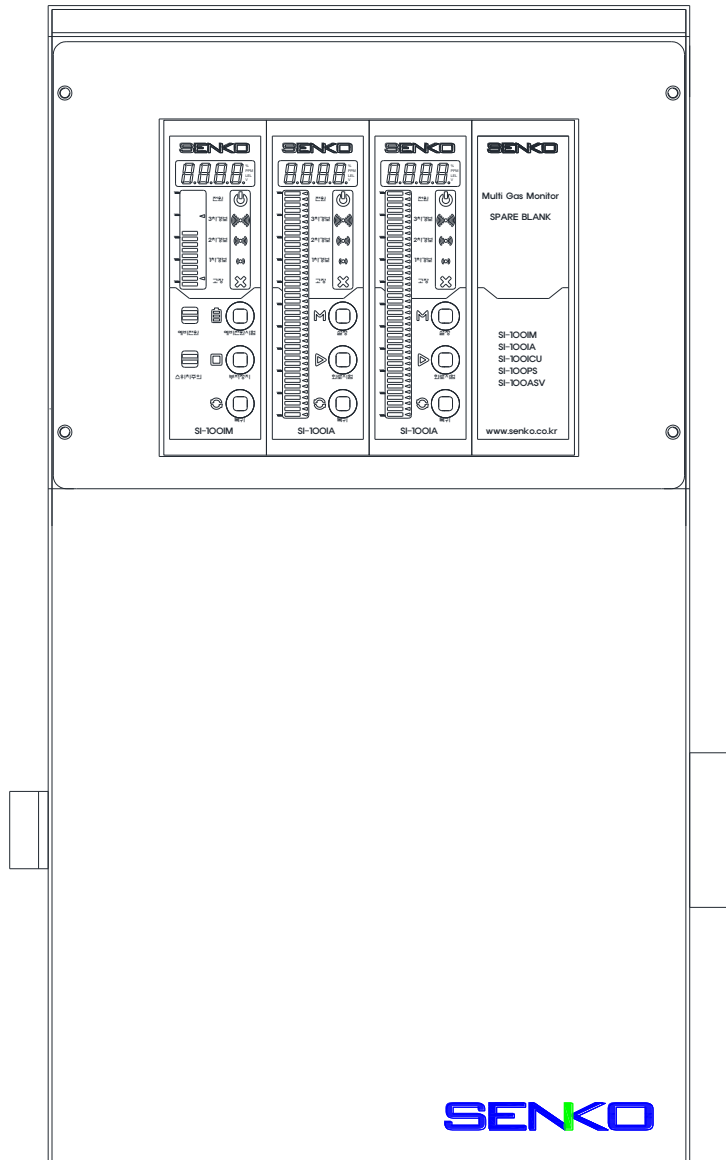


MULTI GAS MONITOR (SI-100IM)

USER MANUAL



SI-100IM – MAIN UNIT

SI-100IA – ALARM DISPLAY UNIT

SENKO

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⚠ WARNING

Read this manual carefully before using the instrument. The instrument will perform as designed only if it is used and maintained in accordance with the manufacturer's instruction. Otherwise, it could fail to perform as designed and persons who rely on this instrument for their safety could sustain serious personal injury or death.

This manual consists of contents about how to use the gas detector. All operators involved in the operation and maintenance of the equipment should read carefully before operation. Caution or warning signs contained in the manual will always be followed. The defects or failure of the product may be caused if our products are used outside the scope of the environment and the product's SPEC as specified in the manual or if the equipment is used by workers not qualified for the maintenance and repair of the products. SENKO is not responsible for such products' failure. Because our product includes a default installation circuit diagram, an installation must be carried out by a qualified person. Also, regular calibration and alarm check on the device must be performed by a qualified worker. SENKO recommend you that monthly calibration and check be performed for the accuracy and reliability of the device. Should a problem occur, please contact the SENKO.

WARRANTY

SENKO warrants the SI series product for 24 months from the shipment date. SENKO will repair or replace a defected product under the warranty free of charge with a new product. However, components, such as sensors, lamps, and batteries, which will have their lives shortened as used are not applicable to this warranty. If a product was purchased a route that SENKO does not recognize, a product with malfunction cannot be repaired or replaced free of charge when mechanical damages or deformations happen from improper use of the product by a consumer or when product failures occur because calibration or replacement of parts has not been made according to a procedure of manual.

Should our product have defect or other quality problems, all the costs incurred except the shipping cost will be borne by SENKO during the warranty period. After the warranty period, all the costs of repair, replacement, transportation of products or parts, in principle, will be borne by customers. SENKO is not liable for any indirect or incidental loss or accidents that may occur while using the product. The warranty is limited to replacement of parts and products. This warranty is applicable only to users who have purchased the product from authorized sales offices or representatives specified by SENKO. Warranty repairs must be made through a SENKO-designated A/S center with experienced technicians.

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1. Overview

SI-100IM (MULTI GAS MONITOR)

With a built-in 32bit High Speed CPU, the SI-100IM product can quickly process a variety of functions and provide precision data.

The SI-100IM product is a multi-type, composed of the Main Alarm Unit and the Alarm Display Unit, which has from one channel to 12 channels from one main alarm unit.

The SI-100IM product, designed as a DIN Type, can be installed in a variety of designs, such as Wall Mount Panel Type, Free Standing Type or 19 "Rack Type.

The SI-100IM products are indicated with 4 FND Digital Display and 40 units of Bar-Graphic Display, and can generate three kinds of alarms.

The primary, secondary, tertiary alarm setting displays are indicated with 40 Arrow Displays, which make it easy to recognize.

In addition, a unit display (LEL, PPM,%) by gas on the right of the FND Display is designated for use so that anyone can easily determine and distinguish gas' combustibility, toxicity , oxygen by intended use, thereby enabling easy management.

