



Flammable, toxic and oxygen deficiency gas detector using catalytic, electrochemical cell and infrared sensors.

Sensepoint XCD



Common transmitter platform

- Same transmitter structure applicable to a variety of new and existing gas sensors
- Local/remote sensor capability
- Uses ECC/Catalytic/IR sensing technology
- Smart intelligence recognises sensor type & range

Clear and informative display

- Tri-colour backlight on LCD display
- Instantly and clearly visible from a distance
- Helps to clarify operation status in adverse situations

Multiple signal outputs

- 4 to 20mA standard
- Switching relays
- Modbus

Surecell™ and Reflex™

- Superior performance sensing technology
- Increased accuracy and reliability
- Determines the health of O₂ and toxic cells
- Detects “dry-out” of the sensor cell
- Ensures highest level of “up-time”

Infrared sensing technology

- Low cost IR solution
- Longer service life
- No poisons
- Doesn't need oxygen

Non-intrusive operation

- Easy routine maintenance
- No need to open the transmitter
- Faster planned maintenance
- Greater operator confidence

Housing material options

- Aluminium alloy
- Stainless Steel 316

Easy to install

- Simple plug-in sensors
- Integral plate for wall mount
- Separate kit for vertical/horizontal pipe mount
- On board relays allow for local alarms
- 3 wire operation, source or sink

Worldwide certifications

- IEC, ATEX
- UL, CSA
- KTL, GB

Applications

- Petrochemical plants
- Oil refineries
- Chemical manufacturing
- Offshore exploration and production
- Power generation plants
- Fertilizer manufacturing
- Natural gas distribution
- Steel plants
- Waste water facilities
- Gas & Petroleum storage
- Plant rooms and factories
- Chemical stores
- Food & Beverage
- Refrigeration
- Vehicle manufacturing

The Sensepoint XCD (Exceed) range of fixed gas detectors is used to monitor areas where flammable, oxygen deficiency and toxic gases may pose a hazard to working environments. Incorporating all the advantages of leading edge, fixed industrial gas detection technology, XCD offers high performance and reliability synonymous with the Honeywell brand. XCD is designed for a broad spectrum of industrial applications with a comprehensive choice of features and benefits in a truly cost effective package.

This advanced and versatile range of gas detectors monitors and indicates the presence of any one of many toxic and flammable gases. Any user can instantly identify the operating status of XCD via its clear multi-function backlit display. Output signals available are industrial standard 4 to 20mA, relay contacts and MODBUS. Routine maintenance, diagnostics and options to customize XCD factory defaults can be achieved without opening the unit.

Sensepoint XCD uses a number of patented sensing technologies in its core design which reflect over 40 years of global experience associated with the famous Sieger name. These include poison resistant catalytic bead for flammable gases and electrochemical cell for toxic gases. Non-dispersed Infrared (NDIR) technology is available to those users who require more robust detection with longer sensor operating lifetime.

As a result, XCD is suitable for many light and heavy industries. In addition, the design of XCD reflects outstanding performance, whether it is used in harsh outdoor environments or sheltered indoor applications.



TRI-COLOUR BACKLIGHT ON LCD DISPLAY, INSTANTLY AND CLEARLY VISIBLE FROM A DISTANCE

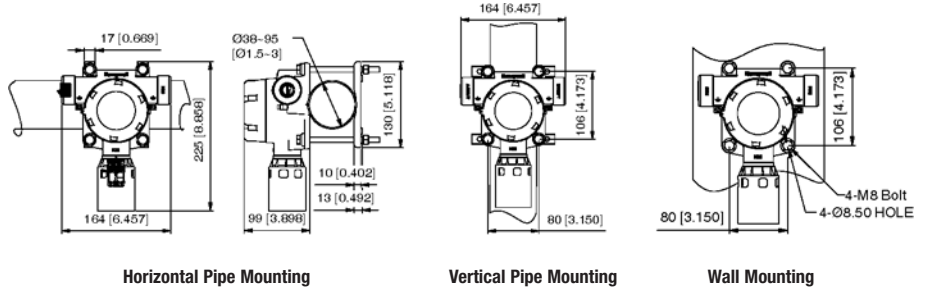
Sensepoint XCD will automatically alert the operator to its functional status. Normal operation will be indicated by a steady GREEN backlit display. A flashing RED backlit display will alert the operator to a Gas Alarm. A Fault condition from the XCD will be indicated by a flashing YELLOW backlit display.

