

# HANDHELD MULTI GAS DETECTOR

Monitor CO<sub>2</sub>, CO, PM<sub>2.5</sub> to ensure a reliable and effective indoor air protection



Dual Beam  
NDIR Tech.



Data Logging  
with SD Card



Audible Alarm



RS485 Comm.  
Interface



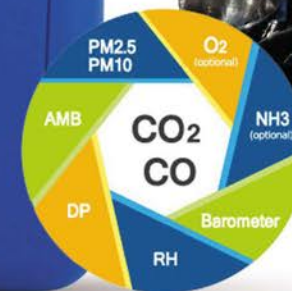
Rechargeable  
Battery

## Measurands

*Basic:* CO<sub>2</sub>, CO, PM<sub>2.5</sub>, PM<sub>10</sub>, RH, DP, AMB, Barometer

*Optional:* O<sub>2</sub>, NH<sub>3</sub>

ZG9 series is designed to simultaneously measure multiple gas concentrations in the ambient environment. With long-term data storage, the user can assess the environmental friendliness. When ZG9 series measures the gas concentration reaching the alarm setting or higher, the data display and alarm functions are activated. ZG9 series is equipped with an RS485 interface for connecting to a computer for remote monitoring so as to reduce the risk of exposure to high concentrations of harmful gases and avoid harm to human health. ZG9 series can be used in a wide range of industries, which include paint-related industries, wineries, related industries of CO<sub>2</sub>, food industry, laboratory, construction industry, etc.



## ACEZ INSTRUMENTS PHILIPPINES CORPORATION

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# Handheld Multi Gas Detector

## SPECIFICATION

	Temperature	RH	Barometer	CO <sub>2</sub>	CO	PM <sub>2.5</sub> / PM <sub>10</sub>	O <sub>2</sub> (Optional)	NH <sub>3</sub> (Optional)
Measurement Range	0°C~50°C	0~100%	50 ~110 kpa	0~9,999 ppm (5,001~9,999 ppm over range)	0~1,000 ppm	999 µg/m <sup>3</sup>	0~25%	0~100 ppm
Accuracy	±1°C	±3%@25°C (20% RH~80% RH), others ±5%	±0.4 kpa	0~5000ppm: ± (50ppm+3% of reading)	±10ppm or 5% of reading, whichever is greater	±15% or ±15 µg/m <sup>3</sup> , whichever is greater	<2% FS/0.1 mbar	±10%
Display Resolution	0.01°C	0.01%	0.1 mmHg	1 ppm	1 ppm	1 µg/m <sup>3</sup>	0.01%	1 ppm
Warm-up Time	-	-	-	<1 minute	1 ppm	<1 minute	<1 minute	5 minutes
Model	<div>ZG906C</div> <div>ZG906CMP</div> <div>ZG906CMONP</div>							
Operating Cond	0~40°C(32°F~104°F), 0~95%RH, non-condensing, with lithium-ion batteries 0~50°C(32~122°F), 0~95%RH, non-condensing, without lithium-ion batteries							
Storage Temp.	-20~60°C(-4~140°F), 0~85%RH, non-condensing, without lithium-ion batteries							
Power Supply	Rechargeable Battery (not included): Li-ion 3.7V Unprotected Button top 18650 battery *3 (L65~67mm , Ø18~19mm) USB or 5 VDC AC adapter (not included)							
Storage Capacity	Depend on SD card capacity (max.16G SD card)							
Comm. Interface	RS485 ModBus BR19200, N, 8, 1							
Alarm Volume	80db±5%@10cm							

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## NATIONAL AMBIENT AIR QUALITY GUIDELINE VALUES FOR PARTICULATE MATTER 2.5 (PM<sub>2.5</sub>)

The Provisional National Ambient Air Quality Guideline Values for Particulate Matter 2.5 (PM<sub>2.5</sub>), the following AQI Breakpoints shall describe the six (6) levels of air quality for PM<sub>2.5</sub> defined as particles 2.5 and less in micrometers in diameter and their cautionary statements for the general public:

Category	Color	RGB Color Code	Hex Color Code	PM 2.5 (µg/m <sup>3</sup> )	Cautionary Statements
				BP <sub>Lo</sub> - BP <sub>Hi</sub>	
Good	Green	(0, 228, 0)	#00E400	0 - 25	None
Fair	Yellow	(255, 255, 0)	#FFFF00	25.1 - 35.0	None
Unhealthy for sensitive groups	Orange	(255, 126, 0)	#FF7E00	35.1 - 45.0	People with respiratory disease, such as asthma, should limit outdoor exertion.
Very Unhealthy	Red	(255, 0, 0)	#FF0000	45.1 - 55	Pedestrians should avoid heavy traffic areas. People with heart or respiratory disease, such as asthma, should stay indoors and rest as much as possible. Unnecessary trips should be postponed. People should voluntarily restrict the use of vehicles.
Acutely Unhealthy	Purple	(143, 63, 151)	#8F3F97	55.1 - 90	People, should limit outdoor exertion. People with heart or respiratory disease, such as asthma, should stay indoors and rest as much as possible. Unnecessary trips should be postponed. Motor vehicle use may be restricted. Industrial activities may be curtailed.
Emergency	Maroon	(126, 0, 35)	#7E0023	Above 91	Everyone should remain indoors, (keeping windows and doors closed unless heat stress is possible). Motor vehicle use should be prohibited except for emergency situations. Industrial activities, except that which is vital for public safety and health, should be curtailed.

Consistent with the above AQI Breakpoints, the provisional guideline values for PM<sub>2.5</sub> under DAO 2013-13 is hereby amended as follows:

Pollutant	Short-term <sub>1</sub>		Long-term <sub>2</sub>		Implementation Period
	µg/Ncu.m	Average Time	µ g/Ncu.m	Average Time	
PM <sub>2.5</sub>	35 <sup>3</sup>	24 hours	25 <sup>3</sup>	1 year	Upon effectivity date of the DAO