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**Bangalore**
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To learn more about Honeywell solutions & offerings, visit www.honeywell.com/pls or contact your Honeywell account manager.

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email: GCCC.INDIA.HPS@HONEYWELL.COM

The Honeywell Customer Care Centre provides a centralized contact point that allows customers to reach a Honeywell phone representative 24 hours a day and 7 days a week to log their service requests. All service requests are assigned to a responsible service professional and are tracked until closure. Your call is important to us.

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Avoid abnormal situations

The key to success in today's fast moving competitive global business environment is getting products to the market faster. The safety of your plant, personnel, production, and environment is crucial to achieving on time delivery and minimizing any potential losses. Honeywell's extensive portfolio of fire and gas detection solutions such as gas detectors, fire detectors, fire alarm panels, SIL 3 certified PLC's, and integrated fire and gas safety system, provides a rapid and coherent operational response to emergency situations, ensuring maximum uptime for your plant.

End to End Solutions in Fire and Gas Detection

The need for Fire and Gas Detection

- Fire & Gas detection is mainly used to monitor areas where hazardous levels of gas or flammable substance are not normally present.
- They are designed to give early warning of the build up of gas or fire before it becomes a hazard to people, infrastructure and environment.
- Various national and international laws exist that demand the use of gas or fire detection to protect people and plant.
- Many local codes of practice also exist that ensure health and safety policies are employed.
- Insurance companies may not provide cover to businesses that cannot prove that they have taken appropriate safety measures to detect hazardous gases and detection of flame, smoke, heat, or fire.

Our Portfolio

<table>
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<tr>
<th>Product</th>
<th>Honeywell offering</th>
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</thead>
<tbody>
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<td>Gas Detectors</td>
<td>Mido Scientific, Sieger, Zareba, Lumidor, etc.</td>
</tr>
<tr>
<td>Fire Detectors</td>
<td>System Sensor detectors (Honeywell Life Safety)</td>
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<tr>
<td>Fire Alarm Panels</td>
<td>XLS/Eltek/Notifier/ESSER</td>
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<td>Fire and Gas PLC system up to SIL 3</td>
<td>Safety Manager (SM)</td>
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<tr>
<td>Operator station across units</td>
<td>Experion Work Stations</td>
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We know what you need!

Honeywell's fire and gas portfolio encompasses a gamut of products meeting your every need from standalone detectors, to fire alarm systems, to end to end solutions like integrated fire and gas.

In the following sections, we take a detailed look at gas detectors, fire alarm systems, fire and gas safety PLC, and the integrated fire and gas solution.
Gas Detectors

Experts in Gas Detection
With over 200 collective years of expertise in manufacture, design, and innovation it’s no wonder Honeywell is widely recognized as the definitive gas detection expert. Learn more about the company’s impressive product portfolio and technology since its inception.

Better Sensors = Better Products

Core Sensing Technologies
Based on the nature of gases, Honeywell incorporates different sensing technologies in its detectors.

Flammable gases
- Catalytic Detectors
- Infrared Detectors

Toxic gases
- Chemcassette Detectors
- Electrochemical Detectors

Product Portfolio

Mda Scientific  Sieger  Zareba  Lumidor Netronics  SFD Sixth Sense

Semiconductor  Oil & Gas Exploration & Refining  Hazardous, Heavy, Light Industry  Premium, Rental, & Compliance Portables  Domestic & Sensors

Chemcassette
Vertex 2.0 Cm4
Lifeline II Midas

Searchline Excel
Searchpoint Optima
Apex Opus Series
2000 System 57

Touchpoint
Metro Sensepoint

Impact, Impact Pro
Micromax Plus
Micromax Pro
Xt, Xp, X4

SF350 Co, SF Gas
SF Smoke
EZ-sense

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1. Apex Flammable and Toxic Gas Detectors
Universal transmitter for flammable & toxic gases
- Universally approved - ATEX, UL, CSA
- Detects more than 35 different gases using catalytic bead or electrochemical sensors
- XPIS plug & play sensor cartridge minimizes downtime
- 3/4 wire 4-20mA output, 2 x alarm relays plus fault relay

Rugged and robust design
- Heavy duty 316 stainless steel construction (IP66/67)
- Designed for harshest environmental conditions (-40°C to +65°C)

Easy to install
- Integral mounting bracket (designed into casting)
- Transmitter removes completely for unhindered access to terminals
- Can be mounted up to 100m away from the transmitter
- Pre-formed cable entries (2 x M20/M25/3/4NPT – user defined)

Easy to use
- IS key pad enables full user configuration
- No special tools required (password protected)
- User friendly user interface (back-lit, gas type, units, gas reading

