Specifications

Model	Main Unit		Sub Unit
	PS-8N	PS-8M	PS-8S
Sensor Detection Principle	Electrochemical cell, Hot wire semiconductor, Galvanic cell		
Sampling Method	Automatic suction-type (approx. 0.5L/min±20% automated suction flow rate)		
Sampling Pipe	Outer diameter 6mm / inner diameter 4mm (outer diameter 1/4 inch / inner diameter 11/64 inch) PTFE Tubing *1 Tube length less than 20m *2		
Target Gas	Set to user specifications		
Detection Range	Set to user specifications		
Display	Monochrome LCD full dot display Gas concentration: 5- digit display (with units of measurement) Others: gas name, flow rate status, first and second stage alarm indicator, fault alarm		None (Main Unit contains display)
Power Display	Power source LED (Green)		Power source LED (Green)
Alarm Set Value	Set to user specifications		
Alarm Accuracy	•Combustible gas: ±25% of alarm set value (under same conditions) •Poisonous gas: ±30% of alarm set value (under same conditions) •Oxygen deficit: ±1vol% of alarm set value (under same conditions)		
Alarm Delay	•Combustible gas: within 30 seconds at gas concentration of 1.6 times alarm set value. •Poisonous gas: within 60 seconds at gas concentration of 1.6 times alarm set value. •Oxygen deficiency: within 5 seconds at a gas concentration between 10%vol to 18%vol (at 20±2℃) (Excluding pipe length and communication time for all gases listed above)		
Alarm Display	1st stage Gas Alarm: Alarm 1 flashing LED (red) LCD screen: ALARM 1 display 2st stage Gas Alarm: Alarm 2 flashing LED (red) LCD screen: ALARM 2 display		
Fault Diagnosis	Internal failure, sensor abnormality, flow rate drop abnormality, power voltage abnormality, unit communication failure, sensor incorrect insertion		
Fault Alarm Display	Fault alarm: flashing LED (yellow) + corresponding event icon		Fault alarm: flashing LED (yellow)
Maintenance Mode Display	Maintenance: flashing LED (blue) (Maintenance mode 1: flashing, Maintenance mode 2: rapid flashing) + corresponding event icon		Maintenance: flashing LED (blue) (Maintenance mode 1: flashing, Maintenance mode 2 : rapid flashing)

External Output	Digital signal*3	*When using the expansion unit MR module RS485 (Modbus-RTU)	Ethernet 10BASE-T/100base-Tx (Modbus/TCP) Modbus/TCP (Maximum number of connections depends on system configuration) Maximum transmission distance 100m (to HUB)	—
	Gas concentration analog signal*4	DC4-20 mA (common negative with power source) (Output accuracy: within FS ± 0.5%) *0.6 mA or less when a fault alarm indication occurs *The resistance, including wiring resistance, must be 300 Ω or less		—
	Combined gas alarm contact (1st and 2nd stage), Combined fault alarm indication contact*5	1a non-voltage contact/automatic return *Rated load: AC125V 0.5A or DC30V 1.0A (resistive load) *Individual contact outputs require an expansion unit.		—
Explosion-proof Rating		Non-explosion-proof		

Terminal Connection Cable	Terminal block (3pin x 1, 6pin x 1)	Compatible cables: CVV 1.25 mm² and others Target signal: power source Gas alarm contact (1- stage and 2- stage) Trouble alarm contact		—
	Terminal block (3pin x 1)	Compatible cables: CVV-S 1.25 mm² and others Target signal: Gas concentration analogue signal		—
	RJ-45 connector 8P8C	none	Compatible cables: Cat5e STP Ethernet cable or newer Target signal: Digital Ethernet 10BASE-T/100base-Tx and PoE power source	—

Operating Temperature and Humidity Range	0 °C to 40 °C (with no sudden changes), 30 to 85%RH (with no condensation)		
Power Source Used	DC24V ± 10%	DC24V ± 10% or PoE (Power over Ethernet, IEEE 802.3at)	Supplied from the main unit
Power Consumption*6	CDS-7: 3.5 W (max. 5.2 W) CDS-7 (catalytic conversion type) : 4.0 W (max. 5.9 W) COS-7: 3.5 W (max. 5.2W) CHS-7: 4.0 W (max. 5.9W)		CDS-7: 2.7W (max. 3.5 W) CDS-7 (catalytic conversion type): 3.0W (max. 3.8 W) COS-7: 2.7W (max. 3.5 W) CHS-7: 3.2W (max. 4.2 W)
Dimension	W70 mm × H124 mm × D172 mm (excluding protrusions)		
Mass	Approx. 850 g (excluding sensor)		Approx. 770 g (excluding sensor unit)
Attachment Type	Wall mounted or DIN rail		

