1000ppm
MIDAS-I-N2O	NDIR - Nitrous Oxide (N_2O)	100-1000 ppm
MIDAS-I-CO2	NDIR - Carbon Dioxide (CO_2)	0.015 – 0.2 % VOL
		0.015 – 2.0 % VOL
		0.015 – 5.0 % VOL
MIDAS-X-COS	Carbonyl Sulfide(COS)	0-100ppm
MIDAS-X-IPA	IPA	0-800ppm

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

Midas-M Extractive Gas Detector

Extractive 4-in-1 Midas-M transmitters operate with Midas-M sensor cartridges, for use as a local gas detector. Transmitters are powered by 24VDC or via Power over Ethernet (PoE). Midas provides 0-22 mA analog or Modbus/TCP Ethernet as outputs. Integral general relays for A1, A2 and fault are included, and may be configured normally open or normally closed, latching or non-latching. Transmitters include Manual, Quick Start Guide, and (1) PG16 gland fitting for power in and relays out, 1/4" O.D.x 1/8" I.D. Sample Inlet tubing (10') [3m], 1/4" O.D x 3/16" I.D. Exhaust tubing (10') [3m], and a sample line tubing duct adapter (1283K1090). Generation 2 features a multi-colored backlight to indicate status.

Order the following parts for a complete Midas® System:
1. Midas-M or Midas-M with LIT
2. Sensor Cartridge
3. Sample and Exhaust tubing
4. End of line filters

35.6 Transmitter Modules (sensor cartridge must be ordered separately)

Extractive Transmitter for Universal Gas Detection

Part Number	Description
MMT-01	Midas-M 4-20mA and TCPIP Modbus Transmitter
MMT-T01	Midas-M 4-20mA and TCPIP Modbus Transmitter w/Tube
MMT-B01	Midas-M 4-20mA and TCPIP Modbus Transmitter Bulk (6)
MMT-02	Midas-M TCPIP Modbus Transmitter
MMT-T02	Midas-M TCPIP Modbus Transmitter w/Tube
MMT-B02	Midas-M TCPIP Modbus Transmitter Bulk (6)

Extractive Transmitter with LIT

Part Number	Description
MMT-L01	Midas-M 4-20mA and TCPIP ModbusTransmitter - LIT
MMT-LT01	Midas-M 4-20mA and TCPIP Modbus Transmitter - LIT
MMT-LB01	Midas-M 4-20mA and TCPIP Modbus Transmitter w/Tube - LIT
MMT-L02	Midas-M TCPIP Modbus TransmitterTube - LIT
MMT-LT02	Midas-M TPCIP Modbus Transmitter Bulk (6) - LIT
MMT-LB02	Midas-M TCPIP Modbus Transmitter, (6)Bulk - LIT

Midas-M Cartridges

Cartridge
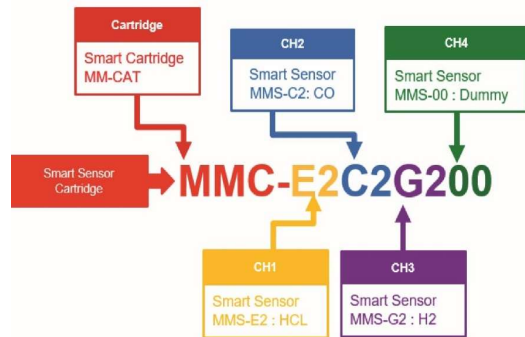
Part Number	Description
MMC-xxxxxxxx	Midas-M Sensor Cartridge with Smart Sensors

