



DEva Integrated CMH Lighting System  
630W 120/240v, 240/277v

## Owner's Manual

3 November, 2018



Congratulations on your new DEva Integrated CMH Lighting System! The DEva combines a unique low-frequency Silent Squarewave ballast with a computer-designed DE reflector for one amazing, computer-controlled grow light system. We hope you dig it the most.

This manual will tell you to to hang, connect and operate your new DEva CMH.

### The Box Contains

- DEva Integrated CMH Lighting System
- Power Cord
- Two (2) RJ-14 Data Cables
- RJ-14 Dual Splitter
- Two custom wire light hangers

### Installing Your DEva

The DEva CMH requires two 315w CMH lamps, you can not run with just one. There sockets in the DEva are PGZ type, which means they must be used with lamps rated for open fixtures like the Philips lamp shown at right:



The DEva also comes with a pair of custom steel wire hangers to make hanging the light a snap:



## Front Panel Controls



The front panel of the DEva CMH has a push button for setting power level, and connector for 120/240 or 277 volt AC power, and a connector for external control by a computer, the Revolution RLC1 or compatible Digital Lighting Controllers like the Maxibright or Gorilla Grow controllers using the Revolution protocol.

Each button press moves the power setting one LED to the right. DEva waits for three (3) seconds after the last button press before doing anything, so you can't accidentally turn your lights off.

## Blinking LEDs - What Your DEva Is Telling You

### OFF Blinks Once A Second - Over Temperature

If the DEva internal circuits reach 80 Celsius, it's way too hot and she will shut off with the OFF LED blinking on and off once a second. Once the internal temperature cools to 50 Celsius DEva will automatically restart.

### OFF Blinks Four Times A Second - Ignition Timeout

If the lamp fails to ignite, DEva will wait and try again for 30 minutes like this:

- Wait 5 minutes, try again
- Wait 5 minutes, try again
- Wait 10 minutes, try again
- Wait 10 minutes, try again
- Give up, switch off, this is not happening

After 30 minutes and five (5) tries to start, DEva flashes the OFF LED four (4) times a second to let you know that she's off, and intending to stay off until reset or power is removed.

If the OFF LED is flashing fast you can either remove and reapply power, or simply press the button to restart the ignition sequence. We suggest replacing the lamp first - if it doesn't light in a half hour of trying, it probably isn't going to.

### Selected Power LED Blinks Once A Second - Low Voltage

When incoming power drops below 115 volts the LED for your chosen power level will blink on and off once a second indicating output power is limited due to low incoming supply voltage.

If incoming voltage remains at or below 100 VAC (a failing generator or brownout, for example) DEva will remain off until voltage rises above 110 volts. If the voltage drops below about 90 volts, DEva will indicate this by all lights going dark.

### Selected Power LED Flickers Briefly Once a Second - External Control





The RLC1 Digital Lighting Controller can control 512 DEva lights in two zones. You can set on and off times, sunrise and sunset ramps, dimming with temperature and over temperature shutdown for each zone.

When the provided RJ-14 phone cable is plugged into the DEva and an RLC1 controller, the front panel lights on the DEva will show the closest power setting and the LED will blink off, very briefly, once a second to show you that the DEva is controlled by an outside source and that pressing the button will not work.

If the cable becomes disconnected, or the RLC1 stops working DEva will return to manual control at whatever power level was last selected - just as you would expect.

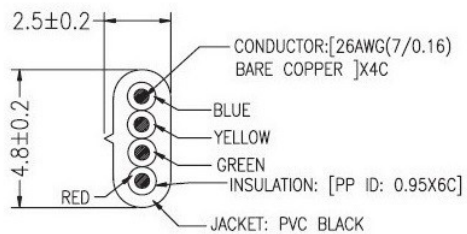
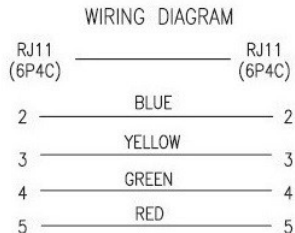
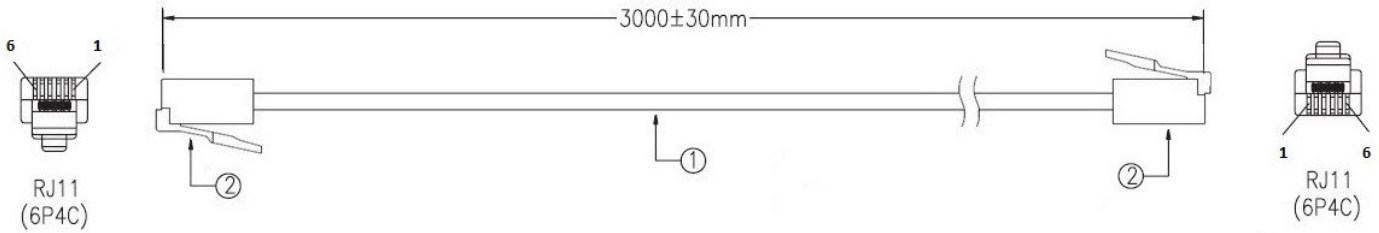
## Power Cables

DEVA CMH lights come in 120/240 or 240/277 versions and either can be ordered with various power cords as noted below.

