

INSTRUCTIONS MANUAL

LNG/LPG GAS DETECTOR SI-560



⚠ 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 contains operating instructions for stationary gas monitoring instruments designed for area air quality and safety applications, and should be **STUDIED CAREFULLY** by all persons responsible for the operation and maintenance of the instruments. All SENKO equipment described herein is designed or manufactured for use only as set forth herein and by the labels affixed, or other literature accompanying the product.

Where **WARNINGS** or **CAUTIONS** are herein set forth, they must be followed. If SENKO equipment is used in a manner or under conditions not specifically authorized or prescribed by this manual, or by other materials or written instructions either accompanying the product or authorized by SENKO in writing, or if it is used or maintained by unqualified or improperly trained personnel, SENKO Co., Ltd. disclaims all responsibility of every kind for said equipment.

Please call the factory if any problems are encountered.

WARRANTY

SENKO sensors and instruments are designed for area air quality and safety applications. SENKO gas monitoring instruments are provided with a one year warranty. This warranty covers only defective parts or workmanship in normal use and service. Instruments which fail to function due to factory defect within one year of date of shipment are to be returned to SENKO for warranty repair.

SENKO will determine the nature and responsibility for the defect. In all cases the warranty is limited to the original cost of the equipment. Any misuse of equipment is the customers responsibility. SENKO will either repair or replace (at SENKO's option) returned instruments subject to the warranty, at no charge.

No field service is included in this warranty. For field service requirements please contact SENKO.

This warranty is voided by:

1. Improper application of instrument.
2. Misuse of instrument.
3. Intentional or accidental damaging of instrument.
4. Not returning the sensor to factory for warranty validation.

For any queries regarding warranty repair or replacements, please include the instrument model and serial number in any transmittals to SENKO. SENKO instruments are supplied with operating and installation manuals and other literature. These are the only source of specific details regarding proper operation and maintenance of the equipment. These instructions must be carefully read and the precautions followed in detail. Instruments must be calibrated and alarms checked periodically to assure proper equipment operation. Please refer to the manual for details.

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Introduction



:: Features

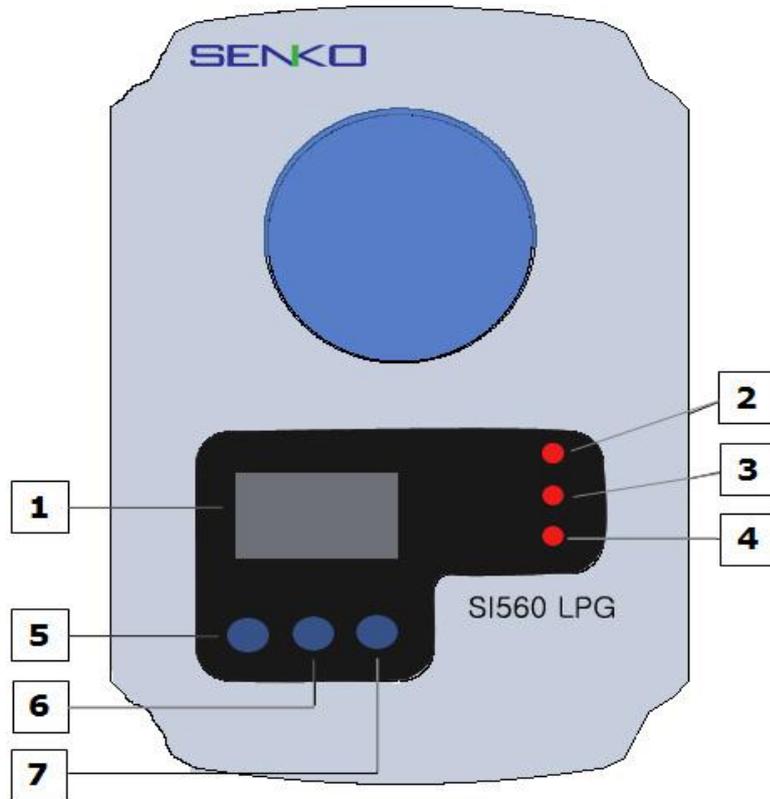
Flammable gas detector(SI560LPG) is a separated gas detector, composed of detection part and control part which displays gas concentration from the signal received from the detection part. Detection part has a structure of flameproof enclosures. In order to stabilize the sensor operation, we introduced a stabilization step at an initial stage of operation. SI560LPG is also robust for the change of surrounding temperature and input voltage and designed to consume the minimum electric power. Automatic shut-off gas valve is operated by transmitting a gas leakage signal to automatic shut-off gas valve.

