

# The CMP7000 Control System

For Plant Growth Chambers



**CONVIRON®**



# Advanced Control for Plant Growth Chambers

For researchers requiring the highest level of control in their plant growth chambers, the CMP7000 provides the most advanced solution for programming environments and monitoring experimental data - all accessible from a full-color touchscreen interface mounted on the chamber.

Pictured below, the Convirion CMP7000 controller, when combined with, ConvirionDirect and/or Central Management™ provides a versatile controls platform for users to manage their experiments with precision and confidence - from anywhere in the world.\*

**“The CMP7000 makes programming my chamber easy.”**



### Intuitive Interface

7" full-color, high resolution touchscreen with intuitive graphic interface for easy navigation.



### Easy Programming

Extended visibility of multiple timelines and processes.



### At-a-Glance Monitoring

Historical trend graphs, vibrant alarm status, and easy-to-track alarm history.



### Remote Connect

Connect from anywhere on your laptop or any LAN connected device with ConvirionDirect.



**With ConvirionDirect I always have access to my chamber —from anywhere.**

## Program Complex Experiments

On the touchscreen display, users can create, edit, name and store up to 16 programs (24-hour cycles) that define up to 18 control processes including temperature, humidity, lighting, carbon dioxide and other gases, watering and other connected devices. Stepped or ramped rate of change is possible depending on configuration.

## Organize Schedules

Up to eight programs can be organized into a schedule to create single-day, multi-day and seasonal experiments. Within a schedule, programs can be set to run once or repeat up to 99 times, or they can be set to run indefinitely for long-term experiments.

For added flexibility, users can replace or add sensors as needs change and adjust the offset calibration through the touchscreen display. Users can adjust non-program based processes, such as fan speed control and the type of temperature transition (i.e. step or ramp).

## Access Research Data

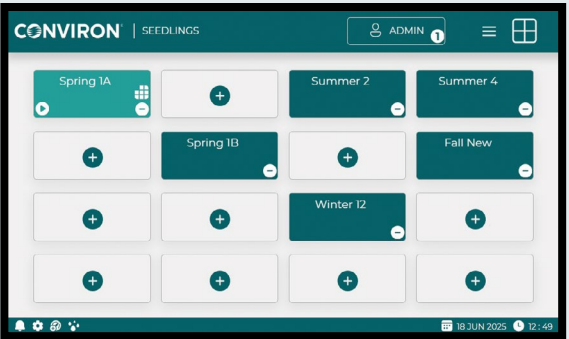
Control processes are automatically logged and five days of history can be accessed. Up to seven of the processes can be viewed one at a time as trend graphs on the touchscreen display, which show setpoint and actual values that are logged every 30 seconds. Zoom and pan functions ease visualization of trend data, which can also be saved to a USB stick.

For more extensive analysis, every 18 seconds CMP7000 automatically records every input/output parameter that is being controlled and monitored. This comprehensive, high-resolution data is available to users and service personnel from any network- or Internet-connected PC, through ConvirionDirect.

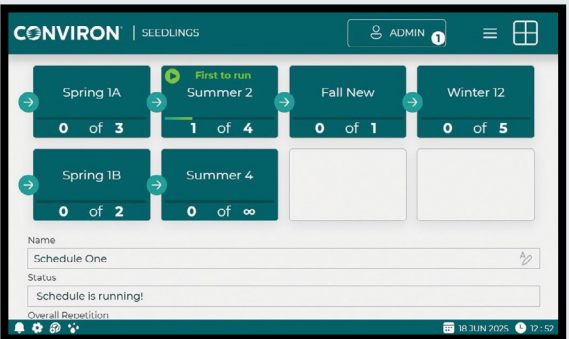
## Protect Your Plants

To protect your experiments from unintended changes, access to User, Administrator and Service levels is protected by passwords.

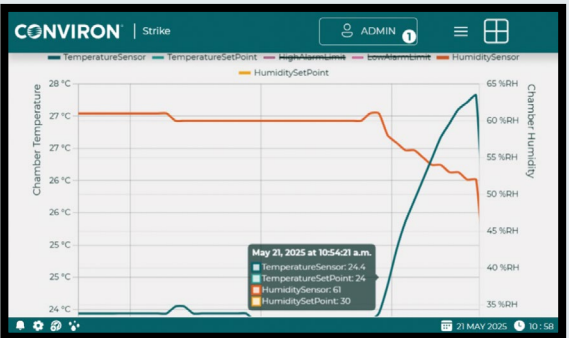
Users can define audible and color-coded alarms on the touchscreen display to alert them to conditions within the chamber. The most recent 16 alarms appear clearly on the display and a complete alarm history can be retrieved through any network- or Internet-connected PC, through ConvirionDirect.



Create up to 16 programs



Organize up to eight programs in a schedule



Visualize up to seven control processes

LINE	TIME [24-hrs]	TEMPERATURE [°C]	HUMIDITY [%RH]
01	04:00	15.0	60
02	05:00	15.0	60
03	06:00	15.0	60
04	07:00	17.0	40
05	08:00	19.0	40

Program up to 18 control parameters

# Central Management of All of Your Research

With Conviron Central Management™, researchers and facility managers can operate a single chamber or manage an entire fleet of plant growth environments from a central workstation and from remote devices connected through LAN or the Internet.\*

**Real-Time Connectivity:** Users have complete control of all chambers from any connected PC or mobile device with Internet access, including creating/editing programs and changing operating tolerances.

**Alarms and Notifications:** A secure TLS connection to email systems provide real-time alerts and alarm notifications to PC or mobile devices. Central Management (CM) can also interface with building management systems.

**Data Protection:** Experiment data is protected with automatic backup and restore functions including system protection, disaster recovery and file restoration.

**Data Management:** CM stores all experimental data and alarms on its hard drive and allows for complete access, extensive filtering and flexible extraction of data for analysis and reporting.

**Supervisory Dashboard:** An easy-to read dashboard displays the status of all chambers at a glance.

\*The CMP7000 is fully compatible with ConvironDirect and will be fully CM compatible in coming software releases. Consult factory for details.



TEMP	20	HUM	60
20.3		59	
008-PGR15			
TEMP	20	HUM	LIGH
20.5	60	700	
	58	695	
050-PGR15			
TEMP	23.0	HUM	80

**Central Management is a convenient way for me to have complete control of my entire fleet of Conviron chambers and rooms."**