

**SENKO** CO., LTD

# PRODUCT CATALOGUE



Better Safety, Better Life, Challenge, Innovation

**KOSDAQ**  
LISTED COMPANY



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# ABOUT SENKO

Senko Co., Ltd. was established in 2004 in Gyeonggi-do, South Korea, specializing in the development of high-quality gas sensors and gas detectors. Since then, the company has grown rapidly, expanding its product reach globally.

Senko's business operations are divided into four main areas: Sensor, Gas Safety, Environment IoT, and Breath IoT. Each division is committed to innovation and excellence, ensuring high standards of quality and reliability in their products.

With offices in 35 countries and partnerships with 55 agencies worldwide, Senko serves a diverse customer base and responds swiftly to market needs.

At Senko, we are dedicated to continuous improvement and innovation, striving to make the world a safer and healthier place through our advanced sensing technologies. We look forward to building on our success and exploring new opportunities in the ever-evolving landscape of gas detection and IoT solutions.

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- Global Office
- Worldwide Distributors





\*Contact your SENKO representative for complete product information.

# HISTORY



## 2004-2008

- Established Senko Corporation
- Registered Senko Factory
- Selected as a joint research business for the IT-NT convergence technology development project (ETRI, Ministry of Information and Communication)
- Domestic patent application (breathing inspection device)
- New technology idea commercialization feasibility evaluation project (KTCGF)
- Designated as a preliminary venture company with new technology
- Korea Gas Safety Corporation portable device safety certification
- Established Senko R&D Center-Senko Environmental Sensor R&D Center



## 2009-2013

- Investment attraction of JAFCO ASIA FUND IV (Capital 791,430 thousand won)
- Secured new technology product certification (NEP)
- PCT international patent application (Gas Detecting Apparatus And...System)
- Registered a domestic patent (electrochemical oxygen gas sensor)
- Established Senko Co., Ltd. Ansan branch
- Designated as a venture company by Small and Medium Business Administration
- Registered a domestic patent (indoor gas detector and indoor air purification system)



## 2014-2018

- Acquired TR CU certification
- Acquired international IECEx certification (SI Series)
- Assignment of a unique number for trade business and issuance of membership card of Korea International Trade Association
- Acquired China CPA certification (SP-Secure)
- Acquired CNEx certification in China (SI Series)
- Trademark registration : No. [42] SOOM (domestic, english and general trademark)
- LB Investment attracted third-party allocation investment
- S-Oil Residue Upgrading Complex Project
- Awarded by the Minister of Trade, Industry and Energy on the 55th Trade Day
- Acquired green technology certificate



## 2019-2023

- Acquired ISO 9001:2015 certification for quality management system
- Signed a contract to manufacture smoke detection sensors in vehicles with SK Planet
- Acquired landed property for the new factory
- Listed on the KOSDAQ market
- Registered the Abu Dhabi National Oil Company
- Established second factory in Hwaseong-si
- Acquired U&E, the company specializing in safety management solutions based on digital twin
- Acquired KENTEK, the company designing and manufacturing of environmental detectors
- Established Canada branch
- Acquired TR.CU certification for SGT, SGT-P, MGT
- Blanket PO about 2,600,000\$ received from one of distributors

# DUO TRACER

## Portable Dual Gas Detector



### DESCRIPTION

The DUO TRACER is a portable gas detector that uses the diffusion method to warn of dangerous environments related to gases. The detector indicates the concentration of oxygen, explosive or toxic gases on the LCD monitor. It is easy and simple to operate. The device alerts the workers to danger with an alarm, LED, and vibration when gas levels exceed safety thresholds. The device shows the gas concentration in real time and identifies the maximum and minimum concentration. Settings can be modified via wireless or Senko IR Link(Optional).

### KEY FEATURE

- Dual gas detection
- Wireless and IR connectivity
- Real-time monitoring
- Water/dust proof (IP67)
- Compact and lightweight
- High-performance alarms
- Automatically logs up to 30 alarm events
- Easy configuration and manage data using the IR Link
- User-friendly operation

### SPECIFICATION

Model	DUO TRACER
Sensor Type	Electrochemical, Non-Dispersive Infrared (NDIR)
Measuring Type	Diffusion Type
Case Material	Rubber type polycarbonate
Dimensions	56(W) x 89(H) x 21(D) mm / 2.2(W) x 3.5(H) x 0.83(D) inch
Weight	200g / 7.05oz
Operating Temperature	-20°C to +50°C / -4°F to +122°F
Operating Humidity	15% to 90% RH (Non-condensing)
Event Log	Most recent 30 alarms
IP	IP 67
Alarm	Visual (LCD and flashing LEDs), Audible(Buzzer), Vibration
Display	Liquid Crystal Display (LCD)
Key	One button
Battery	Replaceable Primary cell 3.6V Thionyl chloride (Li/SOCl <sub>2</sub> ) battery manufactured in Vitzrocell
Battery Life	DUO TRACER-1 to 2: Approximately 3 months DUO TRACER-3 to 9, A to F: Approximately 2 years ※ 8 hours daily use, wireless off. ※ Battery lifetime could vary depending on usage conditions and environment.
Environmental Condition	Pollution Degree: "2" Atmospheric Pressure: 80 ~ 120KPa
Accessories	Calibration Cap (Available as an option)
Attachment Method	Equipped with a clip for attachment to clothing, belts, or helmets.
Warranty	2 years from the date of purchase





## CERTIFICATION

IECEX	IECEX KSCP 24.0025X	DUO TRACER-1 to 2	Ex ia op is IIC T4 Ga
		DUO TRACER-3 to 9, A to F	Ex ia IIC T4 Ga
ATEX	KSCP 24ATEX0016X	DUO TRACER-1 to 2	Ex ia op is IIC T4 Ga
		DUO TRACER-3 to 9, A to F	Ex ia IIC T4 Ga
CSA/UL	LC24CA22376-1	DUO TRACER-1 to 2	Ex ia op is IIC T4 Ga
		DUO TRACER-3 to 9, A to F	Ex ia IIC T4 Ga
CNEEx	24.4201X	DUO TRACER-1 to 2	Ex ia op is IIC T4 Ga
		DUO TRACER-3 to 9, A to F	Ex ia IIC T4 Ga
KCs	24-GA2BO-0613X	DUO TRACER-1 to 2	Ex ia IIC T4 Ga
	24-GA2BO-0612X	DUO TRACER-3 to 9, A to F	Ex ia IIC T4 Ga

## GAS TYPES

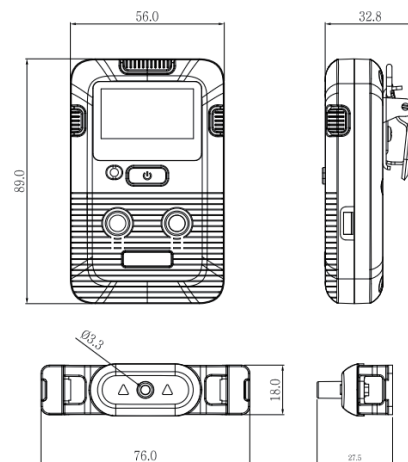
Gas	Measuring Range	Resolution	Low Alarm	High Alarm
CH4	0 ~ 100 %LEL	1% LEL	10 %LEL	30 %LEL
CO2	0 ~ 5 %vol	0.01 %vol	0.5 %vol	1.0 %vol
CO	0 ~ 500 ppm	1 ppm	30 ppm	60 ppm
H2S	0 ~ 100 ppm	0.1 ppm	10 ppm	15 ppm
SO2	0 ~ 20 ppm	0.1 ppm	2 ppm	5 ppm
H2	0 ~ 1,000 ppm	1 ppm	100 ppm	500 ppm
NH3	0 ~ 100 ppm	1 ppm	25 ppm	35 ppm
NO2	0 ~ 20 ppm	0.1 ppm	3 ppm	5 ppm
O2	0 ~ 30 %vol	0.1 %vol	19 %Vol	23 %Vol
O3	0 ~ 5 ppm	0.1 ppm		

Model Name		Gas Type	
Model	x(*)	Ch-A	Ch-B
DUO TRACER-x(*)	1		CH4(**)
	2		CO2(**)
	3		CO
	4		H2S
	5	O2	SO2
	6		H2
	7		NO2
	8		NH3
	9		O3
	A		CO
	B	NO2	H2S
	C		SO2
	D	SO2	H2S
	E		CO
	F	NH3	CO

(\*) x means series number for gas domination. The number is 1 to 9 or A to F.

(\*\*) These sensors are NDIR sensors, and the rest are electrochemical sensors.

## DIMENSION (Unit:mm)



## ACCESSORIES

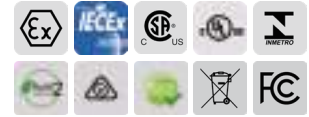


### IR Link Communication

Connects to the computer in order to program configuration and download data log

# SGT

## Disposable Single Gas Detector



### DESCRIPTION

SGT is a single disposable detector. It operates continuously for two (2) years even without replacing the battery or gas sensor to protect workers from oxygen deficiency or toxic gases. It measures a gas continuously and displays its concentration and raises an alarm when a risk occurs.

