

*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, oxygen and semiconductor gas

**Semiconductor gas detector  
with Power over Ethernet**



**SEMI CE**

## 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 than before.

### • 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\*

\* RS-485 communication function is outside the scope of CE marking.

## 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				
Alarm Accuracy*1	Combustible gas: $\pm 25\%$ Toxic gas: $\pm 30\%$ Oxygen: $\pm 1\text{vol}\%$				
Response Time*2	Combustible gas: (T60) $\leq 30$ sec.    Toxic gas: (T60) $\leq 60$ 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.」		
External Output*3	Pyrolysis furnace disconnection alarm	Yellow LED flashes	「CONV.」		
	• Digital signal Ethernet100base-Tx(Modbus/TCP) • Digital signal RS-485(Modbus/RTU) • Gas concentration analog signal 4-20mADC • Gas alarm contact (1st and 2nd stages) 1a no-voltage contact (common)/Automatic reset Rated load: 0.5A at 30VDC (resistance load) • Trouble alarm contact open collector output (N/C)/Automatic recovery Rated load: 30mA at 30VDC (resistance load) (Low flow rate, sensor trouble, thermal decomposition pyrolyzer disconnection, power supply disconnection, fuse disconnection: OFF)				
Approvals	SEMI, CE				
Applicable Cable	Digital signal Ethernet100base-Tx,PoE : Cable for Ethernet, Category 5e or more Digital signal RS-485, Gas alarm contac,Gas concentration analog signal, Trouble alarm : CVV-S 1.25mm (RS-485 uses a twisted pair cable)				
Operating Temperature/Humidity*4	Temperature: 0 to +40℃    Humidity: 30 to 85 %RH				
Power Supply	24VDC $\pm 10\%$ PoE(Power over Ethernet, IEEE 802.3af/ANSI X3.263)				
Power Consumption*5		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
Dimensions	PoE, Ethernet, Gas concentration analog signal not used	4.4W	4.4W	5.4W	8.3W
	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				

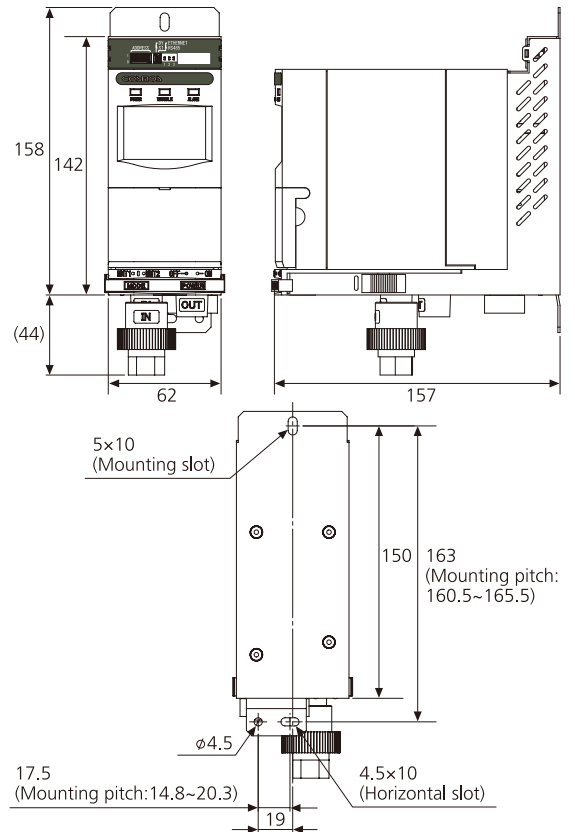
\*1 Under identical conditions. \*2 Excluding piping length and communication time.

\*3 Either Ethernet or RS-485 can be used. \*4 No sudden temperature or humidity changes. No condensation.

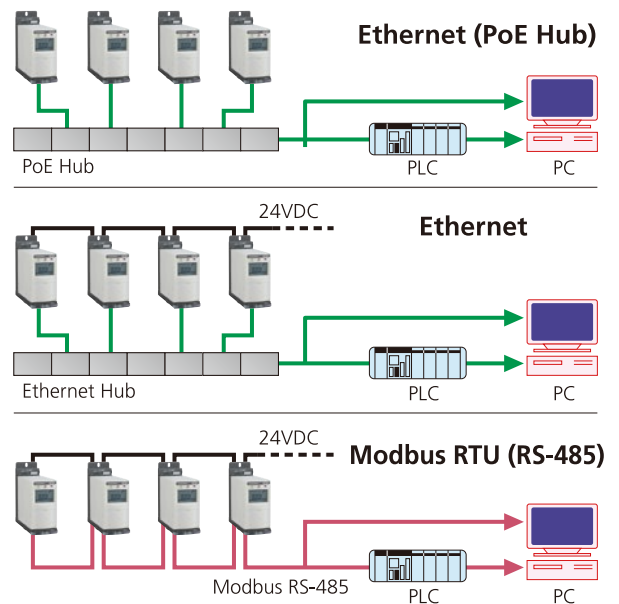
\*5 When analog output and digital output are used at the same time.

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

Read the operating instructions thoroughly before use. Always operate in accordance with the instructions.  
Be sure to choose the sensor designed to detect the required type of gas. Use of the wrong sensor type could cause an accident.