

# INTELLIGENT SERIES GAS SENSORS iSERIES

Next-Gen Intelligent  
Sensors

Honeywell introduces the Next-Generation intelligent series gas sensors (iseries). These sensors have a digital interface, longer life and numerous built-in diagnostics features.



The iseries' intelligent diagnostic features help enhance the overall instrument performance, making them smarter and safer by indicating faults and monitoring health, thereby decreasing downtime and cost of ownership.

The ease of integration combined with pre-calibration drives a significant benefit to OEMs and users in terms of integrating the sensors easily into the instrument. In-built OEM lock code can be used to prevent unauthorized third-party replacement of sensors in the field. With an extended operating life of five years and extended temperature and humidity range, iseries sensors are apt for usage in wide range of applications and climatic conditions.

Honeywell iseries sensors are ATEX and IEC Ex Certified (EN IEC 60079-0 and EN IEC 60079-11) and are designed to meet multiple performance standards, including BS EN 45544-1, BS EN 50104, ANSI/ISA 92.00.01, ANSI /ISA 92.04.01 and AS/NZS 4641.

#### Available now:

- Electrochemical: CO, H<sub>2</sub>S, SO<sub>2</sub> & O<sub>2</sub>
- Pellistor: LEL

#### Future releases include other gases such as:

- Electrochemical - NO, NO<sub>2</sub>, O<sub>3</sub>, Cl<sub>2</sub>, H<sub>2</sub>, NH<sub>3</sub>, dual CO/H<sub>2</sub>S, dual CO/H<sub>2</sub> and H<sub>2</sub>S (extended operating range)



**Digital interface:** The sensor has a UART protocol to communicate with the instrument with chip select option to interface with more than one sensor.



**Interchangeable:** All intelligent sensors have the same dimensions and communication protocol. Supply voltage of all sensors is in the range from 3.1 V to 3.3 V.



**Digital traceability:** Sensors contain the following data: serial number, manufacturing date, and gas type for quick and easy identification of the sensor.



**OEM lock:** Sensors have two levels of lock codes. The first one is an OEM specific code programmed in during manufacture and cannot be modified. This lock code is provided by the OEM.



**Pre-calibrated sensors:** Sensors will be calibrated during manufacturing and calibration data is written in the sensor. Sensor will output gas concentration when interrogated by instrument.



**Predictive calibration:** Sensors\* can predict in advance when its accuracy is becoming too poor to give a reliable, accurate reading (advanced warning of when recalibration is needed).



**End-of-life indication:** The alarm will be flagged when the sensor\* has taken/lost a considerable amount of water (electrolyte concentration is above or below limits). Sensors\*\* can predict in advance when its sensitivity is falling too low to give a reliable, accurate reading (advanced warning for sensor replacement).



**Fault indication:** Intelligent sensors\* can detect several internal faults like open circuit sensing/high impedance electrode, drift/fault in reference electrode, electrolyte concentration out of range and counter electrode fault.



**Compact form fit:** The sensor is half the height of a traditional sensor. The design also simplifies target gas access to the sensor face.

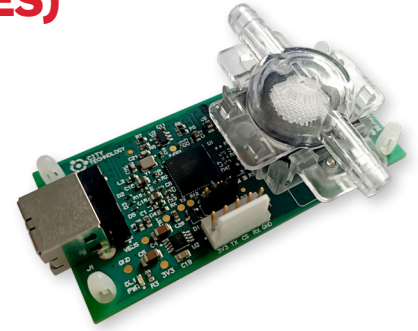
\*Electrochemical sensors

\*\*Toxic sensors

**Honeywell**

# INTELLIGENT SERIES GAS SENSORS (ISERIES) EVALUATION KIT

The Sensor Evaluation Kit, provides an easier way to demonstrate, simulate, and evaluate all Honeywell iseries digital sensors. The kit interfaces a digital gas sensor to a board. The software controls the board to take readings from the gas sensors. Sensor measurements and communication commands are displayed on the user's PC and can be recorded to a .CSV file for further analysis. The board can also be used in simulation mode, where it behaves as a virtual sensor.



- **Quicker, easier sensor evaluation:** The Evaluation Kit and associated Honeywell software simplify sensor evaluation and demonstration by eliminating the need for the customers to write any code.
- **Command set window:** This function allows the user to visualize how the packets of data are being transferred and how the commands are executed, reducing considerably the development process.
- **Simulation mode:** This mode allows the user to simulate the response of different sensors and their response to gases without the need of having the physical sensor. Additionally, it is possible to emulate the virtual sensor response through the evaluation kit software, including gas readings, sensor status, alarms and errors.
- **Expedite development:** The response of a virtual sensor can be emulated by using the simulation mode and connecting the board to your instrument. The simulated response is configurable through the software.

## FOR MORE INFORMATION

Honeywell Advanced Sensing Technologies services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing, or the nearest Authorized Distributor, visit [sps.honeywell.com/ast](http://sps.honeywell.com/ast) or call:

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Europe	+44 1344 238258
Japan	+81 (0) 3-6730-7152
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## Honeywell Advanced Sensing Technologies

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## FEATURES

- The Evaluation Kit has a socket which fits all iseries digital gas sensors
- Digital output for all sensors: ppm, %, %LEL or %vol (depending on the type of sensor)
- OEM/partner code lock
- Configurable alarm settings
- Configurable sampling (up to one per second)
- Compatible with a wide range of sensors that are currently on development

## APPLICATIONS

- Sensor demonstration
- Sensor testing and evaluation
- Proof-of-concept testing
- Gas instrument development
- Data logger

## WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgment or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items that Honeywell, in its sole discretion, finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While Honeywell may provide application assistance personally, through our literature and the Honeywell web site, it is buyer's sole responsibility to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this writing. However, Honeywell assumes no responsibility for its use.