

pSENSE



Portable CO₂- and Temperature instrument

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 two 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.

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

Standard specification

Measured gas	Carbon dioxide (CO ₂)
Operating Principle	Non-dispersive infrared (NDIR)
Measurement range CO ₂	0-2000ppm
Extended measurement range	2001-9999ppm
Accuracy CO ₂ ¹	±50ppm ±5% of reading
Measurement range Temp	0-50°C
Accuracy Temp	±0.6°C/±0.9°F (@ 25°C)
Dimensions	209.4 x 70 x 57.7mm (L x W x H)
Power supply	AA type (UM-3) x 4 pcs

Key benefits

- State-of-the-art non-dispersive infrared (NDIR) technology to measure carbon dioxide gas in parts-per-million (ppm)
- IP30 Classification
- Data output RS232
- Displays the current carbon dioxide and temperature on a large LCD
- Displays TWA (8 hours) STEL (15 minutes) Min, Max and average values
- Internal automatic self-diagnostic function
- Audible alarm
- Easy to calibrate

¹ Accuracy is specified over operating temperature range at normal pressure 101.3kPa. Specification is referenced to certified calibration mixtures. Uncertainty of calibration gas mixtures (±1%) is added to the specified accuracy for absolute measurements.



pSENSE Technical Specification

General Performance:

Storage Temperature Range	-20 ~ 60°C
Sensor lifetime expectancy ¹	>15 years
Maintenance interval	Manual calibration with fresh air
Display	Numerical Liquid Crystal
Warm-up Time	30seconds
Operating Temperature Range	0 – 50°C
Operating Humidity Range	0 – 95%RH, non-condensing humidity environment
Alarm sound level	80dB
Dimensions	209.4L x 70W x 57.7H (mm)
Weight	~180g (battery excluded)
Power-up Time	<30sec. (full specs <15minutes)
Housing material	ABS/PC blend
Operating environment	Residential, commercial

Electrical / Mechanical:

External supply	Plug in transformer 9V, 1.0A
Internal Battery	4 pcs AA batteries 24 hours capacity

CO₂ Measurement:

Sensing method	Non-dispersive infrared (NDIR)
Sampling method	Diffusion
Response Time (T _{1/e})	~30sec
Measurement Range	0 – 2000ppmvol.
Accuracy ¹	±50ppm ±5% of reading
Pressure Dependence	+1.6% reading per kPa deviation from normal pressure, 101.3kPa

Temperature Measurement:

Measurement Range (T)	0 ~ 50°C
Accuracy	±0.6°C/ ±0.9°F (@ 25°C)
DP (Dew Point Temp)	-73.4 ~ 50°C
WB (Wet Bulb Temp)	-13.3 ~ 50°C
Response Time	~30sec

Data Output:

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

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