LIMITATIONS

Midas-M Sensor List - Build a complete cartridge using chart above

Part Number	Description	
MMC	*MMC will require a 1 cent charge to customer PO and Invoicing to match	
MMS-00	Midas-M Dummy Sensor	
MMS-E2	Midas-M HCl/0-8ppm,2yrs	
MMS-F3	Midas-M Methane_CH4 0-100%LEL,2yrs	
MMS-X2	Midas-M Silane (SiH4) 0 -20 ppm, 2 years	
MMS-G2	Midas-M H2/0-1000ppm,2yrs	
MMS-L2	Midas-M Chlorine (Cl2) 0 - 2ppm, 2 years	
MMS-A2	Midas-M NH3/0-100ppm,2yrs	
MMS-C2	Midas-M CO/0-100ppm,2yr	
MMS-C3	Midas-M CO/0-100ppm,Low Cross Sensitivity,2yrs	
MMS-Q2	Midas-M Bromine_Br2 0-0.4ppm,2yrs	
MMS-R2	Midas-M PH3/0-1200ppb,2yrs	
MMS-R3	Midas-M PH3/0-1200ppb,2yrs	
MMS-U2	Midas-M Ozone (O3) 0 - 0.4ppm, 2 years	
MMS-D2	Midas-M Oxygen (O2) 0 - 25%v/v, 3 years	
MMS-S2	Midas-M SO2/0-8ppm,2yrs	
MMS-TR	Midas-M Carbon Dioxide_CO2 0-2%,2yrs	
MMS-Z2	Midas-M HF/0-12ppm,2yrs	
MMS-Y2	Midas-M Hydrogen Cyanide_HCN 0-20ppm,1yrs	
MMS-I2	Midas-M Methane (IR)_CH4 0-5%vol,5yrs	
MMS-ET	Midas-M EthyleneOxide_ETO 0-40ppm,2yrs	
MMS-V2	Midas-M Nitric Oxide_NO 0-100ppm,2yrs	
MMS-VN	Midas-M NitrogenDioxide_NO2 0-12ppm,2yrs	
MMS-H4	Midas-M HydrogenSulfide_H2S 0-40ppm,2yrs	

Note: Completed cartridge must be in alphabetical order

Midas-M Extractive Gas Detector

35.7 Midas-M Accessories / Options

Mounting Accessories

Part Number	Description
MM-REL	Midas-M Relay Module
MVIP3632-2A	2A 24VDC power supply in vented NEMA 4 enclosure
MVIP3632-5A	5A 24VDC power supply in vented NEMA 4 enclosure

Duct Sampling Adaptors

Part Number	Description
1283K1090	Duct Adapter for 1/4" O.D. tubing for 4-16" round ducts
0235-0095	Union Fitting 1/4" tube, polypropylene

Service Items

Part Number	Description
MM-PM	Midas-M Pump Module
MM-FIL	Midas-M Filter Module
MM-FRT	Midas-M Front Module
MM-B01	Midas-M 4-20mA Base Module
MM-B02	Midas-M Modbus TCP Base Module
MM-M01	Midas-M 4-20mA Main Module
MM-M02	Midas-M Modbus TCP Main Module
MM-CAT	Midas-M Cartridge w/o Smart Cells
MM-LPM	Midas-M Pump Module - LIT
MM-LIT	Midas-M Check Valve - LIT

Tubing and External Sample Line Filters

Part Number	Description
780248	End of Line Particulate Filter, Disposable
1991-0147	End of Line Particulate Filter for Corrosive Gases, Disposable This disposable filter provides protection against particulate bu
0235-0095	Union Fitting - Use to connect disposable filter to end of line
1830-0055	End of Line Particulate Filter for Corrosive Gases, Reusable This reusable filter housing provides protection against particul
0235-1072	Replacement "Corrosive" Filter Elements (pk 100) For use in 1830-0055 filter housing
102599	Tubing Teflon® FEP 1/4" OD x 1/8" ID (Sample inlet) (per Foot)
1991-0136	Tubing Teflon® FEP 1/4" OD x 1/8" ID (Sample Inlet) (100' continuous length)
100440	Tubing Polypropylene 1/4" OD X 3/16" ID (Exhaust) (per Foot)
1991-0137	Tubing Polypropylene 1/4" OD X 3/16" ID (Exhaust) (100' continuous length)

36. SPM Flex Chemcassette®

Tape-Based Gas Detector

The SPM Flex, the next evolution of our SPM and TLD gas Detectors with Chemcassette® tape technology, is capable of working as both a fixed and a portable unit. The monitor detects the ultrasensitive gases inherent in your operations, including hydrides, mineral acids and amines.

Our Chemcassette tape technology shows the presence of gas quickly and definitively with a physical record. So you can prevent costly downtime from false alarms.

To order a complete system:

1. Select Base Unit (Section 1)
2. Chemcassette tape(s) per calibration (Chemcassette Section 2)
3. Select Base Unit Options (Section 3)
4. Select Accessories and Installation Items (Section 4)

36.1 Base Units

Fixed Units include Standard Wall Mounting Bracket, Battery, Power Supply, Regional Power Cord, CD and Quick Start Guide.
Portable Units include Handle assembly, clean-room suitable shoulder strap, Battery, Power Supply, Regional Power Cord, CD and Quick Start Guide.

