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IP68 IP69K CERTIFIED
IK10 IMPACT CERTIFIED

EDGE POWERED BY COLORWASH

EDGE INSTALLATION MANUAL PAGE 1

WARNING

Fixtures must be installed by a qualified electrician in accordance with all applicable national and local electrical and construction codes and regulations. Please read through this entire document before beginning the installation.

Remove any fixture from service if water or corrosion is observed inside the fixture. Water and chemicals can corrode metallic components and damage electrical circuits. Faulted electrical circuits can experience self-heating which, while unlikely, may present a fire hazard if left unchecked. This heating can also serve as an ignition source for gases generated by the corrosion of metals inside of the enclosure. Regularly scheduled inspections are recommended to ensure safe operation.

RISK OF ELECTRIC SHOCK

- Turn power off before inspection, installation, or removal.

Electrical Requirements

- Suitable for wet locations.
- Follow all National Electric Codes (NEC) and local codes.

Notes

These instructions cover both the standard EDGE Power/Data Translator (PDT) configuration and PDT configuration that includes the optional ColorWash controller. The steps which differ between these two configurations are in separate sections, and it is only necessary to complete the ones that apply to the PDT being installed.

Customer Service

For technical assistance and installation support please call 800-285-6780 x2 or email support@ggled.net

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EDGE INSTALLATION MANUAL PAGE 2

Supplied Materials

1. G&G *EDGE* Series Fixtures
2. Leader Cable(s)
3. Jumper Cable(s)
4. Termination Plug(s)
5. Mounting Brackets (Ceiling or Wall)
6. G&G *EDGE* Power/Data Translator (PDT) [Includes controls, power distribution and drivers.]

1

EDGE Standard Fixture

EDGE Leader Fixture

2

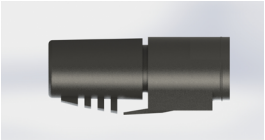
Leader Cable

3

Jumper Cable

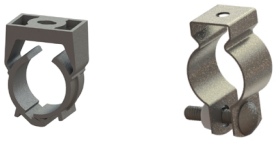
4

Termination Plug



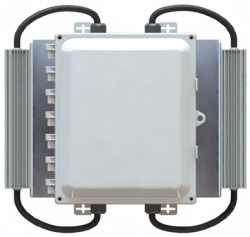
5

Mounting Brackets



6

EDGE Power Data/Translator Box



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EDGE INSTALLATION MANUAL PAGE 3