Installation

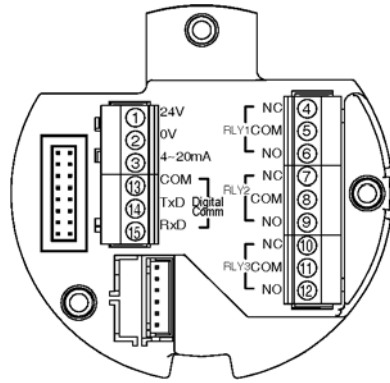


Mechanical Installation options

Sensepoint XCD is designed for use in potentially explosive atmospheres. As such, installation should follow national guidelines using suitable mechanically protected cable and glands (M20 or 3/4" NPT) or conduit. Use 0.5mm² (20AWG) to 2.5mm² (~13AWG) cross sectional area cable as needed to ensure minimum operating voltage at the detector, depending on installed cable length. Various accessories are available for different applications.



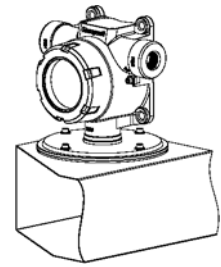
Terminal connections



Terminal Module

Terminal	Connection	Description
24V	Power (16-32VDC)	Controller Connections
0V	Ground	
4-20mA	Current Output Signal	
COM	Comm. Ground	RS485 MODBUS RTU
TxD	Data+	
RxD	Data-	
RLY1/NC	Normally Closed	Programmable Relay 1 (Default A1)
RLY1/COM	Common	
RLY1/NO	Normally Open	
RLY2/NC	Normally Closed	Programmable Relay 2 (Default A2)
RLY2/COM	Common	
RLY2/NO	Normally Open	
RLY3/NC	Normally Closed	Programmable Relay 3 (Default Fault)
RLY3/COM	Common	
RLY3/NO	Normally Open	

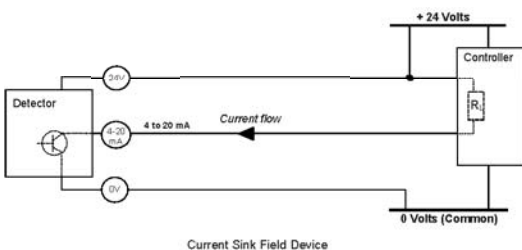
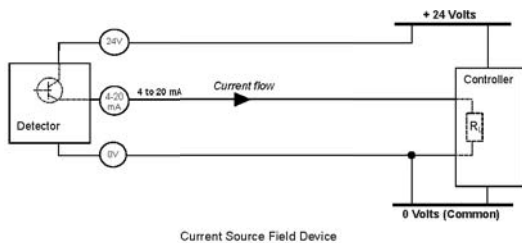
Optional mounting



Duct Mounting

Transmitter wiring

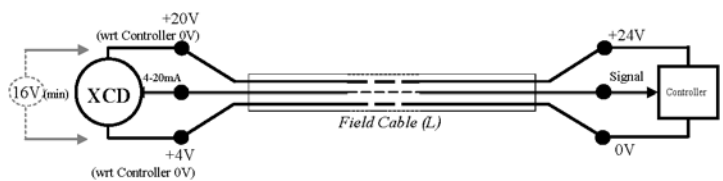
The Sensepoint XCD transmitter may be wired in either Current SOURCE or Current SINK configuration. These two options are offered to allow greater flexibility in the type of control system that it can be used with. SOURCE/SINK is selectable via the switch located on the back side of the display module; accessible by removing the display module during installation/commissioning.



Typical maximum installed cable lengths

The Sensepoint XCD transmitter requires a power supply from the controller of between 16Vdc and 32Vdc. Ensure that a minimum supply of 16Vdc is measured at the sensor, taking into account the voltage drop due to cable resistance. The maximum loop resistance in the field cable is calculated as follows:

$$R_{loop} = (V_{controller} - V_{detector\ min}) / I_{detector}$$



Power Connection

The following tables shows the maximum cable distances between the controller and transmitter for different cable parameters.

Typical cable data		Maximum Cable length (L)	
Cable size (cross sectional area)	Cable resistance Ω/km (Ω/mi)	Meters	Feet
0.5mm ² (20AWG*)	36.8 (59.2)	353	1158
1.0mm ² (17AWG*)	19.5 (31.4)	666	2185
1.5mm ² (16AWG*)	12.7 (20.4)	1023	3356
2.0mm ² (14AWG*)	10.1 (16.3)	1287	4222
2.5mm ² (13AWG*)	8.0 (12.9)	1621	5318

*nearest equivalent

Specification



Sensepoint XCD Transmitter

Use 3-wire, 4-20mA, gas detector transmitter for use with directly installed flammable and toxic gas sensors. For the protection of personnel and plant from flammable and toxic gas hazards.