SPM Flex Fixed Units	
Part Number	**Description**
SPMF-F1US	SPM Flex Fixed Unit for North America
SPMF-F1AU	SPM Flex Fixed Unit for Australia
SPMF-F1CH	SPM Flex Fixed Unit for Switzerland
SPMF-F1DK	SPM Flex Fixed Unit for Denmark
SPMF-F1EU	SPM Flex Fixed Unit for Europe
SPMF-F1GB	SPM Flex Fixed Unit for Great Britain
SPMF-F1JP	SPM Flex Fixed Unit for Japan

SPM Flex Portable Units	
Part Number	**Description**
SPMF-P1US	SPM Flex Portable Unit for North America
SPMF-P1AU	SPM Flex Portable Unit for Australia
SPMF-P1CH	SPM Flex Portable Unit for Switzerland
SPMF-P1DK	SPM Flex Portable Unit for Denmark
SPMF-P1EU	SPM Flex Portable Unit for Europe
SPMF-P1GB	SPM Flex Portable Unit for Great Britain
SPMF-P1JP	SPM Flex Portable Unit for Japan

36.2 Chemcassette Tapes

Chemcassette tapes are individually formulated for a specific gas or family of gases. Each Chemcassette tape is a proprietary chemical reagent system that acts as both a trapping and analysis medium, detecting and measuring ppb/ppm amounts of target gas with excellent sensitivity and response speed. Each Chemcassette tape is gas tested to assure proper response when installed in-field in a Honeywell Analytics/MDA Scientific gas Detector.

90 Day XP Chemcassette Tapes — For SPM Flex Only (Provides up to 90 Days of continuous monitoring)	
Part Number	**Description**
1265-3000	SPM Flex CC XP Hydrides (90)
1265-3001	SPM Flex CC XP Mineral Acids (90)
1265-3002	SPM Flex CC XP Chlorine (90)
1265-3003	SPM Flex CC XP Ammonia (90)
1265-3007	SPM Flex CC XP Phosgene (90)
1265-3012	SPM Flex CC-U XP Mineral Acids (90)

30 Day Chemcassette Tapes — For SPM Flex Only (Provides up to 90 Days of continuous monitoring)

Part Number	Description
1265-3004	SPM Flex CC Fluorine Oxidizers (30)
1265-3005	SPM Flex CC Sulfur Dioxide (30)
1265-3006	SPM Flex CC Diisocyanates (30)
1265-3008	SPM Flex CC Hydrazine (30)
1265-3010	SPM Flex CC Hydrogen Peroxide (30)
1265-3011	SPM Flex CC Ozone (30)

14 Day Chemcassette Tapes — For SPM Flex Only (Provides up to 2 weeks of continuous monitoring)

Part Number	Description
1265-4000	SPM Flex CC-S XP Hydrides
1265-4001	SPM Flex CC-S XP Mineral Acids
1265-4002	SPM Flex CC-S XP Chlorine
1265-4003	SPM Flex CC-S XP Ammonia
1265-4004	SPM Flex CC-S Fluorine Oxidizers
1265-4005	SPM Flex CC-S Sulfur Dioxide
1265-4006	SPM Flex CC-S Diisocyanates
1265-4007	SPM Flex CC-S XP Phosgene
1265-4008	SPM Flex CC-S Hydrazine
1265-4009	SPM Flex CC-S Hydrogen Cyanide
1265-4010	SPM Flex CC-S Hydrogen Peroxide
1265-4011	SPM Flex CC-S Ozone
1265-4012	SPM Flex CC-S-U XP Mineral Acids

36.3 Options and Spares

To order the following options, add the part numbers to above base unit. Prices listed below are additional to the cost of the base unit.
Note: Some options are not compatible with others. Please contact Honeywell Analytics before ordering.

