

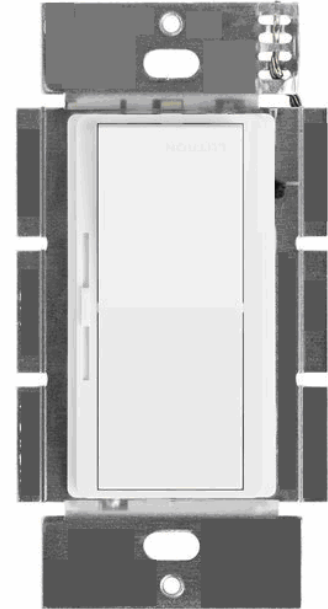


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AL-WS-DR1 v2

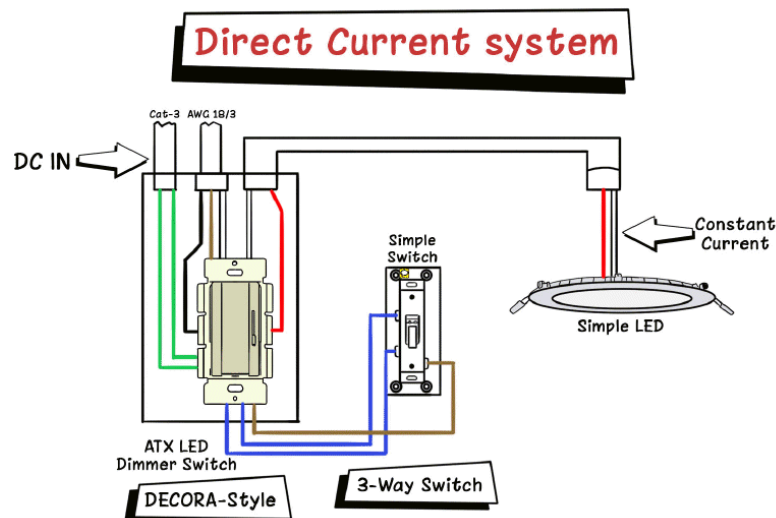
Decorator style
Constant Current LED
Dimmer / Driver
Left Side Slider
with integrated switch
24 watts 3-Way



Product Description - AL-WS-DR1 wall switch

This switch operates just like any standard residential light switch – however it takes 24-54v DC instead of 120VAC, and directly drives up to 24 watts of driverless LED fixtures and bulbs. This Decorator style switch in a standard residential style outline fits into any home, looks like any switch yet meets NEC article 411 for low voltage lighting.

Stand alone it operates as a simple switch for a string of LED's. Typically 1 to 4 LEDs with 660 mA (6 watts) each are connected for 24 watts total. Use AWG 16 or 18 to bring 48v (or 44 to 54 volts) from a central power supply over to the switches, then use AWG 18 to connect to your LEDs – no tools are required to wire this device. For 3-way operation – a simple 2 wire link with AWG20 allows simple 3-way switch control the attached LED's. Any single pole switch found at Home Depot can be used to add a 3-Way remote switch, or dual pole switch for an unlimited number of switch points.

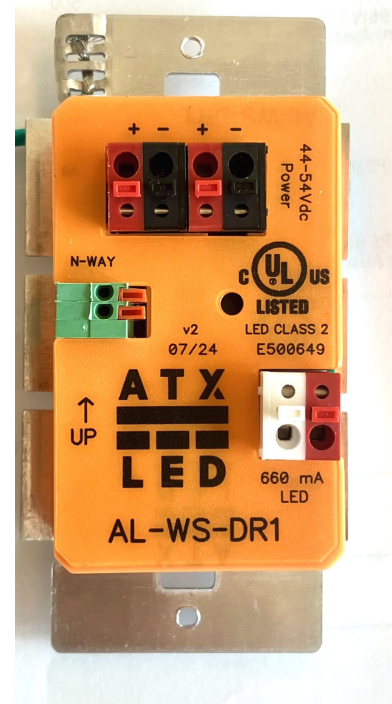


A proven rocker switch and brightness slider leverages mass production of decorator switches, now for low voltage applications – any casual user requires no training, no App to use this switch. Perfect, flicker free dimming from off to 1% to 100%.

To enable Home / Business automation – the AL-WS-DR1 can be replaced by a AL-WS-DR2 which uses the DALI protocol, or the AL-WS-DR2W which uses WiFi – the wiring to the power panel and LEDs is the same.

