Austin Led Consultants
DMX and Led power over ethernet

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PL-AT-TW1-Wiz
Alexa / Google / WiFi
Constant Current Tunable White
LED driver with PoE
802.3af / 802.3at
AutoSwitching

Product Description - PL-AT-TW1-Wiz – PoE powered LED driver

This LED driver in a compact module can be installed 328 ft away from a PoE injector or switch using Cat-5e cable. In most areas PoE installations do not require licensed electricians. Just two wires with AWG 18 or AWG 20 up to 100 ft long connect to up to 28 watts of LED with constant current . The PL-AT-TW1-Wiz series has low standby power, and is configurable for 300ma and 700 ma LED current requirements. The wide output voltage range of 9 to 50 volts fits the NEC / NFPA codes for low voltage wiring and allows any LED fixture to be used.

Intended for use with any 802.3at, 802.3af or passive Poe injector or switch, the output current automatically adjusts to match the PoE source. With 802.3af switches – 300 ma (12 watts) , with 802.3at switches 700 ma (25 watts). Thus power can be controlled for 13 watts or 25 watts via a managed PoE switch.

When used with a 802.3bt switch – two devices can be connected in series to use all 4 pairs of the Ethernet cable and double the wattage on one PoE port

WiFi and Bluetooth control by Wiz Pro Connected lighting. App or Alexa or Google control of brightness, schedule and Color temperature. See our Wiz user guide for details.

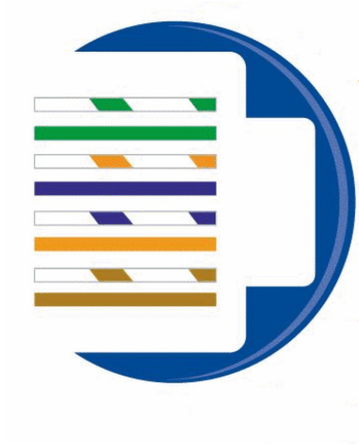
Specifications for PL-AT-TW1

Power input	44 to 56 volts 802.3af or 802.3at or Passive PoE
RJ45 Input Connector	RJ45 standard connector mode A power, mode B passthru
RJ45 Output Connector	RJ45 standard connector allows 2 devices on one 802.3bt port: mode A out from the mode B input
RJ45 LED status	Green means PoE active, Amber means 802.3at
LED Output Voltage	9v to 50v 25 watts max
Output Power	a) with 802.3af max current 300 ma = 12 watts b) with 802.3at max current 700ma = 23 watts
Auto power switching	Current reduced to 300 mA if 802.3af switch detected increases to 700 ma if 802.3at
Inrush limiter	Built in – automatic
Hot Swap	LED load can be disconnected under power
PIR control via Rj45 out connector	12 volt power to a PIR, return signal is 1 (or open) for ON, 0 for Off
802.3af keep alive	100 mW smart standby load for keep-alive internal jumper for 10 mW 802.3bt standby
Output current	300 ma or 700 ma, automatic or manual
LED output connector	TE 3 pin connector with spring load Common +, Warm White, Cool White
Pinout 802.3af / 802.3at	Pins 1,2 and 3,6 provide power either polarity Automatic power detection feature:
Protection	Reverse, short and static protection
Operating Temperature	0°C ~ 50°C

Keep Alive

Keep Alive is the current needed to keep a PoE switch port from shutting down. Simple keep alive burns 500 mW when th LED is off. Smart Keep Alive reduces this to 100 mW. An internal jumper allows this to be set to 10 mW for 802.3bt applications.

RJ45 connector pinout



Pin	In	Out
1	PoE 1	PoE 2
2	PoE 1	PoE 2
3	PoE 1	PoE 2
4	PoE 2	Dim / Switch
5	PoE 2	PIR +
6	PoE 1	PoE 2
7	PoE 2	Signal
8	PoE 2	Ground

PoE 1

PoE 1 is the power for the LED attached to this device. It can be mode A 802.3af, 802.3at or 2 pair 802.3bt for up to 25 watts. To use a Mode B PoE switch or passive PoE injector – use a Mode A to Mode B crossover adapter. See the PL-RJ45ABX device.

PoE 2

PoE 2 is the optional power from a 802.3bt switch. It is passed thru the device to the next device in the chain to provide power for the LED attached to that device. It can be mode B 802.3af, 802.3at or 4 pair 802.3bt for up to 25 watts. The output RJ45 moves the mode B input to Mode A output so no crossover is required.

PIR power and signal

The device provides 12v power for a PIR sensor. Up to 20 mA can be supplied from the 48v PoE input, note most PiR require about 1 mA when in standby. A 0 level (signal connection to ground) turns the LED off. Open or 3.3v turns the LED on.

Dimmer / Switch In

The device has a Switch input with a 10k pullup to 5v. When Open the LED is on, when closed the LED is off. If a PWM signal is applied (For example from a AL-WS-010v) then the LED can be dimmed.

For simple On/Off operation – any standard simple $2 wall switch can be wired using CAT-5e cable.

If the PIR signal pin is grounded, the Switch input changes to Momentary operation – this means a RH-253 type switch can be used, for Push On, Push Off, Hold for dimming. Double push changes to Tunable white adjustment mode. Otherwize, the levels are set and stored from the Wiz app.

Tunable White Mode

An internal jumper enables Tunable White operation. In this mode – the Switch input changes the Color from Warm to Cool only