

Be sure, be safe.

**COSMOS**

SEMICONDUCTOR GAS DETECTOR

**PS-7-M**

## Various Gases Detected by Changing Sensor Units Significant Reduction in Maintenance Work

For Combustible gas, Toxic gas, and Oxygen

Semiconductor gas detector  
with Power over Ethernet



- SEMI
- CE marking

**Features**

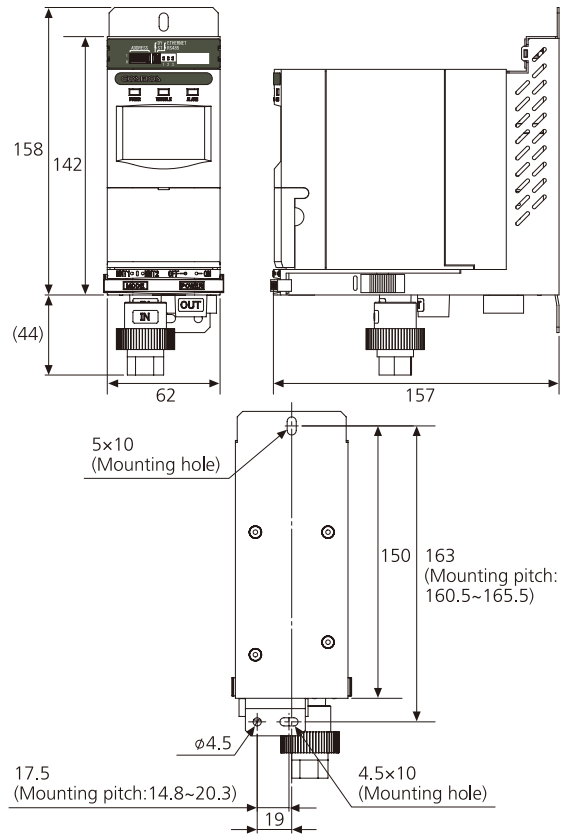
- **PoE eases installation work**  
Power supply cables are no longer required due to the Power over Ethernet. As a result, installation can be performed more easily and cost can be reduced.
- **Large LCD display**
- **Simple replacement of sensor unit and sampling unit**
- **With prevention function for inserting incorrect sensor**
- **Both Ethernet and RS-485 are available\***  
\* The RS-485 function used in this product has not been verified for CE-marking compliance.

**Specifications**

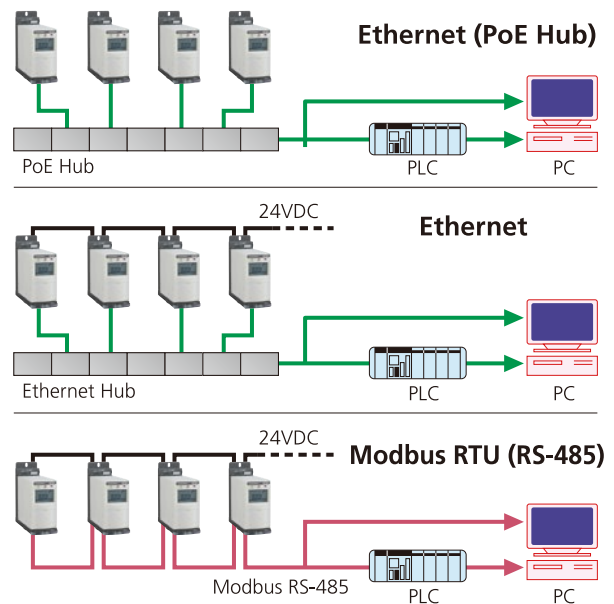
Model		PS-7-M			
Detection Principle	Electrochemical cell, Hot wire semiconductor, Catalytic, or Galvanic cell				
Target Gas	Combustible gas, Toxic gas, Oxygen				
Sampling Method	Extractive				
Detection Range	As per delivery specifications				
Alarm Set Value	As per delivery specifications				
Accuracy*1	Combustible gas: ±25% Toxic gas: ±30% Oxygen: ±1vol%				
Response Time*2	Combustible gas: (T60)≤30 sec. Toxic gas: (T60)≤60 sec. Oxygen: Within 5s to reach 18vol% under condition of 10vol%				
Alarm Indication		LED		Display	
	Gas alarm	Red LED flashes (2 stages)		"ALARM1/ALARM2"	
	Sampling filter notification display	Yellow LED flashes		Flow display is rotating at low speed	
	Flow rate reduction alarm	Yellow LED flashes		"FLOW" and flow display stops rotating	
	Sensor trouble	Yellow LED flashes		"SENS."	
	Sensor misinsertion alarm	Yellow LED flashes		"SENS."	
Pyrolysis furnace disconnection alarm	Yellow LED flashes		"CONV."		
External Output*3	<ul style="list-style-type: none"> <li>• Digital signal Ethernet100base-Tx(Modbus/TCP)</li> <li>• Digital signal RS-485(Modbus/RTU)</li> <li>• Gas concentration analog signal 4-20mADC</li> <li>• Gas alarm contacts (1st and 2nd stages) N.O. dry contact (same common), self-resetting Rated load: 0.5A at 30VDC (resistance load)</li> <li>• Trouble alarm contact open collector output (N/C)/Automatic recovery Rated load: 30mA at 30VDC (resistance load) (Low flow rate, sensor trouble, pyrolyzer disconnection, power supply disconnection, fuse disconnection: OFF)</li> </ul>				
Approvals	SEMI, CE*4				
Applicable Cable	<ul style="list-style-type: none"> <li>• Digital signal, Ethernet100base-Tx and PoE: LAN cable, Cat. 5e or higher</li> <li>• RS-485 digital signal, Gas alarm contacts, Gas concentration analog output and Trouble alarm open collector: CVV-S cable 1.25mm<sup>2</sup> (2-core shielded twisted pair cable is needed for RS-485.)</li> </ul>				
Operating Temperature/Humidity*5	Temperature: 0 to +40°C Humidity: 30 to 85 %RH				
Power Source	24VDC±10% PoE(Power over Ethernet, IEEE 802.3af/ANSI X3.263)				
Power Consumption*6		LED		Display	
		CDS-7	COS-7	CHS-7	CDS-7+CDP-7
		MAX	MAX	MAX	MAX
	24VDC, Gas Concentration Analog Signal Use	4.7W	4.7W	5.7W	8.0W
	24VDC, Ethernet, Gas concentration analog signal not used	4.1W	4.1W	5.0W	7.3W
24VDC, RS-485, Gas concentration analog signal not used	4.6W	4.6W	5.5W	7.8W	
PoE, Ethernet, Gas concentration analog signal not used	4.4W	4.4W	5.4W	8.3W	
Dimensions	CDS-7+CDP-7:W62xH172xD157 mm(excluding protrusions) Other sensors:W62xH142xD157mm(excluding protrusions)				
Mass	CDS-7+CDP-7: Approx. 1.3kg Other sensors: Approx. 1.2kg				

\*1 Under identical conditions. \*2 Excluding piping length and communication time. \*3 Either Ethernet or RS-485 can be used. \*4 The RS-485 function used in this product has not been verified for CE-marking compliance. \*5 No sudden temperature or humidity changes. No condensation. \*6 When analog output and digital output are used at the same time. The above specifications may be changed without prior notice for improvement.

**Dimensions**



**System Configurations**



Modbus is a trademark and the property of Schneider Electric SE, its subsidiaries and affiliated companies. Ethernet is a trademark of Fuji Xerox Co., Ltd

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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.