

RIKEN

EXPERT OF SILANE GAS DETECTION SILANE (SiH₄) GAS DETECTION SYSTEM

Double sensor monitors for Silane (SiH₄) and particulates (SiO₂ etc)

Detection of SiH₄
by two methods

FEATURES

- Detection of leakage for SiH₄ and SiO₂ with twin sensors
- Easy to read three color (green/orange/red) LED bargraph display
- Built-in suction pump
- Ability to indicate a flow failure alarm
- Trouble alarm



Indicator/alarm unit
model EC-582S



Silane detector
model GD-SK34PN



RIKEN KEIKI CO.,LTD.

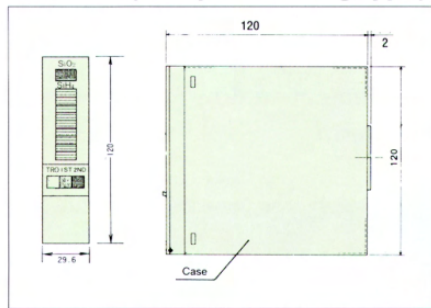
SILANE (SiH₄) GAS DETECTION SYSTEM

OVERVIEW

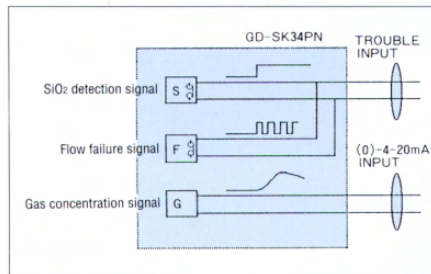
Silane gas can be present both in the state of its raw gas (SiH₄) and in the state of particulates (SiO₂) after oxidation (combustion) when it leaks into the air.

The silane gas leak detection can be assured by this dual detection system with a high reliability electrochemical sensor method for silane gas (SiH₄) in the state of its raw gas and with a new type ion detection method for silane gas (SiO₂) as particulates after combustion.

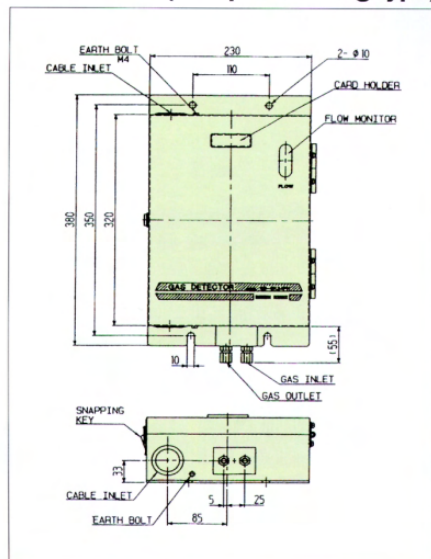
EC-582S (Sample-drawing type)



BLOCK DIAGRAM



GD-SK34PN (Sample-drawing type)



SPECIFICATIONS OF INDICATOR/ALARM UNIT

Model	EC-582S	
Detection gas	Silane (SiH ₄) in air	Oxide (SiO ₂ , etc.) in air
Indication	LED bargraph meter with three colors	Red color lamp
Gas SiO ₂ alarm function	Function	Latched mode, Non-latched mode after reset
	Alarm setting value	5ppm (variable)
	Alarm response	Within 1 minute when exposed to gas concentration of 1.6 times of alarm setting value
	Alarm indication lamp	1st alarm: Flashing LED (orange) continuous light when reset 2nd alarm: Flashing LED (red), continuous light when reset
	Alarm contact	1st alarm: 1a or 1b (specify)
Capacity of contact	AC100V 0.5A, DC30V 1.5A (load resistor)	
Outer analog output	4-20mA Load resistor below 300Ω (non-insulation)	_____
Trouble alarm function	Failure mode	Flow fail, disconnection of signal cable (Contact opens)
	Indication	Flashing with green lamp
	Output of contact	1a or 1b
	Capacity of contact	AC100V 0.5A, DC30V 1.5A (Load resistor)
Warm up	Approx. 1 minute	
Power requirement	DC24V ±10%	
Power consumption	Approx. 11W (including detector)	
Operating temperature and humidity	0-40°C, 35-90%RH	

Specifications subject to change without notice.

SPECIFICATIONS OF DETECTOR

Model	GD-SK34PN	
Detection gas	Silane (SiH ₄) in air	Oxide (SiO ₂ , etc.) in air
Detection principle	Electrochemical cell	Dual ionization chamber
Detection range	0-15ppm	Above 10mg/m ³
Signal transmission method	4-20mA (2 core cable)	ON/OFF transmission (Contact closure)
Sampling method	Sample-drawing type (sample flow rate 500cc/min.)	
Power requirement	Pump: AC100V (or AC117V) Indicator/alarm unit: DC24V ±10%	
Operating temperature and humidity range	0~+40°C, 35-90%RH	

Specifications subject to change without notice.

