



Dual Beam Detection

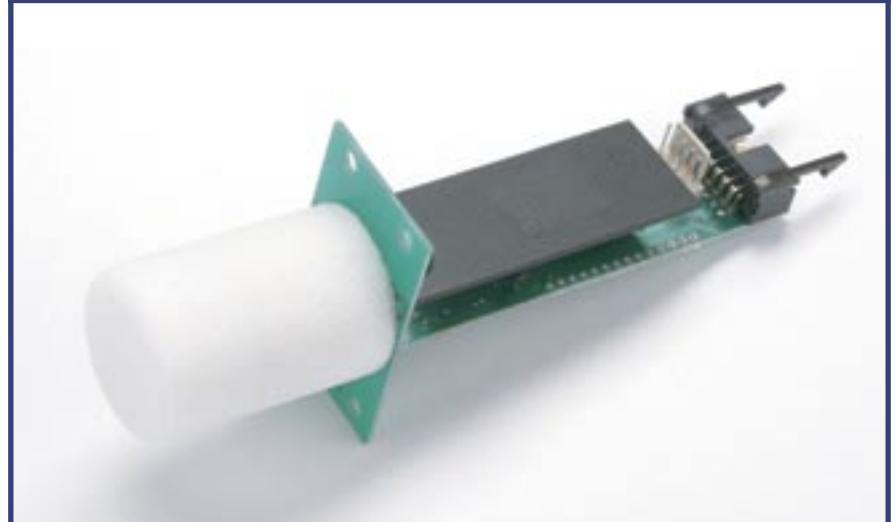
Compact Installation

No Secondary Boards

RS-232 Capability

Impeccable Stability

irSense™ Model 400 Dual-Beam CO₂ Sensor



Equipped with
14 Pin Standard
& 5 Pin Analog
Connectors



Available with
Sample Draw
or Diffusion Heads



Compact!
Electronics are
Mounted on the
Sensor Body

The **AirSense™** Model 400 Infrared CO₂ Sensor is the first compact, general purpose OEM CO₂ Analyzer with dual-beam infrared technology. In the past this technology has only been available in much larger stand alone laboratory analyzers.

Dual-beam technology provides a second infrared detection channel to automatically correct for drift in the measurement system, eliminating the need for frequent calibration. This gives the **AirSense™** Model 400 a distinct advantage over previous sensor designs utilizing single beam technology.

The **AirSense™** Model 400 requires no other processing modules, unlike earlier systems that required a secondary processing board to complete the package. Integrating the Model 400 is simple because the module is equipped with both a digital 14 pin connection for i²C communication, (**RS-232 Board can be added as an option**) and 5 pin analog connection for linear measurement.

The dual-beam detector of the Model 400 responds in under 16 seconds to changes in gas concentration. The processing unit continuously measures and corrects for short and long term changes, compensating for IR Source Aging and reflectivity changes.

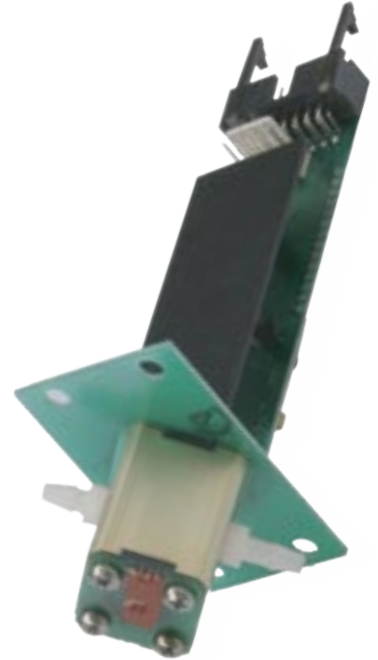
The compact size, low power requirement, and rapid response of the **AirSense™** 400 Series make it the ideal choice for embedded CO₂ measurement. With the 400 series it is finally cost effective to incorporate the rapid response, accuracy, and stability of NDIR dual beam technology in all CO₂ sensing and control applications.



AirSense™ Model 400 IR CO₂ Sensor

Specification Table

Sensing Technology	Non-dispersive infrared (NDIR) dual wavelength detector.
Measurement Range	0 - 20% CO ₂
Maximum Drift	+/- 1% of full scale
Accuracy	+/-5% of reading or 0.1% CO ₂ , whichever is greater
Repeatability	Better than 0.1% CO ₂
Linear Measurement Outputs	0 - 1 volt analog TTL Level PWM
Digital Interface	i2c Slave RS-232 Optional
Operating Temperature	0 - 50°C
Operating Humidity	0 - 100% RH, non-condensing
Storage Temperature	-20 to 70°C
Power Requirement	7.5 - 15 VDC @ 170 mA max (125 mA Avg.) Approx. 1.0W with 12 V. input



Also available from Digital Control Systems Inc.



The **AirSense™** Line of CO₂ Monitors



The **Servomax™** Line of Speed Controllers



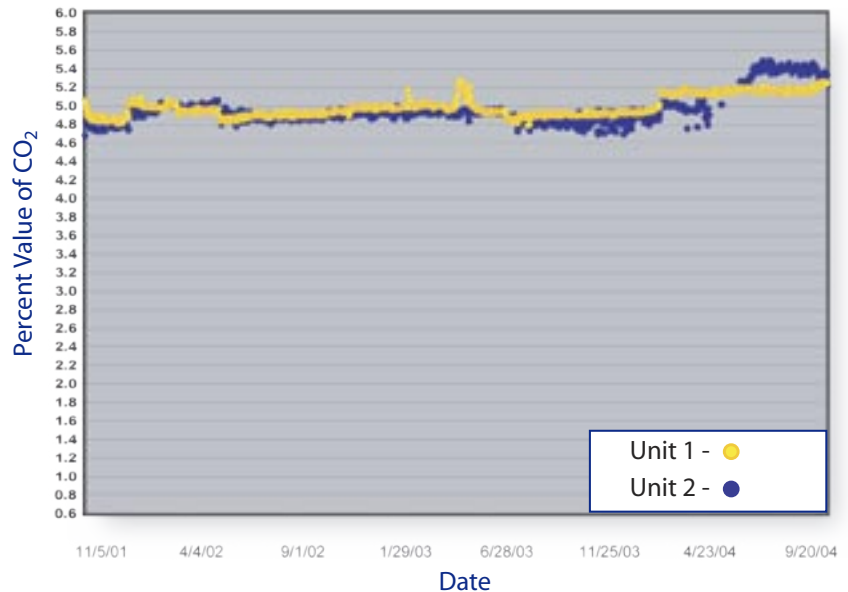
The **Multistat™** Line of Temperature Controllers



OEM Manufacturing for Custom Products

Long Term Accuracy

The graph below illustrates the performance of the Model 400 during a three year time period.



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