



# Austin Led Consultants

DMX and Led power over ethernet

ATX LED Consultants Inc  
815-A Brazos #326  
Austin TX, 78701  
512 377 6052  
<http://atx-led.com>

## **PWS-AT-WiFi** **Decorator style - momentary** **PoE Constant Current LED** **Dimmer / Driver for 8 LEDs** **with Wall Switch** **28 watts 802.3af/at WiFi**



### Product Description - PWS-AT-WiFi wall switch

This switch operates just like any standard residential light switch – however it takes 802.3af or 802.3at instead of 120VAC, and directly drives up to 24 watts of LEDs. This Decorator style switch in a standard residential style outline fits into any home, looks like any switch yet requires no licensed electrician for installation. No complicated controller is required yet it can be controlled by App, or Cloud automation.

Stand alone it operates as a simple switch for 24 watts of LED's. Software configurable for 300, 360, 660 mA LEDs with up to 24 watts total. Use AWG CAT-5e or CAT-6 cable to bring 48 to 56v from a PoE Switch or Injector, then use AWG 18 to connect to your LEDs – standard RJ45 on the CAT-5e, simple DC connectors connect to the LEDs.

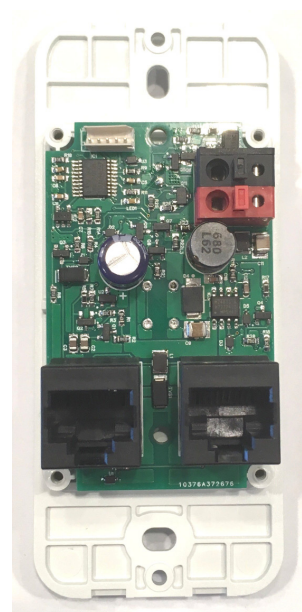
A simple momentary switch is used for On/Off and brightness. With the standard format of the Decorator switch - now for low voltage applications – any casual user requires no training, no App to use this switch. Perfect, flicker free dimming from off to 1 to 100%. No network setup is required. Temperature feedback assures excellent dimming.

To enable Home / Business automation – the PWS-AT-WiFi includes the Wiz Connected solution for App and voice control. Use the Wiz App from the app store, or IFTTT, or use the AL-DALI-Pi.

#### Specifications

Power source	RJ45 power mode A, 802.3af or 802.3at
LED constant current output	700 mA max current, programmable Spring loaded connectors
Input voltage range	44v to 57 volts
Standby power consumption	Meets 802.3af specs 20% duty cycle
Conversion efficiency	Over 95%
Protection	Reverse protection and static protection
Operating Temperature	0°C ~ 50°C
Size	115 x 46 x 50 mm
Dimming	1 to 100 % Current control
FCC and interference	All outputs are RF filtered for minimal interference
Maximum output voltage	42 volts
Minimum output voltage	6 volts, minimum current self calibrating*
Hot Swap	Yes – can unplug and connect LEDs with power applied.

- 3 Package Options
- A) Wall Switch PWS-AT-WiFi
  - B) Ceiling mounted PL-AT-WiFi
  - C) PIR detection with PIR-AT-WiFi



# Wiring the PWS-AT-DALI

See <http://atxled.com/How2> for more examples



## PoE / LED for 1 room



1 to 4 P023R6 LEDs



Awg 18



\$1  
Door Switch



Power for 20 Leds



Cat-5e



AL-WS-DR1



\$2  
3-Way

## Key parts of an PWS-AT-WiFi installation

		ATX LED installation	Conventional 120vac
PoE-Switch	Use existing PoE Switch	\$12 / port	
CAT-5e	Copper ( not CCA ) Cable to the switches	\$0.10 / ft	Romex \$0.50 / ft
PWS-AT-WiFi	Dimmer / Driver	\$80 retail	\$40 Smart dimmer
AWG18	Wire to the LEDs	\$0.15 / ft	Romex \$0.50/ft
P023R6-660	LED lights	\$15 retail	Can+Trim+LED
Labor		Low Voltage	Electrician

# Powering the PWS-AT-WiFi

Power the switch via RJ45 input connectors, 48 or 50v is recommended. No Data connection is required. The attached LED will turn on if the switch is pressed, or if there is a command from the WiFi connection. Connect the DC outputs to your LED's. Combinations of 300 to 700 mA LED can be set by the jumper.