Options and Spares

Part Number	Description
SPMF-WAND	Sample Wand Kit (includes probe, filter/holder, coiled tube, mounting
SPMF-STRP	Clean Room Suitable Shoulder Strap
SPMF-HNDL	Handle for Portable configuration
SPMF-WTHR	Weather Shield for use in Fixed configuration (includes mounting hardware)

36.4 Accessories and Installation Items

SPM Flex Accessories and Installation Items

Part Number	Description
SPMF-PWRS	Universal Power Supply (no cord)
874333	North America (120VAC) Power Cord
874557	Australia Power Cord
874558	Great Britain
874559	Denmark
874560	Switzerland
874561	Europe
1874-0112	Japan (100VAC)
SPMF-PCON	6' Power Cable with Weather proof connector (for connection to user 24VDC)
SPMF-ECON	10' Ethernet Cable with Weather proof connector male, standard male
SPMF-CCON	Communication SPM Flex side connector, 6' communication Cable with weather-proof
1265-2014	SPM Flex Optics Test Card
0235-0095	Union fitting — use to connect disposable end of line filter to tubing
102599	Tubing ¼" O.D x 1/8" I.D. FEP - for sample inlet, per foot
100440	Tubing polypropylene ¼" O.D. x 3/15" I.D - for exhaust, per foot
1265A0070	Main PCB
1265A0074	User interface / display PCB
1265-0153	User interface ribbon cable

1265A0080	RFID PCB
1265A0321	RFID/Hall Effect cable assembly
1265-0167	9 Cell Battery pack (factory only)

SPM Flex Mounting Accessories

Part Number	Description
SPMF-MBST	Standard Mounting Bracket for Fixed Unit (for SPM Flex only)
SPMF-MBRF	Retro-Fit Mounting Bracket for Fixed Unit (compatible with original SPM)

36.5 Service Parts

These parts are for field or factory service work.

Service Parts

Part Number	Description
1265A0413	Pump
1265A0404	Optics and Gate motor assembly
1265A0422	Tape advance stepper motor
1265-0035	Clear door
1265A0182	Replacement latch assembly for clear door
0140-0013	Coin Battery CR2302 Energizer
1265-0082	Power switch / USB cover
1265-0165	Warning label for power switch / USB cover
1265-0036	Clear door gasket
SPMF-DCET	Dust cover For Ethernet port SPMF-DCET
SPMF-DCCO	Dust cover For communication port SPMF-DCCO
SPMF-DCPO	Dust cover For power port

Consumables

Part Number	Description
1991-0147	Corrosive end of line filter
780248	Standard end of line filter
871134	Small acid scrubber / filter
710235	Standard size acid scrubber / filter

37. Accessories:

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

Horns & Strobes

Part Number	Description
P2WL-P	Horn/strobe 24 Vdc, 2 wire (Clear Lens)
P2WK-P	Horn/strobe 24 Vdc, 2 wire, outdoor (Clear Lens)
P2WHK-P	Horn/strobe 24 Vdc, 2 wire, outdoor, high candela (Clear Lens)
PC2W-P	Horn/strobe 24 Vdc, 2 wire, ceiling mount (Clear Lens)
PC2WH-P	Horn/strobe 24 Vdc, 2 wire, ceiling mount, high candela (Clear Lens)
SPSWK-P	Speaker/strobe, selectable candela, white, outdoor (Clear Lens)
WH-126143	Mount 4 multi-tone strobe (Clear Lens)

Horn & Strobe Accessories

Part Number	Description
MP120KL	120 Vac Mounting plate adaptor (for use with 2-wire horn/strobes)
LENS-B2	Lens - blue, wall mount
LENS-R2	Lens - red, wall mount
LENS-A2	Lens - amber, wall mount
LENS-G2	Lens - green, wall mount

Strobe

Part Number	Description
SCW-P	Strobe, standard candela, white, ceiling mount
SW-P	Strobe, standard candela, white, wall mount
SWH-P	Strobe, high candela, white, wall mount
SWHK-P	Strobe, high candela, white, wall mount, outdoor
SVIP3532-2	Beacon, Class I, Div. 1 24 Vdc, red

Horn

Part Number	Description
M-503973	Horn, 120 Vac, indoor application, M-503973 Edwards 874-n5, 78-103db UL/FM approved, White
M-503974	Horn (NEMA 4X), 120 Vac, indoor or outdoor application, M-503973 Edwards 876-n5, 78-103db UL/FM approved, White
M-501767	Explosion proof horn, 120 Vac, Class I Div. 1, M-501767 Federal Signal 31X-120-3 Explosion Proof Horn 120VAC Class 1 Div 1
SVIP3532-1	Horn, Class I, Div. 1 24 Vdc
SVIP3795-R24	Strobe red 24V Class 1 Div. 2 3/4" pipe mount
SVIP3795-R24DM	Strobe Red 24V Class 1 Div. 2 direct mount