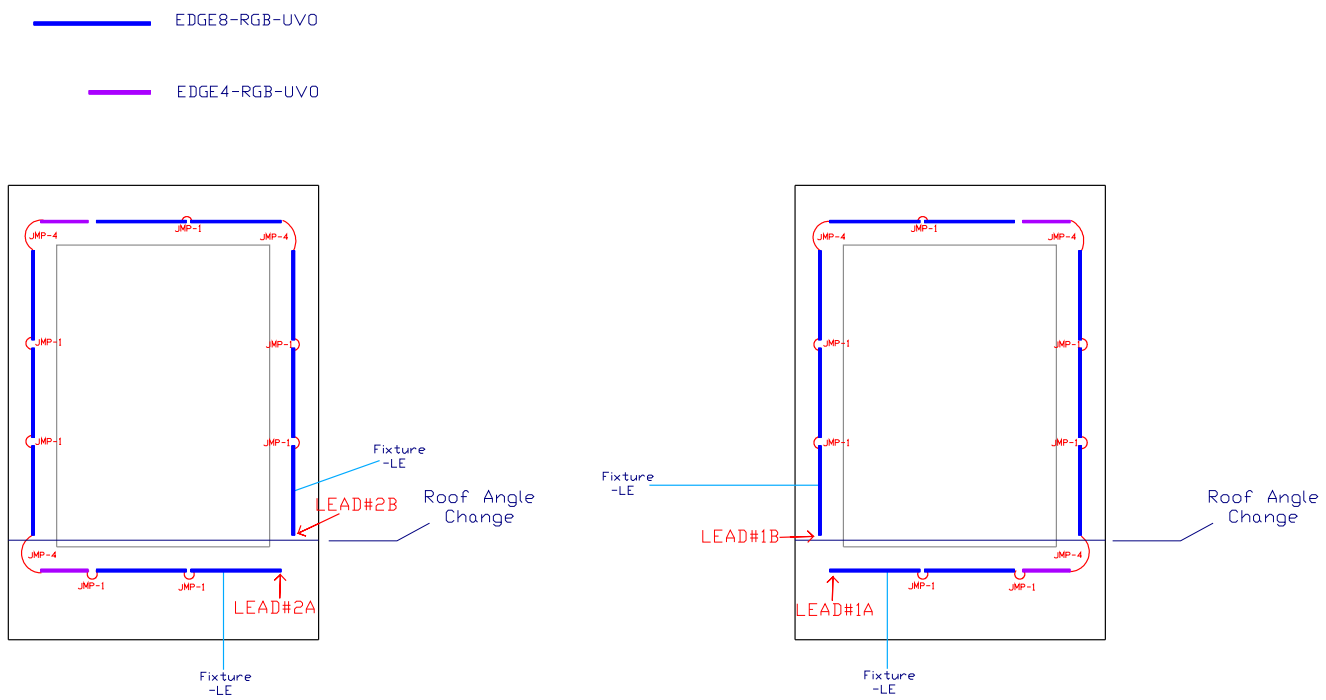
NOTICE TO INSTALLERS

G&G EDGE lights must be installed on the building in accordance with the layout that is provided with the system. Each string of lights must be connected to the LED output on the PDT as specified in the layout documents. Failure to follow the layout or connecting a string of fixtures to the wrong LED output will lead to lighting effects being generated in an erratic manner or the lights not working at all. If changes to the layout connections are required, please contact G&G Customer Support for assistance.

There are 2 different types of fixtures used in the EDGE lighting system. The first "LEAD" (LE) fixture on each leader uses a 6-pin input connector, while all other "THRU" fixtures in each string have 4-pin connectors. THRU fixtures have a gray connector shell on the input end and a black connector shell on the output end, while LEAD fixtures have black connector shells on both ends. Care must be taken to ensure that the LEAD and THRU fixtures are installed in the correct locations.

The jumpers between fixtures have 4-pin connectors that mate to the output and input connectors on the THRU fixtures. A terminating cap must be plugged into the output end of the last fixture in each string. This cap seals the last fixture in the chain. Failure to install this cap will lead to premature fixture failure due to water ingress.

Refer to your site-specific fixture layout and wiring diagram prior to installation. An example is shown below. If you have any questions about the layout, contact G&G support prior to beginning installation.



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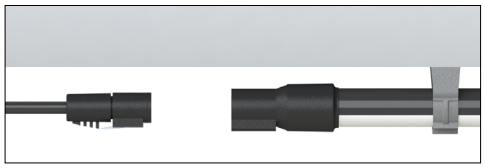
EDGE INSTALLATION MANUAL PAGE 4

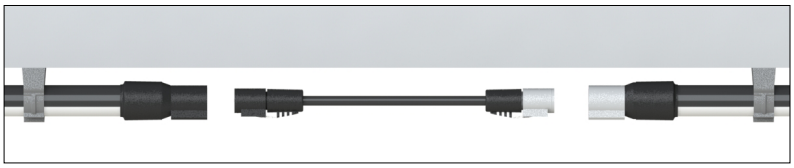
Mounting the *EDGE* Fixtures

- *EDGE* series wet location fixtures are typically surface mounted (Walls, Soffits, etc.). If mounting to the building soffits, it is recommended to mount the fixtures on the outer edges of the soffits to maximize the distance from the building walls. Fixtures should be aimed downward and slightly inward toward the building for the best effect.
- Each fixture has an input (male) and output (female) end. The end of the fixture with the product identification label is the input end. The fixture must be installed with the input end oriented in the direction of your incoming power source or leader cable.
- The location of the fixtures must follow your site-specific layout.
- For long linear runs, G&G recommends using a chalk line or laser to mark the mounting bracket locations.
- 2′, 4′, and 6′ fixtures require at least two mounting brackets. Brackets should be installed near the ends of the fixtures. 8′ models require three brackets with the third bracket being installed near the center of the light fixture.
- This product makes use of a push-click connector system. An audible click upon insertion of the connector indicates that the connector is fully seated. Failure to fully seat connectors can lead to cable and fixture damage during use.