:: Specification

Gas leak detector receiver(single channel)	
Model	SI-Single
Detecting range	3 digit FND
Alarm display	0-100%LEL
Relay contact	COM. NO. NC(250V, 3A)
Input signal	4-20mA DC(2wire or 3 wire)
Alarm recover	Buzzer(Audible alarm)
Operating temp.& Humi.	-20°C~+50°C,0~99%.RH(non-condensing)
Power	AC 220V (60HZ)
Dimensions	140 (W) × 200 (D) × 78(H) mm
Weight	810g

1. Description

Instrument Overview

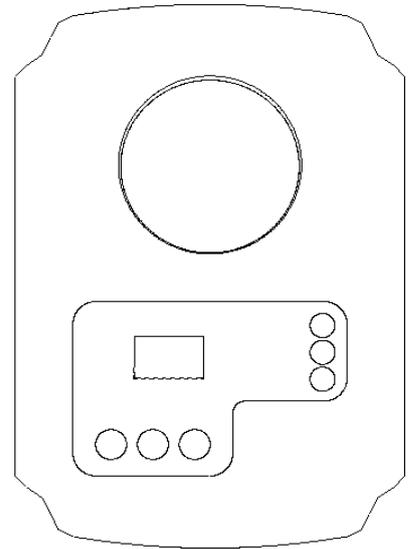


NUMBER	NAME	FUNCTION
1	VOLUME	Gas volume display
2	Power LED	Main power
3	Warning LED	Gas leakage warning
4	Fail LED	Sensor fail warning
5	Test	Circuit test
6	Restore	Restore
7	Stop alarm	Stop buzzer

2. Specification

Receiving Part

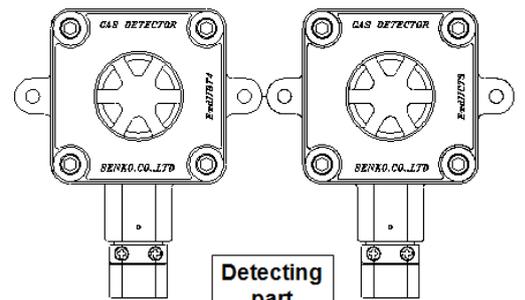
Type	<ul style="list-style-type: none"> • AC 220V, separation type • Industrial single circuit • Diffusion • Immediate alarm type • Combustible catalytic sensor circuit • Explosion-proof type
Power	AC 220V, 60Hz
Power consumption	9W
Temperature	-20~50
Density to alarm	20% LEL
Power led	LED green light
Alarm sign	LED yellow light and buzzer sound
Breakdown	LED red light
Dimension	140×200×78 mm
Output signal	Voltage : 12V Relay: COM, NO, NC
Weight	1.5Kg



