Lumidor Impact & Impact Pro

Portable multi-gas detectors offering advanced features and ease of use, with a low cost of ownership
Impact portable gas detectors bundle feature-rich advantages into a unit offering a low cost of ownership. Available in two configurations (Impact & Impact Pro), Impact models accept serviceable and/or disposable cartridges, are pre-calibrated and ready to go from the box.

The Impact gas detectors are safe, small, lightweight, battery-powered and rugged — ideal for areas where exposure to toxic or flammable gases pose a risk. You benefit from one touch calibration, cartridge replacement in less than one minute, and IP67 rated durable housing that protects against dust/water ingress. Our unique cartridge design (with up to 4 sensors in a self-contained plug-in cartridge) allows you to change all sensors at once—for about the cost of a typical single sensor. Options include advanced infrared sensors, Safelink confined-space instrument-to-instrument communication, unpowered low-flow-rate Enforcer gas calibration/bump test station, rechargeable battery and more.
Honeywell Analytics’ unique cartridge technology enables the Impact range of portable multi-gas monitors to monitor and display up to four gases simultaneously. The pre-calibrated cartridges use high specification flammable, oxygen and toxic sensors to ensure that safe, accurate and reliable measurements are always made.

Convenient to Use
- Self contained package
- Pre-calibrated, ready to go
- No need to return instruments to central location
- Can be replaced in the field

Easy to Install
- Full instructions included with every cartridge
- Single captive screw fitting mechanism
- Asymmetrical design ensures cartridge can only be fitted one way
- Minimal training required

Planned Maintenance Made Easy
- Countdown to replacement or calibration included as standard
- Minimizes unexpected failures
- Maximizes availability to the user
- Provides predictive cost of ownership

Proven Sensor Technology
- High specification sensors
- Stable and accurate
- Poison resistant catalytic bead or IR cell for flammable
- Electrochemical and patented Surecell™ technology for toxic
- Over 30 years manufacturing experience

Supplied Fully Configured
- Gas specific data held on smart cartridge
- 3 levels of instantaneous alarm and time weighted average alarms on toxic
- Pre-set limits adjustable via PC if required

Serviceable Cartridge Option
- Individual sensor replacement possible
- Traditional service options apply
- Only required for exotic gases

Impact IR Sensor Cartridge
Impact Pro now includes a range of advanced infrared (IR) optical sensors with models available to detect % LEL or % VOL methane (as well as other hydrocarbons) and CO₂ with long-term stability. This additional sensor complements the proven electrochemical cell and catalytic bead technology within the Impact Pro range.

IR Technology Overview
Infrared Cells: IR sensors operate by passing infrared light through the gas sample and detecting the change in transmitted light as the molecules absorb the energy to change their vibrational and rotational status. A specific fingerprint can be assigned in the IR spectrum that represents certain gas molecules. Miniature IR sensors can now be practically incorporated into portable devices; they have the characteristic of a small footprint and relatively low battery consumption making for an ideal sensor for portable use to detect methane (linear) and other hydrocarbons at % LEL and % Vol applications. IR sensors can also be tuned to measure CO₂.

Confined Space Entry Kit
Confined space entry carrying case from Honeywell features high-impact, watertight protection along with a lifetime warranty against breakage. Molded foam interior has compartments for two Impact Pro detectors, calibration gas bottle, Enforcer bump test/calibration kit, charging cradle, datalogging cable, batteries and flow adapter; additional compartments are available for power supplies, cables and adapters. Case can be ordered separately or with fully stocked confined space entry kit. Call your sales representative for pricing.
Enforcer
Bump Test / Calibration Kit

Regulations require regular testing of gas detection equipment to ensure that the instrument will work as and when required. When using an Impact multigas detector, the Enforcer allows you to easily comply with regulations without the need for costly test facilities or third parties.

Convenient to Use
- Portable design
- Lightweight and compact
- Disposable multi gas cylinder
- Wall mounting bracket with security fixing included

Easy to Operate
- Simple five-step operation
- Calibration in 2 minutes
- Minimal training required

Minimal Running Costs
- Unpowered, low flow rate operation
- No need for third parties
- Reduce instrument downtime
- Simplify operations

Easy to Maintain
- Durable plastic housing
- Wipe clean surfaces
- Replaceable gaskets and seals
- Built-in pressure indicator tells you when gas needs replacing

Maintain Records
- Calibration history recorded by instrument
- Print history via optional PC software
- Ensure compliance with regulations

‘Bump’ testing should be carried out before use of any portable gas detector. This involves exposing each gas sensor to a known concentration of target gas and ensuring that it responds correctly.

