

ECgaspoint

Wireless Gas Sensor Device

- Monitoring gas concentrations
- 40 years of experience in gas sensor technology





Product Overview

ECgaspoint continuously monitors the gas concentration and is able to track air quality changes in real-time.

ECgaspoint has a standard MQTT protocol with WiFi and easily connects to a local WiFi network.



Parameter

Gas

Temperature

Relative Humidity



Gas



Temperature



Relative Humidity

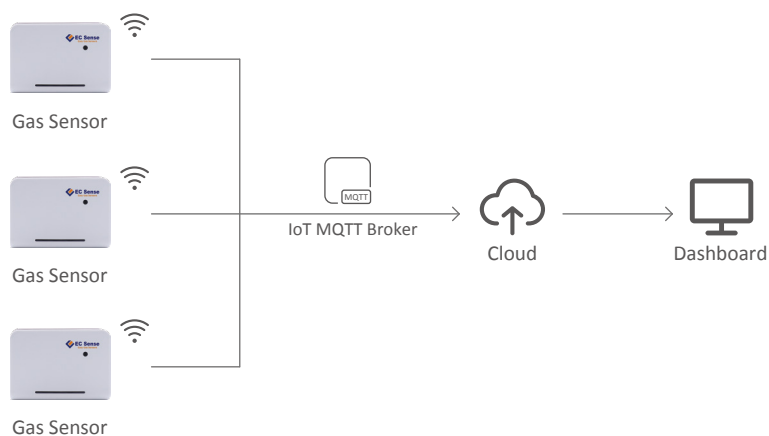
For Facility Management

Professional indoor air quality monitoring - easy to use.

Easy Installation

ECgaspoint is suitable for any indoor space of a building and can be installed quickly.

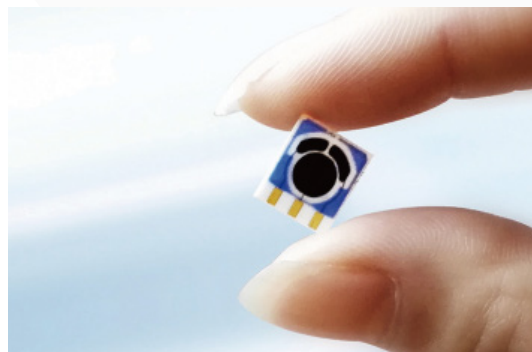
The measurement data is transferred to the dashboard via WiFi.





Key Sensing Technology from EC Sense

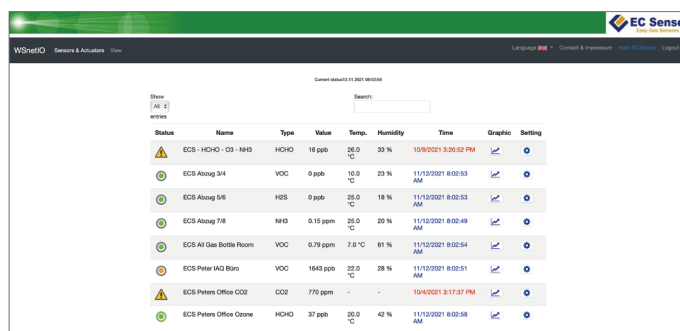
ECgaspoint uses the Solid Polymer Electrochemical Sensing Technology, which is for industrial applications. It employs a three-electrode arrangement - the working, the counter and the reference electrodes - in which concentration measurements can be performed continuously and the sensor operates at a fixed potential. The gas of interest (target gas) diffuses through a diffusion barrier, such as a capillary, into the cell to the working electrode, where an electrochemical reaction takes place. Oxidation and reduction reactions are happening simultaneously. The current flowing through the cell is direct proportional to the concentration of the target gas. A reference electrode keeps, with a potentiostat, the potential constant together.



