

# pSENSE RH



## Portable CO<sub>2</sub>-, Temperature and RH instrument

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

The large illuminated display presents the three values simultaneously, as well optional Air/Wet and Bulb temperature by selection.

Built-in data output (RS232) makes it simple to log data for longer time. Audible alarm, Max/Min average as well as TWA and STEL measurements are possible.

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

### Standard specification

Measured gas	Carbon dioxide (CO <sub>2</sub> )
Operating Principle	Non-dispersive infrared (NDIR)
Measurement range CO <sub>2</sub>	0-5000ppm
Extended measurement range	5001-9999ppm
Accuracy CO <sub>2</sub> <sup>1</sup>	±30ppm ±5% of reading
Measurement range Temp	0-50°C
Accuracy Temp	±0.6°C/±0.9°F (@ 25°C)
Measurement range RH	0 ~ 99.9RH%
Accuracy RH	±3RH% (@ 25°C, 10~90%) ±5% for other RH ranges
Dimensions	209.4 x 70 x 57.7mm (L x W x H)
Power supply	AA type (UM-3) x 4 pcs

<sup>1</sup> 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.

### 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, temperature and RH% 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



# pSENSE RH Technical Specification

## General Performance:

Storage Temperature Range	-20 ~ 60°C
Sensor lifetime expectancy	>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

## CO<sub>2</sub> Measurement:

Sensing method	Non-dispersive infrared (NDIR)
Sampling method	Diffusion
Response Time (T <sub>1/e</sub> )	~30sec
Measurement Range	0 – 5000ppmvol.
Accuracy <sup>1</sup>	±30ppm ±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

## Relative Humidity Measurement:

Measurement Range	0 ~ 99.9%RH
Accuracy	±3%RH (@ 25°C, 10 ~ 90 %)
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

<sup>1</sup> Accuracy is specified over operating temperature range. Specification is referenced to certified calibration mixtures. Uncertainty of calibration gas mixtures (±1% currently) is to be added to the specified accuracy for absolute measurements.

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Calibration Kit pSENSE can be ordered from Senseair@.