

**SENKO**

**KOSDAQ**  
LISTED COMPANY



# Our History

## SENKO Co., Ltd. was established based on own Electrochemical Gas Sensor Technology.

SENKO Co.,Ltd. was founded in 2004 and has developed Gas detector, Gas monitoring system based on his own Gas sensor technology. Now, SENKO is producing more than 12 gases sensor with various physical structure. SENKO has invested in research and development of new gas sensor and has customized typical electrochemical gas sensor to satisfy the requirements of Consumer product manufacturer like Samsung Electronics & LG Electronics. We are welcome to cooperate with customers for the customized sensor development.



- 2021** Acquired U&E Providing total solutions for safety, security and air quality monitoring systems  
Establishment Canada branch in Calgary
- 2020** Listed on the KOSDAQ market  
Registered in Abu Dhabi National Oil Company
- 2019** Certifications for SGT-P(IECEX, ATEX)  
OEM contract with Encored Japan Inc.(Soft Bank)  
IoT Odor monitoring system project with LG hausys  
Registered in Kuwait Oil Company(KOC)
- 2018** Establishment EU branch in UK  
Received 3 million dollars export tower award from Korea government  
Received citation from Ministry of Trade, Industry and Energy
- 2017** Establishment Russia branch in Moscow  
Certifications for SGT(ATEX, IECEX, CSA, UL)
- 2016** IoT "SOOM" Brand launching
- 2015** Green technology certificate  
IECEX certifiacate for SI-100, SI-100C and SGT  
Co-development program with LG Electronics and Samsung Electronics  
System Business Division establishment  
New customized sensor developopment for IoT market
- 2014** SENKO China Joint Venture Establishment in Shanghai  
Colormetric sensor supply to Samsung Electronics Home appliance  
China CPA, CCCF Certificate
- 2012** SENKO Osan Factory (land 2,968m<sup>2</sup>)  
35 Oversea Countries Distributorship Agreement  
Gost & Immetro Certificate  
Award from Korea President
- 2004** SENKO Co., Ltd. Establishment

# Global Sales Network

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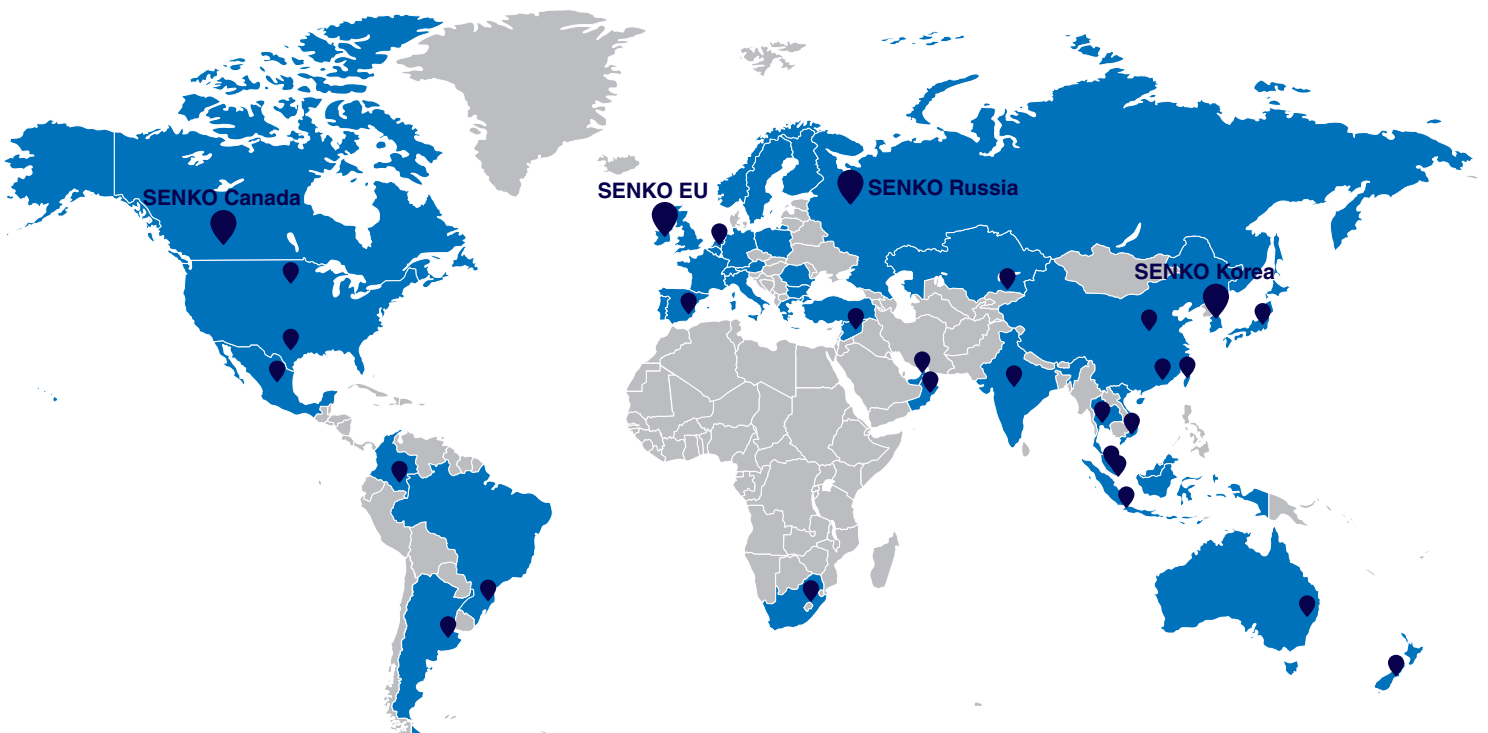
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# SGT

## Disposable Single-Gas Detector

SENKO



### Description

SGT is a single disposable detector. (SGT-P is replaceable) It operates continuously for two years even without the replacement of the battery or gas sensor in order 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 two 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 Docking Station