2. Optima Plus Infrared Flammable Gas Detector
Fast speed of response
>5 seconds (T90)

Sensitivity
- 0-100% LEL or LEL Metres
- Works in Oxygen free atmospheres
- Fail safe
- Self checking diagnostics

Costs
- Low routine maintenance costs

Standard Configuration
- Optima Plus
  - methane, propane
  - butane, ethane
  - propylene
- Weather protection
- SS 316 construction
- Deluge protection
- Dust Barrier

3. Searchline Excel Open Path Infra red Gas Detector
Open path detectors
- There is a transmitter and receiver in the range of 5m to 200m between them
- For application of open path detectors in ducts, the range is 0.5 to 5 meters
- Dual compensated optics provide best base line stability to compensate for rain, fog, and water in between

Advanced technology
- Excel has real time clock to provide exact timing of the various events
- The receiver also has heating option for using under cold conditions
- The system has default outputs for dirty optics, beam blocked, inhibit, and system fault
- Immune to all known poisons

Low maintenance required
- Maintenance includes cleaning of optical components and aligning receiver and transmitter units to match the line of sight
- No calibration required

For more information please visit www.honeywellanalytics.com
Fire Alarm Systems

Honeywell's fire detectors are designed to afford open area protection and are for use in hazardous areas where potentially explosive atmospheres are likely to arise.

**Types of fire detectors**
- Photo Electric Detector
- Heat Detectors (Fixed Temp Cum Rate of Rise)
- Multi Criteria (Photo & Heat Detectors)
- CO detector
- Flame detector
- Specialty detector
  - Laser: for clean room application
  - Harsh: for dusty environment
  - OT Blue: to sense smallest smoke particle
  - O2 T: to sense various type of smoke in minimum time and avoid false alarm

**Fire detection technologies**
At Honeywell, we believe in offering cutting edge technology in our detectors, such as:
- Conventional
- Analogue Addressable
- Intelligent Standalone

**Typical Loop Configuration**
- **Addressable Fire detectors**

**Salient Features**
- Typical loop response time from detector to panel of less than 1 second
- Automatic device addressing
- Max 125 Detectors/Modules per loop
- Support both Class A & Class B Wiring
- Support for T Tap (Max 125)
- Panel continuous test for sensitivity of each detectors
- Loop length of more than 2km UL/LPCB approved to replace manual detector sensitivity test

**Advantages:**
- Saves wiring in case of remote locations
- More accurate location of detected hazard
- Integrated local alarm display
- Remote connection of sounders and beacons possible
- Line monitoring for critical outputs like sounders, beacons, Fire Water Pump etc
- Alarms and indications centralized via Fire & Gas system
- Reset possible from central location (Experion)
- Redundancy communication

**Compatible Fire Alarm Systems**
- **Notifier**
  - By Honeywell
- **Esser**
  - By Honeywell
- **Eltek**
  - By Honeywell
- **XLS**
  - By Honeywell

**Integration to Process Control**
- Alarm, Sequence of Events, & Diagnostics via Experion stations
- Integration on Experion Operator stations
- Common Platform for Emergency Shut Down and Fire and Gas
- Reduced costs of operation & maintenance

**For more information please visit www.honeywelllifesafety.com**

Safety Manager PLC

Safety Manager PLC, Honeywell’s next generation safety system platform, is an effective and reliable solution for critical process control, equipment, and process protection. The safety system is the central control unit of the overall fire and gas detection and control system. The controller receives the alarm and status or analog signals from the fire and gas detection devices required for detection. The controller initiates the required actions to alarm and to mitigate the hazard.

**Features**

**Fire and Gas Safety Solution**
- Meets IEC 61511 requirement for events mitigation
- Integrated Fire & Gas solution with process control
- Integrated solution with shutdown systems

**Multiple Vendor Interface**
- Program for field devices
  - Certified field devices via Multi Vendor Interface Program (MVIP)
  - Fire detector & gas sensor Field termination units

**Application Standards Approvals**
- FM 3600 approvals for Class 1 Division 2
- Marine certification (Lloyd's Register)
- NFPA 72/UL864
- Upto SIL3 approved as per IEC 61508 / 61511

**Based on Proven technology**
Safety Manager is based on the unique and field-proven QMR-diagnostic-based technology with 2oo4D architecture. QMR enhances system flexibility, increases diagnostic messaging capabilities, and improves system fault tolerance for critical applications. It enables the handling of multiple system faults within Safety Manager, matching the needs of critical control applications.

In addition, Safety Manager provides the basis for integrating Safety Integrity Level (SIL) rated field sensors and valve actuators, ensuring that safety functions are well-established to protect complex and hazardous...
Integrated Fire and Gas System

What are you looking for in an integrated fire and gas safety system?

