

# AL-WS-DR1-PIR

## LOW VOLTAGE DAbus WALL SWITCH



### Vacancy/Occupancy Wall Switch/Driver for LEDs or Fan

The AL-WS-DR1-PIR wall switch directly drives up to 30 W of LED bulbs or a 12 W fan using low voltage DC instead of 120 V AC. This decorator-style switch in a standard residential outline fits into any home and meets NEC article 411 for low voltage lighting.

The built-in ambient light and presence sensor exceeds Title 24 requirements. The switch can operate in vacancy mode (manual on, automatic off), occupancy mode (automatic on and off), or occupancy with ambient mode (automatic on if the room is dark, automatic off). The dimming feature of this device means that the light does not go off all at once; instead, it dims slowly down to zero.

For 3-way operation, a simple 2 wire link with AWG 24 or better allows 2, 3, or an unlimited number of switches to control one set of LEDs. Any single pole switch can be used to add a 3-way remote switch, or the AL-WS-M momentary switch can be used. Multiple AL-WS-DR1 devices can communicate without any hub using this interface.

### Key Specifications

Electrical/Operational	
Input voltage range	24 V to 52 V DC
Minimum output voltage	6 V
Maximum output voltage	Input minus 4 V
Standby power consumption	<50 mW
Conversion efficiency	Over 95%
Protection	Reverse protection and static protection
Operating temperature	0°C to 50°C
Standard Connections	
Power source and load	Spring-loaded connectors (2 pair) for AWG 16-
LED constant current output	660 mA with 0 to 100% dimming
Fan voltage control output	12 V, 1 A, constant voltage

### Features

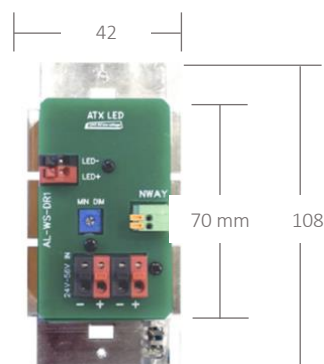
- Elegant decorator-style appearance
- Sensor provides automatic on/off
- IEC 62386 DAbus built in (see <https://www.dali-alliance.org/dali/standards.html> )
- Low voltage operation
- Easy installation using AWG 16 or 18
- Integrated slider controls 0-100% smooth dimming and gradual off

### Certifications

- NEC article 411
- UL Listing pending
- Meets FCC RF standards for minimal interference

## Dimensions

External size (metal)	108 mm x 42 mm W x 34 mm D
External size (switch)	70 mm x 42 mm W x 34 mm D



## Key Functions

Function	Description
Presence Sensing	The AL-WS-DR1-PIR detects the presence of people by Infrared passive sensing.
Ambient Light Sensing	When the AL-WS-DR1-PIR has turned the attached LEDs off, it will measure the light in the room and automatically turn the lights on if there is not enough ambient light.
Vacancy Sensing & Learning	When the AL-WS-DR1-PIR has detected no presence for 120 seconds, the fade dimming to off begins. This will slowly turn the lights off to allow anyone in the room to reach the switch or trigger detection before the room is dark.
Nightlight	If enabled, the AL-WS-DR1-PIR will turn on a light to guide people in the room without turning the lights on.
Fan Operation	If a fan is detected, then the device will drive a fan. In this mode, the push button adds 10 minutes of run time with each press. Automatic On/Off can be enabled.
3-Way Operation	The device has a 3-way input that allows simple AL-WS-M switches to be used for On, Off, and Dim
On/Off Operation	Press the button once to toggle the light on or off. If the light is turned on by the switch, each further press extends the Vacancy time by 10 minutes.
Local and Remote Dimming	Press and hold the switch to dim the LED up and down.
Auto Gang Operation	This allows multiple devices to be connected as one large, multi-motion sensing network controlling a large number of LEDs.
User Programming	The round programming button is used for setting user options and is used together with the main switch.
Nightlight Brightness Mode	If the device is placed into Nightlight Brightness mode, then the brightness of the nightlight will be controlled by the large button for the next 15 seconds.

## Part Numbering

AL	-	WS	-	DR1	-	PIR
ATX LED		Product Type		Description		Variety