Personal gas detectors are normally calibrated every 3 to 6 months. Typically this requires specialist knowledge and equipment that is costly or the work is sub-contracted to a third party. During this time instruments are not available for use and so could delay essential operations or force additional detectors to be purchased.

The Enforcer calibrates Impact multigas detectors fitted with oxygen, flammable, carbon monoxide and hydrogen sulfide sensors in less than two minutes — and can also perform low-level oxygen tests. Volumes and flow rates are minimized to allow approximately 200 calibrations per cylinder of gas, making calibration as low in cost as a ‘Bump’ test.

Impact instruments when used with the Enforcer are always available for use. Calibration results are recorded for printing at a later date via the optional PC software thereby ensuring that instrument histories are always available if required.

Calibration in Five Easy Steps with Enforcer

1. Screw the multi gas cylinder into Enforcer
2. Check the pressure gauge to ensure the cylinder is not empty
3. Open the Enforcer by pulling the sliding tray forward
4. The tray ‘locks’ open when lowered in its tracks
5. Turn on and insert the Impact to be calibrated. The instrument may be zeroed in fresh air first if required
6. Ensure that the instrument is locked into position on the guides located on the sliding tray
7. Close the sliding tray by lifting the handle
8. When closed Impact will automatically recognise
9. Press the button to calibrate the Impact
10. Calibration can take between 45 and 90 seconds subject to the age of the instrument
11. Upon completion Impact will display the results of the calibration
12. Results may be downloaded via the PC software and printed for report purposes if required
Safelink is designed to simplify compliance with confined space entry regulations stating that an Attendant must continuously monitor the status of the Entrant and initiate rescue procedures if necessary. When the Safelink cable is attached between the two Impact Pro instruments the link is easily recognized. One instrument is configured as the Attendant and the confined space is automatically designated as the Entrant; neither instrument can now be turned off.

The Attendant is prompted at regular timed intervals to send a message to the Entrant who has to reply by pressing a button on the instrument. If no reply is received both instruments raise alarms. Other pre-defined messages may be configured using the optional PC software allowing a flexible method of communication to be established.

Ensures Good Working Practice
- Continuous monitoring of ‘Entrant’
- Simple and reliable means of communication
- Prompts users to maintain contact
- Ensures compliance with regulations

Minimizes Risk
- ‘Attendant’ always aware of ‘Entrant’ status
- Help can be made more quickly available
- ‘Rescuer’ is aware of conditions prior to entry

Easy to Use
- Plug and play configuration
- Intuitive, multi-lingual menu system
- Single button operation
- Single button ‘Emergency’ alarm facility
- User configurable messages

Reliable
- Instruments continuously talk to each other
- Full data integrity check eliminates false alarms
- No blind spots

Multiple Applications
- Gas check prior to entry
- On-going monitoring during operations
- Communications system in difficult areas
- Search and rescue
Impact Specifications

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| Ordering information |

Notes:
A wide range of optional accessories are available including:
- Base station and Impact Configuration Utility (required for data download and configuration).
- Rechargeable NiMH batteries for use with base station or offline charger.
- Enforcer calibration system.
- Safelink communication system.
- Pre-entry sample probes including hand aspirator, 1m probe, tubing and ball float.
- Body harness and harness clip offering alternate mounting arrangements.
- Field case for housing of all accessories as required.

Disposable or serviceable sensor cartridge must be ordered separately*. 

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<table>
<thead>
<tr>
<th>TYPE</th>
<th>CERTIFICATION</th>
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<tbody>
<tr>
<td>Impact</td>
<td>USA</td>
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<tr>
<td>Impact Pro</td>
<td>Canada</td>
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<td>S</td>
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*Default

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### Notes:
- Refer to cartridge datasheet for gas specific data.
# Impact Sensor Cartridge Specifications

## General Specifications

### Use
For use with Impact and Impact Pro portable multi-gas monitor for the protection of personnel from up to four hazardous gases in the working environment.