Mount the fixture(s) in their specific location using the Surface Mount Bracket to affix directly to the ceiling or soffits.



Connect the power leader cable to the input connector (male) on the LEAD fixture. To do this, align the connectors, push inward, and listen for the audible click sound that indicates that the connector is fully seated.



When daisy chaining fixtures continue mounting fixtures and attach jumper cables as needed using the same push-click connection method as the leader cable.

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EDGE INSTALLATION MANUAL PAGE 5

CONTROLLER INSTALLATION & ELECTRICAL CONNECTIONS

Notes

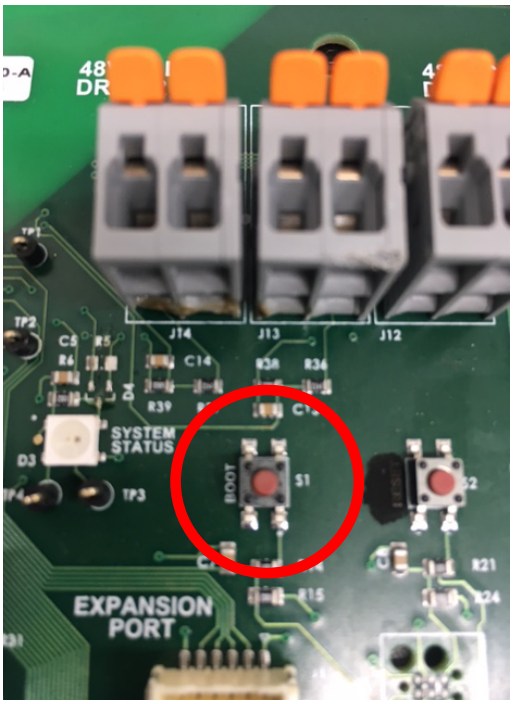
- The *EDGE* Power/Data Translator (PDT) board distributes power to the LED fixtures and the optional ColorWash control board.
- If installed, the ColorWash control board manages network connectivity, show/effect generation and other controls.

Power Circuits / Wiring / Circuit Breakers

The EDGE system is compatible with 120V and 277V single phase power systems. The EDGE system needs to have power supplied to it from the building's breaker box to the three AC VOLTAGE IN terminals (LINE, NEUT, GRND) at the bottom of the board below the driver fuses. The input circuit shall be supplied with a 20A breaker on 120V systems or a 15A breaker on 277V systems.

Power/Data Translator (PDT) Board

- The AC Input terminal blocks (120V/277V) feed 1 or 2 externally mounted AC/DC drivers, depending upon the PDT configuration. These are installed and wired at the factory.
- The drivers supply 48VDC to the 4 LED Output terminal blocks. See table on page 6 for maximum fixture connection details.
- One PDT board represents one DMX512 universe; the maximum number of fixtures that can be run off one universe depends on the amount of power available from the drivers.
- Each leader cable must be terminated at its own LED output terminal block.
- A Reset (Boot) Button S1 is located below the Single Driver Jumper terminals on this board. See the picture to the right.



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EDGE INSTALLATION MANUAL PAGE 6

Pixel Information

- EDGE fixtures use 4 DMX channels per pixel in an RGBW configuration for each 2-foot-long pixel, but only the first three channels (RGB) are used (EDGE fixtures only contain red, green and blue LEDs).
- When installing the system, check the length of the string of fixtures for each part of the building where the fixtures will be installed. Do not connect more than 88 feet of fixtures to the 1A LED output, and do not connect a total of more than 88 feet of fixtures to the Driver 1 outputs (1A and 1B). The same limits apply to the Driver 2 outputs (2A and 2B). The B outputs (1B and 2B) have a limit of 40 feet. G&G recommends that the split be as even as possible within these limits. For example, if possible, split 88 feet into a 48-foot string and a 40-foot string, or split 72 feet into two 36-foot strings.
- Please contact the G&G support team before making any changes to the layout of fixtures and leaders. The system has limits on how many fixtures and pixels can be connected to each driver and each output, and the support team will be able to tell if a change to the original layout will work or not.
- Consult the following table for the maximum lengths for each output and the mapping of EDGE pixels to each LED output.

