



## 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**

*\*Available for EB project*



## 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 range is 10% of reading		
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)	±7%RH (at 25°C, others)
	±5%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