### KEY FEATURE

- Disposable type (No sensor or battery change)
- Operates continuously for 2 years
- Excellent water / dust proof structure
- Automatic checking of the sensor trouble
- High-performance audible and vibrating alarm
- Automatic logging of 30EA events
- Easy configuration and data management through IR link
- Easy calibration through the Docking Station



### SPECIFICATION

<b>Model</b>	SGT
<b>Sensor Type</b>	Electrochemical
<b>Measuring Type</b>	Diffusion Type
<b>Case Material</b>	Rubber Enclosure
<b>Dimension</b>	54 (W) x 91 (H) x 32 (D)mm
<b>Weight</b>	93g (Toxic), 104g (O2) / Battery, Clip included
<b>Operating Temperature</b>	-40°C~+50°C (Toxic), -35°C~+50°C (O2)
<b>Operating Humidity</b>	5%~95% RH (Non-condensing)
<b>Operating Life</b>	24 months, Based on 2 minutes of alarm per day
<b>Event Log</b>	Recent 30 alarms
<b>IP</b>	IP 67
<b>Alarm</b>	Red Flashing LEDs (Light-Emitting Diode), 90dB audible alarm at a distance of 10cm, Vibration alarm
<b>Display</b>	Liquid Crystal Display (LCD)
<b>Battery</b>	Manufacture : Vitzrocell, P/N : SB-AA02 (P), System : Lithium Primary Battery, Nominal Voltage : 3.6V, Nominal capacity : 1.2Ah
<b>Components</b>	Calibration Cap, Manual, Calibration and Test Certificate
	ATEX II 1 G Ex ia IIC T4 Ga
	IECEX Ex ia IIC T4 Ga
	Ex ia IIC T4 Ga
<b>Certification</b>	CSA/UL Class I, Zone 0, AEx ia IIC T4 Ga Class I, Division 1, Groups A, B, C, D, T4
	INMETRO Ex ia IIC T4 Ga
	etc. RoHS2, RCM, REACH, WEEE, FCC

### ACCESSORIES



**IR Link Communication**  
Connects to the computer in order to program configuration and download data log



**Sampling Pump**  
(SP-Pump101)



**Extension Probe**  
5m / 10m



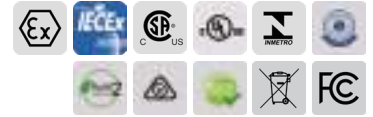
**SGT Docking Station**

### SENSOR SPECIFICATION

Gas	Measuring Range	Low Alarm	High Alarm
O2	0~30%Vol	19%Vol	23%Vol
CO	0~500ppm	30ppm	60ppm
H2S	0~100ppm	10ppm	15ppm
H2	0~1,000ppm	100ppm	500ppm
SO2	0~50ppm	2ppm	5ppm
NH3	0~100ppm	25ppm	35ppm
NO2	0~20ppm	3ppm	5ppm

# SGT-P

## Replaceable Single Gas Detector



### DESCRIPTION

SGT-P is a single replaceable gas detector designed to detect oxygen deficiency and the presence of toxic gas in the ambient environment. SGT-P is the replaceable type of gas sensor and battery. When activated, SGT-P continuously monitors ambient air for the presence of a specific gas and alerts the user to potentially unsafe exposure with LED, vibrating, and audible alarms in the event that gas concentration exceeds alarm set points.

### KEY FEATURE

- Sensor and battery replacement
- Power on / off available
- Configuration via exclusive IR Link

### SPECIFICATION

Model	SGT-P
Sensor Type	Electrochemical
Measuring Type	Diffusion Type
Case Material	Rubber Enclosure
Dimension	54 (W) x 91 (H) x 32 (D)mm
Weight	93g (Toxic), 104g (O2) / Battery, Clip included
Operating Temperature	-40°C~+50°C (for CO, H2S, H2, NH3, and NO2) -35°C~+50°C (for O2 and SO2)
Operating Humidity	5%~95% RH (Non-condensing)
Operating Life	24 months, Based on 2 minutes of alarm per day
Event Log	Recent 30 alarms
IP	IP 67
Alarm	Red Flashing LEDs (Light-Emitting Diode), 90dB audible alarm at a distance of 10cm, Vibration alarm
Display	Liquid Crystal Display (LCD)
Battery	Manufacture : Vitzrocell, P/N : SB-AA02 (P), System : Lithium Primary Battery, Nominal Voltage : 3.6V, Nominal capacity : 1.2Ah
Components	Calibration Cap, Manual, Calibration and Test Certificate
Certification	ATEX II 1 G Ex ia IIC T4 Ga
	IECEX Ex ia IIC T4 Ga
	Ex ia IIC T4 Ga
	CSA/UL Class I, Zone 0, AEx ia IIC T4 Ga Class I, Division 1, Groups A, B, C, D, T4
	INMETRO Ex ia IIC T4 Ga
	PESO Ex ia IIC T4 Ga
	etc. RoHs2, RCM, REACH, WEEE, FCC

### ACCESSORIES



**IR Link Communication**  
Connects to the computer in order to program configuration and download data log



**Sampling Pump**  
(SP-Pump101)



**Extension Probe**  
5m / 10m



**SGT-P**  
Docking Station

### SENSOR SPECIFICATION

Gas	Measuring Range	Low Alarm	High Alarm
O2	0~30%Vol	19%Vol	23%Vol
CO	0~500ppm	30ppm	60ppm
H2S	0~100ppm	10ppm	15ppm
H2	0~1,000ppm	100ppm	500ppm
SO2	0~50ppm	2ppm	5ppm
NH3	0~100ppm	25ppm	35ppm
NO2	0~20ppm	3ppm	5ppm
HCN	0~50ppm	2ppm	5ppm

# MGT

## Portable Multi Gas Detector



### DESCRIPTION

MGT is an united gas detector measuring four (4) major gases, which cause the most industrial accidents, to protect workers from disasters caused by Oxygen deficiency, Toxic gas poisoning, and gas explosion. It measures continuously four (4) gases (O<sub>2</sub>, CO, H<sub>2</sub>S, and Combustible Gas (CH<sub>4</sub>)) and displays their concentrations and raises an alarm (visual, vibrating, and audible) when the risk occurs. It features the dual sensor of CO and H<sub>2</sub>S.

### KEY FEATURE

- Small dimension & lightweight
- Rechargeable battery
- 30EA of bump tests / events / cal.
- Simultaneously detect 4 different gases
- 25 hours use by one charge for 4-6 hours (P-Type)
- 60 days use by one charge for 4-5 hours (N-Type)
- Configuration via exclusive IR Link
- Easy check & calibration via Docking Station
- Intrinsic safety

### SENSOR SPECIFICATION

Gas	Measuring Range	Low Alarm	High Alarm
O <sub>2</sub>	0~30%Vol	19%Vol	23%Vol
CO	0~500ppm	30ppm	60ppm
H <sub>2</sub> S	0~100ppm	10ppm	20ppm
CH <sub>4</sub>	0~100%LEL	10%LEL	30%LEL

### SPECIFICATION











Model	MGT
Self Test	Full function self-test upon activation Sensors, battery and circuitry - continuous
Sensor Type	O <sub>2</sub> , CO and H <sub>2</sub> S : Electrochemical Combustible (LEL) : IR or Pellistor
Measuring Type	Diffusion Type
Dimension	61 (W) x 114 (H) x 43 (D)mm
Weight	240g
Operating Temperature	-20°C~+50°C
Operating Humidity	5%~95% RH (Non-condensing)
IP	IP 67
Event Log	Recent 30 alarms
Alarm	Red Flashing LEDs (Light-Emitting Diode), 90dB audible alarm at a distance of 10cm, Vibration alarm
Display	Liquid Crystal Display (LCD), Back-light
Battery	Rechargeable Li-ion power supply unit (2,000mAh)
Battery Life	IR : 60 days continuous / Pellistor : 25 hours continuous
Low Battery Alarm	20 minutes / 10 minutes / 5 minutes Expired : 5 long beeps / flashes and then Off is displayed
Charging Time	4-6 hours
Warranty	2 years
Components	Calibration Cap, Charge Cable (USB C-Type) and Adaptor



## CERTIFICATION

Certification	ATEX	II 1 G Ex ia IIC T4 Ga(SP-MGT-N) II 1 G Ex da ia IIC T4 Ga (SP-MGT-P)
	IECEX	Ex ia IIC T4 Ga (SP-MGT-N) Ex da ia IIC T4 Ga (SP-MGT-P)
	CSA&UL	Ex ia IIC T4 Ga(SP-MGT-N) Class I, Division 1, Groups A, B, C, and/or D, T4 Class I, Zone 0, AEx ia IIC T4 Ga Ex da ia IIC T4 Ga(SP-MGT-P) Class I, Division 1, Groups A, B, C, and/or D, T4 Class I, Zone 0, AEx da ia IIC T4 Ga
	INMETRO	Ex ia IIC T4 Ga (SP-MGT-N) Ex da ia IIC T4 Ga (SP-MGT-P)
	PESO	Ex da ia IIC T4 Ga (MGT-P) Ex ia IIC T4 Ga (MGT-N)
	etc.	RoHs2, EMC, RCM(ACMA&RSM), REACH, WEEE, FCC

## ACCESSORIES

	<b>IR Link Communication</b> Connects to the computer in order to program configuration and download data log
	<b>Vehicle Power Adaptor</b>
	<b>7CH Multi Adaptor</b>
	<b>Sampling Pump (SP-Pump101)</b>
	<b>Extension Probe</b> 5m / 10m
	<b>Multi Cradle</b>
	<b>MGT Single Docking Station</b>
	<b>MGT Docking Station</b>
	<b>MGT External Filter Adapter</b>
	<b>MGT External Replacement Filter for MGT Adapter (Kit of 10)</b>

# SP-MGTP

## Portable Multi Gas Detector



### DESCRIPTION

SP-MGTP is a sampling-type gas detector that measures six (6) major gases simultaneously, which cause most of the industrial accidents, to protect workers from the disasters caused by the oxygen deficiency, toxic gas poisoning and gas explosion. It detects up to six (6) gases with 37 different toxic and flammable gas combinations and displays their concentrations and raises an alarm (visual, vibrating, and audible) when the risk occurs.