### Specification

<b>Model</b>	<b>SGT</b>
<b>Sensor Type</b>	Electrochemical
<b>Measurement</b>	Diffusion type
<b>Display</b>	LCD display
<b>Audible</b>	90dB at 10cm
<b>Warning Lamp</b>	Red Flashing LEDs (Light-Emitting Diode)
<b>Vibration</b>	Vibration Alarm
<b>Battery</b>	Manufacture: Vitzrocell P/N: SB-AA02(P) / System: Lithium Primary Battery Nominal voltage: 3.6V / Nominal capacity: 1.2Ah
<b>Temperature &amp; Humidity</b>	-40°C ~ +50°C(for Toxic) / -35°C ~ +50°C(for O2) 5%~95% RH (Non-condensing)
<b>Case</b>	Rubber Enclosure
<b>Accessories</b>	Calibration Cap, Manual, Calibration and Quality report
<b>Option</b>	External Sampling Pump (SP-Pump101), SENKO-IR Link, Docking Station
<b>Size &amp; Weight</b>	Size: 54(W) × 91(H) × 32(D)mm Weight: 93g(Toxic), 104g(O2) (Battery, clip included)
<b>Operating Life</b>	24 months, based on 2 minutes of alarm per day
<b>Event Log</b>	Recent 30 alarms
<b>Approval</b>	<b>ATEX</b> II 1 G Ex ia IIC T4 Ga <b>CSA&amp;UL</b> Class 1, Zone 0, ex ia IIC T4 Ga <b>IECEX</b> Ex ia IIC T4 Ga <b>INMETRO</b> Ex ia IIC T4 Ga

### 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
<b>O2</b>	0~30%Vol	19%Vol	23%Vol
<b>CO</b>	0~500ppm	30ppm	60ppm
<b>H2S</b>	0~100ppm	10ppm	15ppm
<b>H2</b>	0~1000ppm	100ppm	500ppm
<b>SO2</b>	0~50ppm	2ppm	5ppm
<b>NH3</b>	0~100ppm	25ppm	35ppm
<b>NO2</b>	0~20ppm	3ppm	5ppm

# SGT-P

## Replaceable Single-Gas Detector

SENKO



### Description

SGT-P is a single replaceable gas detector designed to detect oxygen deficiency and presence of toxic gas in the ambient environment. SGT-P is the replaceable type of a 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

<b>Model</b>	<b>SGT-P</b>
<b>Sensor Type</b>	Electrochemical
<b>Measurement</b>	Diffusion type
<b>Display</b>	LCD display
<b>Audible</b>	90dB at 10cm
<b>Warning Lamp</b>	Red Flashing LEDs (Light-Emitting Diode)
<b>Vibration</b>	Vibration Alarm
<b>Battery</b>	Manufacture: Vitzrocell / P/N: SB-AA02(P) / System: Lithium Primary Battery Nominal voltage: 3.6V / Nominal capacity: 1.2Ah
<b>Temperature &amp; Humidity</b>	-40°C ~ +50°C(for Toxic) / -35°C ~ +50°C(for O2) 5% ~ 95% RH (non-condensing)
<b>Case</b>	Rubber Enclosure
<b>Accessories</b>	Calibration Cap, Manual, Test Report
<b>Option</b>	External Sampling Pump (SP-Pump101), SENKO-IR Link, Docking Station
<b>Size &amp; Weight</b>	Size: 54mm(W) x 91mm(H) x 32mm(D) Weight: 93g(Toxic), 104g(O2) (Battery, clip included)
<b>Event Log</b>	Recent 30 alarms
<b>Operating Life</b>	24 months, based on 2 minutes of alarm per day
<b>Approval</b>	<b>ATEX</b> II 1 G Ex ia IIC T4 Ga <b>IECEX</b> Ex ia IIC T4 Ga <b>INMETRO</b> Ex ia IIC T4 Ga

### 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	0~1000ppm	100ppm	500ppm
SO2	0~50ppm	2ppm	5ppm
NH3	0~100ppm	25ppm	35ppm
NO2	0~20ppm	3ppm	5ppm

### 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**

# MGT

## Portable Multi-Gas Detector

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### Description

MGT is an united gas detector measuring four(4) major gases, which cause the most of the industrial accidents, to protect workers from the disasters caused by the 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 size & Light weight
- 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 4-6 hours (N-type)
- Configuration via exclusive IR Link
- Easy check & calibration via Docking Station
- Intrinsic Safety

### Accessories



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



**Vehicle power adaptor**



**7CH Multi adaptor**



**Sampling pump (SP-Pump101)**



**Extension Probe 5M/ 10M**



**Multi Cradle**



**MGT Single Docking Station**



**MGT Docking Station**

### Specification

Model	MGT
<b>Self-test</b>	Full function self-test upon activation Sensors, battery and circuitry - continuous
<b>Detecting Method</b>	Diffusion
<b>Display</b>	LCD Display (back-light)
<b>Alarm</b>	LED flashing, Sound, Vibration
<b>Sensor</b>	O <sub>2</sub> , CO and H <sub>2</sub> S: Electrochemical Combustible(LEL): IR or Pellistor
<b>IP</b>	67
<b>Temperature</b>	-20°C ~ +50°C
<b>Humidity</b>	5~95% RH(Non-condensing)
<b>Battery</b>	Rechargeable Li-ion power supply unit (2000mAh)
<b>Charge Time</b>	4-6 hours
<b>Battery Life</b>	IR: 60 days continuous / Pellistor: 25 hours continuous
<b>Low Battery Alarm</b>	20 minutes / 10 minutes / 5 minutes expired: 5 long beeps/ flashes and then Off is displayed
<b>Warranty</b>	2 years
<b>Weight</b>	240g
<b>Size</b>	61(w) × 114(h) × 43(d)mm
<b>Optional Accessory</b>	MGT-IR Link, Docking Station, SP-Pump 101
<b>Approval</b>	<b>ATEX</b> II 1 G Ex ia IIC T4 Ga <b>CSA&amp;UL</b> Class 1, Zone 0, Ex ia IIC T4 Ga <b>IECEX</b> Ex ia IIC T4 Ga <b>INMETRO</b> Ex ia IIC T4 Ga