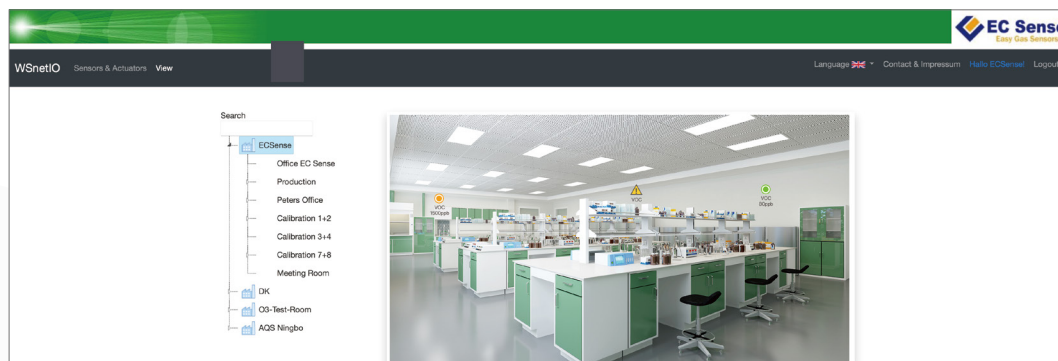
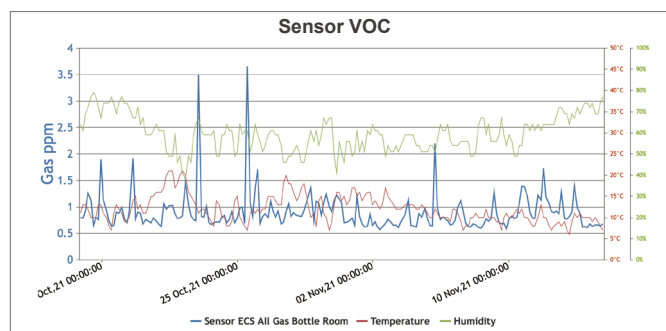
WSnetIO Cloud Systems

Real-time with dashboard

- Sensor names can be assigned individually, for quick location of sensors.
- 100% web-based without installation, the dashboard uses a simple web browser.
- Easy to navigate every room or location of the building.
- Define alarm levels.
- Easy to add room or location pictures for clear visualization.
- View real-time air quality data and history (1 hour/day/week/month/year, all data) by concentration number and graph.
- Local data saving, browser based setup and visualization on any PC, Phone or Pid.
- Multiple choice of operating languages.



Status	Name	Type	Value	Temp.	Humidity	Time	Graphic	Setting
⚠	ECS - HCHO - CS - N43	HCHO	18 ppb	26.0 °C	33 %	10/9/2021 3:20:52 PM		
⚠	ECS Along 314	VOC	0 ppb	10.0 °C	23 %	11/10/2021 8:00:53 AM		
⚠	ECS Along 546	H2S	0 ppb	25.0 °C	18 %	11/10/2021 8:00:53 AM		
⚠	ECS Along 718	NH3	0.15 ppm	25.0 °C	20 %	11/10/2021 8:00:49 AM		
⚠	ECS All Gas Bottle Room	VOC	0.79 ppm	7.0 °C	81 %	11/10/2021 8:00:54 AM		
⚠	ECS Peter IQG Bldg	VOC	1643 ppb	22.0 °C	28 %	11/10/2021 8:00:51 AM		
⚠	ECS Peters Office CO2	CO2	770 ppm	-	-	10/4/2021 3:17:37 PM		
⚠	ECS Peters Office Crome	HCHO	37 ppb	20.0 °C	42 %	11/10/2021 8:00:58 AM		





Typical Applications

|| ECgaspoint solution for all commercial, public and industrial buildings

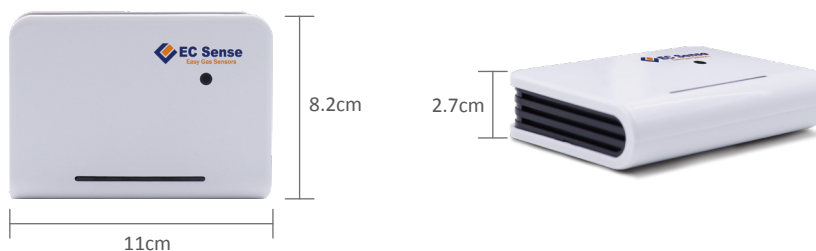
- Laboratory
- Production Facility
- Workplace



- Hospital
- Odor Monitoring in Public Toilets



Mechanical Drawing





Technical Specifications

Gas Sensor

For measurement range and resolution, please refer to the gas list.