2. Features

SI-100IM products are equipped with three types of warning alarms, failure alarm, 4-20mA, an output of 12V signals, etc. Flat Cable connection only to the upper of the product enables transmission through telecommunication, thereby making a channel display of a corresponding Alarm Unit on the Main Alarm Unit through the transmitted data, so that a user, at a glance, can notice which alarm unit has given an alarm signal. (The three Alarm outputs can be controlled by on / off control, and a common output of the SI-100IM can be automatically displayed by recognizing an on / off status of the unit by channel that has been set). A 12V signal also can be controlled.

Also, if the SI-100ICU Unit is connected to a Channel without installation of a separate communication module, connection to Flat Cable only enables a reception of the communication information and conversion to RS-485 signals in order to make transmission.

In addition, the SI-100ICU Unit can take INPUTs of up to eight D/I's and convert into RS-485 signals. Because it can convert the information of SI-100IA's 12 channels and eight D/I's into the RS-485 signal, it can transmit data of Total 20 channels.

Once the transfer of RS-485 signals is complete, they will be connected to Gaswin Program, thus enabling users to control an overall status and an alarm-off, test, Stop-the-buzzer function, and corrective actions by using the computer.

After calibration, a user can store the number of times of calibrations in the internal memory, making the state of the sensor analyzed and displayed by converting a changed output value after calibration into a percentage value (a replacement cycle of the sensor can be estimated.)

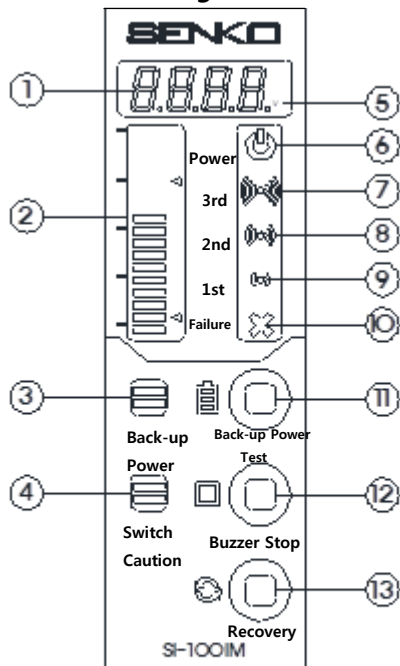
3. Specifications

SI-100IM (Main Alarm Unit)

1	Main CPU	MKE02Z64 (32bit High Speed CPU)
2	Input Power	DC24V
3	Output Power	DC24V
4	Input Power Display	4Digit FND Digital Display
5	Main Power Display	Green LED Display, 18 Bar Graph
6	Spare Power Display	4Digit FND Digital Display, 18 Bar Graph
7	Spare Power Monitoring	Red LED Display
8	Warning Alarm Display	AU01 ~ AU12 Display consecutive changes of warning unit.)
9	Spare Power Test	Battery Test Switch
10	Alarm Output	Alarm 1 SPDT Relay Dry contact Signal Output
		Alarm 2 SPDT Relay Dry contact Signal Output
		Alarm 3 SPDT Relay Dry contact Signal Output
		Selected output among DC12V Output Alarm1 to 3
11	Operation Power	DC12V~DC28V (DC12V or less CPU Sleep Mode No Display)
12	Size	40(W) x 130(H) x104(D)
13	Spare Power	Ni-Cd Battery 18V 600mA (4Channel)

****While the 24V.DC power is introduced for battery charge and discharge and for the power of the Alarm Unit, this unit can make an alarm generating unit display by communicating with the Alarm Unit and generate an alarm.**

SI-100IM Configuration and Description

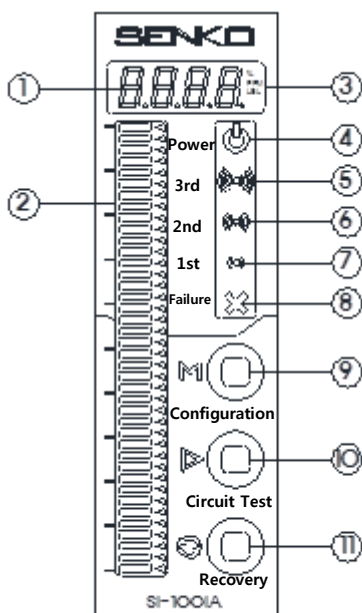


- 4Digit FND Digital Display(Input Voltage: AC/DC)
- Green LED Display, 18 Input Voltage Bar Graph
- Back-up Power Monitoring Lamp (Turned off when battery is disconnected.)
- Switch Caution Lamp (When warning is activated, display buzzer stop)
- Voltage Display
- Power Lamp (POWER ICON)
- Third warning Lamp based on SI-100IA configuration
- Second warning Lamp based on SI-100IA configuration
- First warning Lamp based on SI-100IA configuration.
- Failure Lamp - Cable disconnection, Sensor defect
- Back-up power test Switch (Check Battery connection)
- Buzzer Stop Switch
- Return Switch (When buzzer stops, return to initial mode)

SI-100IA (Alarm Display Unit)

1	Main CPU	MKE02Z64 (32bit High Speed CPU)
2	Input Type	4-20mA Full Scale
3	Measurement Display	0.000 to 9999 Digital User Setting
4	Measurement Error	The bigger of FND Digital $\pm 1\%$ Full Scale or 1Digit
		The bigger of LED Bar $\pm 1\%$ Full Scale or 1Digit
5	Input Measurement Cycle	10ms
6	Warning Alarm Setting	Three-stage alarms (a user's arbitrary setting), displaying a warning with a separate \triangleleft Graph
7	Concentration Display	4Digit F.N.D, 40 Green LED Bar Graph(% , PPM, LEL, V Unit Display)
8	Alarm Setting Display	40 Red Arrow LED Graph (\triangleleft)
9	Alarm Off	Manual & HMI Program
10	Self-diagnosis	Test Switch & Reset Switch
11	Input and output Control	RS-485 (SI-100ICU Connection Option, D/I 8CH)
12	Measurement Output	4-20mA Full Scale
13	Alarm Output	Fault SPDT Relay Dry contact Signal Output (ON/OFF)
		Alarm 1 SPDT Relay Dry contact Signal Output (ON/OFF)
		Alarm 2 SPDT Relay Dry contact Signal Output (ON/OFF)
		Alarm 3 SPDT Relay Dry contact Signal Output (ON/OFF)
		Selected output among DC12V Output Fault & Alarm1 to 3 (ON/OFF)
14	SIZE	40(W) x 130(H) x104(D)
15	Operation Power	DC12V~DC28V

