



CM3550 Series Controller for GrowAire™ Climate Control Systems

ADVANCED COMMUNICATIONS CAPABILITIES

EASY INSTALLATION AND OPERATION

CONTINUOUS MONITORING

Advanced GrowAire™ Microprocessor Controller



CM3550 Controller (above)
and Optional CM3550 Series
Remote Display Terminal (RDT) (right)



Remote Display Terminal



CM3550 Controller Used on GV (4-15 ton) Dehumidifier

FEATURES

- Backlit LCD User Interface
- Uniquely programmed for complex dehumidification, temperature and humidity control.
- Multiple communication options
- Alarm history retention

DESCRIPTION

The CM3550 controllers are uniquely programmed for the indoor grow application providing energy efficient moisture removal and precise temperature and humidity control.

The CM3550 controllers offer greater compatibility with building management systems (BMS). Optional communication modules for the CM3550 include: BACnet® Ethernet, BACnet® MS/TP, Modbus® TCP/IP or Modbus® RTU.

The CM3550 has a built-in time clock for setup/setback of temperature and humidity setpoints based on lighting schedule should a building management system (BMS) not be present on the project. An input is also available that can be tied directly into lighting contactors to provide this functionality as well.

A user interface to the CM3550 is supplied on each unit. This backlit LCD display provides easy to navigate screens for setpoint adjustment and unit monitoring. All Inputs and Outputs along with alarm history can be viewed from the user interface to aid in unit or system diagnostics. The interface is either supplied as a built-in display on the face of the controller or as a separate remote display terminal that is connected to the controller.

ORDER OPTIONS

Sensor Configuration Options

- ☐ CA3500-GR-SA (One for each grow room unit)
This package includes the supply air sensor that will provide feedback to the unit.
- ☐ CA3500-GR-ZONE (One for each grow room zone)
This package includes the zone sensor and the radiant shield. Additionally, this also includes a photocell and associated mounting for installation in the zone.
- ☐ CA3500-RDT (One for each unit where it is selected)
This package includes a remote display (RDT) and cord.

Communication Configuration

- ☐ Standard - No BMS Communication
- ☐ BACnet® Ethernet Module
- ☐ BACnet® MS/TP Module
- ☐ Modbus® Module

All trademarks hereby referenced are the property of their respective owners.

SYSTEM DISPLAY OPTIONS

The CM3550 controller is matched for each Desert Aire product based on the number of inputs and outputs and by taking into account the accessibility of the controller and its user interface. When the remote display terminal is connected to a controller with an integrated display both display devices are fully functional. The following summarizes the options for each product line.

Aura™ (GA) and TotalAire™ Series (GS)

The Aura™ and TotalAire™ Series use a controller with the integral user interface. As an option, a remote mounted display terminal (hand-held or wall mounted) can be ordered (See Order Options on page 1). The remote display terminal is shipped with a 20 ft. cable that has RJ12 6-pin termination plugs.

VerticalAire™ Series (GV)

For the GV 4 to 15 ton systems, the electrical control panel is located in the base section where the compressors are located. Since a display in this area would be difficult to view, a controller without an integral display is provided and the remote display terminal is shipped to be field mounted in a convenient location.

For the GV 20 to 30 ton systems, Desert Aire provides the controller with the integral user interface. As an option, a remote display terminal (hand-held or wall mounted) can be ordered.

RADIATION SHIELD

Grow room's utilizing high intensity lighting generate a large amount of radiant energy which can impact temperature readings. Error in the magnitude of 10°F could be experienced. To eliminate this error, Desert Aire utilizes a radiation shield designed to hold our sensors. With the curved shape and white color of the plates, air flow is able to move across the sensor to keep this light from impacting the readings.

For ease of installation, the shield comes with integral pipe mounting hardware which can be easily removed for surface mounting applications.

BMS COMMUNICATION MODULES

Modbus®- One of the most widely used protocols. Supports Modbus RTU mode; communications standard RS485. Modbus TCP/IP is also supported with appropriate card.

BACnet® MS/TP and BACnet® Ethernet- Based on RS-485 and Ethernet standards. Connection is possible through the following networks:

- SNMP v1, v2, v3 networks
- BACnet®, Ethernet, BACnet®/IP networks, BACnet® MS/TP
- LAN or Internet



Wall or Pipe Mount Temperature & Humidity Sensor with Radiation Shield

AIREGUARD™

In order to utilize AireGuard™ on these units you must purchase the AireGuard™ Hardware Box and AireGuard™ subscription service. The AireGuard™ platform allows for remote monitoring, alarming, and data trending of connected Desert Aire equipment through a secure cloud based database. The owner must provide an Ethernet internet connection to the AireGuard™ Hardware Box to enable the data transmission to the cloud server. The connection communicates without opening additional ports in the system's firewall or requiring a virtual private network.

For those users with more than one dehumidifier, this system can act as their local building management system where all of the units are available with the same login credential. Ethernet cable to be connected from the AireGuard™ interface box to the facility network.

Please refer to the AireGuard™ brochure for additional details.

OPTIMIZING SOLUTIONS THROUGH SUPERIOR DEHUMIDIFICATION TECHNOLOGY

N120 W18485 Friestadt Road, Germantown, WI 53022 sales@desert-aire.com

Ph: (262) 946-7400 - www.desert-aire.com

 **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

