



# CMP6050

CONTROL SYSTEM



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## Product Overview

Convion's new CMP6050 control system represents the most advanced control system from Convion. Based on a PLC architecture, the CMP6050 uses a 6-inch LCD touch screen user interface with pop-up display for programming, scheduling, and alarming. When combined with animated icons and additional keypad functionality, the result is unprecedented ease of use.

Programming is set in real-time on a 24-hour cycle and includes both stepped and ramped temperature set-point functionality. Using a simple and intuitive scheduling technique, programs can be set to run a single cycle, multiple cycles with up to 99 repeats, or they can be set to run indefinitely for long-term experiments. A default 'Status' screen amalgamates set points and actual conditions into a single, concise 'dashboard' for easy viewing and improved chamber management.

## Local Data

Main chamber processes (such as temperature, humidity, lighting, and CO<sub>2</sub>) are automatically logged and can be accessed with up to five-days of history. The data is viewed in the form of trend graphs which can be viewed directly on the local display screen for both 'set-point' and 'actual' values. Zoom and pan functions provide additional visualization tools that allow the user to precisely and accurately view and assess the data.

## Remote Data

The CMP6050 also employs an on-board storage device that automatically records every input/output parameter being monitored and controlled. Data logging resolution is 18 seconds, regardless of the number of parameters being recorded, providing unprecedented data resolution. This comprehensive, high-resolution data is available to Users and service personnel from any network connected PC.

## Graphic User Interface

The Display uses a 6-inch color touch-screen LCD. The user interface is icon-based and graphic rich making it exceptionally easy to use and understand.

## Scheduling

Scheduling is performed by developing a table of up to 8 programs along with the desired number of repetitions for each program. This provides a much more effective and a much simpler scheduling method.

## Alarms

With its 256 color display, alarms are color coded directly on the local display screen. Consequently, alarm conditions are quickly and effectively identified and resolved.

## Flexibility

The CMP6050 is capable of adding sensors and adjusting 'offset' calibration making it highly adaptable when experiments require changing or when they require uniformity monitoring or validation. The CMP6050 also allows for 'global' commands to be set such as fan speed control and Step or Ramp temperature transitions.



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### 1.0 Features:

- 1.1 General: The CMP6050 control system is a robust industrial grade control system that is designed for a range of controlled environment applications. Its intuitive color touch screen interface and its scalability make it the most reliable, flexible and user friendly system available.
- 1.2 Programming: The CMP6050 is capable of storing up to 16 real-time user-entered programs each containing up to 48 lines with one minute resolution. Programs are then entered into a "Schedule" (a sequence of up to 8 program entries) where each program can be repeated up to 99 times or set to run indefinitely. Programs are entered via a high resolution color touch-screen display.
- 1.3 Data Logging and Graphing:
- 1.3.1 Local Data The data available at the local display screen includes main chamber variables such as temperature, humidity, lighting, and CO<sub>2</sub>. Parameters are all logged automatically every 18 seconds and can be viewed in the form of Trend graphs. Trend graphs can be viewed, with up to five days of history, directly on the local display screen for both 'set-point' and 'actual' values. Zoom and Pan functions provide additional visualization tools allowing the User to precisely and accurately view and assess the data.
- 1.3.2 Remote Data The data available remotely is more substantial and includes every input and output parameter being monitored and controlled. Data is automatically logged every 18 seconds regardless of the number of parameters. This provides unprecedented data resolution for the User while it also benefits service personnel. Log data is accessed in several ways:
- A network-connected PC
  - An internet-enabled PC
  - A Conviron Memory Module™ (Optional)
  - Conviron's Central Management System (sold separately)
- 1.4 Alarms: Audible and color coded visual alarms are provided. User-settable absolute alarms for all controlled processes and user-settable process tracking alarms for temperature are available for the User to determine how tightly they want to monitor the experiment. In addition, there are also "built in" alarms available for chamber component monitoring. Alarm history is logged to daily text files easily retrievable from any Ethernet connected computer (either with or without Central Management™) or through the local control screen (last 15 alarm events).
- 1.5 Security: Password-protected levels are reserved for users (three), administrator (one), technicians and Conviron factory service personnel.
- 1.6 Start-Up Delay: Chambers can be programmed with varying restart times to reduce start-up loads after a power failure.
- 1.7 Communications: Ethernet connectivity is delivered with every controller. Controller, mask and Host IP address are easily settable from the Status screen. The controller is shipped communications-ready.
- 1.8 Auxiliary contacts: Alarm contacts for connection to a building management system or (optional) auto dialer.

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### OPTIONAL ACCESSORIES

AUX	Programmable Output:	Provides an auxiliary switch, terminated in the control panel, for timed control of automatic watering, nutrient dosing, etc.
SEN	Sensor	Thermistor temperature sensors (up to 4) available in 18ft (5.5m) length.
ADIAL	Auto-Dialer	An automatic telephone dialing system (auto-dialer) to notify user of chamber alarm.
CMM	Conviron Memory Module™	The Memory Module™ resides at the chamber and is designed for installations that do not have a LAN. The memory card can then be moved to a PC to facilitate importing the data into MS Excel or an equivalent program.