### Techniques used
- Flammable - Catalytic bead/pellistor
- Toxic/Oxygen - Electrochemical
- Toxic/Flammable - Infrared Cell

### Detectable Gases

<table>
<thead>
<tr>
<th>Code</th>
<th>Range</th>
<th>Disposable</th>
<th>Serviceable</th>
<th>Gas Name</th>
<th>Sensor Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>0-25 % v/v</td>
<td>Always fitted</td>
<td>Always fitted</td>
<td>Oxygen (O₂)</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>F</td>
<td>0-100 % LEL</td>
<td>Always fitted</td>
<td>One Catalytic Sensor Always Fitted</td>
<td>Flammable</td>
<td>Catalytic Bead</td>
</tr>
<tr>
<td>R</td>
<td>0-100 % LEL</td>
<td>Not available</td>
<td>IR Sensor Always Fitted</td>
<td>Flammable IR %LEL</td>
<td>IR Cell</td>
</tr>
<tr>
<td>V</td>
<td>0-100 % VOL</td>
<td>Not available</td>
<td>IR Sensor Always Fitted</td>
<td>Flammable IR %VOL</td>
<td>IR Cell</td>
</tr>
<tr>
<td>C</td>
<td>0-500 ppm</td>
<td>0</td>
<td>0*</td>
<td>Carbon Monoxide (CO)</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>H</td>
<td>0-50 ppm</td>
<td>0</td>
<td>0*</td>
<td>Hydrogen Sulfide (H₂S)</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>S</td>
<td>0-20 ppm</td>
<td>0</td>
<td>0</td>
<td>Sulphur Dioxide (SO₂)</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>L</td>
<td>0-10 ppm</td>
<td>0</td>
<td>0</td>
<td>Chlorine (Cl₂)</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>N</td>
<td>0-20 ppm</td>
<td>0</td>
<td>0</td>
<td>Nitrogen Dioxide (NO₂)</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>A</td>
<td>0-100 ppm</td>
<td>0</td>
<td>0</td>
<td>Ammonia (NH₃)</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>D</td>
<td>0-2% v/v</td>
<td>0</td>
<td>0*</td>
<td>Carbon Dioxide (CO₂)</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>T</td>
<td>0 – 5 %V/V</td>
<td>0</td>
<td>0*</td>
<td>Carbon Dioxide (CO₂)</td>
<td>Electrochemical</td>
</tr>
</tbody>
</table>

Notes: * Serviceable cartridges only available in 1 or 4 channel configurations. † All O₂,H₂, SF₆ are disposable only. C or H sensors only available for use in 4 gas Serviceable cartridges. ‡ Infrared sensor cartridge models include one IR catalytic sensor for detecting flammable %LEL, %VOL or carbon dioxide; three additional electrochemical sensors are provided for detection of two toxic gases and oxygen.

### Construction
Easy fit single captive screw with asymmetric design to prevent incorrect fitting by user. RFI shielded polypropylene caseworks for increased reliability and performance.

### Operating temperature
-4°F to +131°F (-20°C to 55°C) for all gas sensors except Carbon Dioxide (Electrochemical) and Ammonia.
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-4°F to +131°F (-20°C to 55°C) for all gas sensors except Carbon Dioxide (Electrochemical) and Ammonia.

### Storage temperature
Cartridge and replacement sensors: -10°C to 60°C /-14°F to 140°F (6 months maximum) for all gases except Carbon Dioxide (Electrochemical) and Ammonia.
Carbon Dioxide (Electrochemical): 32°F to 104°F (0°C to 40°C) Carbon Dioxide (Electrochemical): 6 months maximum.
-4°F to +131°F (-20°C to 55°C) for all gas sensors except Carbon Dioxide (Electrochemical) and Ammonia.

### Humidity range
Continuous 20 to 90%RH.
Intermittent 0-99%RH non-condensing.

### Approvals
Class 1, Div 1, Groups A, B, C, D (UL, CSA).

### Standard supply
Each cartridge is supplied in a sealed container complete with installation instructions, calibration certificate and spare pump seal.

### Ordering information
Cartridges can be re-programmed and re-calibrated via the Impact and Impact Pro instrument and optional base station and PC based Impact Configuration Utility. Contact your Honeywell Analytics representative for more information/ availability.

## Notes
The Impact Pro sensor cartridges that include an IR sensor are serviceable. All IR sensor options occupy the same cell position as the catalytic bead so only either one IR or the catalytic sensor can be installed within any single cartridge. Hydrogen (H₂) cannot be detected using the IR principle.

Note: No alarms are provided for the 0-100% Volume IR sensor. Infra Red sensor options are UL and ATEX certified only. Impact and Impact Pro instruments must be ordered separately.