The Honeywell Safety Management System (SMS) knows what you require from a Fire & Gas Safety System. You need a system that offers you:

- A unified platform for both Emergency Shut Down (ESD) and Fire and Gas applications
- Seamless integration with your process control system
- Common engineering tools and a single window to the process to drive down operational risk and costs
- Integrate serial coupling to addressable systems in living quarters

Honeywell’s integrated fire and gas solution complies with international standards
- TUV DIN 19250, IEC61508, ISA 884.01 and IEC 61511

The fire and gas safety system from Honeywell is designed to meet all these requirements

Recognize, report, and extinguish

The figure below shows the architecture of Honeywell’s integrated fire and gas solution. This includes integrating fire and gas detectors, sounders, beacons, and CCTV’s, using line monitoring features to SIL rated PLC (up to SIL 3), and finally passing this information to SCADA or DCS network. Furthermore, the fire and gas PLC is also interfaced with the Emergency Shutdown System, allowing for process shutdown, which decreases the probability of a hazard taking place.

Fire and Gas field devices certification

The functionality of fire and gas detection devices has increased over the last few years. Using new techniques and adding intelligence to the detectors to reduce the number of spurious alarms has improved the reliability of all types of fire and gas detectors. Correct and certified connection of these devices to the fire and gas safety system is a key factor in reliable performance of the overall mitigation function of the plant and to establish the desired Safety Integrity Level (SIL). Through its Multi Vendor Interface Program (MVIP), Honeywell has established a suite of certified field devices for integration to the Fire and Gas Safety System.

Unified system platforms for Emergency Shut Down and Fire and Gas

The Safety Manager System provides the possibility to use the same system for different applications like Emergency Shut Down and fire and gas. Although ESD and fire and gas protection are normally designed as separate isolated systems, having a common platform for both applications has numerous advantages. These include common programming methodology and tools, common operator and maintenance interfaces, common engineering design, training, maintenance, and spare parts. These ultimately help to reduce the overall lifecycle costs of the operation.

Benefits of Honeywell’s Integrated Fire and Gas Solution

- Integrated Fire and Gas and ESD system for up to SIL-3 application
- Single Point responsibility through out the life cycle of the System
- Honeywell’s ownership of Zellweger, System Sensors, Notifier, ESSER, and Eltek
- Honeywell’s patented technology of Digital Video Manager
- Unique integration with other Automation Systems like DCS, ESD, Building Management, and Industrial Security
- Honeywell Automation India Ltd is TUV certified for compliance to IEC 61508 guidelines as Safety System Integrator

Unified Safety and Control

Fire and Gas applications

Electronic Safety Related Systems (E/E/PE) in the IEC 61508 standard, similar safety procedures are required during design, installation, operation, and modification phases of its lifecycle.
Comprehensive safety services

At Honeywell, our services go beyond just supplying hardware and software. We also offer a range of safety services and risk management solutions tailored to the needs of our different clients, which are grouped in three categories:

**Safety consulting services**
- Identify process hazards
- Categorize and assess process risks
- Classify Safety Integrity Levels (SIL)
- Develop safety requirement specifications
- Thermography Studies

**Project Services**
- Implementation of Safety Instrumented Systems (SIS)
- Installation and commissioning SIL verifications
- Standard Conformance and Performance Evaluation (SCOPE)
- Insurance Planning and Risk Management study
- Disaster Management Planning Safety Perception Survey

**Lifecycle support services**
- SIL validation
- Periodic proof testing
- System maintenance
- Training

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Proven in use across industries

- Oil and Gas Exploration
- Hydrocarbon Processing Industry (HPI)
- Oil and Gas Downstream
- Power
- Chemicals
- Metals
- Minerals
- Mining
- Pharmaceuticals
- Water Treatment Plants

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**Advantage Honeywell**

Honeywell provides leading edge solutions that extend technology leadership in intelligent sensing, gas detection, fire detection, and integration of fire and gas systems with your total plant control system. Our wealth of experience in fire and gas solutions has converted past experiences and application know how into pre-programmed libraries of fire and gas functions, allowing for the best possible conditions for fast and optimum response to emergencies.

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We are with you every step of the way

Honeywell India is the largest automation organization in India with more than 4500 engineers in Process Solutions and Building Solutions, catering to a complete support including Project Management, Engineering, Development center, Testing and After Sales Services. At Honeywell, we put our customers first. We provide ‘end to end’ service and customer support, which means every customer gets the help they need and when they need it. With this mindset, we ensure the same level of customer commitment and support to all applications, industries, and businesses.