



## CO<sub>2</sub> LEVELS AND GUIDELINES

### Non-Enforced Reference levels

#### NIOSH recommendations

**250-350 ppm:**

Normal outdoor ambient concentrations

**600 ppm:**

Minimal air quality complaints

**600-1000 ppm:**

Less clearly interpreted

**1000 ppm:**

Indicates inadequate ventilation; complaints such as headaches, fatigue and eye/throat irritation will be more widespread. 1000 ppm should be used as an upper limit for indoor levels.

**EPA Taiwan:** 600ppm and 1000ppm

#### Type 1

indoor areas such as department stores, theaters, restaurants, libraries, the acceptable Co<sub>2</sub> concentration of 8 hours average is 1000ppm.

#### Type 2

indoor areas with special requirements of good air quality such as schools, hospitals, day care centers, the suggested Co<sub>2</sub> level is 600ppm.

### Regulatory exposure limit

**ASHRAE Standard 62-1989:** 1000ppm

CO<sub>2</sub> concentration in occupied building should not exceed 1000ppm.

**Building bulletin 101 (Bb101):** 1500ppm

UK standards for schools say that Co<sub>2</sub> at averaged over the whole day(i.e. 9am to 3.30pm) should not exceed 1500ppm.

**OSHA:** 5000ppm

Time weighted average over five 8-hour work days should not exceed 5000ppm.

**Germany, Japan, Australia, UK...:** 5000ppm

8 hours weighted average in occupational exposure limit is 5000ppm.

### Ordering Code

VZ7787AZ, 7787 meter

VZ7788AZ, 7788 meter

VZ7798AZ, 7798 meter

## Desktop Carbon Dioxide Monitor w/ logging:7798 . w/ relay:7788 w/o relay:7787

- Large LCD displays CO<sub>2</sub> value (with good, normal, poor air quality indicator), year-month-date, hour-minute, air temp. & relative humidity
- 15 degree tilt to provide easy see and read angle
- Display real time clock and date
- NDIR (non-dispersive infrared) waveguide technology
- CO<sub>2</sub> automatic background calibration(called ABC) for long time drift compensation
- 7798:Up to 15999 points auto logging memory space  
7788:CO<sub>2</sub> relay to control ventilation



MAX/MIN



Metric/Imperial



Auto Logging



PC Link



Buzzer Alarm



DC Jack



LED Alarm



Relay



Model	7798	7788	7787
<b>Measuring range</b>			
CO <sub>2</sub>	0~9999 ppm, (2001~9999 ppm out of scale range)		
Temperature	-10~60°C (14~140°F)		
Relative Humidity	0.1%~99.9%RH		
Resolution	1ppm , 0.1°C/°F, 0.1%RH		
<b>Accuracy</b>			
CO <sub>2</sub>	±50ppm±5% of reading( 0~2000ppm) Other ranges accuracy are not specified		
Temperature	±0.6°C/±0.9°F		
Relative Humidity	±3%RH ( at 25°C, 10~90%RH )	±5%RH ( at 25°C, 20~90%RH )	
	±5%RH ( at 25°C , others )	±7%RH ( at 25°C , others )	
Warm-up time	30 seconds		
<b>Response time</b>			
CO <sub>2</sub>	<2 minutes ( 90% step change )		
Tair	<2 mins (90% step change)		
RH	<10 minutes ( 90% step change)		
Sample point	15999 points ( 5333points for each parameter )	NO	NO
Sampling rate	1sec to 04 hour 59 mins 59 sec.	NO	NO
LCD size (mm, HxW)	60x82		
RELAY(1A 30VDC/0.5A 125VAC)	NO	YES	NO
Operating condition	0~50°C , 5~80% RH (avoid condensation)		
Storage condition	-20~ 50°C,5~90%RH(avoid condensation)		
Power supply	5VDC adaptor (±10%), >=500mA		
Meter size	120 x 80 mm (Diameter x Depth)		
Weight	200g		
Standard package	Meter, manual, 5V universal adaptor, plain box, software CD & cable ( 7798 only)		

### Optional



**STEREO TYPE RELAY OUTPUT**  
P/N: VW38819A  
A CONNECTION WIRE TO USE  
WITH # 7788 RELAY OUTPUT