LED Output	DMX Start Address	Maximum Length of All Fixtures	Maximum Number of Pixels	First Pixel	Last Pixel
1A	1	88 Feet	44	1	44
1B	177	40 Feet	20	45	64
2A	257	88 Feet	44	65	108
2B	433	40 Feet	20	109	128

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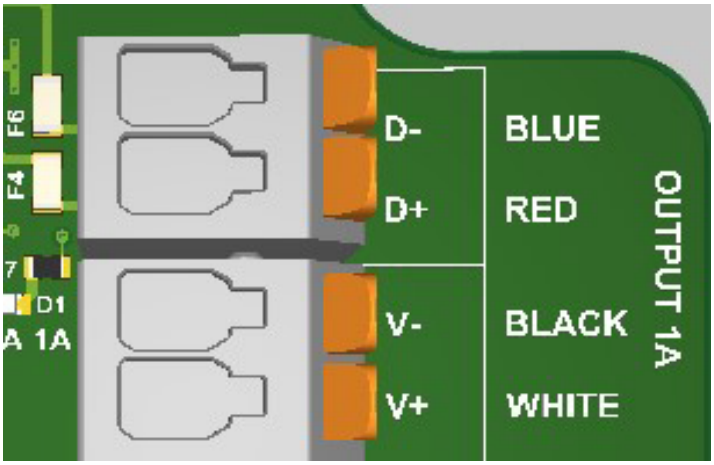
EDGE INSTALLATION MANUAL PAGE 7

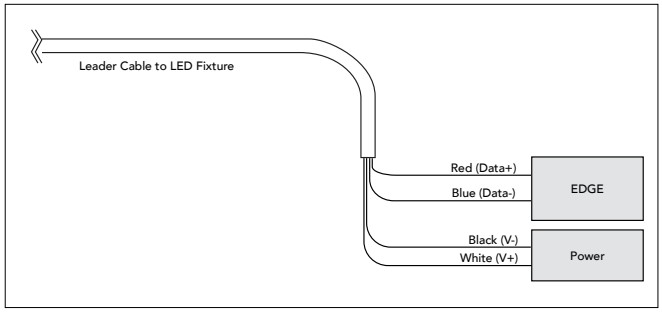
LED Fixture Electrical Connections

- The LED Output connectors on the circuit board inside the *EDGE* PDT are labeled 1A, 1B, 2A, and 2B.
- The system layout that is included with the system identifies which leaders connect to which string of lights. For instance, leader 1A must be connected to output 1A, and leader 2A must be connected to output 2A. Failure to make the correct connections will lead to lighting effects being generated in an erratic manner.
- To connect the leader cables to the LED Output terminals, remove 2-3" of the black outer insulator of the leader cable. Strip 3/8" of insulation off the blue, red, white, and black wires. Connect these wires to the "LED OUTPUT" terminals as shown in the table and photo below. Trim back the green wire and the shield around the blue and red wires; they are not used in the *EDGE* system.

LED Output Terminal	Leader Cable Wire Color
D- (Data Minus)	Blue
D+ (Data Plus)	Red
V- (0 VDC)	Black
V+ (48 VDC)	White