### Sensor specification

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

# iGas Detector CO2

## Carbon Dioxide Gas Detector

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### 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 which may 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
- 14days of use by one fully charge
- Lightweight – 135g
- Exchangeable International wall plug Kit
- Easy configuration and data management via PC program
- Configurable Calibration, Bump test, Self test due warning

### Specification

<b>Model</b>	<b>iGas Detector CO2</b>
<b>Sensor Type</b>	IR
<b>Measurement</b>	Diffusion type
<b>Display</b>	LCD display
<b>Resolution</b>	0.01%vol / 100ppm
<b>Audible</b>	90dB at 10cm
<b>Warning Lamp</b>	Red Flashing LEDs
<b>Vibration</b>	Vibration Alarm
<b>Battery</b>	Rechargeable Li-ion(polymer) power supply unit (500mAh)
<b>Temperature</b>	-20°C ~ +50°C
<b>Charging Time</b>	100 minutes
<b>Humidity</b>	5%~95% RH (Non-condensing)
<b>Case</b>	Rubber Enclosure
<b>Accessories</b>	Calibration Cap, Charge Cable(USB C-Type) and Adaptor
<b>Option</b>	-
<b>Size &amp;Weight</b>	Size: 30(W) x 50(H) x 35(D)mm , Weight: 135g
<b>Operating Life</b>	14 day
<b>Event Log</b>	Recent 30 alarms
<b>Approval</b>	<b>EMC</b> directive(2014/30/EU), ROHS 2

### 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)

#### 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**



# Multi Gas Detector with built-in pump

## 5-Gas Detector

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### Description

MGT Pump type is a portable multi gas detector used for detecting 5 gases, O<sub>2</sub>, CO, H<sub>2</sub>S, combustible gas, and toxic gases(Option).

### Key Feature

- Sampling pump built in structure
- Multi 5 gas detector

### Specification

<b>Model</b>	<b>Multi Gas Detector with built-in pump 5-Gas Detector</b>
<b>Self-test</b>	Full function self-test upon activation Sensors, battery, Pump and circuitry - continuous
<b>Detecting Method</b>	Pump
<b>Display</b>	LCD Display (back-light)
<b>Alarm</b>	LED flashing, Sound, Vibration
<b>Sensor</b>	O <sub>2</sub> , CO and H <sub>2</sub> S: Electrochemical    Combustible(LEL): IR or Pellistor    CO <sub>2</sub> : IR    VOCs: PID
<b>IP</b>	67
<b>Temperature</b>	-20°C ~ +50°C
<b>Humidity</b>	5~95% RH(Non-condensing)
<b>Battery</b>	Rechargeable Li-ion power supply unit (4,000mAh)
<b>Charge Time</b>	4-6 hours
<b>Battery Life</b>	IR: 5 days continuous / Pellistor: 30 hours continuous(Expected)
<b>Low Battery Alarm</b>	20 minutes / 10 minutes / 5 minutes    expired: 5 long beeps/flashes and then Off is displayed
<b>Warranty</b>	2 years
<b>Weight</b>	400g(Expected)
<b>Size</b>	77(w) x 147(h) x 54(d)mm
<b>Optional Accessory</b>	IR Link, Docking Station(Expected)
<b>Approval</b>	<b>IECEX</b> EX ia IIC T4 Ga or EX da ia IIC T4 Ga(Expected)

### 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	30ppm
CH <sub>4</sub>	0~100%LEL	10%LEL	30%LEL
CO <sub>2</sub>	0~5.0%vol	-	-
VOCs	0~6,000ppm	-	-
SO <sub>2</sub>	0~20ppm	-	-
NH <sub>3</sub>	0~100ppm	-	-
NO <sub>2</sub>	0~20ppm	-	-

# SP-Pump101

## Automatic Sampling Pump

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### Description

Sampling pump is designed to be used by connecting to SGT, SGT-P, MGT and SP2nd model. This can be used to check if there is gas leakage when measure the gas underground manhole.



### Key Feature

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

### Specification

<b>Model</b>	<b>SP-Pump101</b>
<b>Flow rate</b>	Minimum 500cc/min
<b>Alarm display</b>	Low flow alarm / Low battery alarm (Red LED)
<b>Operating temperature</b>	-20°C ~ 50°C
<b>Operating humidity</b>	5% to 99% RH(Non-condensing)
<b>Battery power</b>	1.5V AA size Alkaline battery 1EA
<b>Battery life time</b>	More than 10 hours
<b>Dimensions</b>	30(W) × 254(H) × 47(D)mm
<b>Weight</b>	260g (including Battery)



### Accessories



Extension Probe  
5M/ 10M



### 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 number, accurate measurement is possible.

### Key Feature

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

### Specification

Model	SP Secure		
Measuring gas	LNG/LPG, Combustible Gas	H2	
Measuring method	Catalytic	Catalytic	Electrochemical cell
Measuring range	0~100%LEL	0~100%LEL	0~1000ppm
Sensor life time	> 3 years	> 3 years	> 2 years
Response time	<10sec/90% scale	<10sec/90% scale	<75sec/90% scale
Resolution	1%LEL	1%LEL	Within 5ppm
Measuring type	Auto Sampling type		
Operation time	About 12 hours		
Accuracy	±3%/Full scale		
Parameter Control	Right Side switch(calibration, maintenance, alarm setting)		
Operation mode display	Visual : alarm & status icon, Trouble RedLED Audible : buzzer(90dB @ 10cm)		
Measuring value display	LCD Display(3-digit)		
Alarm display	Visual : alarm & status icon Audible : buzzer		
Alarm level set	Programmable within detection range		
Sampling method	Internal sampling pump		
Flow rate	0.5 liter/min		
Program set mode	Alarm value(1,2 alarm)		
Operating temperature	-20°C ~ 50°C		
Operating humidity	10 to 95% RH(Non-condensing)		
Battery power	Rechargeable NI-MH or AA Alkaline battery 3ea		
Battery life time	More than 12 hours		
Material	Poly carbonate		
LCD size	32(W) × 40(H)mm		
Dimensions	55(W) × 240(H) × 31(D)mm		
Weight	260g (Battery Including)		
Approval	KGS Ex d ia IIB T3		

### Accessories



Extension Probe  
5M/ 10M

# SGT Docking Station

## Description

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, 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 Docking station. Event logs are saved into the USB memory and provide analyses for users. The configuration can be set by connecting Docking station with IR link.