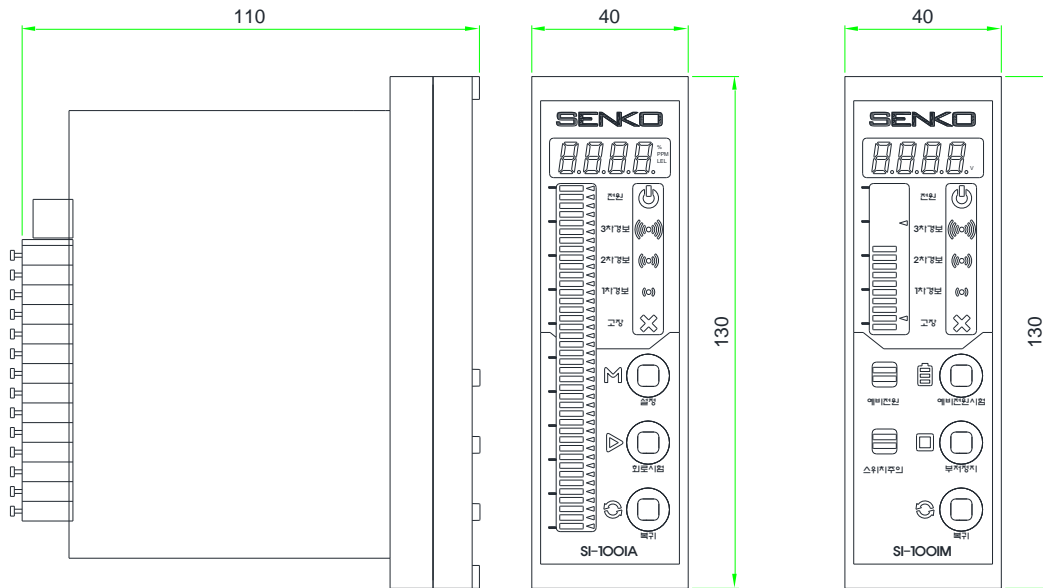
SI-100IA Configuration & Description



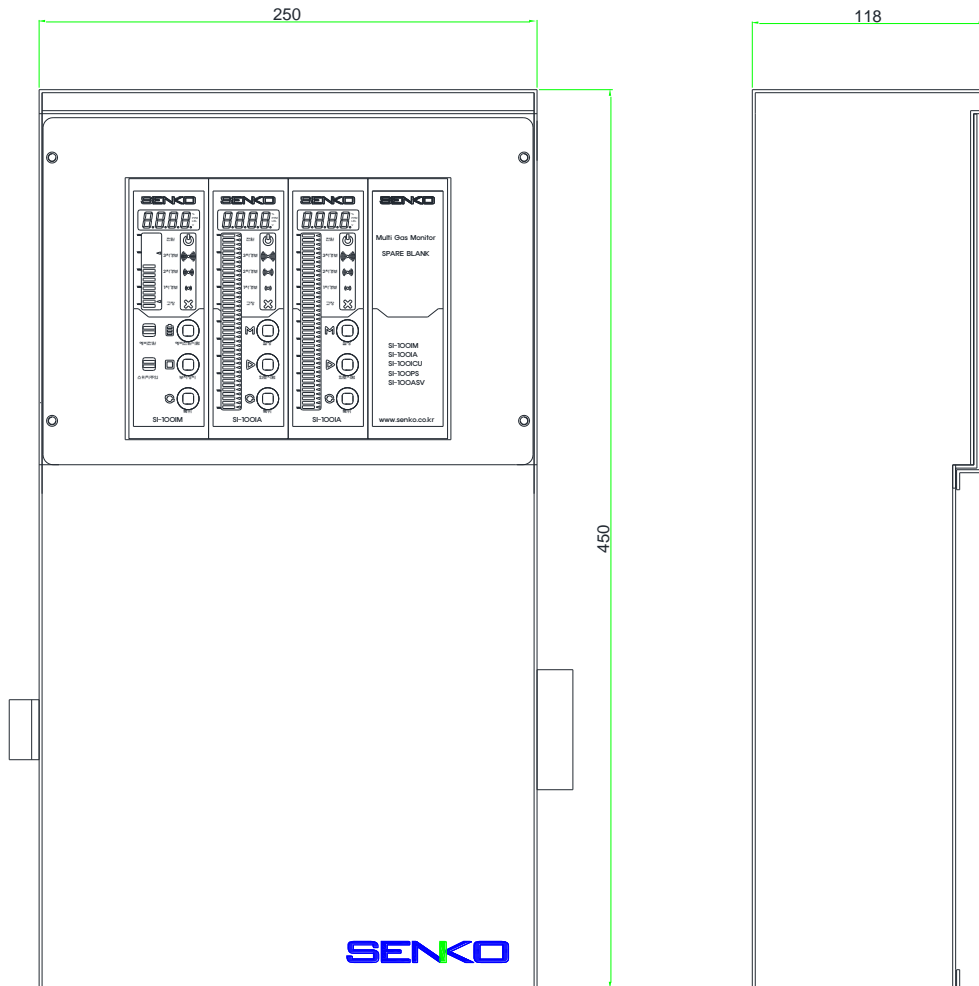
- 4Digit FND Digital Display(Gas Concentration)
- Green LED Display, 40 Gas Concentration Bar Graph
- Concentration Measurement unit(% , PPM, LEL)
- Power Lamp (POWER ICON)
- Third Warning Lamp according to setting value
- Second Warning Lamp according to setting value
- First Warning Lamp according to setting value
- Failure Lamp (Cable disconnection & Sensor Failure)
- Switch Setting (Check out 1, 2, 3 warning value)
- Circuit Switch (Self Warning Test)
- Return Switch (Return to the initial mode)