Electrical Connections



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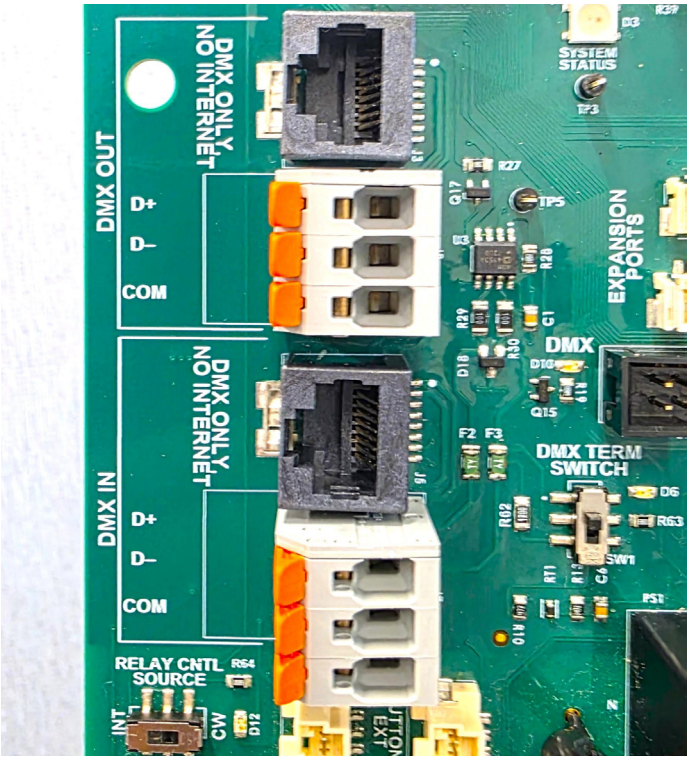
EDGE INSTALLATION MANUAL PAGE 8

DMX CONFIGURATION

If the ColorWash option is installed, please skip this section and proceed to the Control Board and Network Connectivity sections on page 9.

Data Input

- The DMX connections bring fixture data into the *EDGE* PDT board and optionally pass the data along to other DMX devices.
- Connect a CAT6 cable from the ColorWash PDT to the RJ45 (8P8C) connector labeled DMX IN on the EDGE PDT board.
- Discrete wires can be used to connect the DMX signal if this is preferred over the CAT6 cable. Connect the three data wires to the terminals marked D+, D-, and COM on the board.
- A DMX terminator switch is provided on the PDT board. It is set to terminated at the factory. Move this switch to its other position if termination is not required. An indicator for the termination being active is provided near the termination switch. DMX Installation is now complete. Disregard the **ColorWash Installed Option** section next.



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EDGE INSTALLATION MANUAL PAGE 9

COLORWASH INSTALLED OPTION

Control Board

- The required connections to the PDT Board are installed at the factory.
- A Reset Button is located on this board next to the ethernet port J1.
- Ethernet Network connectivity to ethernet port J1 is required to adjust the settings stored on the controller.

Network Connectivity

In order to configure the ColorWash portion of your EDGE system, it must have a connection to the internet. The connection is made using the RJ45 connection port on the control board. This ethernet connection must have access to outside networks.
The network cannot be restricted to local connections only. Enterprise networks may block outgoing connections using a firewall. If this is the case, the following ports must be opened for outbound connections to allow the device to connect to our servers:

Port	TCP	UDP	Usage
31314	•		Initial device-server connection
993	•		Fall-back device-server connection #1
443	•		Fall-back device-server connection #2
80	•		Fetch device firmware

User Interface

- In order to access the ColorWash system, you will need to create an account on the ColorWash dashboard at https://dashboard.colorwash.app.
- Requests for new accounts can also be sent to our support team at support@ggled.net or (800)-285-6780. You will need to provide our team with a valid email address. An invitation link from colorwash@colorwash.app will be sent to that email. Click the Create Account button to access the registration form.
- After your account has been created, you can access the dashboard and adjust the settings for your system.
- For information about configuring your system using the dashboard, please refer to the ColorWash Dashboard User Guide. This can be found on the G&G website at www.ggled.net.

QUESTIONS?

Please contact G&G Support at 800.285.6780

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EDGE INSTALLATION MANUAL PAGE 10

EDGE PDT UNIVERSE 2 & 3 INSTALLATION

If your EDGE-PDT-CW system with a ColorWash (CW) controller requires multiple universes, these instructions will guide you through the installation of universes 2 and 3. Your CW system uses DMX Universe 1, and additional EDGE-PDT-DMX boxes will use universes 2 and 3.

