

# Visualization of CO<sub>2</sub> concentration Automatic ventilation

Ultimate IAQ compatible



**NMA Series** (Standard size)



**SMA Series** (Slim half size)

Measure and display indoor CO<sub>2</sub> concentration

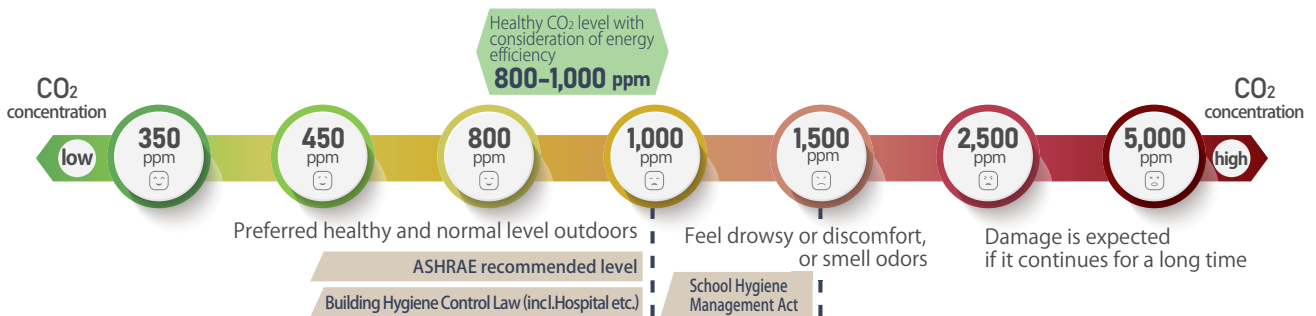
Visualization of ventilation

Energy efficiency by proper ventilation control

Significant reduction in electricity expenditures

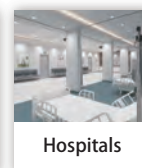
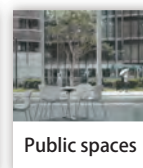
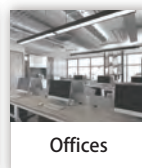
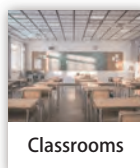
Improve work efficiency, prevent drowsiness and health hazards

Improving the working and learning environment



Detect and inform the levels of CO<sub>2</sub> concentration

CO <sub>2</sub> related standards		
U.S.A.	Japan	
ASHRAE recommended value	Building Hygiene Control Law (incl. Hospital etc.)	School Hygiene Management Act
<b>1,000</b> ppm	<b>1,000</b> less than ppm	<b>1,500</b> less than ppm



CONTACT US

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Please feel free to contact us with any questions before purchasing.



Product HP

Planning, Designing, and sales : C.H.C. SYSTEM TOKYO, JAPAN

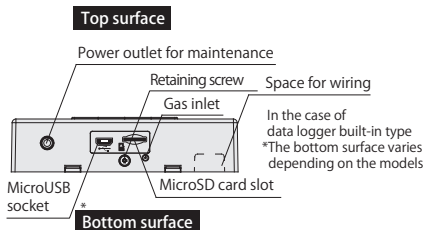
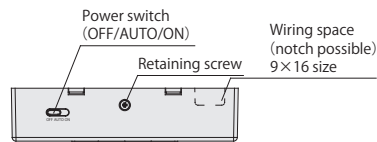
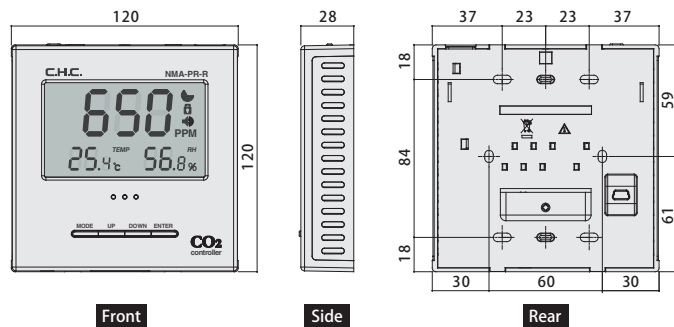
High-precision optical NDIR dual beam sensor, built-in CO<sub>2</sub> concentration correction (calibration) function