4. Product's Dimension

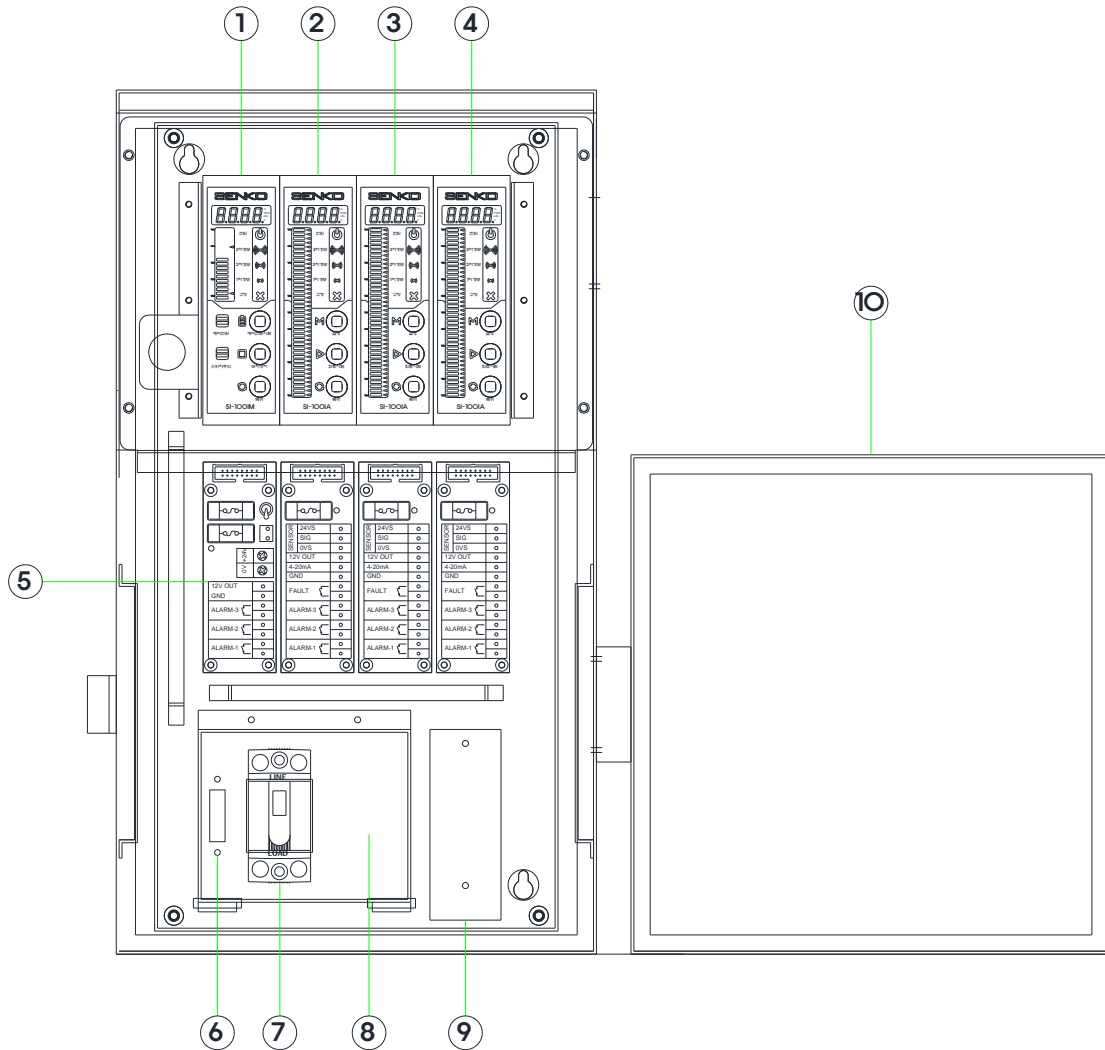
SI-100IM, SI-100IA UNIT DIMENSION



SI-100IM (3CHANNEL) PANEL DIMENSION



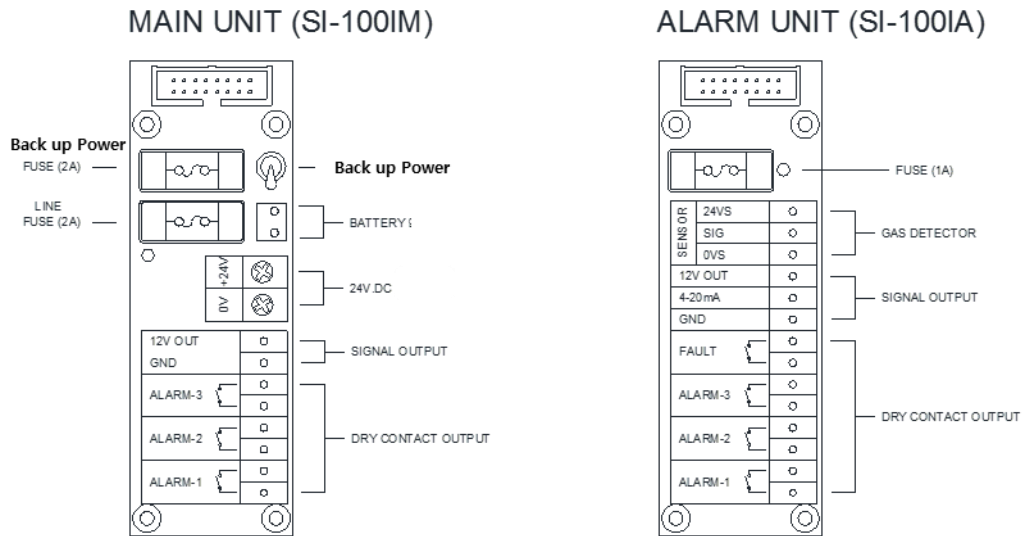
5. Internal Configuration (3-channel basis)