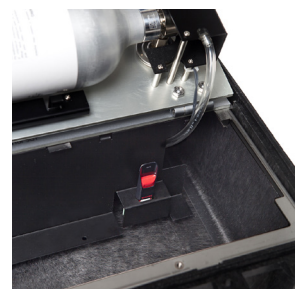


## Key Feature

- Calibration, Bump Test
- Displays status on Power LED and Unit LED
- Saves the status and results of Docking station and SGT
- Upgrades Docking and SGT Firmware
- Saves the log data of Docking station and SGT
- Supports user options using a PC program (IR Link/USB)

## Specification

<b>Model</b>	<b>SGT Docking Station</b>
<b>Size</b>	47 × 41 × 22cm (18.50 × 16.14 × 8.66 in.)
<b>Weight (Without gas cylinder)</b>	8.2kg
<b>Operating Temperature</b>	41 to +104°F (5 to +40°C)
<b>Warrenty</b>	Full 2 years
<b>Battery Type</b>	Rechargeable Lithium Ion
<b>Battery Life</b>	1000 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



## Accessories



### IR-Link Communication

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

## 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 the 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>Size</b>	52.5 x 43.7 x 21.3cm(20.66" x 17.20" x 8.40")
<b>Weight (Without gas cylinder)</b>	11.0kg
<b>Operating Temperature</b>	41 to +104°F (5 to +40°C)
<b>Warrenty</b>	Full 2 years
<b>Battery Type</b>	Rechargeable Lithium Ion
<b>Battery Life</b>	1000 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 5 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



## Accessories



### IR-Link Communication

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





## Description

Docking station maximizes the performance of MGT device. It provides bump test and calibration to ensure the safety of devices and users. Through Bump test, 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 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 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>Size</b>	24.7 x 21 x 10.7cm
<b>Weight</b>	2.85kg
<b>Operating Temperature</b>	41 to +104°F (5 to +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 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



## Accessories



### IR-Link Communication

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

# SI-100

## Fixed Gas Detector



### Description

SI-100 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 LCD display and can be connected to the controller with a standard 4-20mA analog output communication or RS-485 digital communication.

### Key Feature

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



### 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	>2years	>5years	>2years	>2years
Response time	<10sec/ 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	±2%/Full scale			
Parameter Control	Front 3 magnetic switch(calibration, maintenance, 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, 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(Optional: Hart), Digital : RS-485			
PC interace	RS_485			
Cable/Distance	(4-20mA and Power: CVVSB 1.5sq or AWG 20 / 2,500m max), (RS-485 data communication cable: UL2919 RS-485 1pair / 1,200m max)			
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% to 95% RH(Non-condensing)			
Operating power	9~34Vdc 600mA			
Material	Aluminium, Stainless steel(STS304)			
LCD size	55(W) × 30(H) mm			
Dimensions	150(W) × 165(H) × 110(D) mm			
Weight	Standard type: 1.9kg			
Approval	<b>ATEX</b> Ex d IIC T5 Gb IP65			
	<b>CSA</b> (Under certification)			
	<b>IECEX</b> Ex d IIC T5 IP65			
	<b>INMETRO</b> Ex d IIC T5 Gb IP65			

SI-100 Detectable Gases	
Gas Name	Chemical Formula
Oxygen	O2
Carbon Monoxide	CO
Sulfur Dioxide	SO2
Hydrogen(ppm or %LEL)	H2
Hydrogen Sulfide	H2S
Ammonia	NH3
Acetylene	C2H2
Ethanol	C2H6O
Toluene(Catalytic)	C7H8
Toluene(IR)	C7H8
Methane(Catalytic)	CH4
Methane(IR)	CH4
Chlorine	Cl2
Carbon Dioxide (%vol, ppm or %LEL)	CO2
Hydrogen Chloride	HCl
VOC	VOC
Xylene(Catalytic)	C8H10
Xylene(IR)	C8H10
Hydrogen Peroxide	H2O2
Nitrogen Dioxide	NO2
Ethylene Oxide	C2H4O
Ethylene(Catalytic)	C2H4
Ethylene(IR)	C2H4
Nitrogen Monoxide	NO
Hydrogen Fluoride	HF
Isobutane	C4H10
Propane(Catalytic)	C3H8
Propane(IR)	C3H8
Hydrocarbon	HC
Silane	SiH4
Fluorine	F2

\*Please contact us for gases not listed in the table.

# SI-100C

## Fixed Gas Detector

SENKO



### 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			
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	>2years	>5years	>2years	>2years
Response time	<10sec / 90% scale	<30sec / 90% scale	*Depends on sensor	<15sec / 90% scale
Resolution	1%LEL	1%LEL	*Depends on sensor	0.1%VOL
Cable/Distance	Signal cable: 3-wire > CVVSB 1.5sq or AWG20		Power + Signal cable: 2-wire > CVVSB 1.5sq or AWG20	
Measuring type	Diffusion Type			
Accuracy	±3%/Full scale			
Parameter	Control Switch(calibration), Admin Console(maintenance, OPTION)			
Operation mode display	2-LED(Operating and Zero Cal. Span Cal. LED)			
Output signal	4-20mA DC(3wire for combustible gas, 2wire for other gas)			
Conduit connection	NPT 3/4" (2way)			
Mounting type	Wall mount			
Setting	1 Switch Interface(Calibration), Console set available(Option)			
Remote Set	via Console (Zero Calibration, Span Calibration, Calibration Gas Concentration Set, Factory default, 4-20mA Calibration, Range Set, Data Logging)			
Operating temperature	-20°C ~ +55°C			
Operating humidity	5% to 95% RH(Non-condensing)			
Operating power	9~34Vdc 600mA			
Material	Aluminium, Stainless steel(STS304)			
Dimensions	102(W) × 137(H) × 87(D)mm			
Weight	1.0kg			
Option	Console			
Approval	<b>ATEX</b> Ex d IIC T5 Gb IP65			
	<b>CSA</b> (Under certification)			
	<b>IECEX</b> Ex d IIC T5 IP65			
	<b>INMETRO</b> Ex d IIC T5 Gb IP65			

