Specifications

		Main Unit		Sub Unit
Model		PS-8N	PS-8M	PS-8S
Sensor Detection Principle		Electrochemical cell, Hot wire semiconductor, Galvanic cell etc.		
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 *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) •Toxic 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. •Toxic 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°C) (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		
		2nd 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) *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 (1st- stage and 2nd- 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) (coming soon)	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 Recommended tube length less than 20m. 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 Output accuracy: within FS ± 0.5%. 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.

(P)202510000

Be sure, be safe.

COSMOS

SEMICONDUCTOR GAS DETECTOR
PS-8 SERIES

Developed with the highest level of technical precision

Features

1. Customizable Target Gas
2. Compatible with our pyrolyzer-integrated NF_3 and COS sensors.
3. Easy visual verification using large LCD screen

Feature 1 Customizable Target Gas

Target gas may be tailored to user specifications.
For technical assistance, we provide global engineering and service support for your needs.

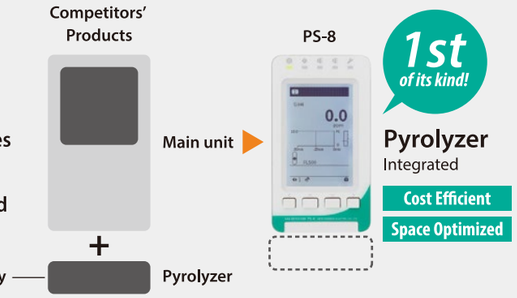
Target Gas*

SiH_4	PH_3	B_2H_6	AsH_3	H_2Se	Si_2H_6
SiH_2Cl_2	GeH_4	NH_3	HF	CL_2	HCl
HBr	F_2	H_2S	ClF_3	O_3	CO
O_2	NF_3	CCl_4	H_2	CH_4	COS

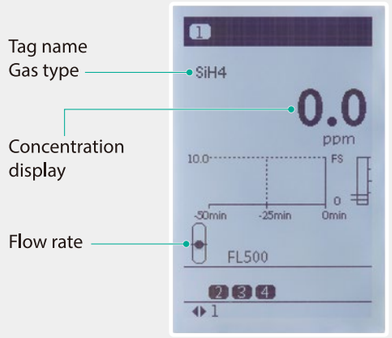
*Please inquire for other gas types

Feature 2 A smarter pyrolyzer-integrated system

The NF_3 and COS sensors designed for the PS-8 series come equipped with integrated pyrolyzers, which eliminates the necessity for external units and simplifies the detection process.

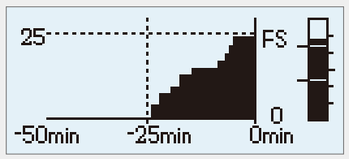


Feature 3 Confirm concentration levels at a glance with the large LCD screen



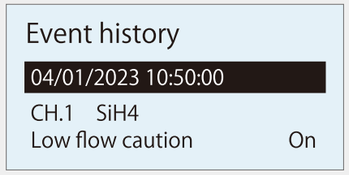
Point 1
Trend Graph Display

Check sensor records up to 50 minutes before a gas leak.



Point 2
Real-Time & Past Event Displays

Seamlessly track and analyze data with ease.

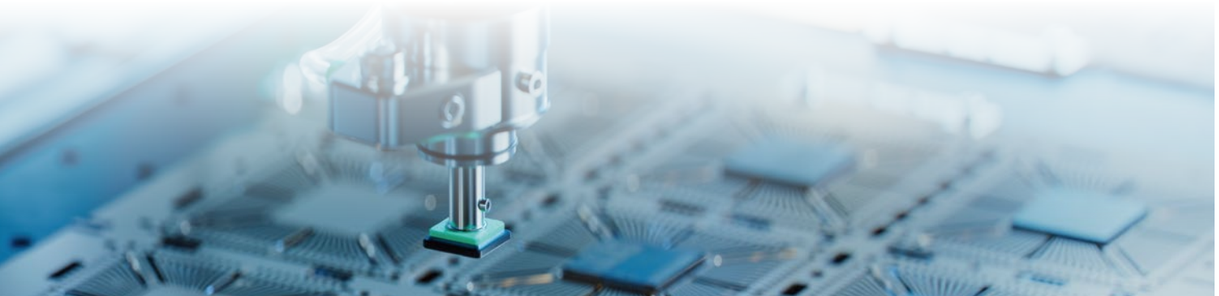


Front access for simple sensor replacement

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 12 nodes

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

Expansion Unit
Max 4 Expansion Units attached to the Main Unit

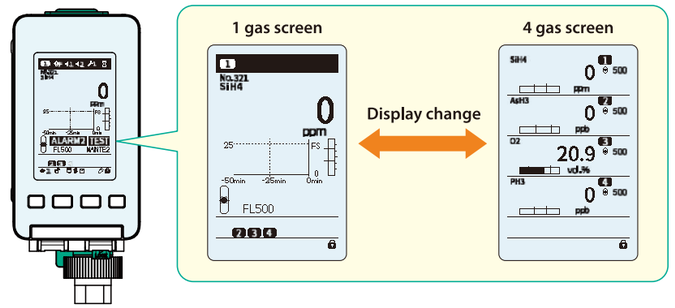
Module Line-up
- AO Module (Analog Output)
- DO Module (Contact Output)
- AI Module (Analog Input)
- MR Module (Modbus-RTU) (Coming soon)

Main Unit
Attach sensors and pumps to the Main Unit where information from up to 12 sensors can be displayed on the large LCD screen.

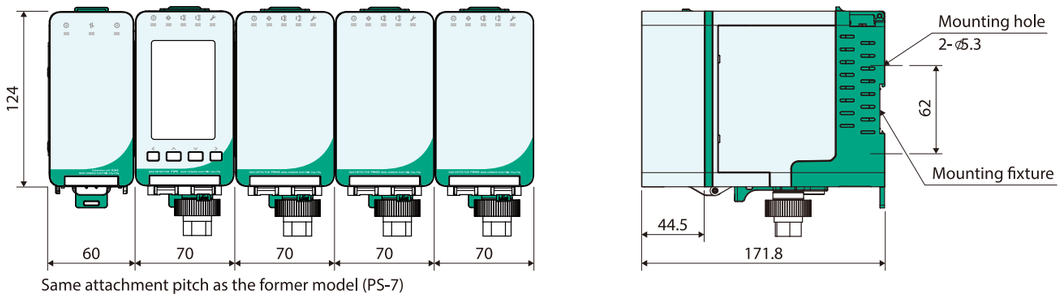
Sub Unit
Max 3 Sub Units attached to the Main Unit

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.



External dimensions (units: mm)



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