### KEY FEATURE

- Sampling-type with embedded pump & probe
- Max 6 gases with 37 different gas combinations
- Event log (Recent 30 event / bump / calibration)
- Easy to maintain (2 filters in probe & in detector)
- Inner teflon coating of gas tube line

### SPECIFICATION

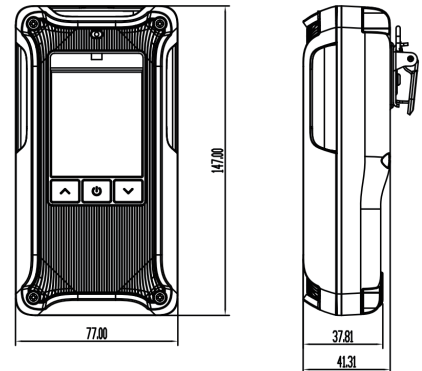
<b>Model</b>	<b>SP-MGTP</b>
<b>Display</b>	Segment LCD Display, LCD Backlight, Indicator LED
<b>Key</b>	3 Operation and Programming Keys
<b>Sensor</b>	Electrochemical for toxic gases and O <sub>2</sub> / PID for VOCs gas / Catalytic and NDIR for combustible gases
<b>Alarm</b>	Visual : LCD Alarm Display, LCD Backlight Indicator LED Audible/ Buzzer (90dB at 10cm)
<b>Dimension</b>	77 (W) x 146 (H) x 43 (D)mm
<b>Weight</b>	490g
<b>How to Fix</b>	Belt Clip
<b>Operating Temperature</b>	-20°C~+50°C
<b>Operating Humidity</b>	10%~90% RH (Non-condensing)
<b>IP</b>	IP 67
<b>Pressure</b>	80~120KPa
<b>Sampling</b>	Built-in pump
<b>Battery Type</b>	Rechargeable Li-ion power supply unit (4,000mAh)
<b>Operating Time</b>	SP-MGTP-P0 Series : 30 hours SP-MGTP-N0/N1/N2 Series : About 5 days or more
<b>Case</b>	TPU covered Poly Carbonate (PC)
<b>Options</b>	IR-Link
<b>Flow Rate</b>	250~300cc





**CERTIFICATION**

IECEX	SP-MGTP-P0 Series	Ex da ia IIC T4 Ga / Ex da ia IIB T4 Ga
	SP-MGTP-N0 Series	Ex ia IIC T4 Ga / Ex ia IIB T4 Ga
	SP-MGTP-N1 Series	Ex db ia IIC T4 Gb / Ex db ia IIB T4 Gb
	SP-MGTP-N2 Series	Ex db ia IIC T4 Gb / Ex db ia IIB T4 Gb
	SP-MGTP-00 Series	Ex ia IIC T4 Ga / Ex ia IIB T4 Ga
ATEX	SP-MGTP-P0 Series	II 1 G Ex da ia IIC T4 Ga / II 1 G Ex da ia IIB T4 Ga
	SP-MGTP-N0 Series	II 1 G Ex ia IIC T4 Ga / II 1 G Ex ia IIB T4 Ga
	SP-MGTP-N1 Series	II 2 G Ex db ia IIC T4 Gb / II 2 G Ex db ia IIB T4 Gb
	SP-MGTP-N2 Series	II 2 G Ex db ia IIC T4 Gb / II 2 G Ex db ia IIB T4 Gb
	SP-MGTP-00 Series	II 1 G Ex ia IIC T4 Ga / II 1 G Ex ia IIB T4 Ga
INMETRO	SP-MGTP-P0 Series	Ex da ia IIC T4 Ga / Ex da ia IIB T4 Ga
	SP-MGTP-N0 Series	Ex ia IIC T4 Ga / Ex ia IIB T4 Ga
	SP-MGTP-00 Series	Ex ia IIC T4 Ga / Ex ia IIB T4 Ga
	SP-MGTP-N1 Series	Ex db ia IIC T4 Gb / Ex db ia IIB T4 Gb
	SP-MGTP-N2 Series	Ex db ia IIC T4 Gb / Ex db ia IIB T4 Gb
UL	SP-MGTP-P0 Series	Ex da ia IIC T4 Ga Class I, Division 1, Groups A, B, C, and/or D, T4 Class I, Zone 0, AEx da ia IIC T4 Ga
	SP-MGTP-N0 Series	Ex ia IIC T4 Ga Class I, Division 1, Groups A, B, C, and/or D, T4 Class I, Zone 0, AEx ia IIC T4 Ga
	SP-MGTP-N1 Series	Ex db ia IIC T4 Gb Class I, Division 1, Groups A, B, C, and/or D, T4 Class I, Zone 1, AEx db ia IIC T4 Gb
	SP-MGTP-N2 Series	Ex db ia IIC T4 Gb Class I, Division 1, Groups A, B, C, and/or D, T4 Class I, Zone 1, AEx db ia IIC T4 Gb
	SP-MGTP-00 Series	Ex ia IIC T4 Ga Class I, Division 1, Groups A, B, C, and/or D, T4 Class I, Zone 0, AEx ia IIC T4 Ga
etc.	EMC, RoHs2, REACH, WEEE, FCC, RCM(ACMA&RSM)	

**DIMENSION (Unit:mm)**



**ACCESSORIES**

-  IR Link Communication  
Connects to the computer in order to program configuration and download data log
-  SP-MGTP Single Docking Station

# iGas Detector CO2

## Carbon Dioxide Gas Detector



### DESCRIPTION

iGas Detector is the most reliable carbon dioxide gas detector designed to monitor the presence of CO2 and alert users to danger with LED, audible, and vibrating alarms in confined spaces. CO2 gas accumulated in poorly ventilated areas and confined spaces is colorless and odorless classified as a toxic gas that cause asphyxia and narcotic effects. Utilizing the high-performance infrared sensor, the iGas Detector CO2 is the best solution to keep workers safe and your operations compliant.

### KEY FEATURE

- IR sensor technology
- Measured by %Vol and ppm
- Rechargeable Li-ion battery
- Automatic logging of 30EA events
- 14 days of use by one fully charged
- Lightweight : 135g
- Exchangeable international wall plug kit
- Easy configuration and data management via PC program
- Configurable calibration, bump test, self-test due warning

### SPECIFICATION

Model	iGas Detector CO2
Sensor Type	IR
Measuring Type	Diffusion Type
Case Material	Rubber Enclosure
Dimension	54(W) x 99.5(H) x 38.8(D)mm
Weight	135g
Operating Temperature	-20°C~+50°C
Operating Humidity	5%~95% RH (Non-condensing)
Operating Life	14 days
Event Log	Recent 30 alarms
IP	IP 67
Alarm	Red Flashing LEDs (Light-Emitting Diode), 90dB audible alarm at a distance of 10cm, Vibration alarm
Display	Liquid Crystal Display (LCD)
Battery	Rechargeable Li-ion (polymer) power supply unit (500mAh)
Charging Time	100 minutes
Components	Calibration Cap, Charge Cable (USB C-Type) and Adaptor
Certification	EMC, RoHs2, REACH, WEEE

### ACCESSORIES



USB Cable (Standard package)  
Connects to the computer in order to program configuration and download data log



Sampling Pump  
(SP-Pump101)



Extension Probe  
5m / 10m

### SENSOR SPECIFICATION

Gas	Measuring Range	Low Alarm	High Alarm
CO2	0~5.0%Vol (50,000ppm)	0.5%Vol (5,000ppm)	1.0%Vol (10,000ppm)



# SP-Pump101

## Automatic Sampling Pump



### DESCRIPTION

SP-Pump101 is designed to be used by connecting to SGT, SGT-P, and MGT Models. This can be used to check if there is gas leakage when measuring the gas underground manhole.

### KEY FEATURE

- Simple structure to install locking
- Excellently durable industrial pump installed
- Automatic checking of chocking

### SPECIFICATION

Model	SP-Pump101
Flow Rate	Minimum 500cc/min
Alarm	Low flow alarm / Low battery alarm (Red LED)
Operating Temperature	-20℃~+50℃
Operating Humidity	5%~99% RH (Non-condensing)
Battery	1.5V AA Dimension Alkaline battery 1EA
Battery Life	More than 10 hours
Dimension	30 (W) x 254 (H) x 47 (D)mm
Weight	260g (Including Battery)
Certification	EMC



### ACCESSORIES



Extension Probe  
5m / 10m

# SP secure

## Portable Gas Leak Detector



### DESCRIPTION

SP secure is designed to be suitable for leak detection of any gas piping and valves by equipping a built-in sampling pump. Since the measured gas concentration is displayed in digital numbers, an accurate Measuring Type is possible.

