



**Flexibility that meets
your requirements**



Easy to Install

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

Easy to Use

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

Easy to Maintain

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

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

Typical applications include:

Petrochemical

Exploration drilling rigs, production platforms, FPSOs, oil and gas terminals, chemical plants, oil and gas tankers

Heavy Industrial

Steel manufacture, ship building

Manufacturing

Automotive, glass and ceramics, aerospace, printing and coating, cosmetics

Pharmaceutical

Research labs, solvent storage areas, process areas, demineralisation plants

Transmitter

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

Sensor

The Apex Sensor can be mounted directly on the transmitter or remotely up to 100m away. The same sensor is used for both catalytic and electrochemical type sensor cartridges.

Smart cartridge

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



General Specification



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Power Supply	24VDC nominal (18-32VDC)
Power Consumption (typical)	Apex 3W toxic, 4.6W catalytic
Outputs	A1, A2 and Fault 2A at 30VDC* selectable normally open or normally closed and normally energised or normally de-energised Analogue signal 4-20mA sink, source or isolated output Digital output LonWorks (optional) - only available on ATEX certified version
Material and Weight	316 Stainless Steel 5.25kg (11.55lbs)
Accuracy	Baseline ±3%, at 50% FSD ±4%
Repeatability	±2% at 50% FSD
Linearity	<5% FSD
Response Time (typical)	Catalytic T50 <5 seconds, T90 <10 seconds Toxic T50 <12 seconds, T90 <30 seconds
Stability (typical)	Temperature <±5% FSD (zero), <±5% FSD (span) Time <±3% FSD / year (zero), <±4% FSD / year (span)
Operating Temperature	-40°C to +65°C (-40°F to +150°F). Operating temperature of electrochemical cell cartridges is cell dependent. LCD display operates over -20°C to +65°C
Operating Humidity	0-99% (non condensing)
Environmental Protection	IP66 / 67 to BS EN60529:1992 (Equiv. NEMA 4X / NEMA 6)
Approvals	CE Approved to all applicable European directives. EMC EN50270: 1999 type 2
Performance Standards	Exam (DMT) EN50054 / 50057 / 50271. CSA C22.2 No.152 (with cartridge 2110B3754)
Certification	ATEX II 2 GD EEx d ia IIC, CSA Class 1, Division 1 groups B, C and D C22.2 No.152 UL Class 1, Division 1 groups B, C and D, and Class 1, Zone 1 AExd [ia] IIC ATEX and UL T4 -40°C to +80°C (-40°F to +176°F), T5 -40°C to +55°C (-40°F to +131°F) CSA T4 -40°C to +75°C (-40°F to +167°F), T5 -40°C to +55°C (-40°F to +131°F) * CSA / UL rating 1A at 28VDC

Available Gases and Ranges *

Gas	Formula	Ranges	Cell type
Flammable	Various	0-100% LEL or 0-10% LEL	CAT
Ammonia	NH ₃	0-50ppm, 0-100ppm, 0-400ppm or 0-1000ppm	ECC
Arsine	AsH ₃	0-0.2ppm	ECC
Boron Trichloride	BCl ₃	0-6ppm	ECC
Bromine	BR ₂	0-0.4ppm	ECC
Carbon Monoxide	CO	0-100ppm, 0-200ppm or 0-500ppm	ECC
Chlorine	Cl ₂	0-2ppm, 0-5ppm or 0-15ppm	ECC
Chlorine Dioxide	ClO ₂	0-0.4ppm	ECC
Diborane	B ₂ H ₆	0-0.4ppm	ECC
Dichlorosilane	SiH ₂ Cl ₂	0-10ppm	ECC
Ethylene Oxide	C ₂ H ₄ O	0-25ppm	ECC
Fluorine	F ₂	0-4ppm	ECC
Germane	GeH ₄	0-0.8ppm	ECC
Hydrogen	H ₂	0-1000ppm	ECC
Hydrogen Bromide	HBr	0-12ppm	ECC
Hydrogen Chloride	HCl	0-20ppm	ECC
Hydrogen Cyanide	HCN	0-20ppm	ECC
Hydrogen Fluoride	HF	0-12ppm	ECC
Hydrogen Sulphide	H ₂ S	0-15ppm, 0-20ppm, 0-50ppm or 0-100ppm	ECC
Nitric Oxide	NO	0-100ppm	ECC
Nitrogen Dioxide	NO ₂	0-12ppm	ECC
Oxygen	O ₂	0-21% V / V	ECC
Ozone	O ₃	0-0.4ppm	ECC
Phosphine	PH ₃	0-1.2ppm	ECC
Propylene Oxide	C ₃ H ₆ O	0-50ppm	ECC
Silane	SiH ₄	0-2ppm, 0-20ppm	ECC
Sulphur Dioxide	SO ₂	0-8ppm, 0-10ppm, 0-15ppm, 0-50ppm	ECC

CAT- Electrocatalytic, ECC- Electrochemical Cell.

* For other gases and ranges not listed contact Honeywell Analytics.

* Oxygen detection products must only be used to detect oxygen depletion in air.

Our Product Range



Fixed Gas Monitoring

Honeywell Analytics offers a wide range of fixed gas detection solutions for a diverse array of industries and applications including: Commercial properties, industrial applications, semiconductor manufacturers, energy plants and petrochemical sites.

- » Detection of flammable, oxygen and toxic gases (including exotics)
- » Innovative use of 4 core sensing technologies – paper tape, electrochemical cell, catalytic bead and infrared
- » Capability to detect down to Parts Per Billion (ppb) or Percent by Volume (%v/v)
- » Cost effective regulatory compliance solutions

Portable Gas Monitoring

When it comes to personal protection from gas hazards, Honeywell Analytics has a wide range of reliable solutions ideally suited for use in confined or enclosed spaces.

These include:

- » Detection of flammable, oxygen and toxic gases
- » Single gas personal monitors – worn by the individual
- » Multi-gas portable gas monitors – used for confined space entry and regulatory compliance
- » Multi-gas transportable monitors – used for temporary protection of area during site construction and maintenance activities

Technical Services

At Honeywell Analytics, we believe in the value of great service and customer care. Our key commitment is providing complete and total customer satisfaction. Here are just a few of the services we can offer:

- » Full technical support
- » Expert team on hand to answer questions and queries
- » Fully equipped workshops to ensure quick turnaround on repairs
- » Comprehensive service engineer network
- » Training on product use and maintenance
- » Mobile calibration service
- » Customised programmes of preventative/corrective maintenance
- » Extended warranties on products



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