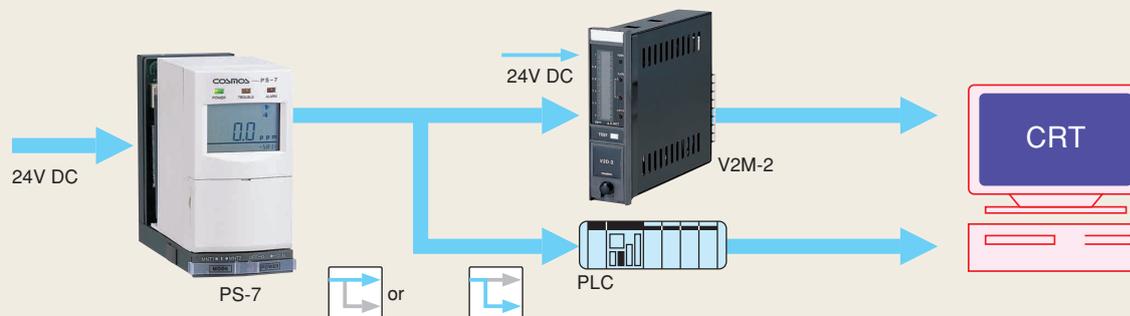


# Gas Detection System for Semiconductor Manufacturing Plants

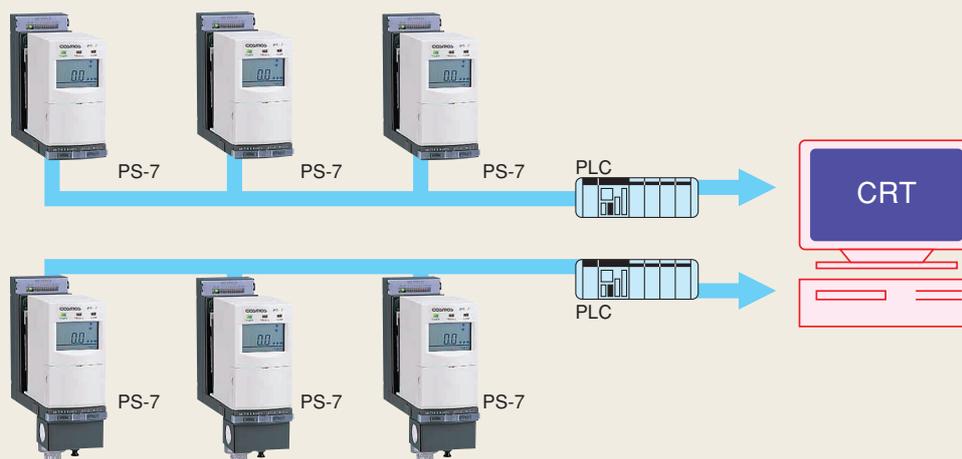
## COSMOS Gas Detector Head

### PS-7

#### Analog Transmission Type



#### DeviceNet-Connected Type

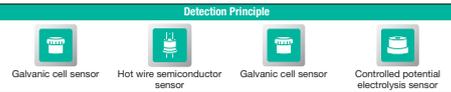


#### Features

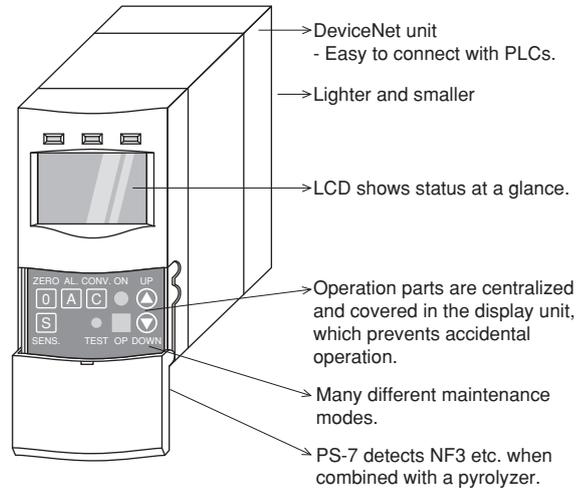
- **Smaller and lighter**  
Became smaller and lighter, about half of the previous COSMOS gas detector heads.  
This compact head does not take up large space for installation.
- **At-a-glance LCD status display**  
An LCD simply shows gas concentration, alarm status, error messages, etc.  
You can see the device status at a glance.
- **Prevents incorrect insertion of a sensor unit**  
Quickly lets you know when a sensor unit of incorrect gas type is inserted.
- **Automatic sampling flow rate control**  
No need to check the flow rate during daily inspections.
- **Easy to replace a sensor unit and sampling unit**
- **Controlled potential electrolysis sensor detects NF3 when combined with a pyrolyzer**
- **Achieved PDA data acquisition**
- **Meets the necessary standards**  
CE standards, SEMI standards.
- **Many different maintenance mode settings**  
You can select the analog output type according to the purpose of maintenance.

