

autopilot®

Environmental Controllers

LIGHT CONTROLLERS (4 & 8 LIGHT)



APCL4X



APCL8X

OVERVIEW

Thank you for purchasing the Autopilot **4-light or 8-light HID controller**. With these controllers you can control multiple lights from one timer or controller device. Power is wired directly into the lighting controller box, and all of the outlets are controlled by one detachable 120V trigger cable. The **APCL4X** is rated for 30 amps at 240 Volts and comes equipped with four 120/240 Volt X-style outlets. The **APCL8X** is rated for 60 amps at 240 Volts and comes equipped with eight 120/240V X-style outlets. Each unit's 120V trigger cable can be plugged into a standard 24-hour timer or environmental controller. The 120/240 Volt style outlets allow running your ballasts at 120/240V without having to change out your ballast power cords. These lighting controllers are also backed by a three-year, no-hassle warranty.

For information on additional Autopilot products please visit AutopilotControllers.com.

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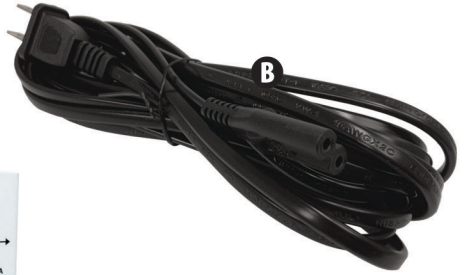
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SPECIFICATIONS

	APCL4X - 4 LIGHT	APCL8X - 8 LIGHT
Main Power Voltage	120V or 240V	120V or 240V
Receptacle Type	4 Nema 5-15, Nema 6-15 or universal	8 Nema 5-15, Nema 6-15 or universal
Maximum Lighting Wattage	4000W (15A per each pair of outlets)	8000W (15A per each pair of outlets)
Maximum Relay Amperage	30A	30A x 2 relays - 60A total
Operating Temperature Range	32-110°F	32-110°F
Operating Humidity Range	0-99% RH non-condensing	0-99% RH non-condensing
Minimum Relay Operations	100,000 @ full load	100,000 @ full load

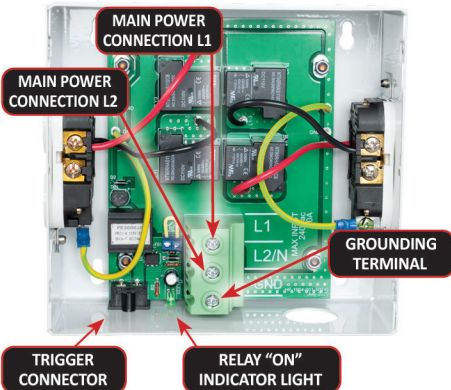
PARTS LIST - (WHAT'S IN THE BOX)

- A** - Light controller (4 light APCL4X or 8 light APCL8X)
- B** - Trigger cable
- C** - User manual

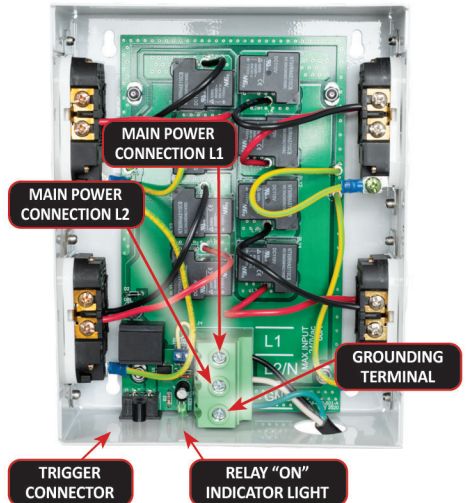


WIRING DIAGRAMS

4-LIGHT CONTROLLER (APCL4X)



8-LIGHT CONTROLLER (APCL8X)



FEATURES

- 4000W 4-light controller, 30A maximum (APCL4X)
- 8000W 8-light controller, 60A maximum (APCL8X)
- All metal housing for safe operation
- Premium-quality industrial grade relays
- X-style outlets allow 120V or 240V ballast operation
- Removable 120V trigger cable

IMPORTANT

Read the entire instructions before attempting to install and operate this unit. If you are unfamiliar with electrical wiring and circuits, we strongly recommend that you consult with a licensed electrician and/or have the unit professionally installed. All local and national electrical codes must be followed. Do not use this item for purposes other than what it is designed for. Do not exceed the maximum ratings of this unit. Incorrect installation or use of this product could result in injury, damage to the unit or the connected devices, or even fire.