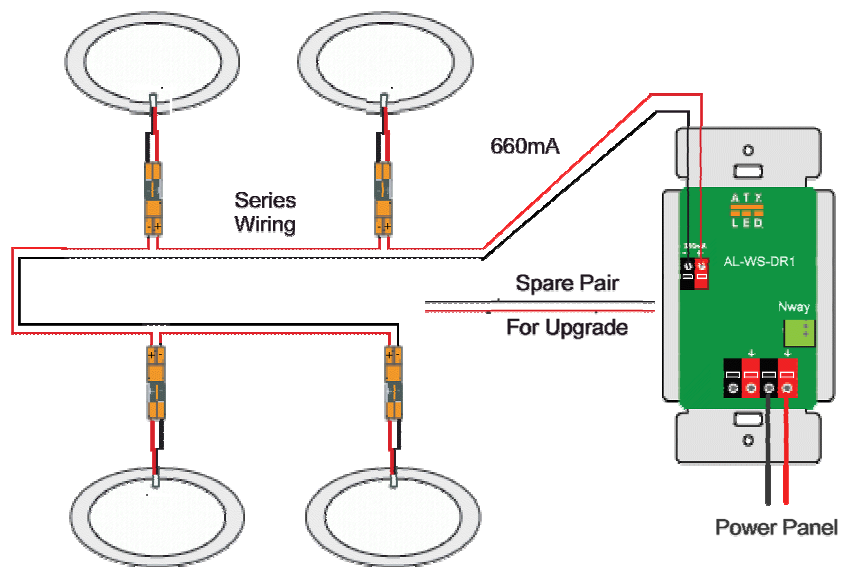
Specifications

Power source and load	Spring loaded connectors (2 pairs) for AWG 16-20 wire
LED constant current output	660 mA max current – one channel Spring loaded connectors Connect 4 LEDs with 660mA each
300 mA option	Contact us for a 300 mA current option
Constant Voltage	See the AL-WS-PWM2 for CV LEDs
Input voltage range	48v to 54 volts DC
Standby power consumption	10 milliwatts
Conversion efficiency	Over 95%
Protection	Reverse protection and static protection
Operating Temperature	0°C ~ 50°C
Size	108H (metal) 70H x 34 D x 42 W mm
Dimming	1 to 100 %, Current control
FCC and interference	All outputs are RF filtered for minimal interference
Maximum output voltage	85% of Input voltage, 43v @ 51v, 45v @ 54v
Minimum output voltage	6 volts
Hot Swap	Yes - can unplug and connect LEDs with power applied.
External Switch	Use with simple contact to turn the light on closed contact is ON



Wiring the AL-WS-DR1 for up to 4 LEDs

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



Powering the AL-WS-DR1

Power the switch via either Red/Black Power input connectors, 51 to 54vdc is recommended. The Dual connectors allow multiple switches to share one home run without wire nuts.

External switch input connection (N-Way)

This input is used to turn the light on from a remote switch. A simple closed contact will turn the light on or off.

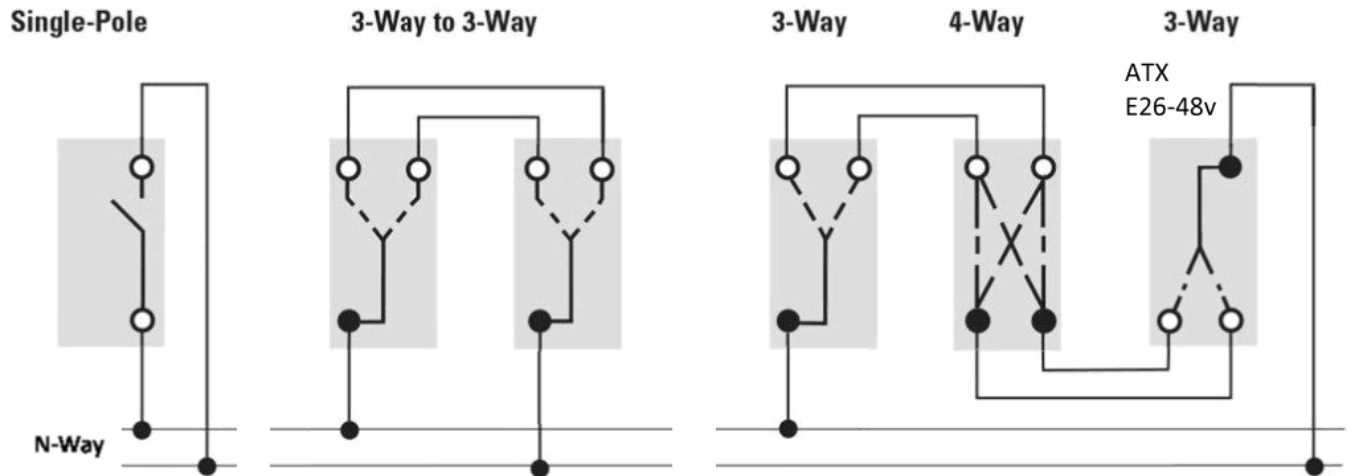
Door Jam Operation

A simple Normally Closed door alarm switch can be wired to the N-way input. Then – when the door opens – the light will go on.

Installation

The brightness slider is on the left side of the switch – this matches the AL-WS-DR2 and other products.

3-Way diagrams



Recommended ETL/UL listed LED's

LED rated watts	Type	Model	Hole Size inch	LED rating mA	Max Count @54v	Max Count @51v	Total power output Watts	Note
6	Flat Ceiling	P023R6	4	660	5	4	30	5 in series
12	Flat Ceiling	P023R11	6	1440	5	4	32***	5 in series
6	Recessed	DL-120	4	660	5	4	30	5 in series
6	Trimless	TI-60	2.75	660	5	4	30	5 in series
6	Pendant	PEN-60	2.75	660	5	4	30	5 in series
6	Gimbal Spot	DL-125	2.75	660	5	4	30	5 in series
6	Bulb	AL-E26-660mA	E26	660	5	4	30	5 in series
3	Bulb	AL-E12-660mA	E12	65	10	8	30	Use AL-WS-DR1K
6	Bulb	AL-E26-48v6w	E26	120	5	5	36	use AL-WS-DR1K
5	Bulb	GU10-48v5w	GU10	120	5	5	25	use AL-WS-DR1K
14	Closet	FMMCL 18 840 S1 M4	18	360 *	2*	2	28	2x Parallel
7	Closet	FMMCL 840 S1 M4	7	360 *	4*	4	28	2x Parallel 2x in series
4 / ft	linear	P023S12	18	1440	7.5 ft	6 ft	30	
2 / ft	linear	P023S6	7,9,12	660	15 ft	14 ft	30	
35	Strip	AL-GL-48v30w	195	700	15 ft	15 ft	35	use AL-WS-DR1K
6	Outdoor Small	ODB6	5	660	5	4	30	5 in series