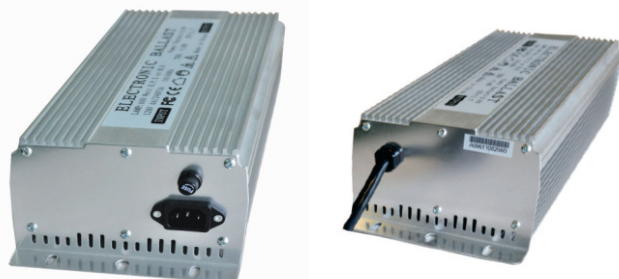




## 600W Digital Electronic Ballast Specifications & Instructions

**IMPORTANT** - All persons that will operate this equipment must read and become thoroughly competent with all operating procedures and safety precautions. Misuse of this equipment may result in electrical shock, personal injury or property damage. Failure to heed all safety precautions will result in void of warranty.



**CAUTION! \*HIGH VOLTAGE DEVICE\* FOR INDOOR USE ONLY.**

### **WARNING!!**

- Be sure to plug power cord into ballast before attaching to timer or power source.
- DO NOT plug or unplug from ballast when connected to the power source or timer.
- DO NOT attempt to connect this device to any other power source than that for which it is rated.
- DO NOT modify this device in ANY way; this could cause serious injury, death or damage to equipment and will void the warranty.
- Be sure power cords and lamp cords are securely connected. Only use bulbs whose wattage matches that of the ballast.
- ALWAYS disconnect the power before changing bulbs or moving equipment. Allow sufficient time for bulbs to cool before changing bulbs or when starting up the system after a short time.
- DO NOT touch the interior of the ballast or socket when power is on.
- DO NOT run ballasts or lights in wet environments. DO NOT SUBMERGE/ALLOW WATER TO TOUCH!
- ALWAYS check for damage incurred from shipping and if damage is present, contact your seller.
- USE ONLY WITH A PROPERLY GROUNDED OUTLET.
- KEEP AWAY FROM CHILDREN!
- DO NOT OPERATE NEAR FLAMMABLE MATERIALS.

### **WARNING!!**

- ELECTRICAL SHOCK MAY RESULT IF GUIDELINES, WARNINGS AND CAUTIONS LISTED HERE ARE NOT FOLLOWED.
- NEVER DISCONNECT ANY POWER CORD FROM A BALLAST WHILE THE POWER IS PLUGGED IN.
- NEVER MOUNT ANY LIGHT DIRECTLY TO A SURFACE OF ANY KIND.
- ANY DEVICE CORD TO BE CONNECTED TO THE BALLAST MUST BE ATTACHED BEFORE CONNECTING BALLAST TO POWER OUTLET.
- NEVER ATTACH DEVICES THAT EXCEED THE RATED WATTAGE OF YOUR BALLAST OR POWER SOURCE.
- NEVER USE WITHOUT A PROPERLY GROUNDED OUTLET.
- ALWAYS ALLOW LIGHTS AND OTHER DEVICES TO COOL COMPLETELY BEFORE MOVING, CLEANING, RESTARTING OR TOUCHING.
- NEVER EXPOSE BALLAST OR LIGHTS TO WATER.
- NEVER HANG OR SUSPEND ANY LIGHT OR BALLAST BY THE CORD.
- DO NOT OPEN THE LIGHT OR BALLAST. THIS WILL VOID THE WARRANTY AND MAY RESULT IN SERIOUS INJURY OR DEATH.
- FOR USE WITH STANDARD HPS AND MH BULBS ONLY.
- DO NOT USE WITH GENERATORS.



# 600W Digital Electronic Ballast Specifications & Instructions

**SEVERE AND POTENTIALLY FATAL ELECTRICAL SHOCK MAY RESULT IF GUIDELINES, WARNINGS AND CAUTIONS LISTED IN THIS MANUAL ARE NOT FOLLOWED. WE ASSUME NO LIABILITY FOR FAILURE TO COMPLY WITH THESE WARNINGS AND CAUTIONS.**

**IMPORTANT! ALL BALLASTS ARE ON WHEN CONNECTED TO A POWER SOURCE. ONLY USE BULBS WHICH MATCH THE RATED WATTAGE OF YOUR BALLAST.**