#### COSMOS Gas Detector Head Features

1. Sensor units are factory calibrated and delivered to the site ready for use.  
When replaced, they will be ready to monitor only by performing zero adjustment and operation checks.  
You do not need to bring in calibration gas which makes a clean room dirty.
2. We take sensor units as trade-ins and use them in our recycling process, which reduces your costs as compared with conventional methods.
3. Sensor units and sampling units need periodic replacement, which requires no tools.
4. Each of the functional components is formed into a unit, which takes little time to replace.
5. No need to worry about replacement periods of sensor units and sampling units. We will support you with our reliable management system.



Connecting a PDA with a detector head makes it possible to acquire data stored in the head.



**Options**



**Pyrolyzer**  
A controlled potential electrolysis sensor detects NF3 etc. when combined with a pyrolyzer.



**DeviceNet unit**  
Using DeviceNet as a protocol to communicate with higher level systems, it is easy to connect with PLCs (when combined with a DeviceNet unit).

Model	PS-7	
	Standard Type	With a Pyrolyzer
Detection Principle	Controlled potential electrolysis, Hot wire semiconductor, Galvanic cell	Pyrolysis+Controlled potential electrolysis
Sampling Method	Pump suction type (0.5L/min, Suction flow rate: automatic control)	
Sampling Tubing *1	Teflon - External diameter: 6mm, Internal diameter: 4mm, Tubing length: 20m or less	
Gas Concentration Indication	4-digit LCD (with measuring unit), 20-step bar graph	
Alarm Indication	<ul style="list-style-type: none"> <li>● Gas alarm (1st and 2nd stage) <ul style="list-style-type: none"> <li>• Alarm: Red LED lamp flashing</li> <li>LCD - ALARM1 for 1st stage, ALARM1 and ALARM2 for 2nd stage</li> </ul> </li> <li>● Low flow alarm <ul style="list-style-type: none"> <li>• Clogging indication: LCD - Flow sign rotates slowly</li> <li>• Alarm: Yellow LED lamp flashing</li> <li>LCD - FLOW indication, Flow sign stops rotating</li> </ul> </li> <li>● Sensor trouble alarm/Incorrect sensor insertion alarm <ul style="list-style-type: none"> <li>• Alarm: Yellow LED lamp flashing</li> <li>LCD - SENS. indication</li> </ul> </li> <li>● Pyrolyzer wire break alarm *2 <ul style="list-style-type: none"> <li>• Alarm: Yellow LED lamp flashing</li> <li>LCD - CONV. indication</li> </ul> </li> </ul>	
External Output	<ul style="list-style-type: none"> <li>• Gas concentration analog output: 4-20mA DC (shared with the power source negative terminal)</li> <li>• Gas alarm contact (1st and 2nd stage): 1a no-voltage contact/Automatic recovery</li> <li>• Trouble alarm contact (Open collector/Automatic recovery)</li> </ul>	
Applicable Cable	3C or 4C shielded control cable (φ 8-11mm)×2	
Operating Temperature/Humidity Range	0°C to 40°C (No sudden change), 30-85%RH (No condensation)	
Power Source	24V DC±10%	
Power Consumption	Approx. 7W	
Dimensions	W62×H124×D143mm (excluding options and protrusions)	
Weight	Approx. 1.0kg	
Installation	Wall mount	

\* 1 Teflon is recommended. But it depends on operating conditions when the gas adsorption capacity is high, so contact us for more information. The specifications above are subject to change without prior notice.  
\* 2 Only for the model with a pyrolyzer

**Dimensions**