## Wiz Connected WiFi Operation

This device includes an interface to Alexa, Google and IFTTT using the Wiz Connected technology. You connect this device to your WiFi network using the sequence below – then you can turn the Lights on/off with an App or by voice control. Power is from the RJ45 connector- data is from WiFi.

## Recommended ETL listed LED's

Any bare LED fixture can be used. They can be simple LEDs or LEDs with load balancing resistors. LEDs with built in DC-DC converters are not recommended. You can purchase LEDs without drivers on Amazon with different shapes, sizes and colors – all of them can be driven by the DR1 or DR2 products.

ATX LED Consultants Inc stocks and ships LEDs that are optimized for low installation costs, with special features and ETL listings that customers want.

Table 1 – for LEDs with 660 mA or 1000 mA

LED rated watts	Model	Size inches	LED rated mA	Max Count	Total power needed	Wiring method
6	P023R6-6	4	660 mA	4	26 watts	Series
11	PR-15-11	4	1000 mA *	4	26 watts	Series
14	PR-15-14	6	1000 mA *	2	26 watts	Series

\* when 1000 mA LED's are used – the max current delivered is 700 mA – so the power is derated by 40%

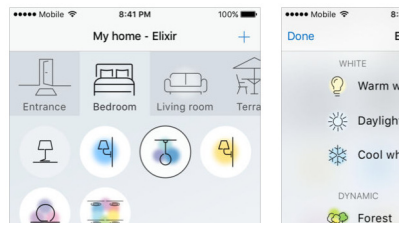
Table 2 – using the AL-LED-Doubler for 300 or 350 mA LEDs

LED rated watts	Model	Size Inches	LED rated mA	Max Count	Total power needed
1	B01FVRQVK4	2	300 mA	27	28 watts
3	B01A6HJJLRY	3	300 mA	8	27 watts
6	P023R6-360	4	360 mA	4	27 watts
12	P023R11-360	6	360 mA	2	25 watts

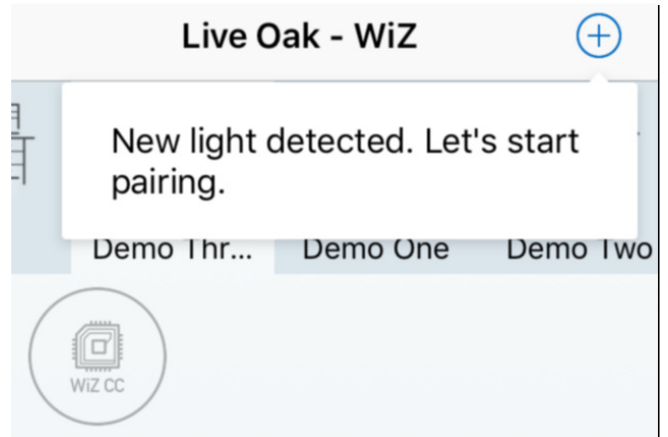
# Wiz Connected Light App Setup



iPhone

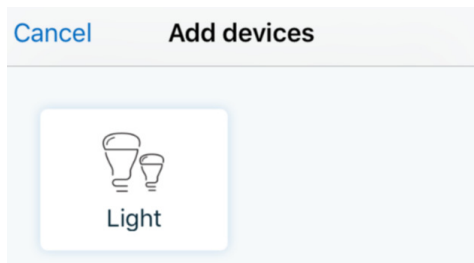


Search for Wiz Connected  
in the App store – install it

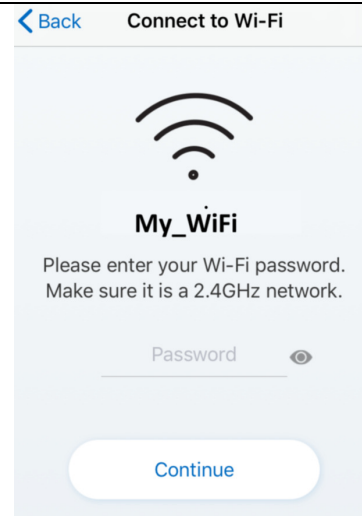


The App will show a new device to connect  
( this this does not appear –  
try a 2.4 ghz network )