### KEY FEATURE

- Sampling pump built-in structure
- The digital concentration display
- Detector for the gas leakage
- Both rechargeable batteries and alkaline batteries are compatible
- Adopt the sensor which detects the low concentrated

### SPECIFICATION

<b>Model</b>	SP secure		
<b>Measuring Gas</b>	LNG/LPG, Combustible Gas		H2
<b>Measuring Method</b>	Catalytic	Catalytic	Electrochemical cell
<b>Measuring Range</b>	0~100%LEL	0~100%LEL	0~1,000ppm
<b>Sensor Life Time</b>	> 3 years	> 3 years	> 2 years
<b>Response Time</b>	<10sec/90% scale	<10sec/90% scale	<75sec/90% scale
<b>Resolution</b>	1%LEL	1%LEL	Within 5ppm
<b>Measuring Type</b>	Auto Sampling Type		
<b>Operation Time</b>	About 12 hours		
<b>Accuracy</b>	±3%/Full scale		
<b>Parameter Control</b>	Right side switch (calibration, maintenance, alarm setting)		
<b>Operation Mode Display</b>	Visual : Alarm & Status icon, Trouble Red LED Audible : Buzzer (90dB @10cm)		
<b>Measuring Value Display</b>	LCD Display (3-digit)		
<b>Alarm Display</b>	Visual : Alarm & Status icon, Audible : Buzzer		
<b>Alarm Level Set</b>	Programmable within detection range		
<b>Sampling Method</b>	Internal sampling pump		
<b>Flow Rate</b>	0.5 liter/min		
<b>Program Set Mode</b>	Alarm value (1, 2 alarm)		
<b>Operating Temperature</b>	-20℃~+50℃		
<b>Operating Humidity</b>	10 to 95% RH (Non-condensing)		
<b>Battery Power</b>	Rechargeable NI-MHY or AA Alkaline battery 3EA		
<b>Battery Life Time</b>	More than 12 hours		
<b>Material</b>	Poly carbonate		
<b>LCD Dimension</b>	32 (W) x 40 (H)mm		
<b>Dimension</b>	55 (W) x 240 (H) x 31 (D)mm		
<b>Weight</b>	260g (Battery Including)		
<b>Certification</b>	EMC		

### ACCESSORIES



Extension Probe  
5m / 10m

# BMC-2000

## Breath CO Monitor



### DESCRIPTION

BMC-2000 can be used in smoking cessation programs by healthcare professionals. And it also can be used as a noninvasive method to get %COHb in the patient's blood and to screen CO poisoned patients by medical man. The small dimension and light weight make the BMC-2000 ideal for hand held use. It is mainly used in smoking cessation clinics. it is used for instructional purposes to check on the client's progress and compliance.

### KEY FEATURE

- Non-Invasive method to know how much carbon monoxide (CO) poisoned
- Indirect and simple instrument to measure carboxyhemoglobin (COHb) in blood
- Easy to discriminate smoker
- Easy to recognize the degree of CO poisoning (smoking habit)
- Two languages (English, Korean) are provided
- CE certificate of european medical equipment
- Concentration of CO in breath and percentage of COHb in blood are displayed simultaneously
- Adult / pregnant / young mode are provided
- Manage analysis data through software

### SPECIFICATION

Model	BMC-2000
Measuring Gas	CO
Measuring Type	Breath through the mouth
Measuring Method	Electrochemical cell
Measuring Range	0~99ppm
Countdown	15 seconds
Accuracy	±5% / Full scale or 1ppm
Hydrogen Cross Sensitivity	5~10% / Full scale
Resolution	1ppm
Parameter Control	Front 3 switch (calibration, maintenance, configuration setting)
Operation Mode Display	Visual : Graphic LCD Display LED Indicator Audible : buzzer
Measuring Value Display	Graphic LCD Display
LED Indicator	7 Steps (Green/Amber/Red)
Reset Signal	Auto Power OFF
Mounting Type	Pocket, Hand carry
User Mode	Adult / Adolescent
Program Set Mode	Language (Korean, English), Age, Sound, Calibration
Operating Temperature	0°C ~ 40°C
Operating Humidity	5 to 95% RH (Non-condensing)
Mouthpiece Adapter	D type bacteria filter
Disposable Mouthpiece	Diameter 22mm
Material	PC+ABS
LCD Dimension	50 (W) X 30 (H)mm
Dimension	74 (W) X 140 (H) X 42 (D)mm
Weight	160g
Certification	EMC

# SGT Docking Station



## DESCRIPTION

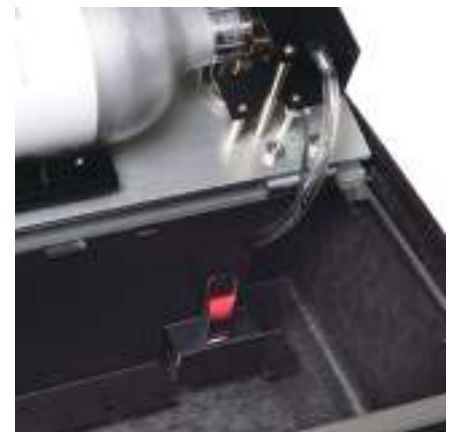
The Docking station maximizes the performance of SGT device. It calibrates and does bump test up to four SGT device simultaneously, helping to reduce time. Through Bump test, The Docking station tests the gas sensor response and alarm of the devices. In addition, it automatically upgrades the firmware of the devices when the devices are connected to The Docking station. Event logs are saved into the USB memory and provide analyses for users. The configuration can be set by connecting The Docking station with IR link.

## KEY FEATURE

- Calibration, bump test
- Display status on power LED and unit LED
- Save the status and results of Docking Station and SGT
- Upgrade Docking Station and SGT firmware
- Save the log data of Docking Station and SGT
- Support user options using a PC program (IR Link/USB)

## SPECIFICATION

<b>Model</b>	<b>SGT Docking Station</b>
<b>Dimension</b>	47 (W) x 41 (H) x 22 (D)cm (18.50 x 16.14 x 8.66 in)
<b>Weight</b>	8.2kg (Without Gas Cylinder)
<b>Operation Temperature</b>	41°F~104°F (5°C~40°C)
<b>Warranty</b>	Full 2 years
<b>Battery Type</b>	Rechargeable Lithium Ion
<b>Battery Life</b>	1,000 Bump Tests
<b>LEDs</b>	5 red/green/orange LEDs (1 for each unit, 1 for power)
<b>Memory</b>	USB 8GB Standard
<b>Log Capacity</b>	Approximately Up to 10 million tests (8GB, Removable USB memory)
<b>Tests Performed</b>	Bump Test and Calibration
<b>Information Stored</b>	Bump/Cal Logs, Individual monitor Event Logs, Firmware and Unit Configurations
<b>Gases Available</b>	CO, H2S and O2
<b>Unit Compatibility</b>	Works with SGT
<b>Calibration Gas</b>	Compatible with 58L cylinders
<b>Charging Adaptor</b>	12V, 3A
<b>Certification</b>	EMC, WEEE, RoHs2, REACH, RCM(ACMA&RSM), FCC



## ACCESSORIES



### IR Link Communication

Connects to the computer in order to program configuration and download data log

# MGT Docking Station



## DESCRIPTION

Bump test and calibration are the key features to ensure the safety of devices and users. MGT docking station version II provides bump testing, event management and calibration from a simple to use multi-unit station. It also maintains all important event logs that demonstrate users are working within company requirements.

## KEY FEATURE

- Zero and span calibration, bump test function
- Indicate the current status of operation by the power LED and unit LED color
- Gas ventilation system to remove a residual gas
- Save the log events after calibration and bump test
- Enable users to adjust the setting points of Docking Station and MGT via IR Link or USB
- Rechargeable battery or power
- Holds up to 4 devices at once

## SPECIFICATION

<b>Model</b>	<b>MGT Docking Station (Version II)</b>
<b>Dimension</b>	52.5 (W) X 43.7 (H) X 21.3 (D)cm (20.66 X 17.20 X 8.40 in)
<b>Weight</b>	11kg (Without Gas Cylinder)
<b>Operation Temperature</b>	41°F~104°F (5°C~40°C)
<b>Warranty</b>	Full 2 years
<b>Battery Type</b>	Rechargeable Lithium Ion
<b>Battery Life</b>	1,000 Bump Tests
<b>LEDs</b>	6 Blue LEDs for each unit (unit x 4), 3-color LED for power, Switch Back Light LED (Yellow, Green)
<b>Memory</b>	USB 8GB Standard
<b>Log Capacity</b>	Approximately Up to 10 million tests (8GB, Removable USB memory)
<b>Tests Performed</b>	Bump Test and Calibration
<b>Information Stored</b>	Bump/Cal Logs, Individual monitor Event Logs, Firmware and Unit Configurations
<b>Gases Available</b>	LEL, CO, H2S and O2
<b>Unit Compatibility</b>	Works with MGT (N, P)
<b>Calibration Gas</b>	Compatible with 58L & 116L cylinders
<b>Interface</b>	Ethernet RJ-45 (TCP/IP), 10Mb/s
<b>Charging Adaptor</b>	12V, 3A
<b>Certification</b>	EMC, WEEE, RoHS2, REACH, RCM(ACMA&RSM)

## ACCESSORIES



### IR Link Communication

Connects to the computer in order to program configuration and download data log

# MGT Single Docking Station



## DESCRIPTION

The Docking station maximizes the performance of MGT device. It provides bump tests and calibration to ensure the safety of devices and users. Through Bump test, The Docking station tests the gas sensor response and alarm of the devices. In addition, it automatically upgrades the firmware of the devices when the devices are connected to the Docking station. Event logs are saved into the SD card and provide analyses for users.

## KEY FEATURE

- Zero and span calibration, bump test function
- Indicate the current status of the operation by the power LED and unit LED color
- Gas ventilation system to remove a residual gas
- Save the log events after calibration
- Enable users to adjust the setting points of docking station MGT via IR Link
- Rechargeable battery or power
- Easy to use, small and light

## SPECIFICATION

<b>Model</b>	<b>MGT Single Docking Station</b>
<b>Dimension</b>	24.7 (W) X 21 (H) X 10.7 (D)cm
<b>Weight</b>	2.85g (Without Gas Cylinder)
<b>Operation Temperature</b>	41°F~104°F (5°C~40°C)
<b>Warranty</b>	Full 2 years
<b>Battery Type</b>	Rechargeable Lithium Ion
<b>Battery Life</b>	1,000 Bump Tests
<b>LEDs</b>	6 Blue LEDs for each unit, 3-color LED for power, Switch Back Light LED (Yellow, Green)
<b>Memory</b>	SD-Card Class 10 (16GB Standard)
<b>Tests Performed</b>	Bump Test and Calibration
<b>Information Stored</b>	Bump/Cal Logs, Individual monitor Event Logs, Firmware and Unit Configurations
<b>Gases Available</b>	LEL, CO, H2S and O2
<b>Unit Compatibility</b>	Works with SP-MGT (N, P)
<b>Calibration Gas</b>	Compatible with 58L & 116L cylinders (Demand regulator use)
<b>Charging Adaptor</b>	12V, 3A
<b>Certification</b>	EMC, RoHs2



## ACCESSORIES



### IR Link Communication

Connects to the computer in order to program configuration and download data log

# MGTP Single Docking Station



## DESCRIPTION

The Docking station maximizes the performance of SP-MGTP device. It provides bump test and calibration to ensure the safety of devices and users. Through Bump test, The Docking station tests the gas sensor response and alarm of the devices. In addition, it automatically upgrades the firmware of the devices when the devices are connected to The Docking Station. Event logs are saved into the SD card and provide analyses for users.