## Specification table

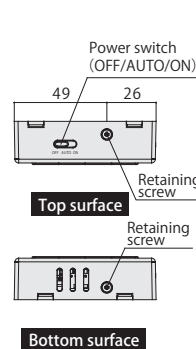
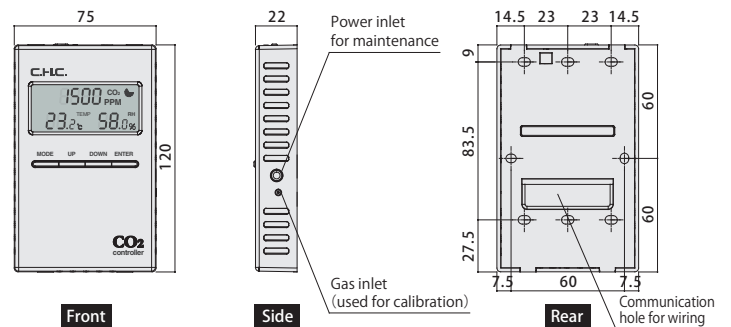
Models	<b>NMA-PR-R</b> Standard type <b>USD 395.00</b> (tax excluded)	<b>NMA-VRC-II</b> Standard type <b>USD 465.00</b> (tax excluded)	<b>SMA-VRC-III</b> Half size <b>USD 535.00</b> (tax excluded)
	<b>NMA-PR-RD</b> Data logger built-in type <b>USD 465.00</b> (tax excluded)	<b>NMA-VRC-IIM</b> RS485(Modbus)type <b>USD 500.00</b> (tax excluded)	
	(AC type) manufacturer's recommended retail price	(DC24V type) manufacturer's recommended retail price	
	Control of ventilation equipment by ON/OFF	Control dampers by proportional output	
Measurement method	Optical NDIR (non-dispersive infrared absorption) dual beam sensor		
Temperature dependent	Large value of $\pm 0.2\%$ or $\pm 2$ ppm per 1° C (25°C standard)		
Air pressure dependent	0.13% per 1mmHg with altitude adjustment function (Factory setting is 0m)		
Response time	2 minutes or less (90%)		
Warm up	In 60seconds		
Correction (calibration) function	Manual correction (calibration)		
Accuracy	CO <sub>2</sub> : Within $\pm 75$ ppm or $\pm 5\%$ larger value (0-3,000 ppm)		
Usage conditions	Temperature: 0-50°C; Humidity: 95% or less, No condensation (environment with airflow of 0.1m/s or more is recommended)		Temperature: 0-50°C; Humidity: 95% or less. No condensation
Measurement range	CO <sub>2</sub> : 0-3,000 ppm	Temperature: 0-50°C	Humidity: 20-90%
Measurement interval	5 seconds (Update Period)		
Relay setting range	CO <sub>2</sub>	ALARM1 : 100-2,980 ppm, ALARM2 : 120-3,000 ppm	
	Temperature	ALARM1 : 100-4,980 ppm, ALARM2 : 120-5,000 ppm	
Relay output	MAX 2A (DC30V or AC250V) . 1 contact, normally open.ON when AL2 is exceeded, then OFF when AL1 is exceeded (reverse setting is also possible) *Relay output selectable by CO <sub>2</sub> or temperature (SMA-VRC-III only)		
Analog output	Current output	4-20mA : CO <sub>2</sub>	4-20mA: CO <sub>2</sub> or temperature (opposite to voltage value)
	Voltage output	0-10V : CO <sub>2</sub>	0-10V: CO <sub>2</sub> or temperature (opposite to current value)
	Output width	ALARM1~ALARM2	0-5,000 ppm and 0-50°C
Digital output	RS485 Modbus RTU (NMA-VRC-IIM/SMA-VRC-III only)		
Data recording	Record CO <sub>2</sub> concentration, temperature and humidity every 5 seconds to MicroSD card (included) . About 2 years with 1GB (NMA-PR-RD/NMA-VRC-IID only)		
LCD display	All display / CO <sub>2</sub> concentration only display / non-display selectable (switchable among 3 patterns)		All display/CO <sub>2</sub> concentration only display/temperature and humidity only display/non-display selectable (switchable among 4 patterns)
LED display	3-color switchable lighting depending on CO <sub>2</sub> concentration (non-display selectable)		
Alarm	Sounds 4 times at ALARM1 or higher; sounds 8 times at ALARM2 or higher. With mute function		
Power supply	AC100-240V	DC24V	
Power consumption	Approx. 1.5W		
Size/Weight	W120×H120×D28 mm · 220g		W75×H120×D22 mm · 130g
Life expectancy of Sensor	Approx. 10 years		
Product warranty period	1 year		

## Body size (mm)

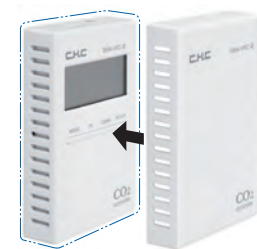
### NMA Series



### SMA Series



The display and operation buttons/switches can be covered with a cover (Optional).



- Using when display and button operation are not necessary.
- Prevent erroneous operation and mischief.

Size: W79 × H124 × D24 (mm)  
Material: ABS resin