SI-100C Detectable Gases	
Gas Name	Chemical Formula
Oxygen	O2
Carbon Monoxide	CO
Sulfur Dioxide	SO2
Hydrogen(ppm or %LEL)	H2
Hydrogen Sulfide	H2S
Ammonia	NH3
Nitrogen Dioxide	NO2
Methane(Catalytic)	CH4
Methane(IR)	CH4
Chlorine	Cl2
Carbon Dioxide (%vol, ppm or %LEL)	CO2
Hydrogen Chloride	HCl
Hydrogen Peroxide	H2O2
Nitrogen Monoxide	NO
Hydrogen Fluoride	HF
Isobutane	C4H10
Propane(Catalytic)	C3H8
Propane(IR)	C3H8
Hydrocarbon	HC
Silane	SiH4
Fluorine	F2

\*Please contact us for gases not listed in the table.



# 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

<b>Model</b>	<b>SI-100D</b>
<b>Measuring range</b>	LNG/LPG(methane/propane)
<b>Measuring type</b>	Diffusion type
<b>Measuring method</b>	Catalytic
<b>Measuring range</b>	0~100%LEL
<b>Sensor life time</b>	> 2 years
<b>Response time</b>	<10sec/90%scale
<b>Accuracy</b>	±3%/Full scale
<b>Output signal</b>	4-20mA DC
<b>Cable/Distance</b>	CVVSB 1.5sq or AWG20 × 3wire (Power + Signal) / 2,500m max
<b>Conduit connection</b>	NPT 1/2"
<b>Mounting type</b>	Wall mount
<b>Operating temperature</b>	-20°C ~ +50°C
<b>Operating humidity</b>	0%~95% RH(Non-condensing)
<b>Operating power</b>	24V DC +/- 20%, <90mAh
<b>Material</b>	Aluminium
<b>Dimensions</b>	93(W) × 106(H) × 89(D)mm
<b>Weight</b>	0.6kg
<b>Approval</b>	<b>KCS Ex d II B T4/14-KB2BO-0422</b>



# SI-H100 / SI-H100 with Pyrolyzer (Option)

## Sampling type fixed-Gas Detector

SENKO



### 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 alarm of dangerous concentration, fault situation, and so on, upon attaching on the wall. SI-H100 assists to prevent or control a variety of gas related accidents including toxic, flammable gases in a plant providing reliable sensor technology.

Pyrolyzer option can be installed underneath the standard SI-H100. for detection and measurement 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 2years life time (Sampling up to 30M)
- Smart sensor cartridge with on board
- 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 systems 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

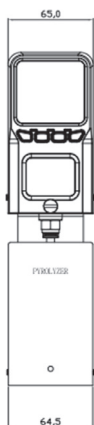
### Specification

<b>Model</b>	SI-H100
<b>Size</b>	124mm(H) X 65mm(W) X 155mm(D)
<b>Weight</b>	2Kg
<b>Operating voltage</b>	DC : 24V ± 10% PoE : 36V~57V (Typical : 48V)
<b>Flow rate</b>	500mL/min (MAX 900)
<b>Power consumption</b>	Approximately 5.0W
<b>Measurement display</b>	Graphic LCD (160 X 100), Gas concentration, Flow rate, Alarm, Rear light, Device abnormality
<b>Alarm</b>	90dB at 10cm
<b>Relay</b>	Primary Alarm, Secondary Alarm, Fault Alarm
<b>Output signal</b>	Analog, 4-20mA
<b>Digital communication</b>	RS-485, TCP Ethernet
<b>Sampling distance</b>	Length of input gas tube: Up to 30m (FEP tube) Length of exhaust gas tube: Up to 30m (FEP tube)
<b>input/output tube</b>	1/4" Teflon tube
<b>Operating temperature</b>	0°C ~40°C
<b>Certification</b>	CE
<b>Control/Set</b>	4 Button & RS485 & Ethernet
<b>Warranty of the device</b>	2 years
<b>Warranty of sensor cartridge</b>	1 year
<b>Remote interface</b>	Ethernet, RS-485
<b>Wiring</b>	4 to 20mA / DC power / Relay: Up to 14 AWG
<b>ETC</b>	Update the latest version of firmware available via the web

SI-H100 Detectable Gases	
Gas Name	Chemical Formula
Oxygen	O2
Carbon Monoxide	CO
Sulfur Dioxide	SO2
Hydrogen(ppm or %LEL)	H2
Hydrogen Sulfide	H2S
Ammonia	NH3
Prophine	PH3
Nitrogen Dioxide	NO2
Methane(Catalytic)	CH4
Methane(IR)	CH4
Chlorine	Cl2
Hydrogen Chloride	HCl
Hydrogen Peroxide	H2O2
Hydrogen Fluoride	HF
Propane(Catalytic)	C3H8
Propane(IR)	C3H8
Hydrocarbon	HC
Silane	SiH4
Boron Trichloride	BCL3
Ozone	O3
VOC	VOC

\*Please contact us for gases not listed in the table.