Part Number	Where Used	Looks Like ...
DEVA630W-US120 Plug: NEMA5-15P	USA, Canada	 A black NEMA 5-15P plug with two flat parallel blades and a ground pin, shown next to a white NEMA 5-15R outlet.
DEVA630W-US240 Plug: NEMA6-15P	USA, Canada <b>THIS IS THE STANDARD CORD</b>	 A black NEMA 6-15P plug with two flat parallel blades and a round ground pin.
DEVA630W-AUS	Australia, New Zealand, China, Argentina	 A black Type I plug with two slanted blades and a round ground pin, shown next to a white Type I outlet.
DEVA630W-UK	UK, Ireland, Singapore	 A black Type G plug with three rectangular blades (two flat, one raised) and a round ground pin, shown next to a white Type G outlet.
DEVA630W-EURO	Europe (except UK)	 A black Type C/F plug with two round pins and a round ground pin, shown next to a white Type C/F outlet.
DEVA630W-277 Plug: NEMA L7-15P	USA, Canada, Europe  These are available by special order for projects that require a locking connector.	 A black NEMA L7-15P locking plug with two flat parallel blades and a round ground pin, featuring a locking collar.

# Data Cables and Connections

These are the data cables we supply. If you get longer or different ones, make sure they are wired like this.



CABLE CONFIGURATION

②	PLUG	RJ11 PLUG 6P4C INSULATION PC CLEAR GOLD PLATED	2	
①	CABLE	UL20251,26AWG*4C(7/0.16BC) PVC JACKET COLOR: BLACK	AS	
ITEM	PART NAME	DESCRIPTION	Q'TY	REMARK

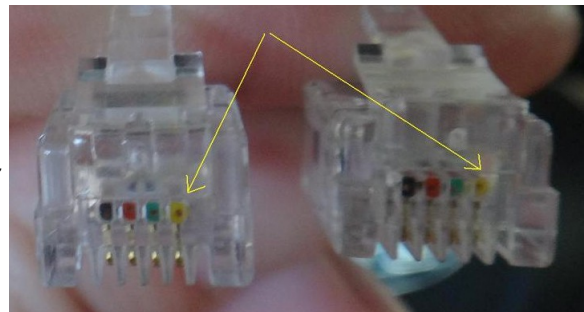
Look at the cable ends in the pic to the right and you'll see the wires are the same by color, pin 1 to 1, pin 2 to 2, etc. on each connector.

RevMicro has the right cables of all sizes should you need them, or <http://digikey.com> is a good source in the USA.

We have tested and recommend these cables:

- Digikey Part Number A2662R-07-ND, 7' long.
- Digikey Part Number A2662R-25-ND, 25' long.

<https://www.digikey.com/>





## Technical Specifications

Input Voltage	120/240 or 240/277 volts AC, 50/60 Hz
Input Current	5.7 – 2.9A Typically
System efficiency	94.7% @ 240 volts
Driver efficiency at full power	> 98%
Power factor	> 99.4%
Light Source	315w Type C182/O with PGZ18 base (two lamps)
Luminous Flux	1200 uMole/sec
External Dim	Revolution or Autopilot controller
External Dim Connector	RJ14 telephone interconnect type (6P4C)
Internal Dim	Push button on panel
Output power	378-636w dimmable in 1% steps
Dimming	Pushbutton or external controller
Certifications	Certified to FCC Part 18 Class B CSA Certified to UL 1598 RoHS and RoHS2 Certified
Dimensions	305mm x 650mm x 135mm (about 26 x 12 x 5 inches)

**R(évolution)<sup>2</sup>**  
 630W Integrated Lighting System  
 Adjustable output 378W/536W/630W/662W  
 Read manual before installation  
 RevolutionMicro.com

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P MAINS.: 682-666 W TYPICAL  
 V MAINS.: 120-240 VAC +/- 10%  
 I MAINS.: 5.7-2.9 A TYPICALLY  
 FREQ.....: 50-60 HZ



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ARTICLE NO : DEVA630  
 FCC ID: 2AH86-DEVA1000W  
 FCC Part 18A



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**Input Rating:**  
 120/240 V 5.7/2.9 A (or 682/666 w) 60 Hz  
 120/240 V 5.7/2.9 A (ou 682/666 w) 60 Hz  
**CAUTION – RISK OF FIRE REPLAMP WITH 315 W,  
 TYPE C182/O**  
**ATTENTION – RISQUE D'INCENDIE UTILISER UNE  
 AMPOULE DE REMPLACEMENTDE 315 W, TYPE C182/O**  
 SUITABLE FOR DAMP LOCATIONS.  
 THERMALLY PROTECTED.  
 CAUTION - RISK OF SHOCK. DISCONNECT POWER  
 BEFORE SERVICING.  
 CONVIENT AUX EMBLACEMENTS HUMIDES.  
 PROTECTION THERMIQUE.  
 ATTENTION - RISQUE DE CHOC. COUPER  
 L'ALIMENTATION AVANT L'ENTRETIEN.



## FCC Compliance Statement

<b>DEva</b>
<b>120/240 630W</b>
FCC ID: 2AH86-DEVA1000W

The DEva Integrated CMH Lighting System has been tested at FCC-certified laboratories in the United States and conforms to FCC's Part 18B Consumer standard for Industrial, Scientific, and Medical Equipment for both conducted and radiated emissions. The DEva CMH uses the same ballast chassis as the DEva 1000w DE, so carries the same FCC identifier.

Given that all electronic equipment emits some RF energy, please note that compliance with these standards does not mean a zero level of emission, only a very low level of emission. The FCC requires that we also state:

*This product may cause interference to radio equipment and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45-30 MHz.*

*This device complies with Part 18 of the FCC Rules.*

Changes or modifications not expressly approved by Revolution Microelectronics could void the user's authority to operate the equipment.