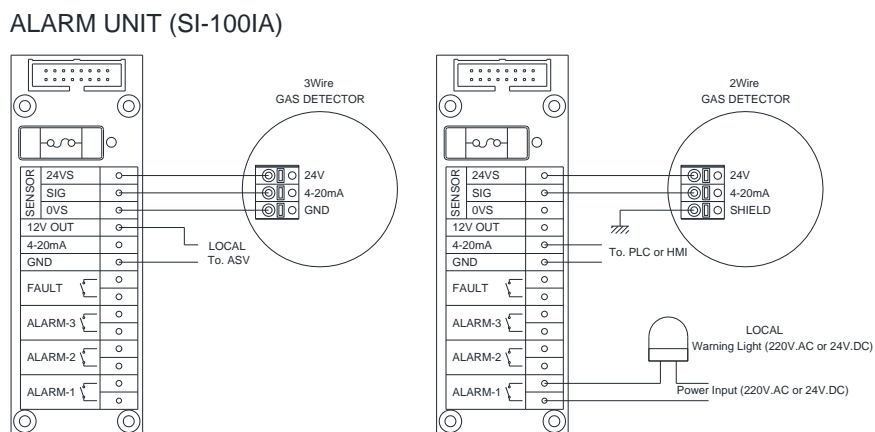
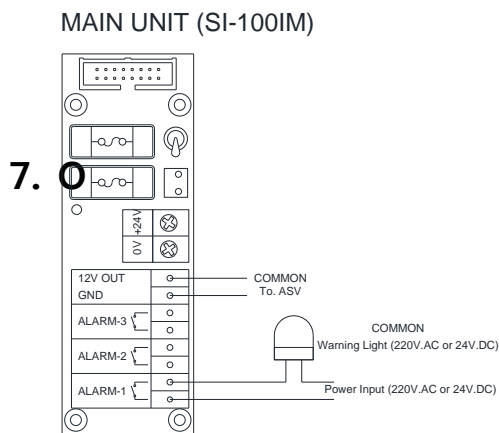
SI-100IM

1. Power Supply and Alarm Generation (Battery charging and Discharge)
2. SI-100IA: No. 01 Alarm DISPLAY Unit
3. SI-100IA: No. 02 Alarm DISPLAY Unit
4. SI-100IA: No. 03 times Alarm DISPLAY Unit
5. Terminal
6. A / C 110-220V Input Terminal
7. A / C POWER Switch (Main Power Switch)
8. Built-in BATTERY
9. SMPS 24V.DC (Power Supply) 3CH-1.2A, 6CH-2.2A, 10CH-3.2A, 12CH-4.5A
10. FRONT DOOR

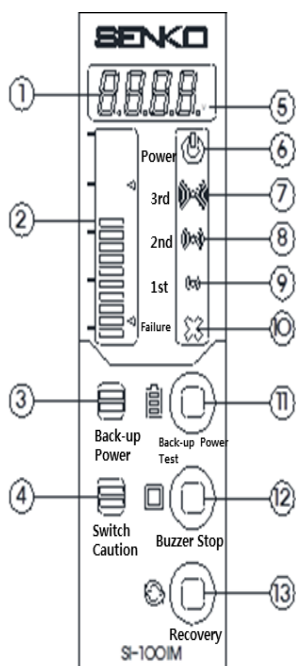
6. Terminal Diagram



If a fuse disconnected, the red LED will turn on, and that is the sign to replace with new fuses. When using main unit (SI-100IM), turn on A/C switch. (If you turn off, the back-up power lamp will turn off.)



7. SI-100IM (Main Alarm Unit)

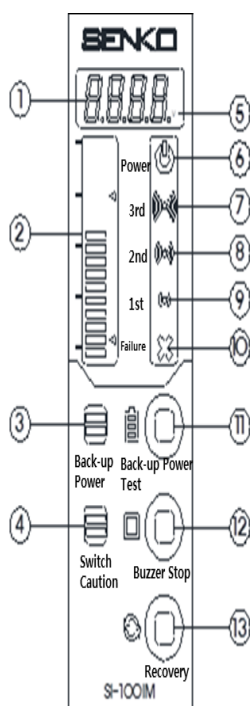


When the power switch is ON, an AC / DC voltage according to an input voltage and a bar graph according to a voltage level will be displayed. An arrow on the side of the bar graph indicates a voltage range of the products at its operational status.

Turn on the battery switch (back-up power) on the back of the product, and spare power lamp will be extinguished and the device will enter into a normal state. If you press the back-up power switch to find a spare power status, the device will display a DC voltage and a charging voltage will be displayed. When an alarm occurs, the power indication unit will display the ID of the Alarm Unit. According to primary, secondary and tertiary alarm set in the alarm, an alarm icon will be blinking. (An ID will be displayed alternating if alarms occur in many places.) When an alarm occurs, you can press the buzzer stop switch to mute the sound.

If you press the Return button when the alarm condition is released, the alarm icon and all operations will turn into a normal status. Because turning on the failure icon may be caused by failure of the Alarm Unit, you need to check the Alarm Unit.

SI-100IA (Alarm Display Unit)



When the power is turned on, the device will display the product software version (1.00.A) for 1 sec and an ID of the Unit from (01) to (12) seconds for 4 seconds. Then, after 25 seconds of stabilization, a corresponding gas density will be displayed. When the Power icon is turned on after flashing during initial stabilization time (30 seconds), the device will enter into a normal operation (If "ErrL" is displayed and an alarm emits, the wiring in the detection unit is defective or has bad connection. If the sensor is defective, you need to have the device checked). If a gas leakage happens, the gas concentration will go up according to the changes in a corresponding gas concentration and a bar graph will be also pushed up by a concentration. As a concentration rises, 1ST, 2nd, 3rd alarm will be generated according to an alarm setting value, thereby making a corresponding signal output (12V, Dry Contact, 4-20mA). With the circuit test switch, you can test a status of the product in normal concentration state. When you press the test circuit for a second, the concentration bar graph will go up, thus generating an alarm and an output like those from gas reaction. (However, during the circuit test, an output of 4-20mA will not be made). Gas alarm or circuit test can be return to the start with the return switch. (Individual Return)

If a number of the units generate alarms at the same time, a total return will be made when the return function of the SI-100IM is used

Using the Setting Switch, you can check the current alarm value and a variety of kinds of information. Press the Setting Switch, the following will be displayed in a sequence:

The image shows a seven-segment display with the characters 'AL-1' and 'LEL' to its right.

