

**Controlled potential electrolysis Diffusion type Ozone Gas Monitor**
**Ozone Gas Monitor**
**MODEL: OZG-EM-0\_K Series**

OZG-EM series is ozone gas concentration monitor to manage environment using ozone gas. It enables the measurement from low concentration area so that there is superior stability. Furthermore, structure is simple and is superior in maintenance performance.

**Feature**
**■ Calibration**

It is possible to calibrate without standard gas.

**■ Outputs**

4-20mA-transmission output and the alarm contact output by a standard.

**■ Option**

This monitor can use an extension cable for a sensor.


**OZG-EM-010K**
**Standard Specifications**

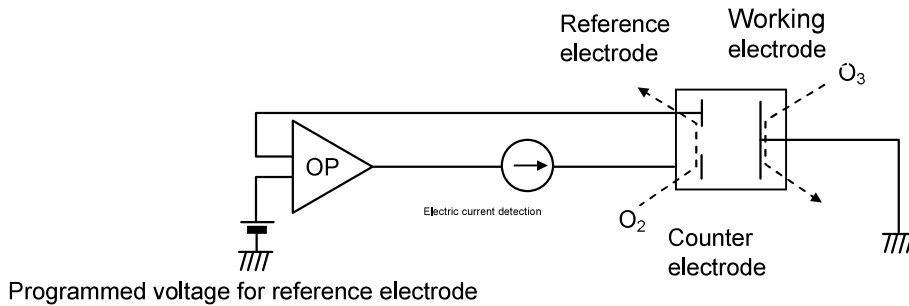
Standard Specifications	
Product name	Ozone Gas Monitor
Model	OZG-EM-010K      OZG-EM-011K
Measurement method	Controlled potential electrolysis
Display	3-digit LED
Measurement range	0~1.00ppm      0~10.0ppm
Accuracy	Within $\pm 10\%$ F.S. (as of calibration) Within $\pm 25\%$ F.S. (for 6month)
Repeatability	Within $\pm 5\%$ F.S.
Response time	Within 90sec. for 90% response
Sensor life	1 year (non-calibration)
Alarm setting range	0.10~1.00ppm      1.0~10.0ppm
Alarm setting	By the trimmer on front panel for each point
Alarm contact	1c contact, 0.5A, AC125V
Output signal	4~20mA DC Isolated, load resistance 600 $\Omega$ or less
Power requirements	100V AC $\pm 10\%$ 50/60Hz
Power consumption	Approx. 50VA
Environment	Temperature -5~40°C , Humidity 30~95%R.H.
Dimensions (mm)	154(W) $\times$ 113(H) $\times$ 76(D)
Weight	Approx. 750g
Mounting	Surface mounting with four M4 screws
The others function	Zero calibration, Span calibration, FACTOR ADJUSTMENT Sensor warning signal, Alarm action check
Standard accessory	Screwdriver(-), Fuse(0.5A) ※CAUTION Not contains input cable

## Detection principle

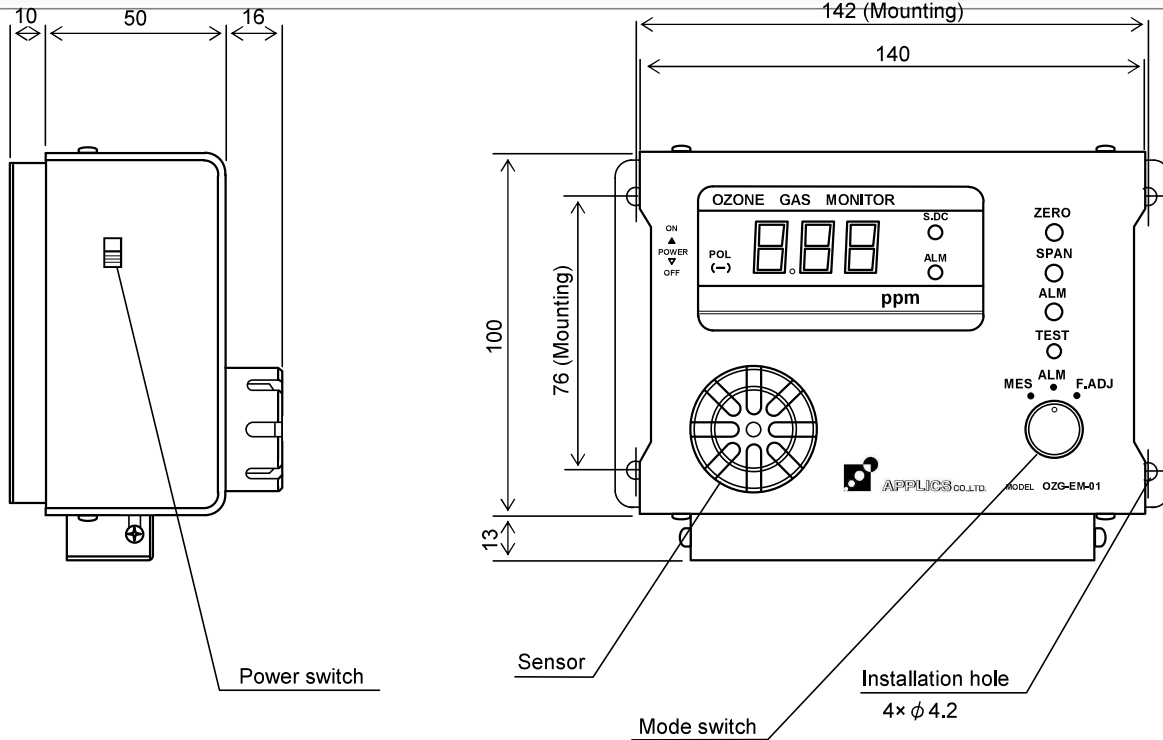
This sensor can detect gas of a low concentration in order to adopt the controlled potential electrolysis which there are the actual results in chemical analysis. We show construction of a sensor in chart below.

Three electrode comes in contact with an electrolyte aspect and a gaseous phase. When ozone gas nears working electrode, reaction occurs.  $[O_3 + H_2O \rightarrow 2H^+ + 2e^-]$  In the counter electrode which absorbed oxygen in air, equivalent to working electrode reaction occurs.  $[1/2 O_2 + 2H^+ + 2e^- \rightarrow H_2O]$

In total it becomes next.  $[O_3 + 1/2 O_2 + H_2O \rightarrow 2O_2 + H_2O]$  The current value which was in proportion to ozone concentration is provided by detecting an electric current to flow in this oxidation reaction.



## Dimensions



**CAUTION** Thoroughly read the Instruction manual before the use of the Instrument.

<Contact Details>

NISHIYAMA Corporation  
 International Business Division  
 4-11-11 Omorikita Otaku Tokyo Japan 143-0016  
 Tel: +81-3-5767-4170  
 E-mail: kokusai@nishiyama.co.jp  
<https://www.nishiyama.co.jp/en/>