## **IMPORTANT SAFETY GUIDELINES AND TIPS**

- **FOR INDOOR USE ONLY. NEVER USE OUTDOORS OR IN ENVIRONMENTS THAT ARE EXPOSED TO THE ELEMENTS.**
- **DO NOT REMOVE WARNINGS OR CAUTION LABELS ON BALLAST.**
- Do not operate this unit if your power supply is not properly grounded or if any cord or plug in your system is damaged or missing a grounding pin. **NEVER MODIFY OR REMOVE GROUNDING PINS.**
- Our ballasts are able to be mounted on a wall and are grounded, however, you should **ALWAYS** be mindful of your surroundings and the current conditions of your ballast's environment. **NEVER** allow ballast or any other grow kit component to contact water. **FAILURE TO DO SO MAY RESULT IN SEVERE INJURY OR RISK OF FATAL ELECTRIC SHOCK.**
- **DO NOT** modify this device in **ANY** way; this could cause serious injury, death or damage to equipment and will void the warranty.
- Ensure that your power source is compatible with the ballast's rated range and wattage.
- **NEVER** attempt to maintain, move or work with the ballast when power is present. **NEVER** touch the socket when power is present. **YOUR POWER SOURCE MUST MATCH THE BALLAST'S REQUIREMENTS. IF YOU ARE UNSURE, CONSULT A CERTIFIED ELECTRICIAN.**
- **ALWAYS** handle ballasts with care.
- Allow sufficient time for your grow system to completely cool before changing bulbs, reconfiguring, repositioning or when starting up the system after a short time. Do not attempt to change bulbs when ballast is on!
- **NEVER** stare at lights when lights are on. Serious or permanent eye damage may occur
- Make sure that your timer is grounded.
- For more important precautions, please refer to the Grow Lights information sheets.
- **USE ONLY FOR THIS KIT'S INTENDED PURPOSE. DO NOT MODIFY.**

## **IMPORTANT!**

**NEVER** switch your ballast's voltage or MH/HPS bulb settings when the ballast is ON. This can damage your ballast and will void your warranty. As with any maintenance or change to your system's configuration, unplug from power source and allow to cool at least 20 minutes.

## **TROUBLESHOOTING TIPS**

Trouble: Ballast will not turn back on just after being turned off.

Remedy: Wait at least 15-20 minutes before turning it back on. Ballasts require a cool down period and the ballast will not restart for at least 15 minutes after shutdown.

Trouble: Glass dust or shards are visible inside bulb.

Remedy: This can be normal. Check to be sure there are no cracks, fractures or breakage in the bulb.

Trouble: Circuit breaker is tripped repeatedly when plugging in ballast.

Remedy: You may have too many devices on one circuit. Try eliminating other devices but if problem persists, consult an electrician.

Trouble: Ballast makes a very loud humming sound when plugged in.

Remedy: The higher the wattage of ballast, the more sound the ballast will make. Some noise is normal but if it seems excessive, consult an electrician.

Trouble: Light will not come on.

Remedy: First check to see that your bulb type and wattage match the ballast type and wattage and that it is securely seated in the socket. If you have the correct bulb type and wattage confirmed and light still does not come on, replace bulb.



# 600W Digital Electronic Ballast Specifications & Instructions

**NOTE: ALL BALLAST MODELS ARE SHIELDED FROM RADIO FREQUENCY INTERFERENCE AND ARE FINNED FOR HEAT DISPERSAL.**

**IMPORTANT! ALL BALLASTS ARE ON WHEN CONNECTED TO A POWER SOURCE. ONLY USE BULBS WHICH MATCH THE RATED WATTAGE OF YOUR BALLAST.**

## BALLAST INSTALLATION

Your ballast is capable of powering either Metal Halide (MH) or High Pressure Sodium (HPS) bulbs and is also compatible with 120V/240V current.

### WARNING:

**NEVER** attempt to switch between MH and HPS operation with the ballast power ON. First turn ballast OFF and allow to cool for at least 20 minutes, then either change bulbs on your lamp device or plug in a device with alternate bulbs loaded. Switching when ballast power is ON will most likely damage your ballast and will void your warranty.

**Note:** Only use bulbs that are approved for use with your ballast. Don't test a HPS bulb on an MH-only ballast or an MH bulb on an HPS-only ballast. This may damage bulbs or your ballast.

1. First, check and re-check that all components, including your ballast, are unplugged.

**THIS IS IMPORTANT! THIS IS A HIGH VOLTAGE APPLIANCE THAT IS CAPABLE OF DELIVERING AN EXTREMELY INJURIOUS OR EVEN FATAL SHOCK IF NOT HANDLED CAREFULLY.**

2. Ensure that you have verified your power source is compatible with the voltage requirements of the ballast and that it is a properly grounded source. Make sure that the Amperage available is at least 33% over the rated Amps of the ballast. To calculate this, use the following formula:

**Wattage divided by Voltage = Amperage**

So for instance, don't put more than 15A on a 20A fuse.

3. **NEVER** operate when explosive or flammable liquids or gasses are present.

## BALLAST INSTALLATION-CONTINUED

4. Plug the end of the ballast power cord into the ballast and then plug the power cord into a grounded timer or power source.



5. Always allow sufficient time for your bulbs and system to cool before installing a new ballast or conducting any maintenance.



Once your ballast is installed it will help to prevent relighting bulbs too quickly after shut off by executing a safety feature of its own...it will not restart for 3-10 minutes.



**INPUT**

### 120V/240V POWER:

All ballasts are supplied with a 120V/240V power cord which can be used for either power supply.