### Option



### Accessories



Adapter



Under cover



# SI-300

## Fixed Gas Detector (Sampling Type)

SENKO



### Description

SI-300 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 Button / RS485 / TCP Ethernet / Bluetooth

### Applications

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



### Specification

<b>Model</b>	<b>SI-300</b>
<b>Size</b>	194mm(W) X 152.4mm(D) X 136mm(H)
<b>Weight</b>	2Kg
<b>Operating voltage</b>	DC : 24V ± 10% PoE : 36V~57V (Typical : 48V)
<b>Flow rate</b>	100 ~ 1,000ml (Normal 300~500ml / min)
<b>Power consumption</b>	Approximately 5.0W
<b>Measurement display</b>	FND, gas concentration, flow rate, alarm, device faulty
<b>Relay</b>	Low Alarm, High Alarm, Fault Alarm
<b>Analog Output signal</b>	4-20mA
<b>Digital communication</b>	RS-485, TCP Ethernet
<b>Sampling distance</b>	Length of input gas tube: up to 30m (FEP tube) Length of exhaust gas tube: up to 30m (FEP tube)
<b>Input/Output tube</b>	1/4" Teflon tube
<b>Operating temperature</b>	-40°C ~ 55°C
<b>Certification</b>	KCs: Ex db IIC T6 Gb
<b>IP</b>	IP 65 (KS C IEC60529:2013)
<b>Control/Set</b>	4 Button & RS485 & Ethernet & Bluetooth
<b>Warranty period of the device</b>	2years
<b>Warranty of sensor cartridge</b>	1year
<b>Remote interface</b>	Ethernet , RS-485, HART(Optional)
<b>Wiring</b>	4 to 20mA / DC power / Relay : up to 14 AWG
<b>Pressure range</b>	90 to 110KPa
<b>Maximum sample flow</b>	Max. 1,000 ml
<b>Maximum sample pressure</b>	6KPa

SI-300 Detectable Gases	
Gas Name	Chemical Formula
Oxygen	O2
Carbon Monoxide	CO
Sulfur Dioxide	SO2
Hydrogen	H2
Hydrogen	H2
Hydrogen Sulfide	H2S
Combustible	-
Combustible	-
Ammonia	NH3
Acetylene	C2H2
Ethanol	C2H6O
Toluene	C7H8
Toluene	C7H8
Methane	CH4
Methane	CH4
Chlorine	Cl2
Chlorine	Cl2
Carbon Dioxide	CO2
Carbon Dioxide	CO2
Carbon Dioxide	CO2
Hydrogen Chloride	HCl
VOC	VOC
Xylene	C8H10
Hydrogen peroxide	H2O2
Nitrogen Dioxide	NO2
Ethylene oxide	C2H4O
Ethylene	C2H4
Nitrogen Monoxide	NO
Hydrogen fluoride	HF

\*Please contact us for gases not listed in the table.

# SI-310

Fixed Gas Detector (Sampling type with the built-in pyrolyzer)

SENKO



## 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 4-20 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
- Cartridge type sensor – Easy maintenance
- Built-in flow control function
- Large LCD with Digital Concentration Indication and Digital Flow Indication
- Control set of 4 Button / RS485 / TCP Ethernet / Bluetooth

## Applications

- Semiconductor industry

## Specification

<b>Model</b>	<b>SI-310</b>
<b>Size</b>	212mm(W) X 225mm(D) X 141.7mm(H)
<b>Weight</b>	6.5Kg
<b>Operating voltage</b>	DC : 24V ± 10% PoE : 36V~57V (Typical : 48V)
<b>Flow rate</b>	100 ~ 1,000 ml (Normal 300~500ml / min)
<b>Power consumption</b>	Approx. 15.0W @ +24VDC (Pyrolyzer Use 600mA@+24Vdc)
<b>Measurement display</b>	FND, gas concentration, flow rate, alarm, device faulty
<b>Relay</b>	Low Alarm, High Alarm, Fault Alarm (Rated 2.0A @ 30Vdc)
<b>Analog Output signal</b>	4-20mA
<b>Digital communication</b>	RS-485, TCP Ethernet (PoE)
<b>Sampling distance</b>	Length of input gas tube: up to 30m (FEP tube) Length of exhaust gas tube: up to 30m (FEP tube)
<b>Input/Output tube</b>	1/4" Teflon tube
<b>Operating temperature</b>	-40°C ~ 60°C
<b>Certification</b>	KCs: Ex db IIC T6 Gb
<b>Control/Set</b>	4 Button & RS485 & Ethernet & Bluetooth
<b>Warranty period of the device</b>	2 years
<b>Warranty of sensor cartridge</b>	1year
<b>Remote interface</b>	Ethernet (PoE), RS-485, HART(Optional)
<b>Wiring</b>	4 to 20mA / DC power / Relay : up to 14 AWG / Ethernet : RJ-45 Cat.5E
<b>Pressure range</b>	90 to 110KPa
<b>Maximum sample flow</b>	Max. 1,000 ml
<b>Maximum sample pressure</b>	6KPa

SI-310 Detectable Gases	
Gas Name	Chemical Formula
Oxygen	O2
Carbon Monoxide	CO
Sulfur Dioxide	SO2
Hydrogen	H2

\*Please contact us for gases not listed in the table.