	Expansion unit (up to 2 modules can be installed)			
Model	PS-8EU			
Module	AO module (analog output)	DO module (contact output)	MR module (Modbus-RTU)	AI module (analog input)
External Output / Signal type	Gas concentration analog signal	Gas alarm contact (1- stage and 2- stage), fault alarm indication contact	Modbus-RTU (Maximum number of connections: 32 (including master))	—
Output number	4	2	1	
Output	DC4-20mA (Common negative terminal with power source) (Output accuracy: within FS ± 0.5%) *0.6 mA or less when a fault alarm indication occurs *The resistance, including wiring resistance, must be 300 Ω or less	1a non-voltage contact/automatic return *Rated load 125 VAC 0.5 A or 30VDC 1.0 A (Resistive load)	Communication method: RS485 2- wire half duplex Maximum transmission distance: 1.2 km (to host device) Speed: 4800bps, 9600 bps, 19200 bps, 38400 bps	
External Input / Signal type	—			4-20 mA analog input
Input number				2
Input				0-21.6 mA
Power Source Display	Power source LED (green)			
Communication Display	—	—	Communication LED (orange) flashing	—
Explosion-proof Rating	Non-Explosion-proof			
External connection terminal compatibility/cable	Terminal block (12pin x 1, 1pin x 1) Compatible cables:CVV-S 1.25 mm² and others	Terminal block (12 pin x 1) Compatible cables: CVV-S 1.25 mm² and others	Terminal block (3pin x 1, 1pin x 2) Compatible cables: CVV-S 1.25mm² and others twisted pair shielded cable	Terminal block (3pin x 2, 1pin x 1) Compatible cables: CVVS 1.25 mm² and others
Operating Temperature and Humidity Range	0 °C to 40 °C (with no sudden changes), 30 to 85%RH (with no condensation)			
Power Source Used	Supplied from the main unit			
Power Consumption*7	1.1 W (max. 2.2 W)	0.8 W (max. 1.6 W)	1.1 W (max. 1.4 W)	0.8 W (max. 1.1 W)
Dimensions	W60 mm x H124 mm x D172 mm (excluding protrusions)			
Weight	Approx. 410 g			
Mounting Method	Wall mounted or DIN rail			

*1 Request separately piping in inches.   *2 For gases with strong adhesion like Halogen, recommend piping of 5m or less. In areas with high dust levels it may be necessary to shorten and periodically replace piping more than the recommendation.   *3 Modbus-RTU can be used with Ethernet or dispersion unit.   *4 The Main Unit analog output is limited to the Main Unit. The Sub Unit sensor analog output requires the AO expansion module. The AO expansion module can output analog signals from the Main Unit allowing for multiple connections.   *5 When installing two or more sensors using a Sub Unit and using individual contact output, use a DO expansion module. In this case, the individual outputs for the sensors installed in the Main Unit will be output from the expansion unit (the main unit's contacts will be output all at once).   *6 When using both analog and digital output, power consumption increases dramatically.   *7 Power consumption when using the maximum number of modules.
The above information may be subject to change without notice.

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⚠ **SAFETY WARNING**
Carefully read the instruction manual prior to use.
Select and use the device designed to detect the required type of gas. Use of a wrong sensor type may cause an accident.

Be sure, be safe.

COSMOS

SEMICONDUCTOR GAS DETECTOR
PS-8 SERIES

Developed with the highest level of technical prowess

SiH4
0.0 ppm
15.0 --- FS
-50min -25min 0min
0
FL500

Features
1. **Long-life-sensors**
2. **Integrated thermal decomposition converter**
3. **Easy visual verification using large LCD screen**

GAS DETECTOR PS-8 NEW COSMOS ELECTRIC CO.,LTD

Feature 1 | Long-life Sensors*

Regular bump tests show a 3 year life span

*Option

Target Gas*

SiH$_4$	PH$_3$	AsH$_3$	GeH$_4$	CO
Si$_2$H$_6$	NO$_2$	O$_3$	NF$_3$	NH$_3$

*Please inquire for other gas types

Feature 2 | Integrated thermal decomposition converter

NF$_3$ and COS* detection required thermal decomposition. Our integrated thermal decomposition converter achieves great cost performance.

*Coming soon

Bulky external converter no longer necessary

Feature 3 | Confirm concentration levels at a glance with the large LCD screen

Tag name
Gas type

Concentration display

Flow rate
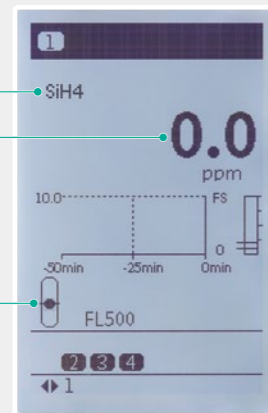
Point 1
Trend Graph

Check sensor records up to 50 minutes before a gas leak.
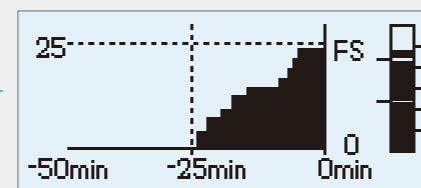
Point 2
History/Contemporary event display

Displays gas detection information and mainenance setting history as well as current conditions or events.

