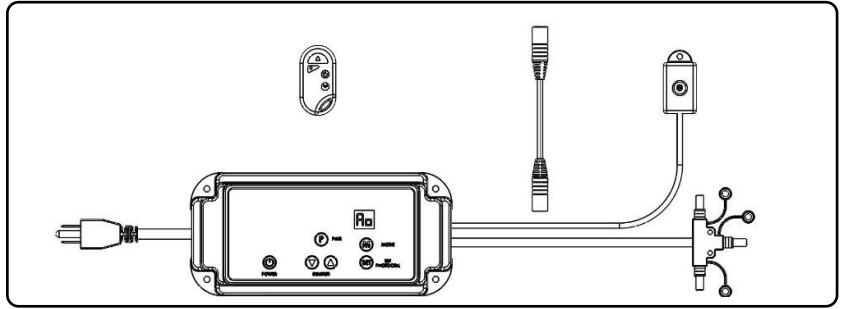


## Pre - Installation Notes

- Follow all national and local building/electrical codes.
- Transformer must be plugged into a GFCI outlet.
- Transformer can support up to 50 watts output.
- Don't cut any wires. Extra wire length can be coiled up.
- Do not use extension cords.
- Do not use within 10 feet of ponds, pools, or spas.
- If using insulated wire staples to hold the wires in place, be sure not to pierce or crush the wires.
- Keep away from external heat sources.

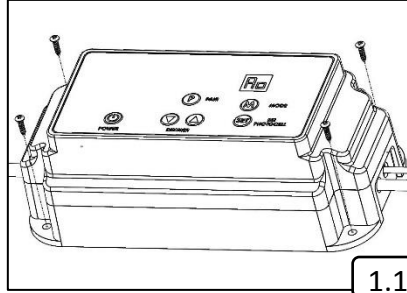
## 12 Volt 50 Watt DC Smart Transformer



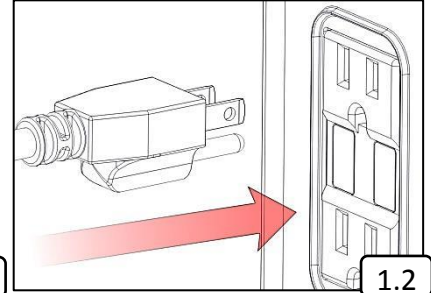
### Step 1

#### Mount the Transformer and Photocell

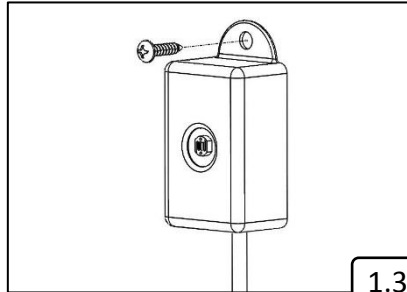
- 1.1** Use (4) stainless steel screws (not included) to mount the transformer a minimum of 12" above the ground level and within reach of a 120V AC GFCI outlet. The 120V AC power cord attached to the transformer is 5 feet long. The transformer can be mounted under the deck but the control panel on the transformer should be accessible to change settings.
- 1.2** Plug the transformer into the GFCI outlet.
- 1.3** Use a stainless steel screw (not included) to mount the photocell in a location that can sense dusk and dawn (night and day) conditions. The attached photocell cord is 5 feet long.



