

# Model *SenseAir*<sup>®</sup>

## Portable Carbon Dioxide Instrument

### PRODUCT DESCRIPTION

Model *SenseAir*<sup>®</sup> is a very light weight (135 g) hand-held, pocket-sized (125x52x32 mm) instrument designed to measure the carbon dioxide concentration and temperature in surrounding air.

The integrated large, clear display presents the current carbon dioxide concentration and temperature.

Built-in data logger makes *SenseAir*<sup>®</sup> the perfect choice for monitoring the carbon dioxide concentration in a number of different applications and environments.

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



*The outer dimensions (125x52x32 mm) make *SenseAir*<sup>®</sup> a unique portable gas monitor.*

### FEATURES

- State-of-the-art non-dispersive infrared (NDIR) technology to measure carbon dioxide gas in parts-per-million (ppm)
- Built in logger funktion, supported by the free software UIP-P
- Displays the current carbon dioxide concentration and temperature on a large, clear, built-in LCD
- Displays the carbon dioxide level on a green-yellow-red 5 step LED bar graph
- Internal automatic self-diagnostic function
- Pocket-sized - 125 x 52 x 32 mm
- Extremely light - 135 grams
- Easy to use - just one button
- Can be customized with application set files, ie to display ventilation rate in l/s/person (or in US units)

### APPLICATIONS

With a battery capacity covering more than 12 hours, its small size (125x52x32 mm) and a total weight of only 135 grams, the *SenseAir*<sup>®</sup> pocket-sized carbon dioxide instrument works perfectly for diagnosing ventilation using carbon dioxide as the surrogate ventilation index. 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 *SenseAir*<sup>®</sup> is also ideal for measuring carbon dioxide concentration in *incubators, greenhouses, mushroom farms, etc.*, where correct levels are essential for the process outcome.

# Technical specification for the portable SenseAir®

## Measurement

Operating Principle .....	Non-dispersive infrared (NDIR) with gold plated optical cell
Gas Sampling Mode.....	Diffusion
Response Time (1/e) .....	2 min diffusion time & 15 sec at 0.2 litre/min gas flow
Measurement Range .....	0-6000 ppm
Extended Range .....	6000-10 000ppm (accuracy not specified)
Accuracy at NTP (+25° C) .....	± 3 % of reading or ± 20 ppm , whichever is greater
Pressure Dependence .....	+ 1.6 % reading increase per kPa deviation from normal pressure
Automatic Background Calibration.....	Automatic Background Calibration with fresh air
Numerical Liquid Crystal Display .....	Can be done together with charging during the night.
	Simultaneous display of
	* the current CO <sub>2</sub> concentration (in ppm.)
	* temperature
	* battery status indication
	* sensor status indication
	* ventilation rate (user configuration)

## Temperature

Operating Principle .....	Termistor
Measurement Range.....	0-50° C
Accuracy.....	±0,5° C (provided that the battery charger is not connected and the unit hangs in the safety strap)

## Logger and software

Digital Interface.....	USB cable with sensor UART-RS232 com driver
Internal Data Logger .....	Logging of CO <sub>2</sub> and temperature by 896 samples each. Logger resets in Off Mode
PC software.....	Windows 95/98/NT/ME/2000/XP compatible software UIP-P to:
	* define personal user preferences
	* support sensor calibration
	* transfer and save logged data
	* view trend curves of logged data

## Electrical:

Battery Charger Input .....	6 VDC / 700 mAh, with NOKIA type miniature connector
Internal Battery.....	3,6 VDC / 1350 mAh Li-ion accumulator ( > 12 h. capacity)
Battery Current Consumption.....	< 55 mA in normal mode

## 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)
Sensor Life Expectancy .....	> 15 years
Battery Life Expectancy .....	> 3 years
Self-diagnostics .....	complete power/sensor/ internal checks
Status Indicator .....	LCD triangle ikon = maintenance call
Power-up Time .....	< 30 sec. (full specs < 15 minutes)
Housing Material.....	ABS/PC blend
Dimensions (L x W x D) .....	125 x 52 x 32 mm
Total Weight .....	135 g

## Accessories:

*Included in original purchase: monitor with internal battery, protective casing, communication cable, wall-plug battery charger*

<u>Optional accessories:</u>	<u>art.no.</u>
Extra PC communication cable .....	A232-0740
Battery charger for use in cars (12V) .....	A-0741-charger
Extra wall-plug battery charger .....	A-0740-charger
Replacement battery.....	1PSC340848-1350
Extra protection casing .....	0741-bag