**Click on the (+) symbol**

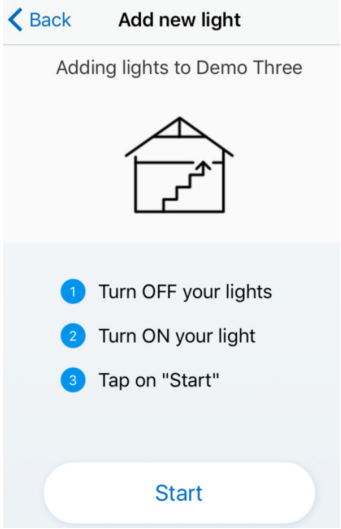


Click on the "Light" tab



Enter your WiFi Password

# Wiz Connected Light App Setup con't



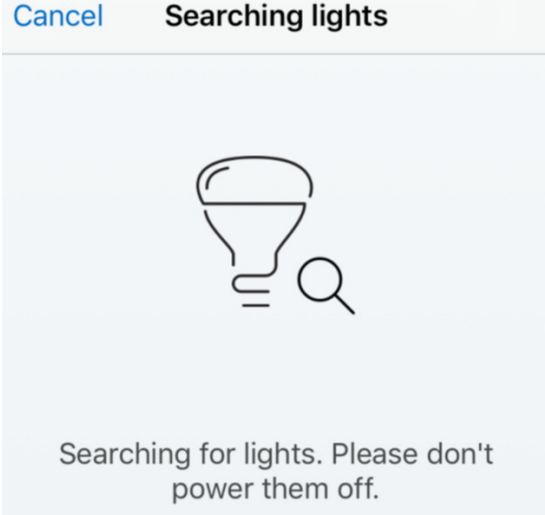
**Add new light**

Adding lights to Demo Three

- 1 Turn OFF your lights
- 2 Turn ON your light
- 3 Tap on "Start"

**Start**

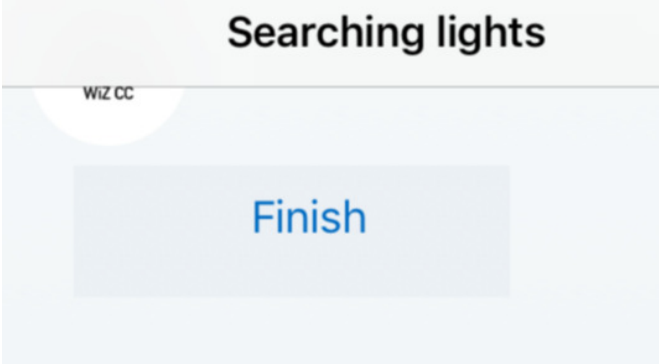
Power off/on then click start



**Cancel Searching lights**

Searching for lights. Please don't power them off.

Wait for the search to finish

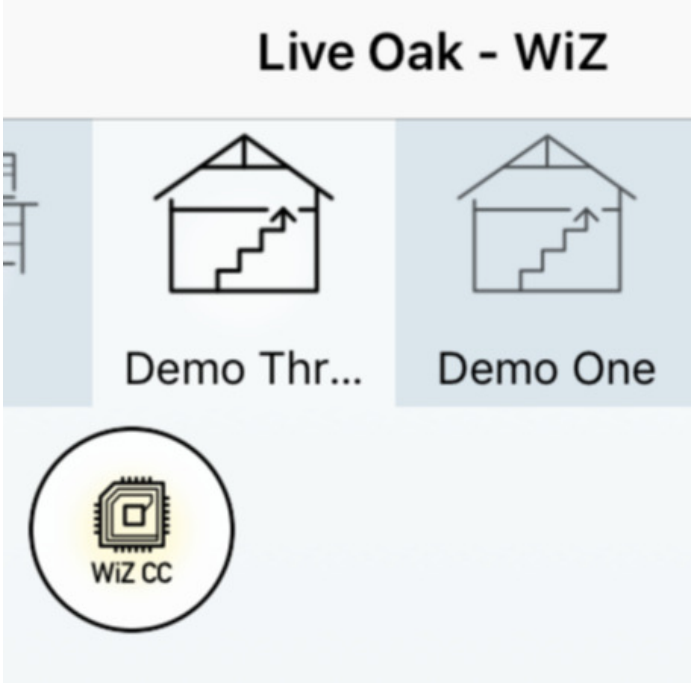


**Searching lights**

WIZ CC

**Finish**

New device found



**Live Oak - WiZ**

Demo Thr... Demo One

WIZ CC

You can now control the light. Next step is in the Amazon Alexa App to add this light to voice control