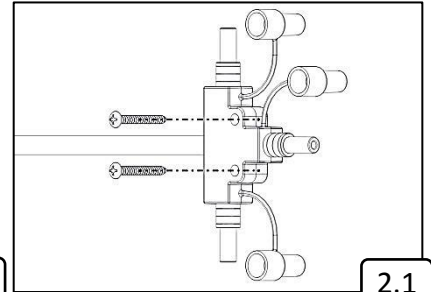
1.1



1.2



1.3

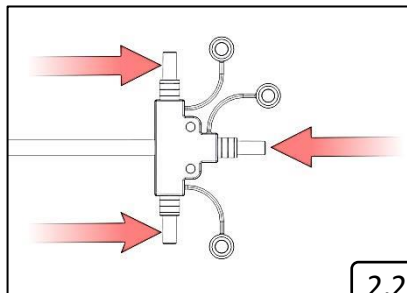


2.1

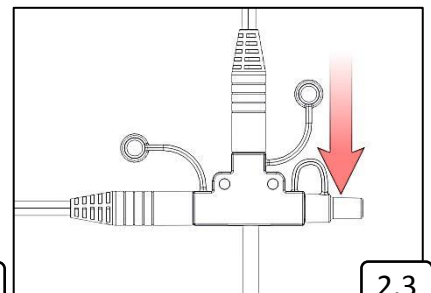
### Step 2

#### Mount the Tee Connector

- 2.1** Run the 4 foot output power cable with the Tee Connector attached to the location of the first light or a central location if lights will be located in multiple directions. The Tee Connector can be secured loosely using (2) #4 x 1" stainless steel screws (not supplied). Do not tighten the screws completely as this can damage the Tee Connector.
- 2.2** If needed, all 3 of the output connectors on the Tee Connector are active and will supply equal power to the entire system.



2.2



2.3

### Step 3

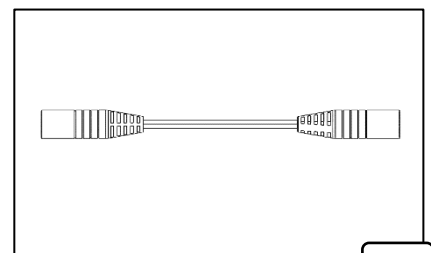
#### Install the Lights and Finalize Installation

- 3.1** Connect the rest of the Main Wiring Connections (not included) per their instructions on reverse side of page.
- 3.2** Connect the desired light fixtures (not included) per their individual instructions.
- 3.3** Refer to the included Control instructions for operation of the transformer. The Control instructions should be retained for future reference.

### Step 4

#### Closed Loop Connector (optional but recommended)

- 4.1** Included with the transformer is a closed loop connector. The closed loop connector has a red female connector on each end and is 6" long. The closed loop connector is used to connect the Main Wiring back into the transformer. This reduces the voltage drop across the wiring in the system.
- 4.2** Use a 2 output splitter on the last light fixture of the run. Plug the last light fixture into one of the 2 outputs splitters male connections. Plug an extension harness into the other male connection of the 2 output splitter. Run enough extension harnesses end to end to reach back to the Tee Connector of the transformer. Use the closed loop connector to make the connection between the extension harness and the Tee Connector.



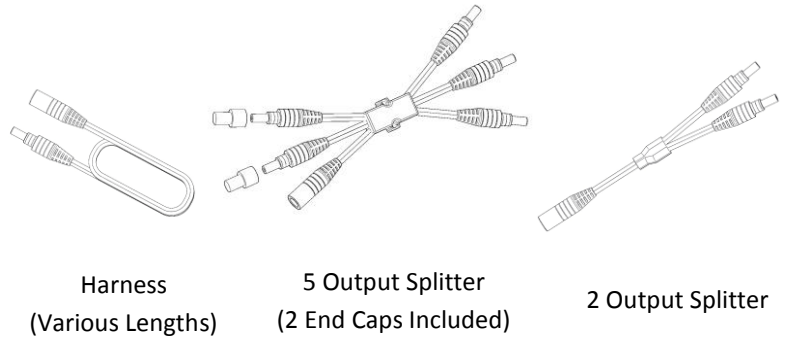
4.1

# Wiring Harness and Splitters

## Pre - Installation Notes

- Do not cut any wires. Any extra wire length can be coiled up.
- If using insulated wire staples to hold the wires in place, be sure not to pierce or crush the wires.
- During installation, it is recommended that you temporarily cover the photocell on the transformer with dark tape so the lights will be on when you plug them in. This will help check for any issues during installation. Remove tape when done.