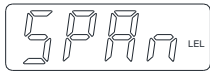
AL-1 : Primary Alarm Setting Value (default 15)

The image shows a seven-segment display with the characters 'AL-2' and 'LEL' to its right.

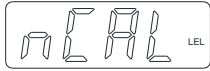
AL-2 : Secondary Alarm Setting Value (default 50)

The image shows a seven-segment display with the characters 'AL-3' and 'LEL' to its right.

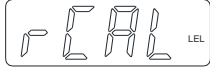
AL-3 : Tertiary Alarm Setting Value (default 70)

The image shows a seven-segment display with the characters 'SPAN' and 'LEL' to its right.

Span : Concentration of Calibration Gas (default 25)

The image shows a seven-segment display with the characters 'n[AL]' and 'LEL' to its right.

N (AL: The number of calibration (depending on the calibration times)

The image shows a seven-segment display with the characters 'r[AL]' and 'LEL' to its right.

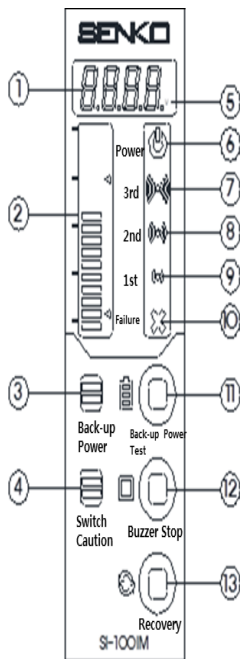
r (LA: Sensor Efficiency Indication (percentage)

The image shows a seven-segment display with the characters '[Id]' and 'LEL' to its right.

[Id]: ID of a corresponding Unit

**** Full Lamp Test: if you turn on/off the power while you are pressing the Return switch, "LTST" will be displayed in a second and then you will release the Switch. When the entire bar graph lamp is lit, the test will be completed.**

8. Description of Features by Switch - SI-100IM (Main Alarm Unit)



Spare Power Test Switch

If you continue to press the backup power switch at a state of AC24V input power, the current voltage of spare power will be displayed (DC20V will buffer enough) and the spare power will operate (automatic switching in case of power failure). When you release your hand from the switch, the device will operate back with AC24V power.

Ac 24 v

dc 20 v

If there is poor spare power or no spare power (still in process of charging), spare power lamp will be blinking. (The case is just like when the spare power switch is OFF on the back of the product or when there is fuse breakage)

Buzzer-Stop Switch

Mute function for an alarm generated by SI-100IA Unit's gas detection. If you press once, it will stop the buzzer, and if you press again, alarm volume will be generated again. If Buzzer-Stop Switch is activated and alarm volume is stopped, the lamp around the switch will be blinking.

b 18.2 v

When you continue to press the buzzer stop switch for more than 1 second (if it were not for alarm), the device will display the voltage in process of charging and tell you about a state of charging spare power or a state of "fully charged"

Return Switch

Once you solve the problem with the gas detector after an alarm from SI-100IA Unit, the concentration will turn into a normal level. The Return Switch is a switch to return all the functions to a normal status (or the start). In the case of SI-100IA, the switch is to return its own Unit to a normal status, while the return switch of the SI-100IM is a switch to return all circumstances in multiple Alarm Units into a normal status (or the start).

SI-100IA When an alarm occurs from the SI-100IA (Alarm Display Unit)

While displaying DI of a unit from which gas leak alarm is emitted to the power display window, the device will emit an alarm. If an alarm occurs at Unit 2, AU02 will be displayed and if an alarm occurs at Unit 3, AU03 will be displayed. If an alarm from primary, secondary, and tertiary alarm unit happens at the same time, the three IDs will sequentially be alternately displayed.

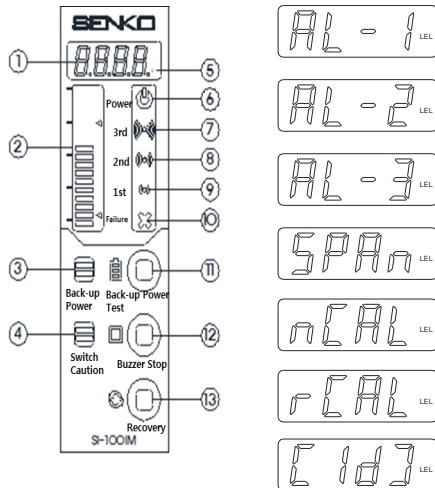
AU01
AU02
AU03

When an alarm occurs, press the buzzer stop switch and check the place where an alarm came from. After checking and solving a problem, press the return switch to a normal gas monitoring status.

SI-100IA (Alarm Display Unit)

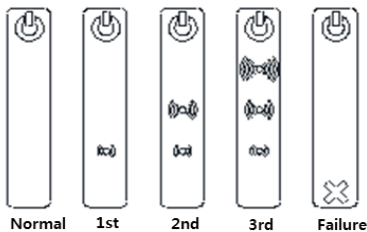
M Setting Switch

If you press the Setting Switch, the display will change in the order of left figure each time you



press the switch. First alarm, secondary alarm, and tertiary alarm, calibration gas concentration, the number of the times of calibration, calibration sensor efficiencies, and Unit ID are displayed. You can check the information that has been set by default in the product.

