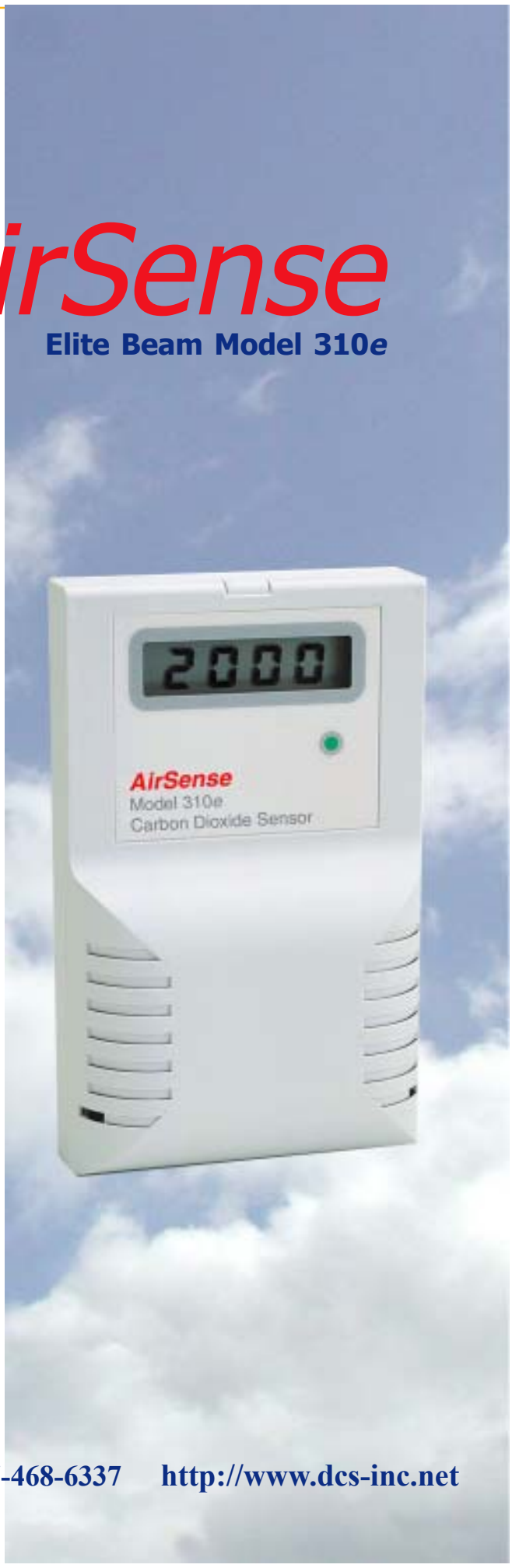
Digital Control Systems, Inc.

AirSense

Elite Beam Model 310e

- 1-10v interface
- 4-20 mA Current loop
- Isolated power supply
- Relay output available



This state-of-the-art instrument measures carbon dioxide (CO2) concentrations in the parts-per-million (ppm) range and is ideal for applications ranging from large buildings with complex HVAC systems to home gyms.

Fresh air contains 350-400 ppm CO2. Human respiration and combustion by-products from furnaces, fireplaces, and appliances can easily raise indoor levels of CO2 above 2000 ppm. According to the National Institutes of Occupational Safety and Health, increased levels (above 2000 ppm) of CO2 may contribute to "sick building syndrome," and symptoms such as hyperventilation, headache, dizziness, shortness of breath, and drowsiness.

The AirSense™ Elite Beam Model 310e CO2 monitor provides continuous, accurate reading of indoor CO2 levels, making it easy to maintain an optimum level of fresh air while reducing heating and cooling costs to an absolute minimum. Use of the AirSense™ Elite Beam Model 310e enables the Building Manager to recirculate heated or cooled air, adding outside air only when indoor CO2 levels rise above 2000ppm. Thus "sick building syndrome" and high heating and cooling costs can both be controlled at the same time with the use of the AirSense™ Elite Beam Model 310e.

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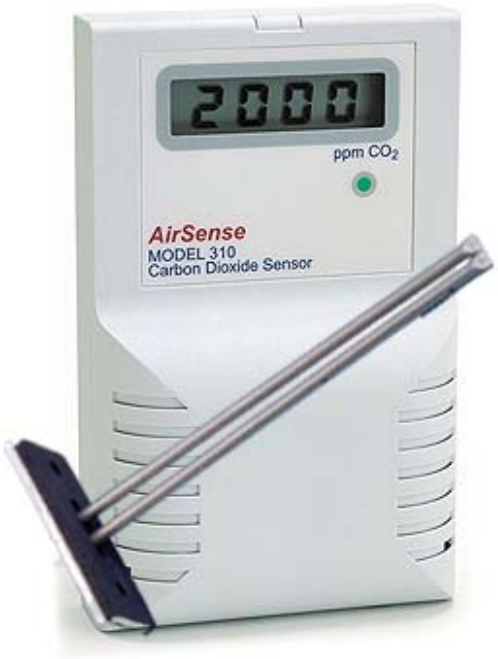
The AirSense™ Elite Beam Model 310e is easy to install and support. Measurement output is via a 4 - 20 mA current loop or a 0 to 10 volt interface. A completely isolated power supply eliminates any ground loop or electrical interaction problems when multiple units are connected to the same controller. Low power consumption makes the AirSense™ Elite Beam Model 310e perfect for battery-operated or other power-sensitive applications.

The AirSense™ Model 310's single gas verification makes field calibration a snap, and its superior design means significantly longer calibration intervals. Unlike other models, its simple user interface has no complicated menus: all maintenance and calibration operations are easily performed even on units with no display.

The AirSense™ Elite Model 310e's versatility is enhanced by options to satisfy most applications. The clear, bright 0.4" high LCD display option is readable from any angle for installations where local annunciation of the CO2 concentration is desired. For direct control applications the relay option can be configured to open or close above the setpoint and is easily adjusted in the field. For plenum sampling requirements, the popular duct option is easy to install.

Parameter	Value
Operating principle	Non-dispersive infrared (NDIR)
Gas sampling method	Diffusion or available duct kit
Measurement range	0-2000 ppm
Repeatability	± 20 ppm
Measurement accuracy	± 3% of reading or 60 ppm, whichever is greater
Recommended calibration interval	5 years
Warm up time	Less than 1 minute
Power requirements	18 - 30 VDC or 18 - 28 V_{RMS} AC
Power consumption	Less than 1 watt
Operating temperature range	0 - 50° Celsius
Operating humidity range	5 - 95% RH, non-condensing
Voltage output (linear)	0 - 10 VDC full scale standard. Range field adjustable from 1-10 VDC
Current output (linear)	4-20 mA (R_{LOOP} : 400 Ω maximum)
Optional LCD display	4 digit, .4" high
Optional relay contact rating	3 Amps @ 24 VAC
Optional relay setpoint range	0 to full scale
Case dimensions	5.25"x 3.25"x 1.4"
Enclosure material	Satin finish, high impact plastic



Model 310*e* available with duct kit.

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