## Components



## Harness

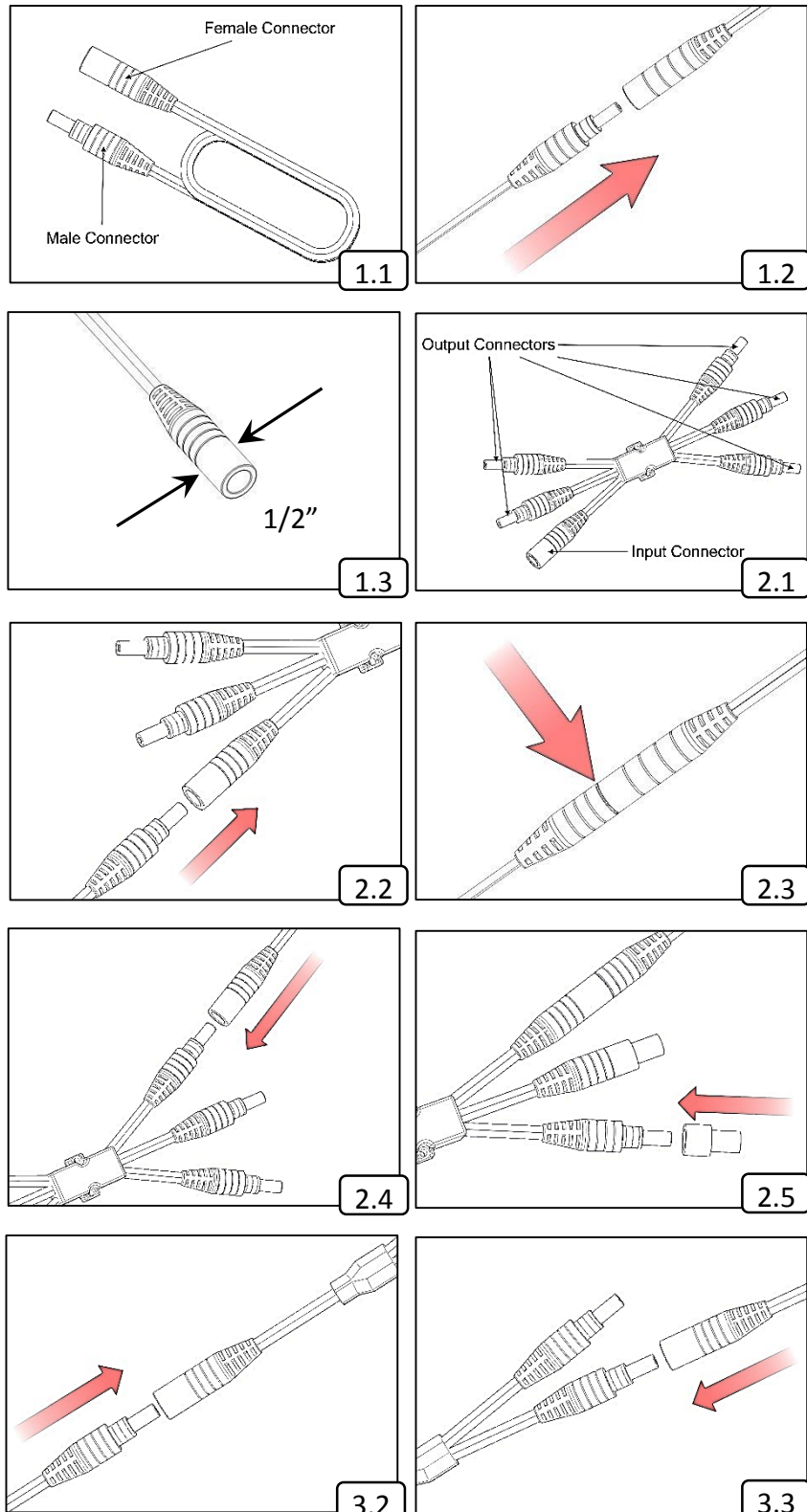
- 1.1 The Harness is used to extend power from the transformer to each individual light or splitter. The Harness has a male and female end.
- 1.2 Harnesses can be plugged into each other to extend length if needed.
- 1.3 The Harness can be run underneath the deck (above ground) and/or inside the post/railing where it is hidden from view.
- 1.4 If needed, the connectors can fit through a 1/2" hole.