Electrical

Input Voltage Range:	16 to 32Vdc (24Vdc nominal)
Power Consumption:	Max 5 Watts
Current output	4-20mA (Source or Sink)
≥0.0<1.0 mA	Fault
4.0 mA to 20.0 mA	Normal gas measurement
2.0 mA or 4.0 mA (17.4 mA)	Inhibit (during configuration/user settings)
22.0 mA	Maximum over range
Terminals	18 x screw terminals suitable for wire diameter 0.5mm ² (20AWG) to 2.5mm ² (13AWG)
Relays	3 x 5A@250VAC. Selectable normally open or normally closed (Terminal) and energized/de-energized (programmable)
Communication	RS485 Modbus (Pending)

Construction

Material	Epoxy painted Aluminium. Stainless Steel 316 (Pending)
Weight	Aluminium Alloy :1.7kg. Stainless Steel 316: 2.2 kg
Mounting	Pole or wall mounting
Entries	2 x M20 (or 2 x ¾"NPT) field cable entries, 1 x M25 sensor entry

Performance

Repeatability	+/- 1% of FSD
Linearity	+/- 1% of FSD
Accuracy	< +/- 5% of FSD (O2, CO, H2S, FL-CAT)
Response Time	T50 = <10s, T90 = <25s (FL-CAT)

Detectable Gases

Gas Name	Selectable Span Gas Range(s):	Step	Default Range	Acceptable Calibration Gas Range(s)
Oxygen	25.0%/Vol only	n/a	25.0%Vol	20.9%/Vol(Fixed)
Hydrogen Sulphide	10.0 to 100.0ppm	1ppm	50ppm	30 to 70% of selected
Carbon Monoxide	100 to 1000ppm	100ppm	500ppm	30 to 70% of selected full scale range (Typically 50%)
Hydrogen	1,000ppm only	n/a	1,000ppm	
Methane (CAT)	20.0 to 100.0%LEL	10%LEL	100.0%LEL	
Methane (IR)	20.0 to 100.0%LEL	10%LEL	100.0%LEL	
Carbon Dioxide (IR)	2.00%Vol only	n/a	2.00%Vol	0.8 to 1.2%Vol

NOTES

Performance figures are taken at 20-25°C, measured using a sample humidity of 50%RH, applicable between 10 and 90% of full scale, measured by test units calibrated at 50% of full scale, measured at recommended flow rate with calibration cup (SPXCDCAL). Response time (T90) may increase at lower temperature condition or at diffusion mode with weather protection (SPXCDWP).

Data represents typical values, and system conditioning may be required to achieve stated result. Contact HA for details.

Certification

China	GB Ex d IIC T4 GB3836.1&2 -2000, PA CCCF (Pending)
Korea	KTL Ex d II C T6 (-40°C to +65°C)
US (Pending)	UL
Canadian (Pending)	cUL/CSA
European	ATEX Ex II 2 GD Ex d IIC Gb T6(Ta -40°C to +65°C) Ex tb IIIC T85°C Db IP66
International	IEC Ex II 2 GD Ex d IIC Gb T6(Ta -40°C to +65°C) Ex tb IIIC T85°C Db IP66
EMC	EN 50270

Environmental

IP Rating	IP66 in accordance with EN60529:1992
Operating Temperature	-40°C to +65°C/ -40°F to +149°F.
Operating Humidity	Continuous 20-90%RH (non condensing), Intermittent 10-99%RH (non condensing)
Operating Pressure	90-110kPa
Storage Conditions	-25°C to +65°C (-13°F to +149°F)

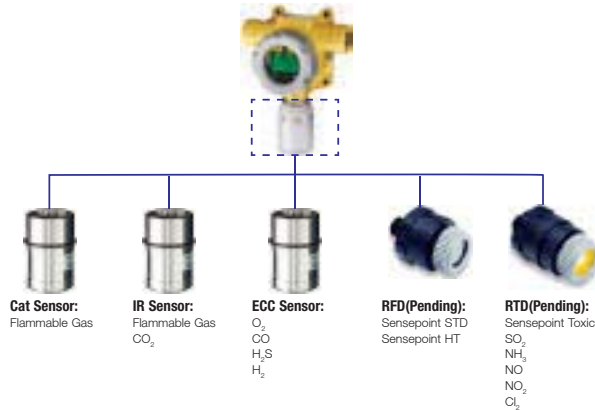


Common Transmitter Platform



XCD Common Transmitter Platform

The Sensepoint XCD uses ECC/Catalytic/IR and remote sensing technology, which are supplied pre-configured. Smart intelligence in the transmitter detects the type and range of sensor fitted.