MAIN POWER REQUIREMENTS

1. The user must provide a source of main power for the lights to operate. The main power connection must be rated for the amperage of the lights to be connected to the unit. (See specifications.)
2. The main power can be “hardwired” into a circuit breaker panel or by installing the appropriate high amperage portable cable and connector end (provided by the user).
3. The 4-light controller (APCL4X) should have a 30-amp, 2-pole circuit breaker, and #10 AWG wire; while the 8-light controller (APCL8X) should have a 50-amp, 2-pole circuit breaker, and #6 AWG wire to provide the main power. 15A MAX for each pair of outlets.
4. A ground lug (grounding terminal) is provided to connect the ground wire. Do not operate this product without a ground wire connected properly.
5. Most applications will use 240V power. It is the responsibility of the user to ensure that all ballasts connected to the unit are wired for 240V. (See ballast requirements.)
6. If the unit is to be used with 120V ballasts, ensure that all of the ballasts connected are wired for 120V operation. (See ballast requirements.)

BALLAST REQUIREMENTS

The ballast that will be used with the lighting controllers must be wired for the correct voltage. Most applications use 240V main power and will require the ballast to operate on 240V power. It is the user’s responsibility to ensure that all of the lighting devices that are connected to this unit are rated for the voltage being provided by the main power.

NOTE: This product can be used to operate 120V devices IF the main power provided to the unit is also 120V. Connecting a ballast that is designed to operate at 120V into a unit that has 240V main power connected could result in damage to the devices or fire. Consult your ballast manufacturer if you have any questions concerning the electrical requirements.

INSTALLATION

NOTE: DO NOT connect any ballasts to this unit until AFTER the power has been installed and verified to be the correct voltage for the ballast that will be connected to this unit.

CONNECTING THE MAIN POWER

1. Loosen the screws on the front cover.
2. Insert the appropriate sized main power cable into the cable clamp at the bottom of the unit. Secure the cable clamp.
3. Insert the green or bare ground wire into the grounding terminal and secure the ground wire.
4. Remove the insulation from the red and the black main power wires and insert the bare wire ends into the 2 power connection points on the power relay. Secure the wires tightly to ensure a good connection. Loose connections will cause the terminals on the relay to overheat, which can cause damage to the unit that is NOT covered by the warranty.
5. If a voltage tester is available, the user should verify the correct voltage is supplied BEFORE connecting the ballasts to the receptacles.
6. Turn on the circuit breaker or connect the main power cable connection. The unit will now be "powered."
7. Using the volt meter, carefully touch one tester probe to each of the main power connection points. The volt meter should read approximately 240V (if connected to a 240V circuit) or approximately 120V (if connected to a 120V circuit).
8. Once the correct voltage has been verified, carefully reinstall the cover on the unit using the 4 screws.

TESTING THE 120 VOLT TRIGGER CABLE

1. The main relay(s) inside the unit will be turned ON when the trigger cable is connected and activated. The trigger cable must be connected to a timer or lighting controller that will provide power to the main relays.
2. When the trigger cable is connected and plugged into the timer/controller, the relays will "close" and the small indicator light on the bottom of the unit will be illuminated.
3. When the trigger cable is disconnected, the relay will "open" and the indicator light will turn off. Once the trigger has been tested for proper operation, unplug the trigger cable.

CONNECTING THE BALLAST

1. The final step in the installation is to connect the ballast power cables to the receptacles on the sides of the lighting controller. (Ensure the trigger cable is not powered up while plugging in or disconnecting the ballasts.)
2. Once the ballasts are connected, the unit is now ready for operation. Connect and power up the trigger cable. The unit should activate and the lights should now be turned on.

NOTICE: The manufacturer, distributors and their retailers cannot be held responsible for any damage or injuries, consequential or otherwise arising from the use of this product. The user of this product assumes all responsibility for the installation and proper use of this product.

