



**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



General Specification	
<b>Power Supply</b>	24VDC nominal (18-32VDC)
<b>Power Consumption (typical)</b>	Apex 3W toxic, 4.6W catalytic
<b>Outputs</b>	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
<b>Material and Weight</b>	316 Stainless Steel 5.25kg (11.55lbs)
<b>Accuracy</b>	Baseline ±3%, at 50% FSD ±4%
<b>Repeatability</b>	±2% at 50% FSD
<b>Linearity</b>	<5% FSD
<b>Response Time (typical)</b>	Catalytic T50 <5 seconds, T90 <10 seconds Toxic T50 <12 seconds, T90 <30 seconds
<b>Stability (typical)</b>	Temperature <±5% FSD (zero), <±5% FSD (span) Time <±3% FSD / year (zero), <±4% FSD / year (span)
<b>Operating Temperature</b>	-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
<b>Operating Humidity</b>	0-99% (non condensing)
<b>Environmental Protection</b>	IP66 / 67 to BS EN60529:1992 (Equiv. NEMA 4X / NEMA 6)
<b>Approvals</b>	CE Approved to all applicable European directives. EMC EN50270: 1999 type 2
<b>Performance Standards</b>	Exam (DMT) EN50054 / 50057 / 50271. CSA C22.2 No.152 (with cartridge 2110B3754)
<b>Certification</b>	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
<b>Flammable</b>	Various	0-100% LEL or 0-10% LEL	CAT
<b>Ammonia</b>	NH <sub>3</sub>	0-50ppm, 0-100ppm, 0-400ppm or 0-1000ppm	ECC
<b>Arsine</b>	AsH <sub>3</sub>	0-0.2ppm	ECC
<b>Boron Trichloride</b>	BCl <sub>3</sub>	0-6ppm	ECC
<b>Bromine</b>	BR <sub>2</sub>	0-0.4ppm	ECC
<b>Carbon Monoxide</b>	CO	0-100ppm, 0-200ppm or 0-500ppm	ECC
<b>Chlorine</b>	Cl <sub>2</sub>	0-2ppm, 0-5ppm or 0-15ppm	ECC
<b>Chlorine Dioxide</b>	ClO <sub>2</sub>	0-0.4ppm	ECC
<b>Diborane</b>	B <sub>2</sub> H <sub>6</sub>	0-0.4ppm	ECC
<b>Dichlorosilane</b>	SiH <sub>2</sub> Cl <sub>2</sub>	0-10ppm	ECC
<b>Ethylene Oxide</b>	C <sub>2</sub> H <sub>4</sub> O	0-25ppm	ECC
<b>Fluorine</b>	F <sub>2</sub>	0-4ppm	ECC
<b>Germane</b>	GeH <sub>4</sub>	0-0.8ppm	ECC
<b>Hydrogen</b>	H <sub>2</sub>	0-1000ppm	ECC
<b>Hydrogen Bromide</b>	HBr	0-12ppm	ECC
<b>Hydrogen Chloride</b>	HCl	0-20ppm	ECC
<b>Hydrogen Cyanide</b>	HCN	0-20ppm	ECC
<b>Hydrogen Fluoride</b>	HF	0-12ppm	ECC
<b>Hydrogen Sulphide</b>	H <sub>2</sub> S	0-15ppm, 0-20ppm, 0-50ppm or 0-100ppm	ECC
<b>Nitric Oxide</b>	NO	0-100ppm	ECC
<b>Nitrogen Dioxide</b>	NO <sub>2</sub>	0-12ppm	ECC
<b>Oxygen</b>	O <sub>2</sub>	0-21% V / V	ECC
<b>Ozone</b>	O <sub>3</sub>	0-0.4ppm	ECC
<b>Phosphine</b>	PH <sub>3</sub>	0-1.2ppm	ECC
<b>Propylene Oxide</b>	C <sub>3</sub> H <sub>6</sub> O	0-50ppm	ECC
<b>Silane</b>	SiH <sub>4</sub>	0-2ppm, 0-20ppm	ECC
<b>Sulphur Dioxide</b>	SO <sub>2</sub>	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

### Find out more

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