Installing Your EDGE-PDT-DMX Boxes

To complete the installation, follow these steps:

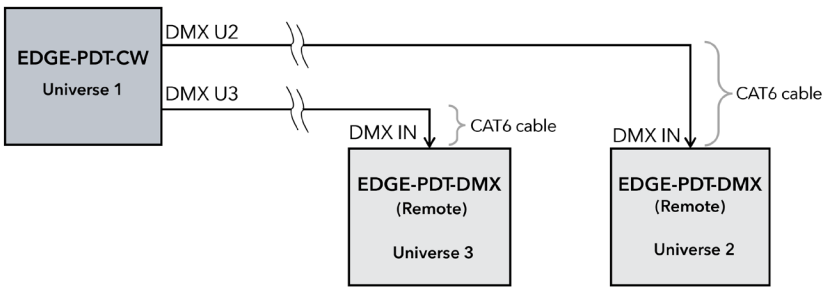
- Install the EDGE-PDT-DMX box(es) for Universe(s) 2 (and 3 if used) according to your site-specific layout and wiring diagram. Refer to the Controller Installation & Electrical Connections section on page 5 for more information.
- Once you've installed the boxes, proceed to the next section to connect their DMX inputs to the EDGE-PDT-CW box.

Connecting Your DMX Inputs

To connect your remote EDGE PDTs for universes 2 and 3 to the ColorWash EDGE PDT, you'll need:

- Ethernet CAT6 cables with RJ45 connectors (one cable per remote universe)
- Make sure the cable length is 500 feet or less
- Connect the CAT6 cable from the corresponding DMX Universe connector on the translator board in the ColorWash EDGE PDT to the DMX IN connector on the remote EDGE PDT.

By following these steps, you'll be able to complete the initial installation of your EDGE PDT system with universes 2 and 3.



Remote EDGE-PDT-DMX Boxes Installation

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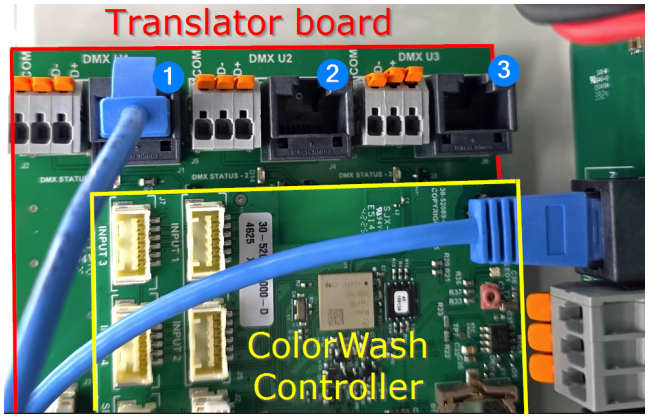
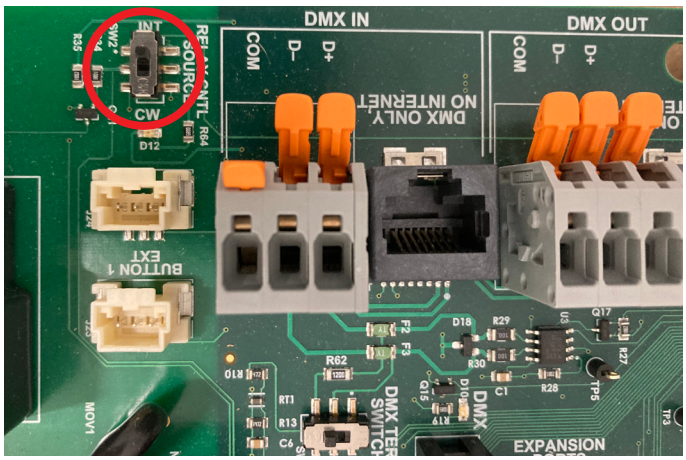
EDGE INSTALLATION MANUAL PAGE 11

At the ColorWash™ PDT

- The ColorWash controller is mounted on top of the translator board and is connected to it with three small harnesses. The translator board (bottom) provides three vertical RJ45 connectors labeled DMX U1, DMX U2, and DMX U3. Universe 1 is connected at the factory to the EDGE PDT board located in the same box as the ColorWash controller.
- For Universe 2, connect the CAT6 cable that runs to the remote EDGE PDT to the RJ45 connector labeled DMX U2 on the translator board (bottom).
- Refer to the DMX Configuration section on page 8 to locate the DMX IN port (RJ45) for the other end of the CAT6 cable on the remote EDGE PDT.
- If Universe 3 is used, connect its CAT6 cable to the RJ45 connector labeled DMX U3 on the translator board (bottom) in the ColorWash controller box.