37. Accessories:

Power Supplies & Additional Accessories

Alarm Bars

Part Number	Description
F08-0011-010	KIT, RAEPOINT W/ALARM BAR, REMOTE, 2.4G
F08-0011-020	KIT,RAEPOINT W/ALARM BAR, REMOTE, 2.4G, AC POWERED
F08-0001-010	KIT, RAEPOINT W/ALARM BAR, REMOTE, 2.4G, ATEX/IECEX
F08-0001-000	RAEPOINT, RRA2000.ATEX/IECEX.REMOTE.RM2400A_2.4GHZ.W/O ALARM BAR.STD. KIT
F08-0003-000	RAEPOINT, RRA2000.ATEX/IECEX.ROUTER.RM2400A_2.4GHZ.W/O ALARM BAR.STD. KIT
F08-0011-000	RAEPOINT, RRA2000.CSA.REMOTE.RM2400A_2.4GHZ.W/O ALARM BAR.STD. KIT
F08-0013-000	RAEPOINT, RRA2000.CSA.ROUTER.RM2400A_2.4GHZ.W/O ALARM BAR.STD. KIT

37.2 Power Supplies & Additional Accessories

Power Supplies & Additional Accessories

Part Number	Description
M-600268	24 Vdc-6.5A Power supply, no enclosure
M-600008	Relay plug, terminates 4/20 signal at Sensor providing relay output. 3 A @ 24 Vdc rating
M-600031	GM-JR-PS GM-JR Power supply, 24 Vdc, 1A
M-600400	Power supply, 24 Vdc, 6.5 A, NEMA 12
M-510150	Liquid crystal display for use with EC-F9 and EC-FX
M-511300	DRM, dual relay module
M-507960	UPS750VA 120V APC Smart-UPS XL 750 VA
M-508370	UPS1000VA 120V APC Smart-UPS XL 1000 VA
MP120KL	120 Vac Adapter Mounting plate
2441-0001	SS tag Kit, 3.0 x 0.5 in. #10 (M5) screw (Tag list and text must be supplied with PO)
10-0282	Push Button for Div 2 Hazardous Areas

37. Accessories:
Calibration Reference Guide

37.3 Calibration Reference Guide

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 N2)	0.5 - 1.0 liter/min
XCD	Sensepoint XCD - O2, H2, H2S 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 CO2	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

37. Accessories:

Calibration Kits and Components

37.4 Calibration Kits and Components

XNX™	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case	XNX Toxic Kit	998-100-004, S3KCAL, ZCALREG1 (.3 LPM), 998-100-003	XNXTOXKit
Tubing, flow adaptor, regulator, carrying case	XNX Toxic Kit (HCN, Cl2, HF, NH3, and HCl)		XNXTOXKit2
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, N600 1001 33, 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, regulator, carrying case	RGC	998-100-004, ZCALREG1 (.3LPM), 998-100-003	OPTIMARGCCALKit
Tubing, gas cover, regulator, carrying case	Non-RGC	998-100-004, 2108D0258, 998-100-002 (2LPM), With GAS CELL, 998-100-003	OPTIMACALKit

Excel	Product	Contains	Part Number
Test filters	Excel	2104N2999	2104N2999

Series 3000	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case; Gassing Cover not included with RGC Cal Kit, please include carry case 998-100-003		998-100-004, S3KCAL, ZCALREG1(.3LPM), 998-100-003	XNXTOXKit

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.

37. Accessories:

Calibration Kits and Components

Satellite	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case	EC	0310-2021, 9602.0095.42.00, 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

Midas	Product	Contains	Part Number
Tubing, flow adaptor, regulator, carrying case		102599, N600 1001 10, 998-100-003	MIDASCALKit

* XCDTOXKit should be used with XCD-Flammable IR

Accessories and Cal 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.