Accuracy: $\pm 5\%$ full scale at 25°C within 35-80%RH

Temperature & Relative Humidity Sensor

Parameter	Temperature	Humidity
Range	-40 to 85°C	0-100% RH
Resolution	0.01°C	0.01% RH
Accuracy	$\pm 0.2^\circ\text{C}$	$\pm 2\%$ RH
Repeatability	0.1°C	0.1% RH
Response Time	< 5 to 30s @ t63%	8s @ t63%
Long-Term Drift	< 0.02°C/year	< 0.25% RH/year

General Specifications

Power Supply	5V DC, 0.3 A
Dimensions	H 110 x W 82 x D 27 mm
Data Transfer & Response Time	5 sec.
Operating Temperature	0 to 50°C
Operating Humidity	15 to 95% R.H.(Non-condensing)
Operating Pressure	800 to 1200 hPa
Wireless Technology	802.11 b/g/n_2.4GHz
Warm-Up Time	< 60s
Storage Conditions	0 to 20°C
Expected Lifetime	> 5 years
Housing Material	ABS
Weight	< 100g
Installation	Hanging
Supplied Accessories	USB power adapter Micro USB to USB cord

Order Information

05-ECgaspoint-01

Gas List

Item	Gas	Gas Formula	Range	Resolution	Response Time
1	Organic Volatiles	TVOC	0 - 10ppm	0.01ppm	< 3s (T90 < 15s)
			0 - 200ppm	0.1ppm	< 3s (T90 < 15s)
2	Formaldehyde	HCHO	0 - 5ppm	0.01ppm	< 3s (T90 < 80s)
			0 - 100ppm	0.1ppm	< 3s (T90 < 30s)
3	Carbon Monoxide	CO	0 - 10ppm	0.01ppm	< 3s (T90 < 30s)
			0 - 100ppm	0.1ppm	< 3s (T90 < 30s)
4	Sulfur Dioxide	SO ₂	0 - 5ppm	0.01ppm	< 3s (T90 < 80s)
			0 - 100ppm	0.1ppm	< 3s (T90 < 30s)
5	Nitrogen Dioxide	NO ₂	0 - 5ppm	0.01ppm	< 3s (T90 < 80s)
			0 - 100ppm	0.1ppm	< 3s (T90 < 30s)
6	Stench Gas	SMELL	0 - 5ppm	0.01ppm	< 3s (T90 < 30s)
			0 - 200ppm	0.1ppm	< 3s (T90 < 30s)
7	Ammonia	NH ₃	0 - 10ppm	0.01ppm	< 3s
			0 - 100ppm	0.1ppm	< 3s
8	Sulfur Hydrogen	H ₂ S	0 - 2ppm	0.01ppm	< 3s (T90 < 80s)
			0 - 100ppm	0.1ppm	< 3s (T90 < 30s)
9	Phosphine	PH ₃	0 - 20ppm	0.1ppm	< 3s (T90 < 30s)
			0 - 2000ppm	1ppm	< 3s (T90 < 30s)
10	Ethylene Oxide	ETO	0 - 100ppm	0.1ppm	< 3s (T90 < 30s)
11	Oxygen	O ₂	0 - 25%vol.	0.01%vol.	< 3s (T90 < 30s)
12	Hydrogen	H ₂	0 - 1000ppm	1ppm	< 3s (T90 < 15s)



Disclaimer

The EC Sense performance data stated above is based on data obtained under test conditions using the EC Sense gas distribution system and AQS test software. In the interest of continuous product improvement, EC Sense reserves the right to change design features and specifications without notice. We are not responsible for any loss, injury or damage caused by this. EC Sense assumes no responsibility for any indirect loss, injury or damage resulting from the use of this document, the information contained therein or any omissions or errors herein. This document does not constitute an offer to sell. The data it contains are for informational purposes only and cannot be considered a guarantee. Any use of the given data must be evaluated and determined by the user to comply with federal, state and local laws and regulations. All specifications outlined are subject to change without notice.

Warning

EC Sense sensors are designed for use in a variety of environmental conditions. However, due to the principles and characteristics of solid polymer electrochemical sensors and to ensure normal use, users must strictly follow this article during storage, assembly and operation of the module. General-purpose PCB circuit board application methods and illegal applications / violation of the application will not be covered by the warranty. Although our products are highly reliable, we recommend checking the module's response to the target gas prior to utilization to ensure on-site use. At the end of the products service life, please do not discard any electronics in the domestic waste, instead follow the local governments electronic waste recycling regulations for disposal.



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