



Austin Led Consultants

DMX and Led power over ethernet

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AL-PWS-SW Decorator style 3-Way Momentary Switch with RJ45 connector and PIR support



Product Description - AL-PWS-SW wall switch

This switch operates just like any standard residential light switch – however it uses all low voltage wiring – it is exclusively designed for the AL-PWS-DR1 wall switch or similar.

This Decorator style switch in a standard residential style outline fits into any home, looks like any switch operation is PoE and might not require a licensed electrician for installation. No complicated controller is required yet it is compatible with a full Alexa / Google ATX LED system and be controlled by App, or Cloud automation.

Designed for 3-way operation – a simple CAT-5 wire link to any with AWG24 or better allows 2, 3, or an unlimited numbers of switches to control one set of LED's.

As a simple momentary switch, it can be 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.

Use the AL-PWS-DR1 to power and dim up to 24 watts of LED light. Connect up to 5 of the AL-PWS-SW in parallel to allow one set of LEDs to be controlled by up to 5 switch points. Connect a PIR detector to allow PIR and Switch operation of the LEDs

Specifications

Power source	RJ45 power mode B, 1 mA needed
Input voltage range	24v to 56 volts
Standby power consumption	50 milliwatts
Protection	Reverse protection and static protection
Operating Temperature	0°C ~ 50°C
Size	115 x 46 x 50 mm
Dimming	Long Press for Dimming
Switching	Momentary push for On / Off
FCC and interference	None
PIR	12v PIR power out and PIR signal input
Daisy Chain operation	Connect up to 5 in series for multi point control
BiDirectional operation	Share one CAT-5 for up and down stream AL-PWS-DR1 switches



Connecting the AL-PWS-SW simple 3-Way

The AL-PWS-SW has a local and remote RJ45 connector.

Connect the AL-PWS-SW R connector to a CAT-5e cable connected to a AL-PWS-DR1 LED driver up to 200 ft away. The momentary switch only functions to the right connector.

The AL-PWS-SW L connector can be connected to another AL-PWS-DR1 driver – which will not be affected by the momentary switch.

Connecting the AL-PWS-SW multipoint 3-Way

Simply stated – up to 5 of these can be wired in series to allow 5 switch points to control one set of LEDs – as in a hallway or stairs.

The AL-PWS-SW has a local (L) and remote(R) RJ45 connector.

An L input propagates to the R output. The built in switch only causes the R output to go low. A low signifies a push button action. Therefore if these switches are connected in series, other switches will forward other push button presses from L to the R connector. If the L connector is connected to a nearby LED driver – the button will not change the led levels on the near device – only the remote device.

Further if the AL-PWS-SW connector R is connected to another AL-PWS-SW connector L – then the 3-Way control will pass forward to the destination LED driver.

Connecting the AL-PWS-SW Complex 3-Way

The AL-PWS-SW has a local (L) and remote(R) RJ45 connector.

An R input propagates to the L output, an L input propagates to the R output. The built in switch only causes the R output to go low. A low signifies a push button action. Therefore if these switches are connected in series, other switches will forward push button presses in either direction – but will initiate presses only to the R connector

Therefore if the AL-PWS-SW connector R is connected to another AL-PWS-SW connector R – then the 3-Way control will pass back and forth between remotely connected LED drivers. See our application note for more details. This allows great flexibility and reduces the number of CAT-5 wires needed.

Connecting the AL-PWS-SW to PIR




The PIR output can connect to a PIR sensor with 12 volts. When the PIR sensor output is LOW the LED is off. When the signal is HIGH or Open the LED will be ON.

Note – the AL-PWS-DR1 should be in PIR mode for this to operate correctly, otherwise the PIR sensor will function as a Long Press and cause Dimming to occur.

DALI bus products from ATX LED Consultants

 <p>AL-DPOE-8 DALI PoE Injector 12-57V Pin45+7B- 1000ma per port</p>	 <p>A white wall switch with a green LED indicator light, being pressed by a finger.</p>	 <p>A transparent plastic enclosure containing a green PCB with various electronic components, including a USB port and a DALI connector.</p>
<p>Injector for 8 home runs</p>	<p>Wall Switch LED Driver with DALI</p>	<p>Alexa to DALI interface AL-DR1-Pi</p>

Typical Compatible standard DALI products

 <p>A white and blue rectangular LED driver with a label showing technical specifications.</p>	 <p>A white wall switch with four circular buttons arranged in a 2x2 grid.</p>	 <p>A small black PCB with four colored wires (red, yellow, blue, black) extending from it.</p>
<p>120 VAC DALI LED driver</p>	<p>DALI Wall Switch</p>	<p>DC-DC Dali driver expansion option</p>