▶ Test Switch



If you press and hold the circuit test Switch for more than 1 second and then release it, a concentration will rise up to a range that has been set, just as in the gas alarm. An alarm will be generated depending on an alarm setting value that has been set. The concentration bar graph will arise just as shown in the figures. As a concentration rises as shown in the figures, the

primary, secondary, and tertiary alarm lamp will be turned on according to an alarm value that has been set and an output will be generated on the back of the terminal (an alarm tone will be different according to each of the alarms.) After the circuit test operation, you can make the unit to the start by pressing the Return switch.



In the case of bad connection in the detection unit, sensor failure, and cable disconnection, ErrL will be indicated and failure alarms will be emitted

↻ Return Switch

After you solve the problem from gas leak alarm, press the return switch to maintain a normal gas monitoring status. (The return switch of SI-100IA is a separate individual return switch for a corresponding unit, which does not affect another Alarm Unit.)

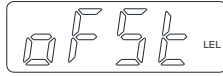
9. Changes in the Internal Settings

* Setting changes are available only for SI-100IA (Alarm Display Unit.)

1-1 Gas Alarm Concentration Calibration

M If you hold the setting switch for 5 seconds, then

Zero calibration



press a switch labeled as oFSt again, a current concentration will be displayed.

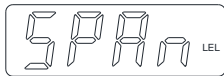
(If a current concentration value is less than 0, it will be displayed as -) If the



current concentration is not zero, press the setting button for more than 1 second. Then ΞSET will be flashing while the current value is adjusted to zero.

(A value of LNG and LPG will turn into -0.9 at the time of Zero calibration and a value in the case of the LIN will be stored at the moment you press the setting button)

Adjusting a concentration of calibration gas (default 25% LEL)

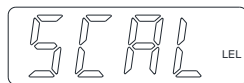


When the Zero calibration is over and the SET is completed, the display will show SPAN. If you press the Switch while SPAN is being displayed, a concentration of the calibration gas that has been set will be displayed. If a concentration of the calibration gas is different, enter the same number as that of the calibration gas by using the UP and DOWN key and hold the switch for 1 second at a status of a changed figure. Then the calibration gas concentration will be changed.

M Up in setting

⌚ Down in setting

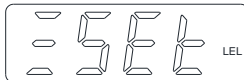
Gas Calibration



After adjusting the calibration gas concentration, SCAL will be displayed. If

you press the Switch at this status, a current gas value will be displayed.

(Zero will be displayed if the Zero calibration is completed). At this moment,



inject the calibration gas to the sensor at this state.

If there is small change even after the gas is injected for 30 seconds, press the setting switch for more than one second when a displayed concentration value is different from that of the calibration gas. Then while ΞSET is being blinking, the connection will be corrected to that of the calibration gas

* If a Concentration of the Calibration Gas is consistent with a gas concentration that you hold, all you have to do is to implement the gas calibration. For this, press the setting switch for 5 seconds, and choose OFST, SPAN, or SCAL with Circuit Test Switch to modify only parts necessary. By default, a SPAN value is set to 25%. (in case of flammable gas)

*. In case of incorrect operations due to the progress of calibration, turn the power ON / OFF while holding a setting and return switch simultaneously. And then, for 5 seconds, "FACT" will be displayed and the device will turn into the initial state. (In this case, gas re-calibration is necessary)

*. If you press the return switch while calibration is in-progress, your device will be switched back to a normal mode from the calibration mode.

1-2 Change of an Internal Setting Value

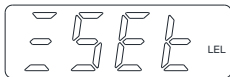


Press the setting and the reset switch at the same time for one second, and the device will enter into the mode. (At the setting change entry mode, the power lamp will be blinking).

Primary Alarm Value Change (default 15% LEL)

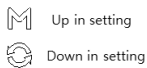


Press the setting switch while AL-1 is shown, a default number will be displayed. If you need a change while a number is marked, change the



number by pressing UP and DOWN Switch. If you press the Setting Switch for a second, Ξ SET will be displayed flashing, and the setting will be complete.

***. If you change the number and press the setting Switch for a second, the mode will be exited while the following modification item is not displayed (Re-entry of setting mode is required). In order to change all settings without re-entering the setting mode, you need to press the setting Switch while the numbers are already changed. Then AL-1 will be displayed and all the new settings will be stored in the internal memory. If you press the circuit test switch > while AL-1 is being displayed, AL-2 will be shown; you can change a secondary alarm value or change AL-2 with AL-3. After all the settings are finished, click the setting for one second at the final step. If the Ξ SET is blinking, all the setting values will be modified at once.**



Up in setting
Down in setting

Secondary Alarm Value Change (default 50% LEL)



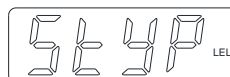
Press the setting switch while AL-2 is shown, a default number will be displayed. If you need a change while a number is marked, change the number by pressing UP and DOWN Switch. If you press the Setting Switch for a second, it will be saved and move to the next step.

Tertiary Alarm Value Change (default 70% LEL)



Press the setting switch while AL-3 is shown, a default number will be displayed. If you need a change while a number is marked, change the number by pressing UP and DOWN Switch. If you press the Setting Switch for a second, it will be saved and move to the next step.

Changing a Gas Type (default LNG)



When pressing the Setting Switch while styp is displayed, =LNG will be displayed. If you press the Circuit Test Switch in order to change it into a different gas type, you can change a type in an order of LPG-LIN-O2 net.

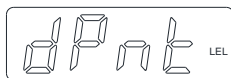
***. LNG - When connected to Receiver for LNG, apply to LNG sensor gas table.**

LPG - When connected to receiver for LPG gas, apply to LPG sensor gas table.

LIN - When connected to receiver other than LPG and LNG, apply to a sensor with linear reaction applied. O2-When connected to Oxygen Receiver (all settings are modified to match oxygen) RANGE (0 ~ 30%) Primary alarm (19%), Secondary alarm (17%), Tertiary alarm (23%)

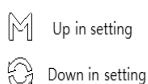
Once you have entry into the setting mode, you press the circuit test switch. Then its corresponding items will be changed sequentially. (AL-1, AL-2, AL-3, STYP). You can pick one selectively and change it.