## KEY FEATURE

- Zero and span calibration, bump test function
- Indicate the current status of operation by the power LED and unit LED color
- Gas ventilation system to remove a residual gas
- Save the log events after calibration
- Enable users to adjust the setting points of docking station MGTP via IR Link
- Rechargeable battery or power
- Easy to use, small and light

## SPECIFICATION

<b>Model</b>	<b>SP-MGTP Single Docking Station</b>
<b>Dimension</b>	24.7 (W) X 21 (H) X 10.7 (D)cm
<b>Weight</b>	2.85g (Without Gas Cylinder)
<b>Operation Temperature</b>	41°F~104°F (5°C~40°C)
<b>Warranty</b>	Full 2 years
<b>Battery Type</b>	Rechargeable Lithium Ion
<b>Battery Life</b>	1,000 Bump Tests
<b>LEDs</b>	6 Blue LEDs for each unit, 3-color LED for power, Switch Back Light LED (Yellow, Green)
<b>Memory</b>	SD-Card Class 10 (16GB Standard)
<b>Tests Performed</b>	Bump Test and Calibration
<b>Information Stored</b>	Bump/Cal Logs, Individual monitor Event Logs, Firmware and Unit Configurations
<b>Gases Available</b>	LEL, CO, H2S and O2
<b>Unit Compatibility</b>	Works with SP-MGTP
<b>Calibration Gas</b>	Compatible with 58L & 116L cylinders (Demand regulator use)
<b>Charging Adaptor</b>	12V, 3A
<b>Certification</b>	RCM(ACMA&RSM)

## ACCESSORIES



### IR Link Communication

Connects to the computer in order to program configuration and download data log

# SI-200E

## Fixed Gas Detector



### DESCRIPTION

The SI-200E is a fixed gas detector installed in a place where potential gas hazard exists to measure oxygen, toxic gas and combustible gas. It shows not only the concentration of gas but also diagnostic result of the unit itself through the LED display and can be connected to the controller with a standard 4-20mA analog output communication or RS-485 digital communication. Also, it is available to input and set by connecting through Bluetooth.

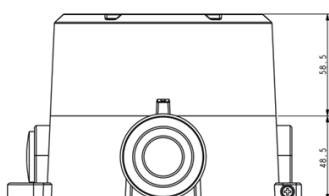
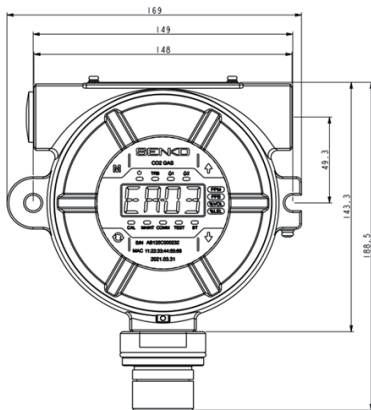
### KEY FEATURE

- Explosive proof structure
- 4-Digit display of concentration
- Long-distance transmission by 4-20mA, RS-485
- Connecting through Bluetooth.

### SPECIFICATION

Model	SI-200E
Dimensions	169mm (W) x 188.5mm (D) x 107mm (H)
Weight	2.4kg
Operation Power	DC : +24Vdc ±10%
Power Consumption	3.6W @+24VDC
Operation Mode Display	FND, Concentration of Gas, Alarm, Malfunction
Relay	1st Alarm, 2nd Alarm, Fault Alarm (Rated 2.0A @30vdc)
Analog Output Signal	4-20mA
Digital Output Signal	RS-485
Measuring Type	Diffusion
Operating Temperature	-40°C ~ 60°C
IP	IP66
Input and Setting	4 Buttons & RS-485 & Bluetooth
Device Warranty	2 years
Sensor Warranty	1 year
Wireless interface	RS-485 Modbus, HART (Option)
Certification	ATEX II 2 G Ex db IIC T6 Gb
	IECEX Ex db IIC T6 Gb
	etc. EMC, RoHs2, RCM(ACMA&RSM), FCC, SIL2

### DIMENSION (Unit:mm)





# SI-200A

## Fixed Gas Detector



### DESCRIPTION

The SI-200A is an explosion-proof, diffusion-type gas detector designed for installation in locations where potential gas hazards exist to detect oxygen, toxic gases, and combustible gases. It features an LCD that displays gas concentrations as well as the device's diagnostic results. The detector can be connected to a gas monitor receiver via standard 4-20mA analog or RS-485 digital communication. Additionally, it allows for input and settings adjustments via Bluetooth connectivity.

### KEY FEATURE

- Explosive proof structure (Transmitter)
- Intrinsically safe structure (Sensor Housing)
- 4-Digit display of concentration
- 4-20mA (HART: optional) / RS-485 output
- Connecting through Bluetooth.

### SPECIFICATION

Model	SI-200A
Dimensions	169mm (W) x 188.5mm (D) x 107mm (H)
Weight	2.4kg
Operation Power	DC : +24Vdc ±10%
Power Consumption	3.6W @+24VDC
Operation Mode Display	FND, Concentration of Gas, Alarm, Malfunction
Relay	1st Alarm, 2nd Alarm, Fault Alarm (Rated 2.0A @30vdc)
Analog Output Signal	4-20mA
Digital Output Signal	RS-485
Measuring Type	Diffusion
Operating Temperature	-40°C ~ 60°C
IP	IP66
Input and Setting	4 Buttons & RS-485 & Bluetooth
Device Warranty	2 years
Sensor Warranty	1 year
Wireless interface	RS-485 Modbus, HART (Option)
Certification	SIL2



# SI-100

## Fixed Gas Detector



### DESCRIPTION

SI-100 is an excellent fixed gas detector to detect toxic gases, combustible gases and oxygen deficiency, installed in a place where potential gas hazard exists. It shows not only the concentration of protentional gas, but also diagnostic the result of the unit itself through the large digital LCD display. Allows a user to connect to the controller with a standard 4-20mA analog output communication or RS-485 digital communication. Aluminum and stainless-steel enclosure gives an excellent RFI and EMC compatibility.

### KEY FEATURE

- Various sensors can be applied
- Easy operation with a magnetic bar
- Large digital LCD display with a blue backlight
- Explosive proof structure
- Water/dust proof structure
- Automatic calibration function by simply applying gas
- Long-distance transmission by 4-20mA output
- Relay contact output signal

### SPECIFICATION

Model	SI-100			
Measuring Gas	Combustible Gas		Toxic Gas	Oxygen
Measuring Method	Catalytic	IR	Electrochemical Cell	Galvanic
Measuring Range	0~100%LEL	0~100%LEL	*Depends on sensor	0~30%Vol
Sensor Life Time	> 5 years	> 2 years	> 2 years	< 2 years
Response Time	< 15sec/90% scale	< 30sec/90% scale	*Depends on sensor	< 15sec/90% scale
Resolution	1%LEL	1%LEL	*Depends on sensor	0.1%Vol
Measuring Type	Diffusion Type			
Accuracy	±3% / Full scale			
Parameter	Front 3 magnetic switch (Calibration, Maintenace, Alarm setting)			
Operation Mode Display	Visual : LCD Alarm Display, LCD Backlight, 3 Indicator LED			
Measuring Value Display	Digital : LCD Display (4-digit)			
Alarm Display	Visual : LCD Alarm Display, LCD Backlight, 3 Indicator LED			
Alarm Output Signal	Relay contact (Max 30Vdc, 5A) when alarm occurred			
Alarm Level Set	Programmable within detection range			
Output Signal	Analog : 4-20mA, Digital : RS-485 (Standard), HART (Option)			
PC Interface	RS-485 (Option)			
Conduit Connection	NPT 3/4" (2way)			
Mounting Type	Wall mount			
Program set mode	Alarm value (1,2 alarm), Alarm time (instant@delay) 1~30min, Alarm dead band, output on/off			
Operating Temperature	-20°C ~ +55°C			
Operating Humidity	5% ~ 95% RH (Non-condensing)			
Operating Power	9~34Vdc 600mA			
Material	Aluminium, Stainless steel (STS304)			
Dimension	150 (W) x 165 (H) x 110 (D)mm			
Weight	1.9kg (Standard Type)			
Option	Console			
Certification	IECEX	Ex d IIC T5 IP65		
	KTL	Ex d IIC T5		
	INMETRO	Ex db IIC T5 Gb IP65		

# SI-100C

## Fixed Gas Detector



### DESCRIPTION

SI-100C is a fixed gas detector installing in a place where potential gas hazard exists to measure oxygen, toxic gas and combustible gas without LCD display. It can be connected to the controller with a standard 4-20mA analog outputs.