37. Accessories:

Calibration Gases

37.5 Toxic Gases

Toxic Gases

For Use With	Gas Type	Concentration	Cylinder Size	Thread Size (Female)	Part Number
XNX/XCD/S3K	SiH4 Silane	5 ppm	58 L	5/8 in. x 18 in.	1991-0167
XNX/XCD/S3K	SO2	5 ppm	34 L	5/8 in. x 18 in.	GFV450
XNX/XCD/S3K	SO2	10 ppm	58 L	5/8 in. x 18 in.	GFV177
XNX/XCD/S3K	SO2	25 ppm	58 L	5/8 in. x 18 in.	571361
XNX/XCD/S3K	H2S / N2	10 ppm	58 L	5/8 in. x 18 in.	2992-0033
XNX/XCD/S3K	H2S / N2	25 ppm	58 L	5/8 in. x 18 in.	998-024-003
XNX/XCD/S3K	H2S / Air	25 ppm	58 L	5/8 in. x 18 in.	998-024-001
XNX/XCD/S3K	H2S / N2	50 ppm	58 L	5/8 in. x 18 in.	998-024-004
XNX/XCD/S3K	NH3 / N2	25 ppm	34 L	5/8 in. x 18 in.	GFV250
XNX/XCD/S3K	NH3 / N2	25 ppm	58 L	5/8 in. x 18 in.	GFV213
XNX/XCD/S3K	NH3 / N2	50 ppm	58 L	5/8 in. x 18 in.	2992-0015
XNX/XCD/S3K	NH3 / Air	100 ppm	58 L	5/8 in. x 18 in.	M-501041
XNX/XCD/S3K	NH3 / Air	500 ppm	58 L	5/8 in. x 18 in.	M-507546
XNX/XCD/S3K	Cl2	2 ppm	58 L	5/8 in. x 18 in.	GFV253
XNX/XCD/S3K	Cl2 / N2	5 ppm	58 L	5/8 in. x 18 in.	571084
XNX/XCD/S3K	Cl2	10 ppm	58 L	5/8 in. x 18 in.	GFV252
XNX/XCD/S3K	NO2 / N2	5 ppm	58 L	5/8 in. x 18 in.	2992-0008
XNX/XCD/S3K	NO / N2	100 ppm	58 L	5/8 in. x 18 in.	2992-0035
XNX/XCD/S3K	N2	99.8% V/V	58 L	5/8 in. x 18 in.	2992-0011
XNX/XCD/S3K	H2 / Air	500 ppm	103 L	5/8 in. x 18 in.	1991-0159
XNX/XCD/S3K	H2 / Air	1000 ppm	58 L	5/8 in. x 18 in.	2992-0016
XNX/XCD/S3K	H2 / 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	20.9% V/V	103 L	5/8 in. x 18 in.	998-023-001
XNX/XCD/S3K	CO2 / Air	1% V/V	103 L	5/8 in. x 18 in.	2992-0029
XNX/XCD/S3K	O2 / N2	17% V/V	103 L	5/8 in. x 18 in.	GFV444
XNX/XCD/S3K	HCL / N2	5 ppm	58 L	5/8 in. x 18 in.	1991-0164
XNX/XCD/S3K	HCL / N2	10 ppm	58 L	5/8 in. x 18 in.	GFV233
XNX/XCD/S3K	PH3 / N2	.5 ppm	58 L	5/8 in. x 18 in.	1991-0165

37. Accessories:

Calibration Gases

37.6 Combustible Gases

Combustible Gases

For Use With	Gas Type	Concentration	Cylinder Size	Thread Size	Part Number
XNX/XCD/S3K	Propane / N2	20% V/V	58 L	5/8 in. x 18 in.	2992-0076
XNX/XCD/S3K	Methane / Air	50% LEL	103 L	5/8 in. x 18 in.	998-022-001
XNX/XCD/S3K	Ethylene / Air	50% LEL	103 L	5/8 in. x 18 in.	998-022-004
XNX/XCD/S3K	Propane / Air	50% LEL	103 L	5/8 in. x 18 in.	998-022-002
XNX/XCD/S3K	Pentane / Air	25% LEL	103 L	5/8 in. x 18 in.	1991-0183
XNX/XCD/S3K	Pentane / Air	50% LEL	103 L	5/8 in. x 18 in.	GFV232
XNX/XCD/S3K	H2 / Air	50% LEL	103 L	5/8 in. x 18 in.	998-022-003
XNX/XCD/S3K	Butane / Air	50% LEL	103 L	5/8 in. x 18 in.	571785

38. Honeywell Analytics Service

Honeywell Analytics Service contact information:

USA Service Workshop
Honeywell Analytics
405 Barclay Blvd.
Lincolnshire, IL 60069
USA
Tel: 800-538-0363 (option #5)
E-mail: ha.us.service@honeywell.com

Calgary Service Department
Honeywell Analytics
Suite 110, 4411 – 6 Street SE
Calgary AB T2G 4E8
Canada
Tel: 1-800-563-2967
Email: haservice.canada@honeywell.com

Honeywell Analytics' global standing for portable, fixed and low level toxic gas detection is backed up with a dedicated team of professionals that takes service and support to a whole new level.