**OUTPUT**

**Note: DO NOT COMBINE MH AND HPS BULBS ON THE SAME DEVICE.**

**WARNING! DO NOT TOUCH OTHER ELECTRIC EQUIPMENT WHEN TOUCHING BALLAST. DO NOT ALLOW OUTPUT END OF BALLAST TO DIRECTLY CONTACT THE FLOOR OR GROUND-THERE IS NO INSULATION DIRECTLY BETWEEN THE INPUT AND OUTPUT ENDS. ALLOW 5 MINUTES FOR BULBS TO COOL BEFORE ATTEMPTING TO RESTART.**



# 600W Digital Electronic Ballast Specifications & Instructions

## WARNING!!

**SEVERE AND POTENTIALLY FATAL ELECTRICAL SHOCK MAY RESULT IF GUIDELINES, WARNINGS AND CAUTIONS LISTED IN THIS MANUAL ARE NOT FOLLOWED. WE ASSUME NO LIABILITY FOR FAILURE TO COMPLY WITH THESE WARNINGS AND CAUTIONS.**

### SPECIFICATIONS:

#### MODEL: 1805, 1806

#### 600W 2-WAY MH/HPS SWITCHABLE BALLAST

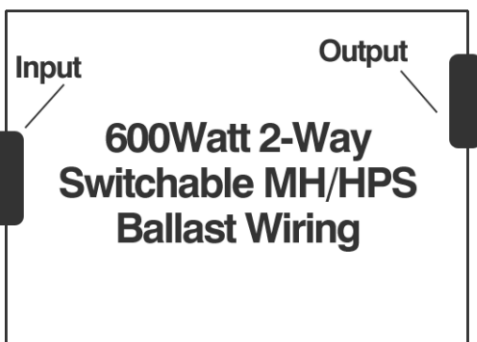
- Voltage: 120/240 (120V plug provided)
- FCC/CE certified
- Energy Saving Interior Fan; heat output holes
- Compatible with 600 Watt High Pressure Sodium Lamps OR Metal Halide Lamps (HPS/MH)
- Short circuit Protection; Strike Failure Protection; Thermo Protection; EOL; Open
- Recommended Installation space: 12in. x 6-1/4in. x 4in.
- Wiring Distance:  $\leq 20M$
- Working Temperature range:  $-86^{\circ}F/30^{\circ}C \sim +122^{\circ}F/50^{\circ}C$
- Maximum Case Temperature:  $176^{\circ}F/80^{\circ}C$

#### INPUT

- Vin: 93 Vac  $\sim$  265 Vac
- Rated Vin: 220 Vac
- Protection of over current input: interior fuse
- PF:  $> 0.99$
- THD:  $< 10\%$
- Frequency in: 50Hz/60Hz

#### OUTPUT

- V Lamp: 90 Vac  $\sim$  145 Vac
- Frequency out:  $> 40KHz$
- Current Crest Factor(CCF):  $< 1.7$
- Voltage of Open Circuit:  $> 300V$
- Ignition Voltage:  $< 4KV$
- P Out:  $> 560W$
- Efficiency:  $> 93\%$  (220 Vac)



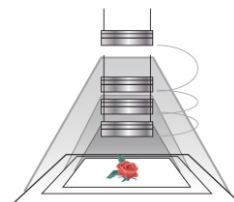
**FOR ILLUSTRATION PURPOSES ONLY! TO AVOID SERIOUS OR FATAL ELECTRIC SHOCK, DO NOT OPEN, TAMPER WITH OR MODIFY YOUR BALLAST IN ANY WAY!**

### GENERAL OPERATING INSTRUCTIONS

- Generally, you should always allow at least a 12" space around lights and ballasts to allow air to circulate
- Depending upon the wattage of your grow kit, allow that an area ranging between 4' and 8' square will be highly illuminated. Place plants directly in the area immediately beneath the light for maximum growth and exposure.
- Allow ample time for bulbs to come to full illumination when first turning on or changing.
- Always allow your system and all components to cool before handling.

### GROWING TIPS

- Most vegetables and houseplants need approximately 10-12 hours of light to actively grow. This may vary depending upon the light tolerance of your plant species. Up to 16 hours a day may be appropriate for forcing flowering.
- Move plants that have been in low light situations to grow lights gradually as sudden exposure may harm their leaves.
- Depending upon your growing environment, you may benefit from a cooling system, air filter or grow tent. Check out the products available at [www.earthworth.com](http://www.earthworth.com)
- Lights may burn erratically at first but will stabilize the longer they are on.
- Consult grower's guides, seed packages or online sources for specific growing information about the plants you wish to grow.
- In general, hang 400W systems about 3' from plant tips; 600W systems about 3-4' from plant tips; 1000W systems about 4-6' from plant tips.
- We recommend leaving your ballast and bulb on for at least 12 hours when first starting system; this will help to extend the life of your bulb.



1000 Watts - 48-72" from plants  
600 Watts - 36-48" from plants  
400 Watts - 24-36" from plants