Ordering Information

Sensepoint XCD consists of transmitter and sensor. Some special sensor (RFD & Sensepoint Toxic) should be ordered separately, but standard sensor such as CAT/IR/EC sensor should be ordered with only one KIT part number. A Sensepoint XCD KIT consists of Transmitter, Sensor socket, Sensor cartridge, Standard weather protection, Magnetic wand and Allen key.

Sensepoint XCD transmitter and sensor KIT

SPXCDAAMFX	Methane CAT 0-100%LEL (20.0 to 100.0%LEL, 10%LEL) with Aluminium alloy, M20 Entry
SPXCDAAMRX	Methane IR 0-100%LEL (20.0 to 100.0%LEL, 10%LEL) with Aluminium alloy, M20 Entry
SPXCDAAMO1	Oxygen 25.0%/Vol with Aluminium alloy, M20 Entry
SPXCDAAMHX	Hydrogen Sulphide 0-50ppm (10.0 to 100.0ppm, 1ppm) with Aluminium alloy, M20 Entry
SPXCDAAMCX	Carbon Monoxide 0-500ppm (100 to 1000ppm, 100ppm) with Aluminium alloy, M20 Entry
SPXCDAAMG1	Hydrogen 0-1000ppm with Aluminium alloy, M20 Entry
SPXCDAAMB1	Carbon Dioxide IR 0-2%VOL with Aluminium alloy, M20 Entry

Replacement sensor cartridge

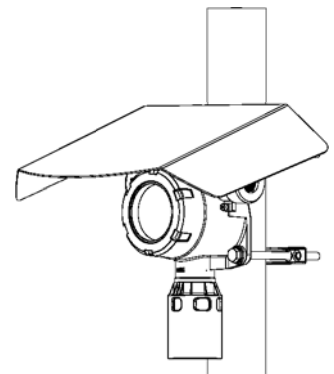
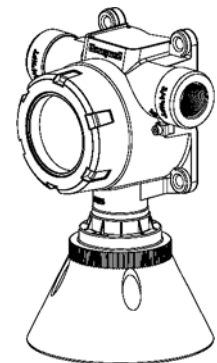
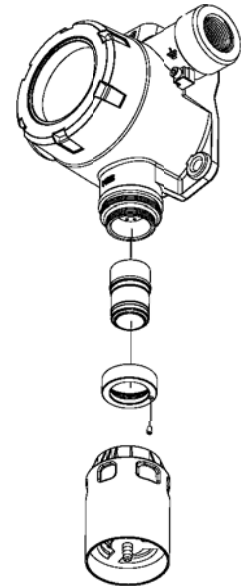
SPXCDSXFXSS	Methane CAT 0-100%LEL (20.0 to 100.0%LEL, 10%LEL)
SPXCDSRXSS	Methane IR 0-100%LEL (20.0 to 100.0%LEL, 10%LEL)
SPXCDSO1SS	Oxygen 25.0%/Vol only
SPXCDSHXSS	Hydrogen Sulphide 0-50ppm (10.0 to 100.0ppm, 1ppm)
SPXCDSXCSS	Carbon Monoxide 0-500ppm (100 to 1000ppm, 100ppm)
SPXCDSG1SS	Hydrogen 0-1000ppm only
SPXCDSB1SS	Carbon Dioxide IR 0-2%VOL only

Accessories

S3KCAL	Calibration cap
SPXCDC	Collecting cone for use with lighter than air gases
SPXCDDMK	Duct mounting kit
SPXCDHMANEN	Hard Copy Manual in English
SPXCMTBR	Pipe Mounting bracket (inc. fixings and hex wrench set)
SPXCDDP	Sunshade / Deluge Protection

Spares

SPXCDDMT	Replacement display module (O ₂ & Toxic)
SPXCDDMF	Replacement display module (FL & IR)
SPXCDTMO	Replacement terminal module (O ₂)
SPXCDTMT	Replacement terminal module (Toxic)
SPXCDTMF	Replacement terminal module (FL & IR)
SPXCNDPTP	3/4"NPT Plug
SPXCND20P	M20 Plug
SPXCNDMANCD	Instruction manual CD
SPXCNDADP	3/4"NPT to M20 Adaptor
SPXCNDWP	Weather Protection
SPXCNDMAG	Magnet
SPXCDSRLS	Sensor Retainer with locking screw
SPXCDAKS	Allen key for stopper
SPXCDDHWS	Hex wrench for earth screw
SPXCDEBS	Earth Bracket and Screws



Honeywell Analytics Lines of Business



Commercial

Vulcain-brand 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

Find out more

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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 Lumidor 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

Technical Services

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