## 5 Output Splitter

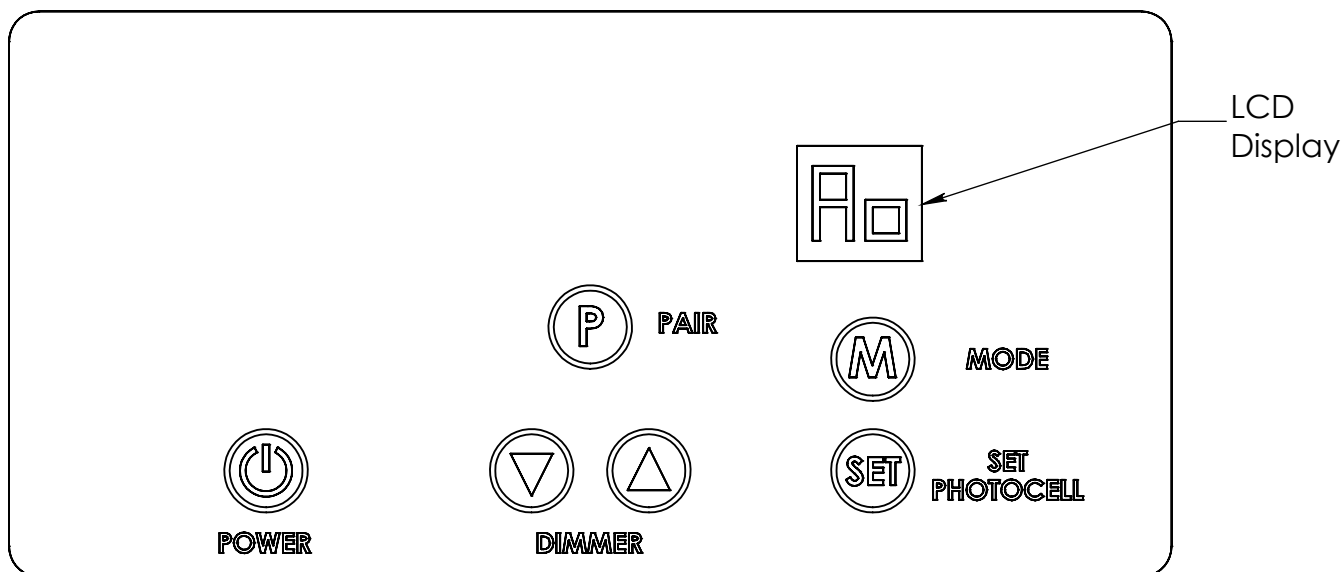
- 2.1 The 5 Output Splitter is used to evenly distribute power from 1 input to 5 outputs.
- 2.2 Plug the male connector from a harness into the female input connector of the 5 Output Splitter. Press firmly until the connection is fully engaged.
- 2.3 Connection is fully engaged when there is minimal gap between the male harness connector and the female input connector.
- 2.4 Plug the female connector from a harness or a light into one of the male output connectors. Repeat for each output connector that is needed.
- 2.5 If there are any unused output connectors, an end cap (2 included) must be used to seal the output connector. Any unused end caps can be saved or discarded. If there are more than 2 unused output connectors, a 2 Output Splitter (see below) should be used.
- 2.6 The 5 Output Splitter can be secured using (2) #2 Stainless Steel Screws (not supplied).

## 2 Output Splitter

- 3.1 The 2 Output Splitter is used to evenly distribute power from 1 input to 2 outputs.
- 3.2 Plug the male connector from a harness into the female input connector of the 2 Output Splitter. Press firmly until the connection is fully engaged. (See Step 2.3)
- 3.3 Plug the female connector from a harness or a light into one of the male output connectors. Repeat for the other output connector.



# 12V 50W Smart Transformer Control Instructions



## POWER:

Turns the system power off and on. When the system power is off, the LCD display will be blank and the only button that will function is the power button. When the system power is on, the LCD display will show the current mode or function that is active.



## MODE and LCD DISPLAY:

Pressing or holding in the mode button will cycle through the different modes settings. The mode settings are 1h, 2h, 3h, 4h, 5h, 6h, 7h, 8h, dd and A□.

### 1 to 8 hour timer (1h, 2h, 3h, 4h, 5h, 6h, 7h, 8h)

- Uses the photocell to turn the lights on. When the photocell senses darkness continually for 30 to 40 seconds, the lights will turn on.
- The lights shut off after the set time expires (1 hour for 1h mode, 2 hours for 2h, etc.).
- After the set time expires the lights will remain off.
- Whether the timer has expired or is still active, when the photocell senses light continually for 30 to 40 seconds, the timer will be reset and ready for another cycle. If the lights are on, they will be shut off and the timer is reset.

### Dusk to Dawn (dd)

- Uses the photocell to turn the lights on. When the photocell senses darkness continually for 30 to 40 seconds, it will turn on the lights.
- The lights will remain on until the photocell senses light continually for 30-40 seconds.
- When the photocell senses light continually for 30 to 40 seconds the lights will be shut off and ready for another cycle.

### Always On (A□)

- The lights are on all the time. The photocell is not used.

