

## Model **pSENSE** Portable Carbon Dioxide Instrument

### PRODUCT DESCRIPTION

Model **pSENSE** is a low cost flexible and easy to use hand-held, instrument designed to measure the carbon dioxide concentration and temperature in surrounding air.

The large illuminated display presents the 2 values simultaneously.

Built-in data output (RS232) makes it simple to log data for longer time. Audible alarm is included. Max/Min Average as well as TWA and STEL measurements are also available.

The carbon dioxide sensor's gold-plated infra-red waveguide and diffusion membrane filter provides you great reliability, accuracy and long-term stability.



### FEATURES

- State-of-the-art non-dispersive infrared (NDIR) technology to measure carbon dioxide gas in parts-per-million (ppm)
- Data output RS232
- Displays the current carbon dioxide temperature on a large LCD
- Displays TWA (8hours) STEL (15 minutes) Min, Max and average values
- Internal automatic self-diagnostic function
- Audible alarm
- Easy to calibrate

### APPLICATIONS

With a battery capacity covering more than 24 hours, the instrument works perfectly for diagnosing ventilation using carbon dioxide as the surrogate ventilation index.

The instrument works perfect for measuring the indoor air quality parameters CO<sub>2</sub>. Temp and Carbon dioxide has been acknowledged as a good indicator that adequate “fresh” outside air is being supplied to the occupants for acceptable indoor air quality. Adequate ventilation reduces temporary sickness, downtime and lost productivity.

The **pSENSE** is also ideal for measuring carbon dioxide concentration in *incubators, greenhouses, mushroom farms, etc.*, where correct levels are essential for the process outcome.

# *pSENSE* portable carbon dioxide instrument

## Technical Specification\*

### Measurement

Operating Principle .....	Non-dispersive infrared (NDIR) with gold plated optical cell
Gas Sampling Mode.....	Diffusion
Response Time (1/e) .....	Approx 30 sec
Measurement Range .....	0-2000 ppm
Extended Range .....	2001-9999 ppm
Accuracy.....	±75 ppm ±5% of reading (CO <sub>2</sub> ) (0 ~ 2000 ppm)
.....	±0.6 °C/±0.9 °F, ±3 % RH (at +25 °C, 10 ~ 90 %)
Warm up time .....	30 seconds
Response time.....	about 30 seconds
Alarm sound level .....	80 dB
Operating condition.....	0° ~ +50 °C, 0 ~ 95 % RH (avoid condensation) for CO <sub>2</sub>
Storage condition.....	-20° ~ +60 °C
Power supply .....	AA type (UM-3) x 4 pcs
Battery life.....	> 24 hours
Standard packing includes .....	Meter, manual, batteries and hard carrying case
Optional accessories.....	adaptor 9V/100-240VAC, RS232 software with D-sub connector
Pressure Dependence .....	+ 1.6 % reading increase per kPa deviation from normal pressure
Calibration .....	Manual calibration with fresh air
Resolution .....	2 ppm – CO <sub>2</sub> concentration, 0.1 °C / °F - Temperature
Numerical Liquid Crystal Display .....	Simultaneous display of * CO <sub>2</sub> concentration (in ppm.) * temperature

### Temperature

Temp. range .....	0° C ~ +50 ° C
RH range .....	0 % ~ 95 %
DP (Dew Point Temperature).....	-73.4 ° C ~ +50 ° C
WB (Wet bulb Temperature).....	- 13.3 ° C ~ +50 ° C
Measurement Range.....	0° – +50 ° C
Accuracy.....	±0.5° C

### Data Output

Digital Interface RS232 .....	Special cable
PC software .....	Windows 95/98/NT/ME/2000/XP Software and cable sold as option

### Electrical:

External supply .....	Plug in transformer
Internal Battery.....	4 pcs AA batteries 24 hours capacity

### General Performance:

Compliance with .....	EMC Directive 89/336/EEC
Storage Temperature Range.....	-20° to +70° C
Operating Temperature Range .....	0° to +50° C
Operating Humidity Range .....	0° to 95 % RH (non Condensing)
Size .....	209.4L*70W*57.7H (mm)
Weight .....	about 180g ( battery excluded),
Sensor Life Expectancy .....	> 15 years
Power-up Time .....	< 30 sec. (full specs < 15 minutes)
Housing Material.....	ABS/PC blend