### KEY FEATURE

- Explosive proof structure
- Water/dust proof structure
- 4-20mA analog outputs
- Built-in calibration mode
- 2 wires for toxic gases / 3 wires for LEL



### SPECIFICATION

Model	SI-100C				Detectable Gases	
Measuring Gas	Combustible Gas		Toxic Gas	Oxygen	Oxygen	O2
Measuring Method	Catalytic	IR	Electrochemical Cell	Galvanic	Carbon Monoxide	CO
Measuring Range	0~100%LEL	0~100%LEL	*Depends on sensor	0~30%Vol	Sulfur Dioxide	SO2
Sensor Life Time	> 2 years	> 5 years	> 2 years	> 2 years	Hydrogen (ppm or %LEL)	H2
Response Time	< 10sec/90% scale	< 30sec/90% scale	*Depends on sensor	< 15sec/90% scale	Hydrogen Sulfide	H2S
Resolution	1%LEL	1%LEL	*Depends on sensor	0.1%Vol	Ammonia	NH3
Cable/Distance	Single cable : 3-wire > CVVSB 1.5sq or AWG20		Power+Signal cable : 2-wire > CVVSB 1.5sq or AWG20		Nitrogen Dioxide	NO2
Measuring Type	Diffusion Type				Methane (Catalytic)	CH4
Accuracy	±3% / Full scale				Methane (IR)	CH4
Parameter	Control Switch (Calibration), Admin Console (Maintenance, Option)				Chlorine	Cl2
Operation Mode	2-LED (Operating and Zero Cal, Span Cal. LED)				Carbon Dioxide (%Vol, ppm or %LEL)	CO2
Display					Hydrogen Chloride	HCl
Output Signal	4-20mA DC (3 Wire for combustible gas, 2 wire for other gas)				Hydrogen Peroxide	H2O2
Conduit Connection	NPT 3/4" (2way)				Nitrogen Monoxide	NO
Mounting Type	Wall mount				Hydrogen Fluoride	HF
Setting	1 Switch Interface (Calibration), Console set available (Option)				Isobutane	C4H10
Remote Set	via Console (Zero Calibration, Span Calibration, Calibration Gas Concentration Set, Factory default, 4-20mA Calibration, Range Set, Data Logging)				Propane (Catalytic)	C3H8
Operating Temperature	-20°C ~ +55°C				Propane (IR)	C3H8
Operating Humidity	5% ~ 95% RH (Non-condensing)				Hydrocarbon	HC
Operating Power	9~34Vdc 600mA				Silane	SiH4
Material	Aluminium, Stainless steel (STS304)				Fluorine	F2
Dimension	102 (W) x 137 (H) x 87 (D)mm					
Weight	1.0kg					
Option	Console					
Certification	ATEX		II 2 G Ex db IIC T5 Gb			
	IECEX		Ex db IIC T5 Gb			
	INMETRO		Ex db IIC T5 Gb IP65			

# SI-100D

## Gas Leak Detector



### DESCRIPTION

SI-100D is a combustible (LNG/LPG) gas leak detector that consists of a sensing unit and receiver. This is used to detect gas leaks in the pipe or valve. SI-100D can be used with present any indicators and PLC using analog output (4-20mA). SI-100D is a low-priced compact and light entry-level product.

### KEY FEATURE

- Explosion proof structure
- Long distance communication with 4~20mA analog output
- Convenient installation
- Simple structure, reasonable price

### SPECIFICATION

Model	SI-100D
Measuring Range	LNG/LPG (Methane/Propane)
Measuring Type	Diffusion Type
Measuring Method	Catalytic
Measuring Range	0~100%LEL
Sensor Life Time	> 2 years
Response Time	< 10sec/90% scale
Accuracy	±3%/Full scale
Output Signal	4-20mA DC
Cable/Distance	CVVSB 1.5sq or AWG20 x 3 wire (Power+Signal) / 2,500m max
Conduit Connection	NPT 1/2"
Mounting Type	Wall mount
Operating Temperature	-20°C ~ +50°C
Operating Humidity	0%~95% RH (Non-condensing)
Operating Power	24V DC +/- 20%, <90mA
Material	Aluminium
Dimensions	93 (W) X 106 (H) X 89 (D)mm
Weight	0.6kg

# SI-H100 with Pyrolyzer (Option)

## Sampling Type Fixed Gas Detector



### DESCRIPTION

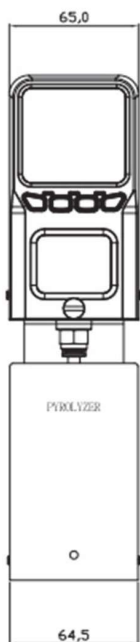
SI-H100 measures sample gas by sensor cartridge in the case upon suction remotely on a real-time basis constantly. The monitor points up to 100 feet (30meters) away and shows alarms of dangerous concentration, fault situations, and so on, upon attaching to the wall. SI-H100 assists assist in preventing or controlling a variety of gas-related accidents including toxic, flammable gases in a plant providing reliable sensor technology.

A pyrolyzer option can be installed underneath the standard SI-H100 for detection and measuring type through thermal decomposition in case of substances that do not have a gas sensor that can be generally detected, such as NF3.

### KEY FEATURE

- Simple to install, easy to use the product
- Extractive pump system which has 2 years lifetime (Sampling up to 30M)
- Smart sensor cartridge with onboard
- Large bright graphic LCD based on Intuitive icon with various expressions
- 3 built-in relays for Alarm 1st, 2nd, and fault
- Ethernet (PoE) communication
- Optional pyrolyzer module
- 4-20mA analog output with event reporting and fault
- Modbus/TCP Ethernet can be easily connected to all control and alarm system ports
- Update the latest version of firmware available via the web
- RS-485, TCP Ethernet to connect alarm system and communication
- Detects gas which is parts-per-billion (ppb) levels

### DIMENSION (Unit:mm)



### SPECIFICATION

Model	SI-H100
Dimension	123 (H) X 65 (W) X 155 (D) mm
Weight	2kg
Operating Voltage	DC : 24V ±10% PoE : 36V~57V (Typical : 48V)
Flow Rate	500mL/min (MAX 900)
Power Consumption	Approximately 5.0W
Measuring Type Display	Graphic LCD (160X100), Gas concentration, Flow rate, Alarm, Rear light, Device abnormality
Alarm	90dB at 10cm
Relay	Primary Alarm, Secondary Alarm, Fault Alarm
Output Signal	Analog, 4-20mA
Digital Communication	RS-485, TCP Ethernet
Sampling Distance	Length of input gas tube : Up to 30m (FEP tube) Length of exhaust gas tube : Up to 30m (FEP tube)
Input/Output Tube	1/4" Teflon tube
Operating Temperature	0°C ~ 40°C
Control/Set	4 Buttons & RS-485 & Ethernet
Warranty (Device)	2 years
Warranty (Sensor)	1 year
Remote Interface	Ethernet, RS-485
Wiring	4 to 20mA / DC power / Relay : Up to 14 AWG
ETC	Update the latest version of firmware available via the web
Certification	EMC, RoHs2

### ACCESSORIES



Adapter



Under Cover

# SI-301

## Sampling Type Fixed Gas Detector



### DESCRIPTION

SI-301 is a sampling type fixed gas detector, measures the sample gas through a sensor cartridge on a real-time basis. This is a device that helps to prevent or control various gases related accidents including suffocation, intoxication, fire, explosion, corrosion, etc in several semiconductor or industrial sites. The measured gas concentration is transmitted in real time with an output of 4-20 mA and can be configured through three internal relays. In addition, users also can widely benefit from control set of RS-485/Ethernet/Bluetooth connection.

### KEY FEATURE

- Explosion-proof structure (IP65)
- Cartridge type sensor - easy maintenance
- Built-in flow control function
- Large LCD with digital concentration indication and digital flow indication
- Control set of 4 buttons / RS-485 / TCP ethernet / bluetooth

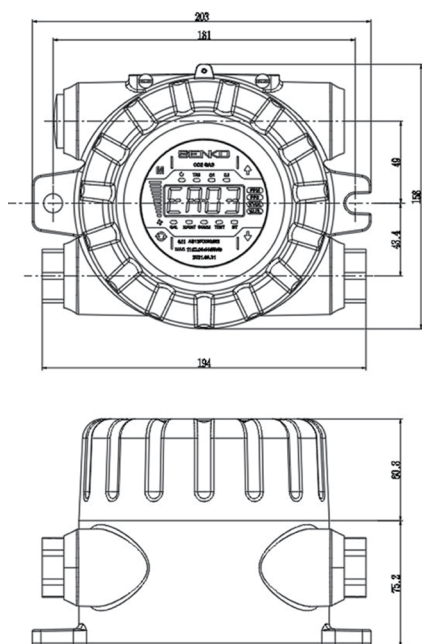
### APPLICATIONS

- Semiconductor industry
- Sewage treatment plant
- Mine
- Petrochemical plant
- Steelworks
- Power supply work

### SPECIFICATION

Model	SI-301
Dimension	194 (H) X 152.4 (W) X 136 (D) mm
Weight	4kg
Operating Voltage	DC : 24V ±10% PoE : 36V~57V (Typical : 48V)
Flow Rate	100~1,000ml (Normal 300~500ml/min)
Power Consumption	Approximately 5.0W
Measuring Type	FND, Gas concentration, Flow rate, Alarm, Device faulty
Display	
Relay	Low Alarm, High Alarm, Fault Alarm
Output Signal	4-20mA
Digital Communication	RS-485, TCP Ethernet
Sampling Distance	Length of input gas tube : Up to 30m (FEP tube) Length of exhaust gas tube : Up to 30m (FEP tube)
Input/Output Tube	1/4" Teflon tube
Operating Temperature	-40°C ~ +55°C
Control/Set	4 Buttons & RS-485 & Ethernet & Bluetooth
Warranty (Device)	2 years
Warranty (Sensor)	1 year
Remote Interface	Ethernet, RS-485, HART (Option)
Wiring	4 to 20mA / DC power / Relay : Up to 14 AWG
Pressure range	90 to 100kPa
Maximum Sample flow	Max 1,000ml
Maximum Sample Pressure	6kPa
Certification	IECEX Ex db IIC T6 Gb
	ATEX II 2 G Ex db IIC T6 Gb

### DIMENSION (Unit:mm)



# SI-310 with the built-in pyrolyzer

## Sampling Type Fixed Gas Detector



### DESCRIPTION

SI-310 is a built-in pyrolyzer sampling type fixed gas detector to easily detect Hexafluorobutadiene, Octafluorocyclopentene, Difluoromethane and Fluoromethane gases through a sensor cartridge on a real-time basis. The measured gas concentration is transmitted in real time with an output of 4-20mA and can be configured through three internal relays. In addition, users also can widely benefit from control set of RS-485/Ethernet/Bluetooth connection.