- Switch the RELAY CTRL SOURCE switch on the Slave PDT board(s) from CW to INT



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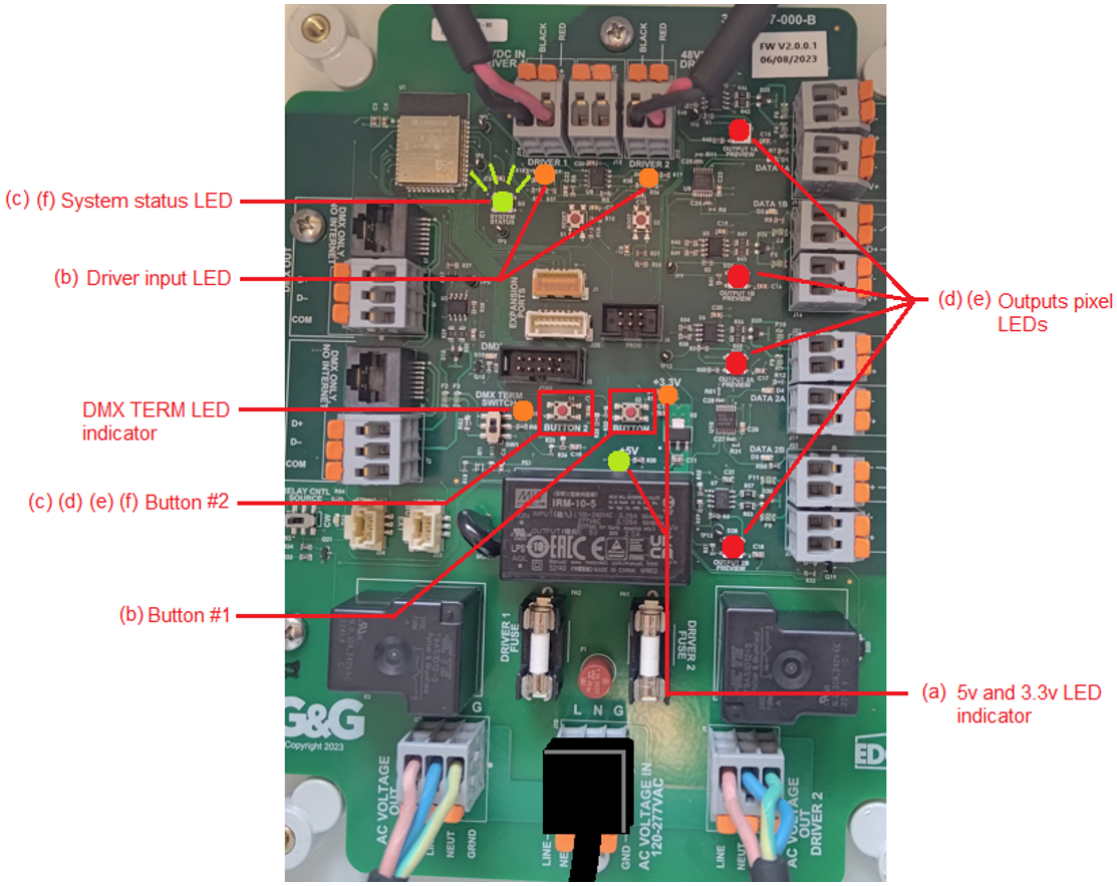
EDGE INSTALLATION MANUAL PAGE 12

For the steps that follow, please reference the below picture of the PDT board:



- Make sure the SYSTEM STATUS LED (D3) is blinking green on both the master and slave PDTs. If not, press RESET or cycle AC power.
- Make sure the relays come on in both (or all 3) PDTs and that the yellow DRIVER 1 and DRIVER 2 LEDs are on. This means DC power is available for the EDGE fixtures.
- Make sure the DMX TERM SWITCH is on in both (or all 3) PDT boxes (the yellow LED D6 should be on when power is applied).
- Make sure the DMX LED (D10) is blinking green on both (or all 3) PDTs. This means that the PDT board is receiving data from the ColorWash controller.