It's your choice...
Whatever industry you're in, we have the levels of support that are right for your business.

It's your business. It's your industry.
And no matter whether you're managing personnel for confined space entry, or securing your plant against gas risks, the process has to keep moving.
The alternative is downtime, or even total shutdown, and then the risks to your business are far greater.

Honeywell provides service levels that make it easy to choose the right kind of support to keep your plant and people safe; to keep your business up and running - because that's our job!

Choose from:

Installation and Commissioning

 - Installation, configuration and commissioning

 - Functional tests

 - Start-up

 - Staff training

 - Bump testing

Contract Maintenance

Service and Repair
 - On-site/workshop repair and calibration

 - Modification and conVersion

Calibration and Surveys

 - Instrument calibration equipment certified to national/regional standards

 - Site surveys

 - Stock surveys

38. Honeywell Analytics Service

Field Service Pricing:

We have a global network of fully qualified and highly skilled Technical Support Resources and Field Service Specialists ready to support your business. Honeywell Analytics is ready to support you 24 hours a day / 7 days a week in the United States & Canada.

For Monday thru Friday Daytime support please contact Honeywell Analytics and follow the voice prompts. In the US please dial 1-800-538-0363. Technical Support is currently Option 4 then Option 3. In Canada please dial 1-800-563-2967 Option 1 English, Option 2 French. Tech Support is currently Option 2.

For Afterhours and weekend support please contact Honeywell Analytics at 1-847-634-2843. Phone support rates will apply.

For Non-contract customers the phone support. Remote Support minimum is 2Hrs.

For Contract customers the service will be negotiated in conjunction with the Continuing Services Agreement.

All Startup & Commissioning of new Honeywell Analytics equipment will be billed at Service Contract rates.

Standard hours are between 07:00 and 15:00. Weekday overtime hours will be billed at 150% the applicable rate, Saturday will be billed at 150% and Sundays & Public Holidays will be billed at 200% the applicable rate.

Travel and Living expenses incurred by Honeywell will be invoiced at actual and reasonable costs plus 10%. This includes airfare, per diem, car rental, hotel and other travel related charges.

Field Service Pricing: Non-Contract Rates

Description
Workshop - Hourly Rate
Field Service - Daily Rate, up to 8 hours
Offshore Field Service - Daily Rate, up to 8 hours

Field Service Pricing: Contract Rates

Description
Field Service - Daily Rate, 8 hours

Honeywell Analytics Lines of Business

Commercial

Gas detection from standalone units   to fully engineered, multi-point systems, all offering cost-effective regulatory compliance

» Applications: parking structures, chillers, mechanical rooms, office towers, commercial buildings, shopping centers, swimming pools, golf courses, schools and universities, laboratories

Industrial

Renowned Sieger and Manning gas detection systems with advanced electrochemical, infrared and open path sensing technologies

» Applications: oil and gas,   cold storage, water/wastewater treatment, chemicals, engine rooms, plastics and fibers, agriculture, printing and light industrial

Portables

Single or multi-gas and other premium Detectors with compact, lightweight designs ranging from simple alarm only units to advanced, fully configurable and serviceable instruments

» Applications: underground utility and electricity ducts, boiler rooms, post-fire sites, sewers, industrial plants, industrial hygiene, first responder teams, remote fleets

High Tech/Government

A complete portfolio of gas and chemical detection instrumentation including infrared spectroscopy (MST) with no cross interference, to Chemcassette paper-based solutions (MDA Scientific) offering detection down to parts per billion

» Applications: semiconductor manufacturing and nanotechnology, aerospace propulsion and safety, specialty chemicals industry, research laboratories, emergency response

Technical Services

24/7 global network includes post-sales service and Systems   Integration teams

» Emergency call out, service contracts, on/off-site repair, training and commissioning
» Complete range of spares, consumables and accessories

Honeywell
THE POWER OF CONNECTED