### KEY FEATURE

- Explosion-proof structure
- Cartridge type sensor - easy maintenance
- Built-in flow control function
- Large LCD with digital concentration indication and digital flow indication
- Control set of 4 buttons / RS-485 / TCP ethernet / bluetooth

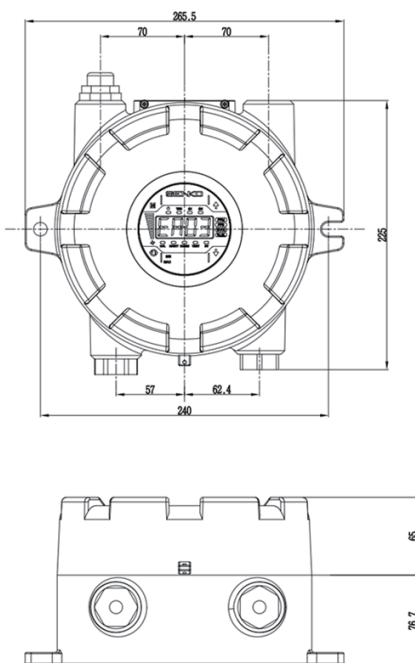
### APPLICATIONS

- Semiconductor Industry

### SPECIFICATION

Model	SI-310
Dimension	212 (H) X 225 (W) X 141.7 (D) mm
Weight	6.5kg
Operating Voltage	DC : 24V ±10% PoE : 36V~57V (Typical : 48V)
Flow Rate	100~1,000ml (Normal 300~500ml/min)
Power Consumption	Approx. 15.0W @+24Vdc (Pyrolyzer Use 600mA @+24Vdc)
Measuring Type Display	FND, Gas concentration, Flow rate, Alarm, Device faulty
Relay	Low Alarm, High Alarm, Fault Alarm
Output Signal	Analog, 4-20mA
Digital Communication	RS-485, TCP Ethernet (PoE)
Sampling Distance	Length of input gas tube : Up to 30m (FEP tube) Length of exhaust gas tube : Up to 30m (FEP tube)
Input/Output Tube	1/4" Teflon tube
Operating Temperature	-40°C ~ +55°C
Control/Set	4 Buttons & RS-485 & Ethernet & Bluetooth
Warranty (Device)	2 years
Warranty (Sensor)	1 year
Remote Interface	Ethernet (PoE), RS-485, HART (Option)
Wiring	4 to 20mA / DC power / Relay : Up to 14 AWG / Ethernet : RJ-45 Cat.5E
Pressure range	90 to 100kPa
Maximum Sample flow	Max 1,000ml
Maximum Sample Pressure	6kPa

### DIMENSION (Unit:mm)



# SI-100IS

## Receiver For Fixed Gas Detector (Bar-Graph Type)



### DESCRIPTION

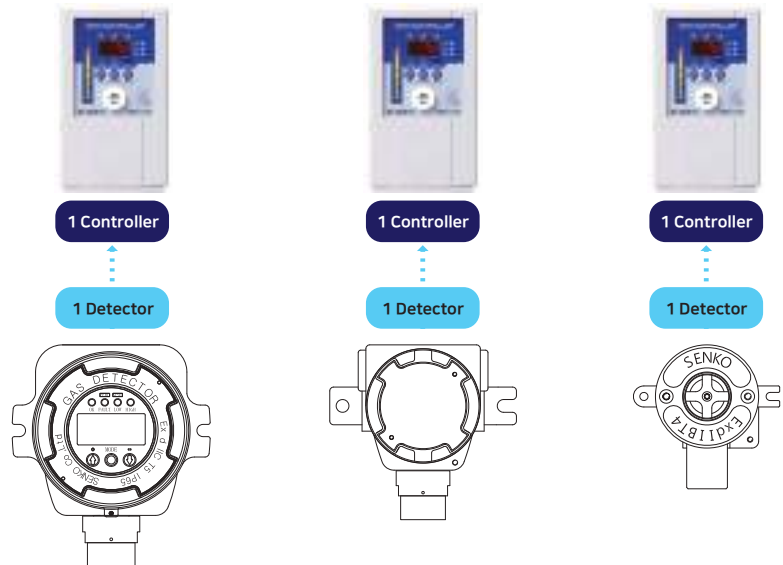
SI-100IS is a single control panel and an alarm for fixed gas detector and fixed gas leak detector composed of sensing part and receiver. It is designed as DIN type and so can be installed as wall mount panel. Performing calibration is processed from a detector and can also perform from the SI-100IS itself.

### KEY FEATURE

- Sophisticated design and simple structure
- Display using the bar-graph depend on alarm steps (1st, 2nd, 3rd alarm)
- 3 colored LED and F.N.D gas concentration display
- Easy zero calibration and built-in calibration mode
- Self test mode
- Display the number of calibrations
- Built-in light bar (Option)

### SPECIFICATION

Model	SI-100IS
Measuring Range	Programmable within detection range
Display	30-Bar grap, 3 Alarm LED, 3 Status LED, 7-Segment (4Digit)
Sound	Buzzer (Alarm 1, 2, 3, Reset, Fault), 80dB
Operation Mode Display	3 Alarm Led, 3 Status LED
Measuring Value Display	30-Bar graph, 7-Segment (4Digit)
Alarm Level Set	Alarm 1, 2, 3 / Programmable within detection range
Alarm Signal Output	Alarm 1, 2, 3 - 12V.DC, Dry contact (com, no, nc), comm 12V. DC, Dry contact (com, no, nc)
Input Signal	4-20mA Signal
Cable/Distance	CVVSB 1.5sq or AWG20 X 3wire (Power+Signal) / 2,500m max
Mounting Type	Wall mount
Program Set Mode	Alarm 1, 2, 3, Range, 4-20mA Calibration etc.
Operating Temperature	-20°C ~ +50°C
Operating Humidity	5%~95%RH (Non-condensing)
Operating Power	100~240V Input AC (50/60Hz), <0.24A
Material	ABS AF308
Dimension	120 (W) X 200 (H), 51 (D)mm
Weight	0.5kg





# SI-100IM

## Multi Channel Gas Monitor for Fixed Gas Detectors



### DESCRIPTION

SI-100IM consists of a Main Alarm unit and Alarm display units. From the one main unit, the alarm display unit can be constructed from 1 to 36 units. SI-100IM is designed as DIN type, so the device can be manufactured in the wall mount panel type, stand-alone type, or 19" Rack type according to a user's preference.

### KEY FEATURE

- Sophisticated design and simple structure
- 4-digit F.N.D display
- 40 LED bar graph (% , PPM, LEL unit display)
- Fault, 1st, 2nd, 3rd alarm Icon
- 40 red arrow LED graph (<) display
- Easy zero and standard gas calibration
- Self diagnosis mode
- Display the frequency of calibration
- Back-up battery installed
- Data recovery function

### SPECIFICATION

Model	Main Alarm Unit	Alarm Display Unit
Model No	SI-100IM	SI-100IA
Measuring Range	0-30V FND Digital Display	0.000 to 9999 Digital User Setting
Measuring Display	4Digit FND Digital Display 18 LED Bar Graph, Battery, B/Z Stop (V Unit Display)	4Digit FND Digital Display 40 LED Bar Graph (%, PPM, LEL Unit Display)
Alarm Display	Fault, 1st, 2nd, 3rd Alarm ICON AU01~AU1 (Alarm Unit, Indicating in order)	Fault, 1st, 2nd, 3rd Alarm ICON 40 LED Bar Graph (<)
Alarm Sound	Buzzer 92dB	
Input Signal		4-20mA Full Scale
Output Signal	1st, 2nd, 3rd Relay Dry Contact 12V.DC	Fault, 1st, 2nd, 3rd Relay Dry Contact, 4-20mA, 12V.DC
Accuracy		FND Digital ±1% Full Scale or 1Digit (Whichever is greater)
Alarm Set	Depend on configuration of SI- 100IA	1st, 2nd, 3rd Alarm Setting 40 Red Arrow LED Graph (<) Setting
Self Test	Manual Total Reset & HMI	Manual Local Reset
Scan Time	10ms	10ms
Back-Up Battery	Ni-Cd Battery 18V 600mA (3, 6 Channel)	
Operating Power	110/220V.AC 50/60Hz (or 24V.DC)	
Temperature / Humidity	-20°C ~ +60°C, 95%RH	-20°C ~ +60°C, 95%RH
Dimension	Main Channel Card : 40 (W) X 130 (H) X 104 (D)mm	Alarm Channel Card : 40 (W) X 130 (H) X 104 (D)mm
Operating In/Out	RS-485 Modbus (SI-100ICU) Option	
Total Weight & Dimension	3CH : 7.3kg, 6CH : 10kg Wall Mount Panel 3CH : 278.5 (W) X 450 (H) X 115 (D)mm Wall Mount Panel 6CH : 398.5 (W) X 450 (H) X 115 (D)mm	
Option	Built-in light bar	

# SI-200IS

## Single Receiver with Built-in Battery (Sensor Integrated)



### DESCRIPTION

The SI-200IS is a receiver unit with a large FND display for gas concentration and an integrated model with a built-in gas sensor.

