

# controllers

## intellus ultra controller

Controls temperature, lighting, humidity (optional) and CO<sub>2</sub> (optional) in a Percival controlled environment.



### features

- Single board solid state design
- Low energy consumption
- Highly visible display with LED indicators
- Highly accurate PID temperature, humidity, auxiliary/lighting control
- 16 total programmable on/off outputs for lighting or other applications (7 of these outputs are configurable for dimmable lighting)
- Integrates with Intellus Web Server (optional) for remote monitoring/programming and email alarm notification via Windows based PC (requires Internet Explorer 6.0+) or Windows Mobile 5.0 Treo™ 700 WX smart phones
- Multiple programming styles including diurnal, 24-hour based real time or elapsed time
- Non-ramping and ramping control
- Store up to 560 total program steps and 70 programs

### features (continued)

- Program sequencing
- Multiple alarm settings provide experiment protection and notification of specific chamber events
- Calibration offsets
- Four password protected security levels
- Non-volatile memory for programs and parameters
- Battery backup for volatile memory

### diurnal programming style

- Specify day (and night period) and enter day and night set points for temperature, humidity and auxiliary
- All lights will be on during the day period and off during the night period
- Diurnal program will continually loop every 24 hours



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## 24-hour programming style

- Programs run in real-time over a 24-hour period
- 500 total program steps
- 50 total programs
- Non-ramping and ramping profiles
- Program sequencing
- Single program will continually loop every 24 hours and sequenced programs will continually loop the entire sequence

## elapsed time programming style

- Program steps run in terms of elapsed time
- Ability to create programs that run for more or less than 24 hours
- 60 total program steps
- 20 total programs
- Minimum step time is 1 minute
- Maximum step time is 999 hours and 59 minutes
- Non-ramping and ramping profiles
- Program sequencing
- Single program will continually loop
- Sequenced programs will continually loop the entire sequence

## alarm features

- High/low temperature safety alarms shut off all chamber control components
- High/low temperature deviation alarms
- Optional high/low humidity and auxiliary alarms
- Light lifetime alarm
- Error codes assist with troubleshooting
- Optional door open timer alarm

## calibration offsets

- Multiple temperature calibration offsets
- Day/night humidity and auxiliary offsets

## additional features

- Set and maintain static set points for temperature, humidity, auxiliary and lighting
- Automatic defrost
- Light lifetime displays accumulated bulb life
- Help menus

## board design

- Three analog input channels
- 32 digital outputs
- Three digital inputs
- Single board solid state design with no moving parts
- Ten-key membrane keypad with integrated LEDs
- Two line by 20 character vacuum fluorescent display
- Piezoelectric buzzer and message display for alarms
- No maintenance required
- Easy field replacement
- Meets UL 508 requirements
- Meets UL3101 Laboratory Equipment requirements
- Meets EN61326 Electrical Equipment for Measurement, control and Laboratory Environment requirements



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