## DIMMER:

- Pressing or holding in the up button (▲) will make the lights brighter. If the lights are full brightness and the button is pressed again (or held in), the lights will flicker or flash to indicate the lights are at the brightest setting.
- Pressing or holding in the down button (▼) will make the lights dimmer. If the lights are dimmed to the lowest setting and the button is pressed again (or held in), the lights will flicker or flash to indicate the lights are at the dimmest setting.
- The dimmer buttons are only operational when the output lights are on.



# 12V 50W Smart Transformer Control Instructions (continued)



PAIR

## PAIR:

Pairs a new wireless remote control or bluetooth device.

To pair a new wireless remote (the included remote is already paired at the factory):

- Press and hold the pair button on the transformer. At the same time press and hold the **M** button on the new remote. The LCD display will show **r t** to indicate that it is in remote pairing mode.
- Continue holding both buttons in for 8 to 10 seconds. When the new remote is paired, the output lights will flash or flicker. The transformer will cycle through the different modes until both buttons are released.

To pair a new bluetooth device (only needs to be done once per device):

- Press and release the pair button on the transformer. The LCD display will show **bt** to indicate that the transformer is in bluetooth pairing mode.
- Follow the app instructions to pair the new bluetooth device.
- When in **bt** mode, no buttons can be pushed for 30 seconds or until a new device pairs with the transformer. The transformer will automatically go back to the previous mode once 30 seconds has expired or a new device has been paired with the transformer.
- A new device that tries to pair with the transformer without being in **bt** mode will be rejected.

## SET PHOTOCELL:

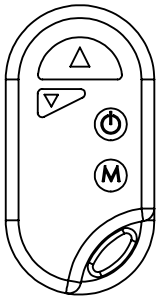
Sets the trigger point for turning the lights on and off.

To set the photocell level:



SET  
PHOTOCELL

- Ensure mode is set to **1h, 2h, 3h, 4h, 5h, 6h, 7h, 8h**, or **dd**. The set photocell button will only work when in these modes.
- Wait until the ambient outdoor light condition is at the desired level for when the lights are to come on (dusk).
- Press and continue to hold the Set Photocell button for 10 to 15 seconds. The LCD display will change to **PS**.
- The lights will flash or flicker once the new photocell setting has been saved.
- The set photocell button can be released. The LCD display will return to the previous setting.
- The lights will turn on in 30 to 40 seconds as long as the ambient light condition is lower than when it was set.



## REMOTE CONTROL:

Controls the transformer remotely. Functions are the same as the transformer buttons.

- ▲ - brightens the lights if they are on
- ▼ - dims the lights if they are on
- ⏻ - turns the system power off and on
- M - Changes the transformer mode
- Pressing both ▼ and M in at the same time will put the transformer into bluetooth pairing mode (see above). The LCD display will show **bt** and no other functions will work for 30 seconds or until a new device is paired.

## Additional Features:

### System Memory

- Previous settings are saved if power is lost. Settings are saved 30 seconds after the last settings change.
- Saved settings include: system power (on or off), transformer mode, photocell trigger point, dimming level, and wireless remote codes (up to 3 different remotes can be paired at one time).

### Overload Protection

- The transformer can sense an overload condition. When this occurs, the lights will shut off and the LCD display will show **oL**. This can be caused by having too many lights attached or a pinched wire causing a short circuit.
- Pressing the power button twice will return the transformer to the previous mode. The system will then continue to check for an overload condition every 10 seconds.

### Over Temperature Protection

- The transformer can sense an unsafe internal temperature condition. When this occurs, the lights will shut off and the LCD display will show **ot**. This can be caused by having the transformer too close to an external heat source.
- The transformer will automatically restart once the temperature has returned to a safe level. The system will continue to check for an over temperature condition every 10 seconds.

### Factory Reset

- Unplug the transformer for at least 10 seconds. Holding the power button in while plugging in the transformer will force the transformer to return to factory settings. The power button can be released once the transformer turns on (the LCD display will show **Ro** since this is the default mode). All settings will return to factory default. Any bluetooth devices or replacement remote controls will need to be paired again. The original remote control will not need to be paired again.