# SI-100IS

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

SENKO



### Description

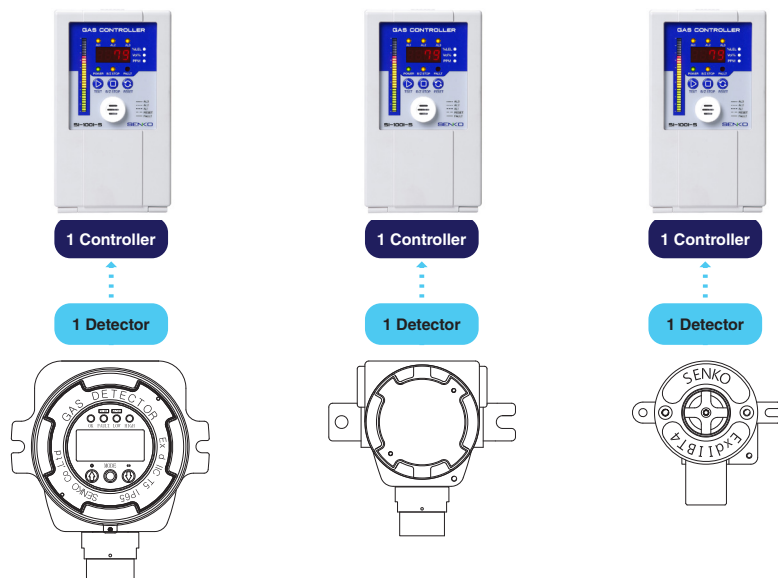
SI-100IS is a single control panel and an alarm for fixed gas detector and fixed gas leak detector composed of sensing part and receiver. It is designed as DIN type and so can be installed as wall mount panel. Performing calibration is processed from a detector and can also perform from the SI-100IS 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 graph, 3 Alarm LED, 3 Status LED, 7-Segment(4Digit)
Sound	buzzer(Alarm1,2,3, Reset, Fault), 80dB
Operation mode display	3 Alarm LED, 3 Status LED
Measuring value display	30-Bar graph, 7-Segment(4Digit)
Alarm level set	Alarm1,2,3 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 × 3wire (Power + Signal) / 2,500m max
Mounting type	Wall mount
Program set mode	ALARM1,2,3, 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
Dimensions	120(W) × 200(H) × 51(D)mm
Weight	0.5kg



# SI-100IM

## Multi Channel Gas Monitor for Fixed Gas Detectors **SENKO**



### 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, Standalone type, or 19" Rack type according to a user's preference.

### Key Feature

- Sophisticated design and simple structure
- 4Digit F.N.D Digital 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 F.N.D Digital Display 40 LED Bar Graph (% , PPM, LEL Unit Display)
Alarm Display	Fault, 1st, 2nd, 3rd Alarm ICON AU01~AU10 (Alarm Unit, indicating in order)	Fault, 1st, 2nd, 3rd Alarm ICON 40 Red Arrow LED 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 $\pm 1\%$ 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
Alarm Reset	Manual Total Reset & HMI	Manual Local Reset
Self Test	Battery Test Switch (AC/DC)	Test Switch (0~Max Range 10sec)
Scan Time	10ms	10ms
Back-Up Battery	Ni-Cd Battery 18V 600mA (3, 6Channel)	
Operating Power	110/220V.AC 50/60Hz (or 24V.DC)	
Temperature / Humidity	-20°C ~ 60°C, 95%RH	-20°C ~ 60 °C, 95%RH
Dimensions	Main Channel Card : 40(W) × 130(H) × 104(D)mm	Alarm Channel Card : 40(W) × 130(H) × 104(D)mm
Operating in/out	RS-485 Modbus (SI-100ICU)_Option	
Total Weight & Dimensions	3CH : 7.3kg, 6CH : 10kg Wall Mount Panel 3CH : 278.5(W) × 450(H) × 115(D)mm Wall Mount Panel 6CH : 398.5(W) × 450(H) × 115(D)mm	
Option	Built-in light bar	

# SI-200I

## Single Receiver with Built-in Battery

SENKO



### Key Feature

- Single Receiver
- Self-diagnosis function
- 4Digit BIG FND display
- DC 4-20mA / RS-485 signal output
- LED and Relay contact output
- Alarm value and delay time can be set
- Built-in Li-ion Battery
- Wall mounting type
- Peak hold

### Applications

- Steel mill
- Petrochemical, Oil refinery
- Shipbuilding yard
- Wastewater treatment facilities
- LPG tank facility
- LNG gas facility



### Specification

Model	SI-200I (MONITORING PANEL)
Measuring Output	Big FND display(for measured value (4-digit)), 9-LED
Enclosure	Non-explosion Proof type
Detectible Gas	All applicable gases (for SI-100, SI-100C, SI-100D models)
Measuring Display	4-digit big digital FND
Measuring Range	0.000 to 9999 Digital user setting
Accuracy	Digital FND, $\pm 1\%$ +1 digit of full scale
Input Signal	4-20mA Full Scale
Operation Temperature	-20 to 50 °C
Operation Humidity	5 to 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 (85 dB)"
Relay contact	AC 250V / 3A (Alarm1, Alarm2, Alarm3, Fault)
Power Supply	INPUT : 100~250V.AC / 18~31V.DC (280mA Max)
Back-Up Battery	Li-ion Rechargeable Battery, 7.3V, 2,850mAh
Battery display	Battery error indicator LED, operating time FND
Battery Operating Time	1-2 hour or more
Cable	Standard type : (CVVS or CVVSB 1.5sq $\uparrow$ )+Shield
Cable Connection Length	"4 - 20mA DC Signal : 2,500m RS-485 Modbus Signal : 1,000m"
Mounting type	Wall mounting type
IP code	IP65
Dimensions& Weight	235.6(W) $\times$ 355.5(H) $\times$ 109.3(D) mm / 1.75kg



# Indoor CO2 monitor

## Carbon Dioxide Gas monitor

### Description

Indoor CO2 monitor is the most reliable air quality monitor monitor it analyzes CO2, Temperature, Humidity continuously to help you maintain a healthy and comfortable environment. CO2 gas is colorless and odorless, it classified as a toxic gas which may cause asphyxia and narcotic effects. A fresh, clean air environment also increases productivity and strengthens the immune system.