### Key
- **Code**: A, C, H, N, S, L
- **Gas Name**: CO, H₂, SF₆, O₂, Cl₂, SO₂, NH₃, CO₂, H₂S, Cl₂, NO₂

### Example Code
- **2302BC**: CO, H₂, SF₆, O₂
- **4**: 4 CHANNEL SERVICEABLE OPTIONS
- **0**: Electrochemical
- **F**: Flammable
- **A**: Ammonia
- **S**: Carbon Monoxide
- **E**: Sulfur Dioxide
- **4 F 0 A S E** = 2302BCS40FASE
### Enforcer Specifications

**Use**
Test and calibration accessory for use with Impact multigas monitor when fitted with oxygen, flammable, carbon monoxide and hydrogen sulfide sensors

**Technique**
A controlled amount of gas is applied to the instrument. The response is compared against historical data obtained during manufacture and if within tolerance automatic adjustment of readings is made

**Construction**
Poly carbonate

**Dimensions**
7” x 5.7” x 22”
(170 mm x 145 mm x 560 mm)
Maximum length includes cylinder and sliding tray in open position

**Weight**
47 oz (1.34 Kg)

**Ordering information**
Enforcer with multi gas cylinder: 2302B0831 (EN50054), 2302B1336 (EN61778)
Enforcer excluding multi gas cylinder: 2302B0650

### Multi-Gas Cylinder Specifications

**Contents**
- 100 ppm Carbon Monoxide
- 40 ppm Hydrogen Sulfide
- 2.5% Methane (CH₄)
- 15% Oxygen
- Nitrogen balance

**Accuracy**
+/-5%

**Number of applications per cylinder (calculated)**
>200

**Type**
2AL

**Standards**
- Europe - One fill valve in accordance with prEN12205
- USA / R.O.W. - DOT 39 Standard

**Dimensions (approx.)**
3.1” x 9.5” (80 mm x 240 mm)

**Weight**
16 oz (0.44 Kg)

**Pressure**
34 bar (maximum)

**Ordering information**
Multi gas calibration gas cylinder: 2302D0833 (EN50054), 2302D0761 (EN61779)

### Safelink Specifications

**Use**
Data cable to allow two Impact Pro personal multigas monitors to be linked together to form an integrated gas monitoring and communication system

**Technique**
RS485 digital communication link with CAN line drivers to reject false alarms and maximize data integrity

**Maximum operating distance**
Up to 300 ft (100 m)

**Materials**
Screened twisted pair PVC cable c/w weatherproof connectors and strain reliefs

**Ordering information**
- 30 ft (10 m) cable 2302B0735
- 150 ft (50 m) cable 2302B0737
- 300 ft (100 m) cable 2302B0746
Honeywell Analytics provides the best-quality gas detection equipment in the world so that businesses can get on with doing what they do best – running their business. Our objective is simply to take care of your safety requirements and to minimize any downtime gas safety issues. Using the best quality equipment is essential, but all equipment needs to be properly serviced and maintained. Honeywell Analytics provides a range of service levels to ensure the support needed to keep businesses running safely.

**Systems Integration**
Our Systems Integration Group provides a complete range of control and visualization services for our customers including network design, project management, system installation, commissioning/testing, and customer training.

**Commissioning**
For extra reassurance, systems can be installed and commissioned (or tested) by qualified Honeywell Analytics Service Engineers. Our specialists will check for installation, as well as provide any training that may be required.

**Equipment Rental**
There’s no need to take risks with safety. If equipment purchases can’t be justified or needs are difficult to assess, equipment can be rented and configured to specific site requirements. Equipment is available on either short or long-term lease arrangements.

**Field Calibration**
All precision equipment must be regularly serviced, calibrated and maintained. Honeywell Analytics offers full service technical support for the full range of fixed and portable equipment, as well as training in the use and maintenance of our instruments.

**Field Service**
Our Field Service team is on call 24 hours a day, 7 days a week, to ensure site safety and that business performance is never compromised. We have a global network of fully qualified and highly skilled engineers ready to meet any emergency need.

**Preventive Maintenance**
Proper maintenance will maintain performance and enhance the bottom line. Honeywell Analytics offers a customized Preventive Maintenance Program, performed by skilled engineers, to keep equipment operating at peak performance.

**On-site Maintenance**
Having a Honeywell Analytics On-Site Service Engineer on-call eliminates the need to employ and train equipment support staff. An On-Site Service Engineer can respond immediately to inquiries and promptly resolve problems, minimizing downtime.

**Specialized Training**
Honeywell Analytics offers on-site training worldwide, which can be customized to meet the needs of your specific equipment, site application and attendees.

**Extended Warranty**
Our Extended Warranty Program provides customers with confidence, convenience and return on investment. Combined with our Preventive Maintenance and Calibration contract, we provide one of the most comprehensive maintenance programs available in the industry.

**Flexible Finance Options**
Honeywell Analytics offers convenient financing solutions for your project and equipment requirements including variable lease programs, attractive finance rates and options and customized payment structures to qualified.
# 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 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

## Find out more
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