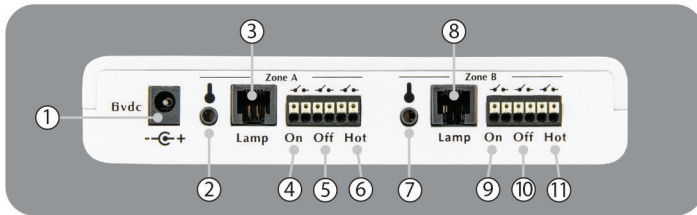
AUTOPILOT PX1 DIGITAL LIGHTING CONTROLLER

There are 5V trigger connectors for auxiliary equipment on the bottom panel which, when used in conjunction with an optional power expander like the Autopilot APCL4X or APCL8X, will allow the connection and control of one auxiliary appliance per zone A or B. Once properly wired to the APCL4X or APCL8X, these will allow an auxiliary appliance (AC, dehumidifier, etc.) in one zone to be turned On or Off in tandem with the On or Off status of the lights in that zone, or to be triggered to turn On by user-defined over-temperature events.

For example, an air conditioner wired in to a zone's "On" connector pair would be turned On only when the lights in that zone are turned On, and Off when the lights are switched Off. Another example scenario would be a dehumidifier wired into the "Off" connector pair of a zone so that it is turned On only when the lights in that zone are powered Off by the PX1.

Yet another example would be an air conditioner wired to a zone's "Hot" connector pair, which would be turned On if triggered by the temperature probe sensing an extreme temperature in the grow room (which you should have already defined in the settings as the "Stop" temperature that will trigger emergency shutdown).

NOTE: The auxiliary connectors use low-voltage (5V) connections. Do not plug 120V trigger cables into the PX1's auxiliary wire connectors.



AUTOPILOT PX1 PHYSICAL INTERFACE (CONNECTIONS)

The bottom of the PX1 has eleven (11) connectors:

1. Power
2. Zone A Temperature
3. Zone A Ballast Control
4. Zone A Low-voltage external equipment trigger for Lights On (pair)
5. Zone A Low-voltage external equipment trigger for Lights Off (pair)
6. Zone A Low-voltage external equipment trigger for overtemperature (pair)
7. Zone B Temperature
8. Zone B Ballast Control
9. Zone B Low-voltage external equipment trigger for Lights On (pair)
10. Zone B Low-voltage external equipment trigger for Lights Off (pair)
11. Zone B Low-voltage external equipment trigger for overtemperature (pair)

LOW VOLTAGE TRIGGER CONNECTIONS

To the left of the terminal block is a part of dry contacts labeled EXT connecting the two terminals to a set of dry relay contacts, like those used on the Autopilot PX1, allows you to control the APCL4X/ APCL8X with your PX1 Lighting Controller.

NOTE: In order for this unit to work with the PX1 Digital Lighting Controller, the 120/240V trigger cable must be plugged into a 120/240V power source at all times.

Remove the yellow jumper when using the dry contact low voltage control (EXT).

IMPORTANT

Determine the voltage of the external equipment you will be operating in conjunction with the PX1 controller. If operating a 240V device the APCL4X/APCL8X will need to be hardwired at 240V. If operating a 120V device with the PX1 controller the APCL4X/APCL8X will need to be hardwired at 120V.

The 120V trigger cable must be plugged directly into an outlet at all times in order to follow the PX1 commands.

Use 5V wire when connecting the extension control contacts to the PX1 external equipment trigger.

WARRANTY



LIMITED WARRANTY

Hydrofarm warrants the **LIGHTING CONTROLLER** to be free from defects in materials and workmanship. The warranty term is for 3 years beginning on the date of purchase. Misuse, abuse, or failure to follow instructions is not covered under this warranty. Hydrofarm's warranty liability extends only to the replacement cost of the product. Hydrofarm will not be liable for any consequential, indirect, or incidental damages of any kind, including lost revenues, lost profits, or other losses in connection with the product. Some states do not allow limitation on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you. Hydrofarm will, at our discretion, repair or replace the **LIGHTING CONTROLLER** covered under this warranty if it is returned to the original place of purchase. To request warranty service, please return the **LIGHTING CONTROLLER**, with original sales receipt and original packaging, to your place of purchase. The purchase date is based on your original sales receipt.

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ADDITIONAL LANGUAGES OF THESE INSTRUCTIONS CAN BE FOUND AT Hydrofarm.com



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