Changing decimal (Default 0.1)

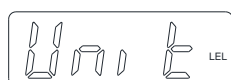


Press the setting switch when DPNT is displayed, one of the figures, 0, 0.1, 0.02, and 0.03, is displayed. While the number is displayed, press the UP, DOWN Switch, and you can change a decimal point.

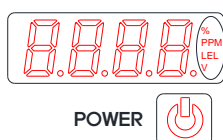
***Only at a setting value change mode among all the setting modes will the UP and DOWN key operate. At the setting modes (AL-1, AL-2, AL-3, STYP), the DOWN key will be operated with the Return Switch Mode to exit from the setting mode.**



Changing a unit by gas (default LEL)



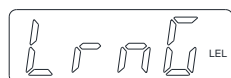
Press the Setting Switch when "Unit" is displayed, and LEL will be displayed Press the UP and DOWN Switch while it is being displayed. You can change to a unit of LEL, PPM, P (NT, ___.)



LEL (combustible, explosive gases)
PPM (toxic gases)
PCNT (%) non-oxygen gas
___ No unit indication

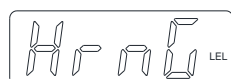
***. Unit display in the right of the Gas Concentrations Display Window will be changed.**

Change in Low Concentration Range (LOW RANGE) (default 0)



Press the Setting Switch when "LRNG" is displayed, and a default value will be displayed Press the UP and DOWN Switch while a figure is being displayed. You can change its value.

Change in High Concentration Range (High RANGE) (default 100)



Press the Setting Switch when "HRNG" is displayed, and a default value will be displayed Press the UP and DOWN Switch while a figure is being displayed. You can change its value.

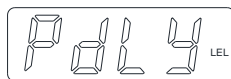
Change in Alarm Operation Method (Default HHH)



Press the Setting Switch when "NODE" is displayed, and "HHH" will be displayed. Then with the UP and DOWN Switch, alarm operation method regarding the primary, secondary, and tertiary alarm will be changed.

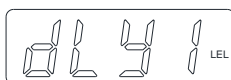
- *. HHH (combustible and toxicity) alarm is getting larger than that of a concentration in a sequence from a concentration level 0**
- *. HLL (oxygen) at a concentration level of 20.9, 1st and 2nd alarm is smaller than the concentration, and 3rd alarm is bigger than that of a concentration**
- *. LLL (level) alarm is getting smaller from a concentration level 100**

Initial Delay Time (default 30)



Press the Setting Switch when "PDLY" is displayed, and a default value will be displayed Press the UP and DOWN Switch while a figure is being displayed. You can change its value.

Primary Alarm Delay Time (default 0.5)



Press the Setting Switch when "DLY1" is displayed, and a default value will be displayed Press the UP and DOWN Switch while a figure is being displayed. You can change its value.

Secondary Alarm Delay Time (default 0.5)



Press the Setting Switch when "DLY2" is displayed, and a default value will be displayed Press the UP and DOWN Switch while a figure is being displayed. You can change its value.

Tertiary Alarm Delay Time (default 0.5)

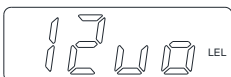


Press the Setting Switch when "DLY3" is displayed, and a default value will be displayed Press the UP and DOWN Switch while a figure is being displayed. You can change its value.

*. The initial delay time can be extended into more than 30 seconds, depending on the settling time of the sensor.

*. Delay time by alarm type can be immediately or further delayed when an alarm concentration level is reached.

Change in 12V Voltage Output (default 321)



Press the Setting Switch when "12VO" is displayed, and a default value will be displayed Press the UP and DOWN Switch while a figure is being displayed. You can change its value.

*. 321 (at primary, secondary and tertiary alarm, all can be output.)

*. 32_ (only the secondary and tertiary alarm are output.)

*. 3_1 (only the tertiary and the primary alarm are output.) Likewise, it is possible to generate 12V selectively at the time of an alarm output.

*. In the case of Main Alarm Unit (SI-100IM), 12V will be output depending on such a setting

4-20mA output (default OFF)



Press the Setting Switch when "TSTO" is displayed, and a default value will be displayed Press the UP and DOWN Switch while a figure is being displayed. You can change its value.

*. This enables a user to choose whether or not the 4-20mA will be output at the circuit test or the gas reaction. *. By default, this will create an output at a reaction to gas. (If you make telecommunications by connecting an analog output to the plc or computer, there might be a case in which circuit test can be mistaken for a gas leak. -You need a careful attention.

Alarm Return (default 321)



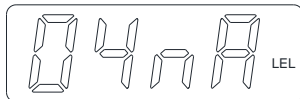
Press the Setting Switch when "HOLD" is displayed, and a default value will be displayed. Press the UP and DOWN Switch while a figure is being displayed. You can change its value.

*. This is the mode to determine whether to memorize alarm or to make an automatic return at the time of returning to the normal range after gas alarm has been emitted

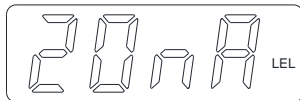
*. By default, even after the primary, secondary, tertiary alarm all is returned to the normal range, the alarm and the output will be still stored.

*. Even If the device is interlocked with other equipment and thus alarm is repeatedly on and off depending on a concentration, a value can be changed.

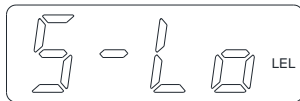
(Primary, secondary, and tertiary alarm can be changed alternatively.)



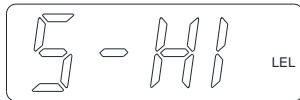
Output Calibration of 4mA



Output Calibration of 20mA



Output Calibration of Low Concentration Sensor



Output Calibration of High Concentration Sensor

The above four items are requirements during manufacture SENKO. If you make change or modifications, they can affect the performance and functionality of the product. Any modifications and changes are prohibited