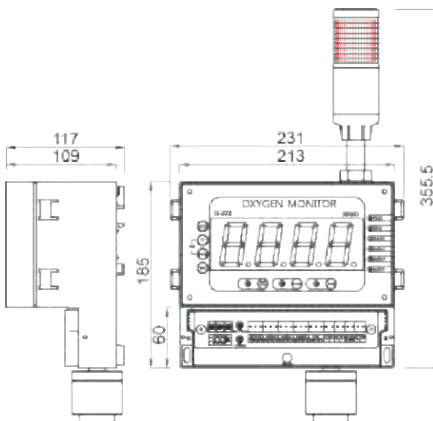
### KEY FEATURE

- Sensor integrated model
- Diagnosis function by itself
- 4-digit big F.N.D display
- DC 4-20mA / RS-485 signal out put
- Set alarm value (1st, 2nd, 3rd) due to a change in concentration
- Li-ion battery built in
- Wall mounted type
- Peak hold

### SPECIFICATION

Model	SI-200IS (Sensor Integrated)
Measuring Type	Diffusion Type
Detectable Gas	O2, Toxic, Combustible Gas
Dimension	231 (W) x 397.5 (H) x117 (D)mm
Weight	2kg
Measurement Output Device	Big FND (for measured value [4-digit]), 9-LED
Enclosure Type	Non-explosion proof type
Measured Value Display	4-digit Big F.N.D display
Measurement Range	0.000 to 9,999 with user settings (digital)
Accuracy	Digital FND, ±1% +1 digit of full scale (displays a larger value)
Temperature	-20 - 50 °C
Operating Humidity	5 - 99% RH (non-condensing)
Output Signal	DC 24 V / DC 4 - 20 mA / RS-485 modbus Check output: 3 mA / Calibration output: 3 mA / Fault output: 0 mA
Alarm Display	Visual indication: 3-alarm, trouble, BATT, B/Z STOP, RESET (LED), Warning light, Audible indication : Buzzer signal (85dB)
Relay Contact	AC 250 V, 3A (Alarm 1, Alarm 2, Alarm 3, Fault)
Power Supply	Input: AC 100 - 250 V
Backup Battery	Li-ion rechargeable battery, 7.3 V, 2,850 mAh
Battery Level Display	Battery error indicator LED, operating time FND
Charging Time	6 hours
Battery Run Time	12 hours or more
Cable	For standard type: (CVVS or CVSB 1.5sq ↑) + Shield
Cable Connection Length	4-20mA DC signal: 2,500m, RS-485 Modbus signal: 1,000 m
Mounting type	Wall mounting type

### DIMENSION (Unit:mm)



# SI-200I

## Single Receiver with Built-in Battery



### DESCRIPTION

The SI-200I is a receiver unit with a large FND display for gas concentration. It is a dedicated receiver model compatible with detection units such as SI-100, SI-100C, and SI-100D.

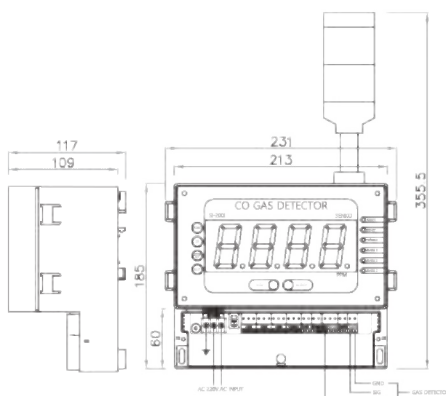
### KEY FEATURE

- Diagnosis function by itself
- 4-digit big F.N.D display
- DC 4-20mA / RS-485 signal out put
- Set alarm value (1st, 2nd, 3rd) due to a change in concentration
- Li-ion battery built in
- Wall mounted type
- Peak hold

### SPECIFICATION

Model	SI-200I (Monitoring Panel)
Detectable Gas	All applicable gases
Input Signal	4-20mA Full Scale
Dimension	231 (W) x 355.5 (H) x 117 (D)mm
Weight	1.75kg
Measurement Output Device	Big FND (for measured value [4-digit]), 9-LED
Enclosure Type	Non-explosion proof type
Measured Value Display	4-digit Big F.N.D display
Measurement Range	0.000 to 9,999 with user settings (digital)
Accuracy	Digital FND, $\pm 1\%$ +1 digit of full scale (displays a larger value)
Temperature	-20 - 50 °C
Operating Humidity	5 - 99% RH (non-condensing)
Output Signal	DC 24 V / DC 4 - 20 mA / RS-485 modbus Check output: 3 mA / Calibration output: 3 mA / Fault output: 0 mA
Alarm Display	Visual indication: 3-alarm, trouble, BATT, B/Z STOP, RESET (LED), Warning light, Audible indication : Buzzer signal (85dB)
Relay Contact	AC 250 V, 3A (Alarm 1, Alarm 2, Alarm 3, Fault)
Power Supply	Input: AC 100 - 250 V
Backup Battery	Li-ion rechargeable battery, 7.3 V, 2,850 mAh
Battery Level Display	Battery error indicator LED, operating time FND
Charging Time	6 hours
Battery Run Time	12 hours or more
Cable	For standard type: (CVVS or CVSB 1.5sq $\uparrow$ ) + Shield
Cable Connection Length	4-20mA DC signal: 2,500m, RS-485 Modbus signal: 1,000 m
Mounting type	Wall mounting type
IP	IP65

### DIMENSION (Unit:mm)



# Electrochemical Gas Sensor



	O <sub>2</sub>	O <sub>2</sub>	CO	H <sub>2</sub>	H <sub>2</sub> S	Hydro Carbon, CO <sub>2</sub> etc
Model	SS1118	SS2118	SS2128	SS2178	SS2198	IR sensor
<b>Performance Characteristics</b>						
Nominal Range	0~100%	0~30%	0~2,000ppm	0~1,000ppm	0~100ppm	
Maximum Overload	-	-	5,000ppm	2,000ppm	550ppm	
Output Signal	6.0±1.0mV	90±20μA@/ 20.9% O <sub>2</sub>	70±20nA/ppm	15±10nA/ppm	700±200nA/ppm	
Resolution	0.1%	0.1%	0.5ppm typical	2ppm	<0.1ppm typical	
T90 Response Time	≤15sec	≤15sec	≤25sec	≤30sec	≤20sec	Depends on type of the gas
Typical Baseline Range (pure air)	-	-	≤±2ppm CO equivalent	0 to 30ppm	≤±2ppm H <sub>2</sub> S equivalent	
Filter Capacity	-	-	-	-	-	
Recommended Load Resistor	-	100Ω	10Ω	10Ω	10Ω	
Repeatability	2% of signal	2% of signal	≤±2ppm CO equivalent	2% of signal	≤±2ppm CO equivalent	
Output Linearity	Linear					
Position Sensitivity	None					
Bias Voltage	Not required					
Weight	7g	18g	6g	6g	6g	15g
<b>Environmental</b>						
Temperature Range	-20°C ~ +50°C					
Pressure Range	Atmospheric ±10%					
Relative Humidity Range	15 ~ 90% RH					
Maximum Zero Shift (+20°C to +40°C)	-	-	-2 to 3ppm	-20ppm equivalent	0.2ppm equivalent	
<b>Life Time</b>						
Long Term Output Drift	Less than 5%/year					
Storage Life	6 months					
Storage Temperature	0~20°C					
Expected operating Life (years)	< 2 years	< 2 years	> 2 years	> 2 years	> 2 years	
Warranty Period	2 years					



NH3	NO2	ZECO	CO / H2S (Dual sensor)		Ethanol	Formaldehyde
SS21N8	SS2148	SS2128_B	SS21CH		SS21A8	SS21F8
0-100ppm	0-20ppm	0-1,000ppm	0-500ppm CO	0~100ppm H2S	0-1,000ppm	0-1,000ppm
200ppm	40ppm	2,000ppm	2,000ppm CO	500ppm H2S	2,000ppm	2,000ppm
100±30nA/ppm	- 220±50nA/ppm	60±20nA/ppm	80±20nA/ppm	775±275nA/ppm	25~40nA/ppm	200±50nA/ppm
<1ppm typical	<0.1ppm typical	≤0.5ppm typical	≤0.5ppm typical	≤0.5ppm typical	≤0.01ppm typical	≤1ppm typical
<30sec	<30sec	<20seconds	<30seconds		<20seconds	<60seconds
±2ppm NH3 equivalent	±1ppm NO2 equivalent	≤±2ppm CO equivalent	≤±2ppm CO	≤±0.5ppm H2S equivalent	≤±2ppm	≤±2ppm
-	-	≥20,000ppm hours	-	-	-	-
10Ω	10Ω	10Ω	10Ω	10Ω	10Ω	10Ω
<±10%	<±5%	≤±2ppm CO equivalent	≤±3% CO	≤±2% H2S equivalent	≤±2%	≤±3%
Linear		Linear up to 2,000ppm	Linear			
None						
Not required						
6g	6g	7g	18g	6g	6g	6g
-20°C ~ +50°C						
800 to 1,200 mbar	800 to 1,200 mbar	Atmospheric ±10%				
15 ~ 90% RH						
± 2ppm equivalent	± 1ppm equivalent	-	-	-2 to 3ppm	-20ppm equivalent	0.2ppm equivalent
Less than 10%/year	Less than 10%/year	Less than 5%/year				
6 months						
0 ~ 20°C						
> 2 years	> 2 years	< 2 years	< 2 years	> 2 years	> 2 years	> 2 years
2 years						

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