



# Austin Led Consultants

DMX and Led power over ethernet

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## AL-DALI-WS-010v 0-10v Dimmer 3-Way switch with DALI™



### Product Description - AL-DALI wall switch with 0-10v output

Combine this switch with a 0-10v LED driver to build cost effective LED installations using standardized technology. It supports the proven 0-10v standard AND the proven DALI protocol in a low cost switch for the USA market for the first time. A proven rocker switch and brightness slider leverages mass production of 120 VAC switches, for a low voltage application – any casual user requires no training, no App to use this switch.

For 3-way operation – a simple 2 wire link with AWG24 or better allows 2, 3, or an unlimited numbers of switches to control one set of LED's. Any single pole switch found at Home Depot can be used to add a remote switch, or a dual pole switch for 3 or an unlimited number of switch points.

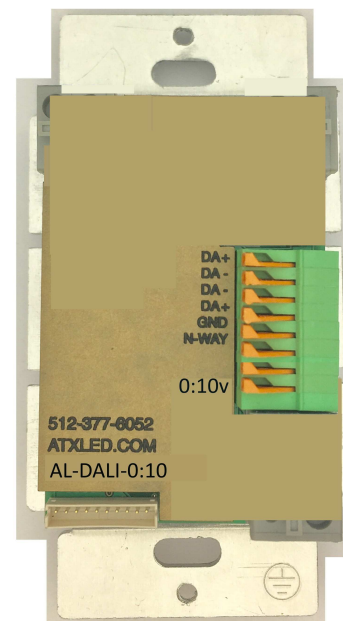
This switch operates just like any standard residential light switch – however no 120 VAC wiring is required. It operates from the low voltage, safe DALI power supply. This Decora style switch in a standard residential style outline fits into any home, looks like any switch yet requires no licensed electrician for installation. No complicated controller is required. But it can grow into a large and complex setup easily.

Stand alone it operates as a simple switch for any 0-10 volt LED driver – connect this to any number of 0-10v LED drivers or LED fixtures for full dimming control.

To enable Home / Business automation – the AL-DALI-010v includes a serial bidirectional port that allows remote control – use a DALI Alexa hub to enable voice control of lighting. The DALI protocol is supported, with automatic addressing. . Use simple CAT-3 wire up to 1000 ft to implement remote management. DALI lines are duplicated allowing easy installation.

### Specifications

Power source	DALI bus – 2 ma max
Input voltage range	12v to 57 volts 50% duty cycle
Power consumption	30 milliwatts @ 16 volts
Protection	Reverse protection and static protection Ground Metal plate to protect from Static Discharge.
Static Electricity	
Operating Temperature	0°C ~ 50°C
Size	115 x 46 x 50 mm
Addressing	Responds to Broadcast addresses or use a DALI master to assign a short address.
FCC and interference	All outputs are RF filtered for minimal interference
Microprocessor	STM32L0 Customization is available
Other Options	Please see our DMX and PoE products
DALI interface	Individual, group addresses per DALI standard AWG 18-24 gauge wire spring fit
3-Way switching	Connect 1 or more standard dual pole switches to the N-Way / Gnd terminals via AWG 18 – 24 wire for 3-way switching



## Default and / or DALI operation

By default – the AL-DALI-WS-010v operates stand alone – no controller or master is required. Connect the 0-10v output to your LED driver. Power the switch via DALI - we offer a low cost current limited power supply.

3-WAY - To use this switch for 3-way wiring – simply connect a AWG24 ( solid CAT-3 is recommended) between the N-WAY pins and a remote 1 pole 110vac type standard wall switch. If 3 or more control switches are needed – use a dual pole switch. No controller is required.

Simple Expansion – if more output power or more LEDs need to be driven – connect the DA+ and DA- pins ( polarity is not significant ) to any DALI driver. No configuration is required. The device operates in broadcast mode – sending broadcast ARC commands with dimming to the remote DALI drivers.

Simple remote control – the device accepts DALI broadcast commands – so any DALI switch or master that sends broadcast commands can connect to this device remotely for on/off/dimming.

Full DALI operation – the device handles the provisioning support under control of a DALI master. The random address assigned at first power application can be mapped to a short address from any DALI configuration tool. Once a short address is assigned – the device can be understood to operate as two devices in one.

DALI driver – the 0-10v output will have a unique DALI short address after provisioning. This address is assigned to a group and a scene with the short addresses included in one group and scene.

DALI Switch – after provisioning – the Switch in this device is placed into Group mode – changing the built-in switch, or the 3-way remote switches, or the dimming value will cause a DALI Group command to be sent to both internally to the 0-10v output as well as externally to the DALI bus. Since the internal 0-10v output is loaded into the assigned group for the switch – the device works as expected.

Use a DALI provisioning tool to assign any other Dali drivers to the switch Group address. The default Group that the switch is assigned is the same as the short address ( up to 15 ).

A DALI Reset command will return all switches to default (broadcast) operation. Remove DALI bus power if the broadcast operation is not wanted – since all switches will control all lights on the DALI bus.



Structured Wiring  
DALI power supply with easy wiring



Meanwell 500 watt  
power supply



Meanwell DC-DC  
Dali driver  
expansion option