### Key Feature

- Reliable monitoring of indoor air quality(CO2/Temp/Humi)
- Real-time air quality measure
- High quality sensor
- Connect wirelessly to your smartphone via Bluetooth, compatible with most Apple, Samsung and Google device
- Portable & durable
- Increased productivity, reduced fatigue



### Specification

<b>Model</b>	Indoor CO2 Monitor
<b>Measuring Range</b>	360ppm ~ 5,000ppm
<b>Battery</b>	Rechargeable Li-ion power (400mA)
<b>Operating temperature</b>	-10°C ~ 40°C
<b>Operating humidity</b>	10% ~ 90%
<b>Interface</b>	Bluetooth® 5.0
<b>LED display</b>	Green Lamp : 360ppm ~ 999ppm Yellow Lamp : 1000ppm ~ 1499ppm RED Lamp : 1500ppm ~ 1999ppm Red Blinking : 2000ppm ~ 5000ppm

- Design can be changed

**New  
Product  
Coming Soon**

# BMC-2000

## Breath CO Monitor

SENKO

CE



### 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 size 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

<b>Model</b>	<b>BMC-2000</b>
<b>Measuring gas</b>	CO
<b>Measuring type</b>	Breath through the mouth
<b>Measuring method</b>	Electrochemical cell
<b>Measuring range</b>	0~100ppm, 0~500ppm
<b>Countdown</b>	15 seconds
<b>Accuracy</b>	±5%/Full scale or 1ppm
<b>Hydrogen cross sensitivity</b>	5~10% / Full scale
<b>Resolution</b>	1ppm
<b>Parameter Control</b>	Front 3 switch(calibration, maintenance, configuration setting)
<b>Operation mode display</b>	Visual : Graphic LCD Display, LED Indicator Audible : buzzer
<b>Measuring value display</b>	Graphic LCD Display
<b>LED indicator</b>	7 Steps (Green/Amber/Red)
<b>Reset signal</b>	Auto Power OFF
<b>Mounting type</b>	Pocket, Hand carry
<b>User mode</b>	Adult / Adolescent
<b>Program set mode</b>	Language(Korean, English), Age, Sound, Calibration
<b>Operating temperature</b>	0°C ~ +40°C
<b>Operating humidity</b>	5 to 95%RH(Non-condensing)
<b>Mouthpiece adapter</b>	D type bacteria filter
<b>Disposable mouthpiece</b>	Diameter 22mm
<b>Material</b>	PC+ABS
<b>LCD size</b>	50(W) × 30(H)mm
<b>Dimensions</b>	74(W) × 140(H) × 42(D)mm
<b>Weight</b>	160g



# 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	Depends on type of the gas
Maximum Overload	-	-	5,000ppm	2,000ppm	550ppm	
Output Singnal	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	
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					
Positon Sensitivity	None					
Bias Voltage	Not required					
Weight	7g	18g	6g	6g	6g	
<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	6months					
Storage Temperature	0~20°C					
Expected operating Life(years)	< 2years	< 2years	> 2years	> 2years	> 2years	
Warranty Period	2years					



NH3	NO2	2ECO	CO / H2S (Dual sensor)		Ethanol	Formaldehyde
SS21N8	SS2148	SS2128_B	SS21CH		SS21A8	SS21F8
0-100 ppm	0-20 ppm	0-1,000ppm	0-500ppm CO	0~ 100ppm H2S	0-1,000ppm	0-1,000ppm
200 ppm	40 ppm	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
< 1 ppm typical	< 0.1 ppm 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 1200 mbar	800 to 1200 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				
			6months			
			0~20°C			
> 2years	> 2 years	< 2years	< 2years	> 2years	> 2years	> 2years
			2years			

# MEZUS Series

## Air Quality Monitoring System



KENTEK specializes in the production of environmental analyzers for air pollution, indoor air quality, odor and flue gas emissions. KENTEK has achieved the environmental certificates of CEP(China) and EPA(USA) and we are ready to meet your global standard and analyze pollution and offer solutions to protect the environment.



### Gas Analyzer

Customize gas type in your Monitoring system



### Particulate Monitor

PM10, 2.5 Analyzer



### MEZUS 510

Calibrate your Analyzer with Multigas Calibrator



### MEZUS 520

Supply Zero Air for accurate Calibration

## Specifications

Gas Analyzer	
<b>Ranges</b>	0~0.1/0~0.5/0~1ppm (selectable) (SO2/NOx/O3/H2S)
	0~50/0~100ppm (selectable) (CO)
	0~500/0~1000/0~2000/0~5000ppm (selectable) (CO2)
<b>Lower detectable limit</b>	0.5ppb (SO2/NOx/O3/H2S)
	0.05ppm (CO)
	0.2ppm (CO2)
<b>Zero drift</b>	1ppb (SO2/NOx/O3/H2S)
	0.1ppm (CO)
	0.25ppm (CO2)
<b>Span drift</b>	1% Full scale
<b>Linearity</b>	1% Full scale
<b>Sample flow rate</b>	0.5~1 liter/min
<b>Operating temperature</b>	5~40°C
<b>Size</b>	506mm(W) x 900mm(H) x 392mm(D)

Particulate Monitor	
<b>Measurement type</b>	PM10, PM2.5 and EC/OC
<b>Ranges</b>	0~1000mg/m3 to 0~5000mg/m3
<b>Source</b>	Carbon -14(C14) <100uCi
<b>Lower detectable limit</b>	<4mg/m3 (1 hour)
<b>Measurement cycle</b>	5 minutes to 1 hour
<b>Sample flow rate</b>	Stabilized flow control by 16.7 litres/min

	MEZUS 600	MEZUS 610
<b>Display</b>	5inch TFT-LCD & Touch Screen	7inch TFT-LCD & Touch Screen
<b>MCU</b>	i.MX6S-800Mhz @ Cortex-A9	S3C6410-667Mhz @ ARM11 SoC
<b>Size (mm)</b>	380(W) x 370(H) x 243(D)	480(W) x 350(H) x 368(D)
<b>Weight</b>	10.5kg (Portable type)	19kg (19" Rack mountable)


MEZUS 510	MEZUS 520
Multigas Calibrator	Zero Air Generator
UV Photometer (0~0.1 to 0~1ppm)	Internal Membrane air dryer
Optional O3 Generator Module	Internal Pump (Output 20SLPM @30 psig)
7inch TFT-LCD Touch Screen Interface	Automatic Pump Control
Ethernet, RS-232, RS-485, USB port	Automatic Water drain
Temperature & Pressure compensation	Scrubber for SO2, NO, NO2, O3, H2S and NH3





## SENKO

SENKO Co.,Ltd. was founded in 2004 and has developed Gas detector, Gas monitoring system based on our own Gas sensor technology. Now, SENKO is producing more than 12 gases sensor with various physical structure.

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