Receiving part

Detecting Part

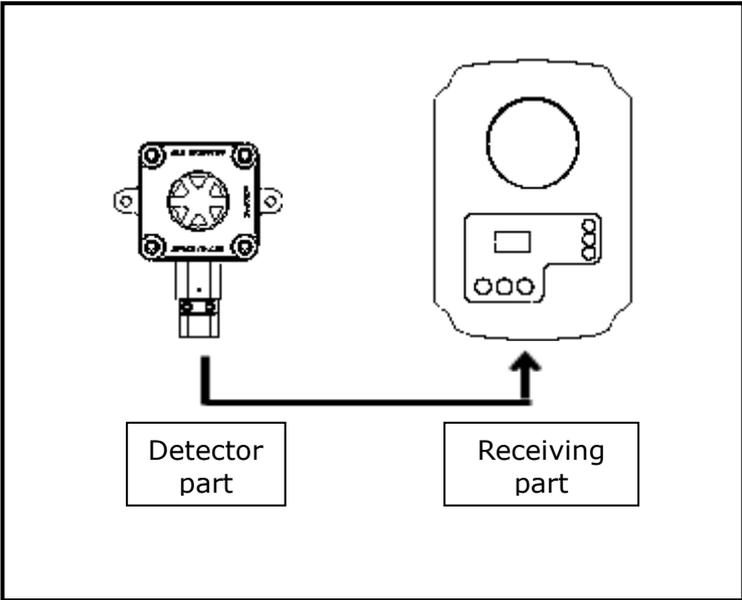
Model	SI560 LPG	SI560 LNG
Sensor	Combustible catalytic sensor	
Gas	LPG	LNG
Operation Temp.	-20~50°C	
Exproof	Ex D II B T4	Ex D II C T3
Dimension	130×107×73	



Detecting part

3. Electric wiring & Installation

Connecting wire



Detective part			Relay Signal			Voltage Signal		A C	
Green	Brown	Blue	NC	COM	NO	12V	GND	220 V	220 V

⚠ WARNING

Check service voltage before installation. In case of connection at detection part, connect properly by matching the color on terminal block with that on detection part. 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.

Installation

① Receiving Part

- Please install at a place where manager or station staff at control center can recognize alarm or take immediate action after alarm.
- Please install receiving part after fixing it fixed bracket with screw nail by checking the wall to be installed.

② Detection Part

- Please install at a place where gas leaks easily, leaked gas stay easily or leaked gas is suspected.
- Regarding the installation location, please install properly by satisfying such condition as property of gas, surrounding circumstances and structure of each facility.
- LPG: Please install with the distance from the floor to the upper portion of detection part at 30 cm or less.
- LNG: Please install with the distance from the ceiling to the upper portion of detection part at 30 cm or less.

③ Use of Signal for Outer Voltage

- Voltage Signal: In case of the link to circuit breaker, please connect to alarm signal input of cutoff.
- Dry Contact Signal: Please use by linking to outer device and blinker light.

4. Operation & Caution

Operation

- ① If plugged in, power lamp runs.
- ② After power lamp is on and the numerical value of densitometer goes up, it is normal if the value of densitometer is expressed to "0" after automatic zero setting through 'Micom' check about the current status of detection part about 30 seconds.
- ③ If test switch is pressed, the value goes up automatically. If it reaches the setting value for alarm (20LEL) or up, alarm lamp is on and alarm sound rings.

- ④ If buzzer stop switch is pressed, buzzer sound stops.
- ⑤ If returning switch is pressed about one second, it returns to the initial setting.
(but, if detection part has more gas than alarm density, alarm will not return)
- ⑥ In case of disconnection of line connected to detection part, fault lamp is on and alarm sound rings.



Caution

- Caution

1. Do not use any inflammable when alarm sounds.
2. While alarm sound is on, do not operate any switches for ventilation fan, lighting and etc.
3. Check and restore by investigating the cause of gas leakage.
4. In case that reason is unknown for gas leakage, contact gas company or distributor for check-up.

- Check-Up

1. Conduct check-up more than once each month and the check-up of detection sensor within one year.

Notice for User

Please use the instrument in the range of the applicable temperature, humidity and pressure that are appropriate for the specification of the product. Using the instrument beyond this range may cause malfunction or glitch of the instrument.

Gas concentration measurement value by the sensor or the instrument can vary according to the environment at site (temperature, pressure and humidity). Therefore the calibration of the instrument should be performed at the same or similar environment as that of the instrument use (temperature, pressure and humidity).

If temperature changes sharply during use of the instrument (for instance, using the instrument at places of far different temperatures between indoor and outdoor), the value of the measured gas concentration can be changed suddenly. Please use it after the gas concentration value is stabilized.

Severe vibration or shock to the instrument may cause the sudden change of value of the measured gas concentration. Please use it after the value of gas concentration is stabilized. Excessive shock to the unit can lead to trouble of the sensor or the instrument.