# Smart Power 50 Android Pairing Instructions

## Step 1:

- Download and install the SmartPower 50 app from the Google Play Store.
- Make sure you are near the transformer and that it is plugged in with the power on (the display should show either Ao, dd, 1h, 2h, 3h, 4h, 5h, 6h, 7h, or 8h).
- Open the app. You will be taken to the Devices tab where you will be shown a list of devices available. See Figure 1.
- An up-paired device will be shown under the 'New Devices' list. It will be shown as SMARTPOWER50\_XXXX. The XXXX is used to differentiate between multiple power supplies in range. (After the power supply and phone are paired, it will show in the 'Paired Devices' list)
- Click on the SMARTPOWER50 device you want to pair with.

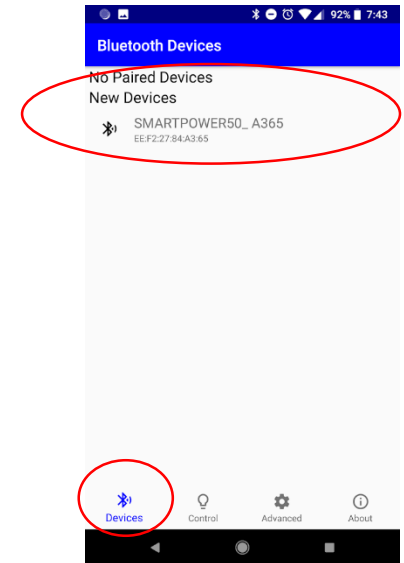


Figure 1

## Step 2:

- A dialog box will show on the screen telling you to press and release the 'Pair' button on the power supply. This will put the transformer into 'Bluetooth Pairing Mode'. See Figure 2.
- When you press and release the 'Pair' button on the power supply, the display will change to show 'bt' to indicate it is in 'Bluetooth Pairing Mode'. It will stay in this mode for 30 seconds or until a new device is paired with the power supply (which ever happens first).
- Once the display on the power supply shows 'bt' , click 'OK' on the dialog box.
- The phone and the power supply will attempt to pair (bond). If successful, you will be taken to the 'Control' tab and the phone will fetch data from the transformer. Once the data is transferred to the phone, you can control the power supply with either the 'Control' or 'Advanced' tab.
- If pairing fails, close the app and re-open it. Then try the pairing process again.

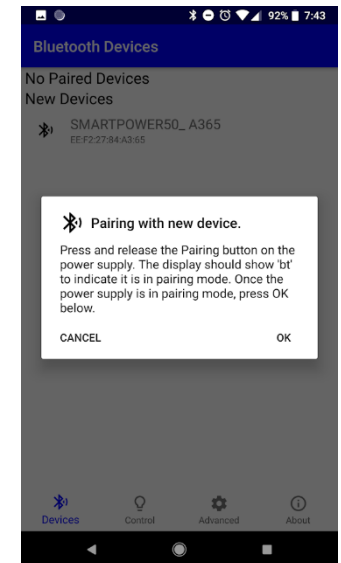


Figure 2

# iPhone SmartPower 50 Pairing Instructions

## Step 1:

- Open the SmartPower50 app.
- Make sure you are on the devices tab (at the bottom). You will see a list of available Bluetooth devices (see figure 1).
- Go to the SmartPower50 power supply. Press and release the Pair button on the SmartPower50 power supply.
- The display on the power supply will change to “bt” to show you are in Bluetooth pairing mode. The power supply will remain in Bluetooth pairing mode for 30 seconds or until a device is paired with the power supply.



Figure 1

## Step 2:

- Go back to the app and click on the SMARTPOWER50\_XXXX name that you want to pair with in the Found Devices list. (the XXXX will be different for most power supplies and is used to differentiate between multiple power supplies in range)
- You will receive a notification on the screen for a pairing request (see figure 2). Click pair and your device will be paired with the power supply.
- You can now control the SmartPower 50 power supply.
- Pairing only needs to be done once for each phone and power supply combination.

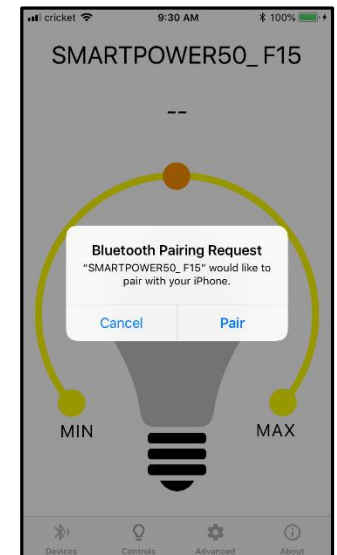


Figure 2