

The CDD-2 has a sophisticated adaptive algorithm microprocessor. This "Overshoot Protection Logic" algorithm "learns" the dynamics of the space being controlled to avoid the dramatic overshoots inherent to setpoint control. These learned control parameters are remembered even when the CDD-2 is powered off.

The CDM-6000 provides a voltage of 0 - 5 volt output as standard. A simple one-point calibration procedure and a built-in calibration port that requires no special fittings or adapters make the CDM-6000 simple to maintain. For information about advanced settings and features of this product, hardware to the terminal block external connections or using this sensor with a device other than the CDD-2 controller, or for complete instructions manual please refer to www.greenair.com/cdm.c.htm.

Features

This carbon dioxide monitor controller model CDM/C-6 package includes the CDM-6000 CO2 monitor with LCD display and a CDD-2 digital sequencer with event programmer and photo sensor. The monitor samples atmosphere once each second and displays current CO2 values in parts per million (ppm) on its display screen, while transmitting linear millivolt signals to the Digital Event Sequencer logic translating circuits. The sequencer then interprets these signals and functions the CO2 equipment outlet according to predetermined values. The built in photo sensor automatically defeats the CO2 equipment outlet during darkness periods.

Description

This booklet will discuss the features and functions of the Green Air Products Infrared Carbon Dioxide Monitor and Digital Event Sequencer system. This system is designed to detect atmospheric CO2 levels and function CO2 producing equipment according to user programmable set points. It employs the most advanced detection system providing precise, accurate and dependable performance.

Introduction

Installation and Operation Manual CDMC-6



Carbon Dioxide Monitor Controller

The CDD-2 Carbon Dioxide Digital Sequencer features Overshoot Protection Logic programming which will automatically maintain the proper dosing parameters necessary to keep any size area enriched within a set tolerance regardless of the particular characteristics of the enclosure. If on the initial cycle the controller senses that excess CO2 has been administered it will automatically compensate for the next dosage. This will assure that the proper levels are constant and maintained at all times with complete accuracy.

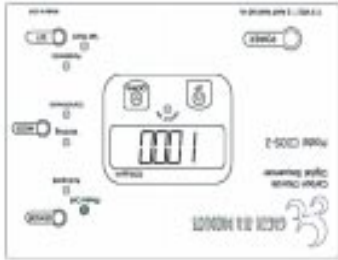
CO2 level. The CDD-2 will flash the current setpoint value. Press the UP or DOWN buttons to achieve any desired value. Press SET again to enter your hysteresis. The system will return to operation mode automatically after five seconds and continuously display the current CO2 level.

Example : Set point = 1000 ppm Hysteresis = 50
In the example if the CO2 level falls below the setpoint (1000 ppm) the CO2 equipment outlet will come "On" and enrichment will continue until a level of 1050 is reached and then it will shut off.

This value determines at what point the CO2 equipment will turn "Off". In the example below a 50 ppm hysteresis setting will turn CO2 "Off" at 1050 ppm. The SET button allows you to choose an enrichment level *setpoint* and *hysteresis* value. The hysteresis is the value between "On" and "Off" functions. removed from the area.

The MODE button switches between CO2 enrichment or CO2 venting functions. *Enrichment* is the normal mode for CO2 enrichment operations. *Venting* mode is for purposes of removing excessive levels of CO2. This is used primarily for mushroomroom cultivation or HVAC control where CO2 is to be removed from the area.

The SENSOR button toggles between photo sensor "on" and "off" modes. If the *activated* LED is lit the controller will operate only when light is present. This is the normal setting for CO2 enrichment. This mode will defeat enrichment during darkness periods. When the *activated* LED is off the controller will operate continuously regardless of the photoperiod.



Feature Identification

Altitude Correction

The CDM-6000 is factory calibrated for operation at sea level. When operated at higher elevations, the calibration may be adjusted to correct for this factor. The CDD-2 can be set to the exact operating elevation to eliminate the measurement error caused by decreased barometric pressure at higher altitudes. This altitude compensation is done by the CDD-2 controller. Let the CDM-6000 stabilize to the ambient CO2 concentration. To change the operating elevation:

1. Press and hold both the 'SET' and 'SENSOR' buttons for about five (5) seconds until all the yellow LED's blink. The current elevation setting is displayed.
2. Use the 'UP' and 'DOWN' buttons to adjust the display reading to the current elevation in feet. The display moves in 10 foot increments.
3. After several seconds of no button activity the CDD-2 reverts to its normal operating mode.

Specifications

Operating principle	Non-dispersive infrared (NDIR)
Gas sampling method	Diffusion or sample draw
Measurement range	0 - 5000 ppm CO ₂
Typical drift (per year)	±75 ppm (@ 1200ppm)
Accuracy	±5% of reading or ±75 ppm
Repeatability	±20 ppm
Calibration Interval	Five Years
Response time	Less than 1 minute
Operating temperature	0 to 50 ° C
Operating humidity	0 - 90% RH (non condensing)
Storage temperature	-30 to + 60 ° C
Power requirements	20 - 28 VRMS AC, 18 - 30 VDC
Power consumption	Less than 2W @ 24 VAC
Voltage output (linear)	0 - 10 volts DC standard
Current output (linear)	4 - 20 mA (R _L < 500 ohm)
Warm-up time	3 minutes
Dimensions	5.2" x 3.2" x 1.4"
Weight	6.5 Oz. (.35 Kg)
Digital Display	4 digit, .35" LCD
Operating life expectancy	10 years typical
Warranty	90 day, parts and labor



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