Event history

04/01/2023 10:50:00

CH.1   SiH4
Low flow caution   On
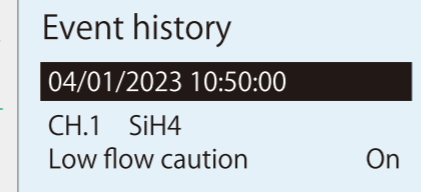
Front access for simple sensor replacement

Expert maintenance not required for sensor replacement

Streamlined wiring with PoE support

Device power and data transmission possible with a single LAN cable
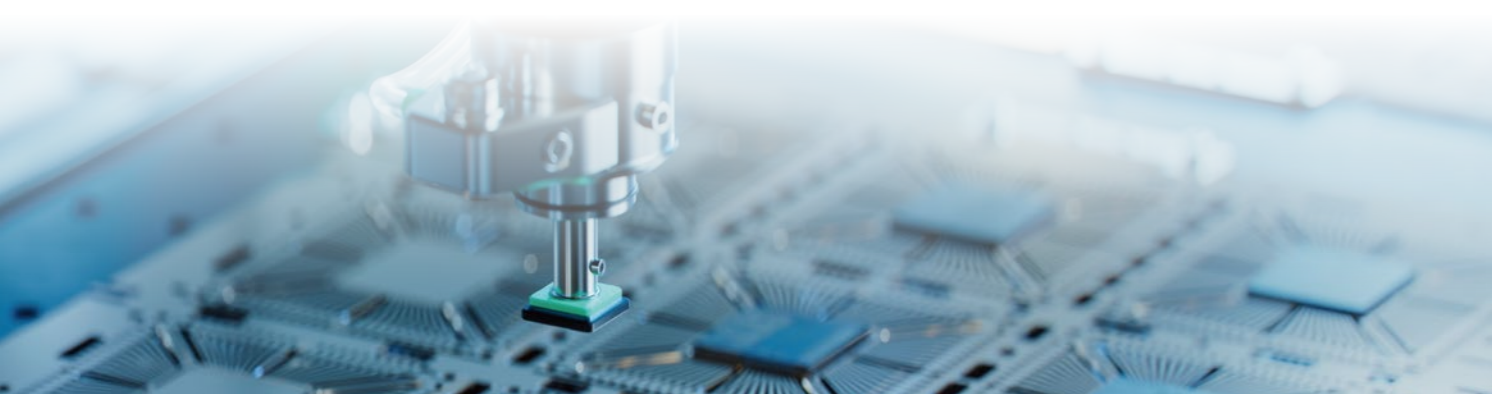
One main unit can display sensor information from up to 16 nodes.

Sensors can be set to match user needs based on the type of gas and concentration level

Expansion Unit
2 expansion units attached to the Main Unit

Module Line-up
- AO Module (Analog Output)
- DO Module (Contact Output)
- AI Module (Analog Output)
- MR Module (Modbus-RTU)

Main Unit
Attach sensors and pumps to the Main Unit where up to 16 sensors can be displayed on the large LCD screen.
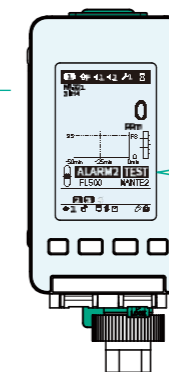
Sub Unit
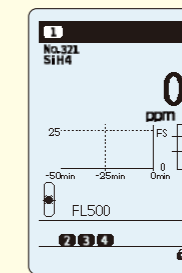Attach pumps and sensors to the Sub Unit

Display Settings

The main unit concentration display can be switched between `1 unit display´ and `4 unit display´, and up to 16 channels can be displayed.
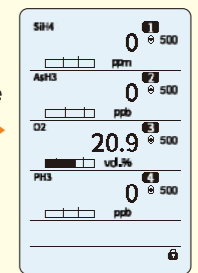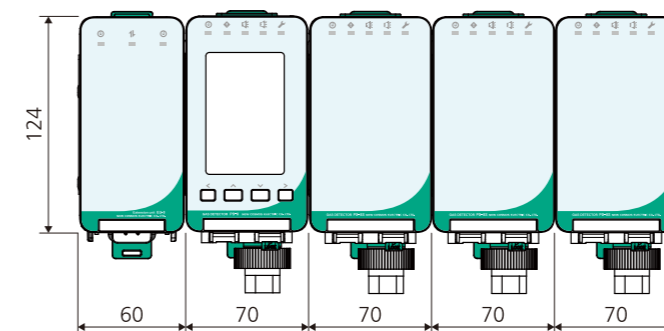
1 gas screen

4 gas screen

Display change

External dimensions (units: mm)

124

60   70   70   70   70

Same attachment pitch as the former model (PS-7)

44.5   171.8

62

Mounting hole
2-φ5.3

Mounting fixture