DMX Decoder with RDM

AL-60-03-0007-RDM

The new Alloy LED DMX Decoder with RDM builds on the great features of our current DMX Decoder (AL-60-03-0007), adding the powerful advantage of RDM (Remote Device Management) technology. With RDM, compatible DMX controllers can automatically detect and manage the Alloy LED RDM Decoder, streamlining setup and configuration.

When using a DMX controller that supports RDM, the Alloy LED DMX Decoder with RDM is the ideal accessory for connecting Alloy LED RGBTW, RGB-W, RGB, Tunable White, and Single-Color tape lights. Even if your installation does not include an RDM-enabled controller—or if you are unsure—you can still confidently use this decoder, as it can also be configured manually.

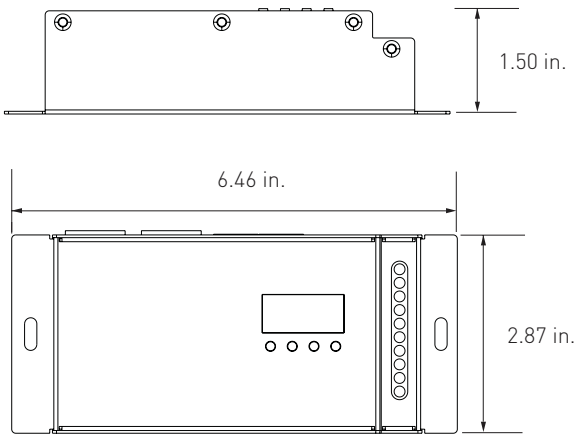
Maximum tape load per decoder (note: follow the maximum run lengths listed in each tape light's specification sheet):

- Radialux 2.2 RGB: 88 ft.
- Radialux 4.4 RGB: 45 ft.
- Radialux 4.4 RGB-W: 45 ft.
- Radialux 4.7 LP RGB-W: 44 ft.
- Radialux 5.9 RGB-W: 34 ft.
- Radialux 8.8 RGB: 23 ft.
- Radialux 8.8 RGB-W: 23 ft.
- VariTune 2.7 LP: 65 ft.
- VariTune 4.3 COB: 38 ft.
- VariTune RazorLine 6.1 Tunable White: 30 ft.

TECHNICAL INFORMATION

- Input Voltage: 12-24V DC
- Max. Wattage: 8A per channel
- Output Power: 5x (96-192W)
- Constant Voltage
- Dimensions: 6.46in x 2.87in. x 1.5in.
- Power Source: 12-24V Non-Dimmable Driver

DIMENSIONS



OPERATION INSTRUCTIONS

Safety & Warnings

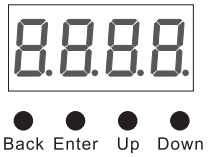
- DO NOT install with power applied to device.
- DO NOT expose the device to moisture.

Operation

Button introduction

Up, Down button is for menu selection.After power on the decoder, if keep on clicking Up button, you will find below menu on display:

DMX signal indicator ● :: When DMX signal input is detected, the indicator on the display following after A turns on red A.XXX .



A.XXX Means DMX address. factory defaults setting is 001.
CH XX Means DMX channels quantity. factory defaults setting is Ch05
bt XX Means Bit (8bit or 16bit). factory defaults setting is 16bit
PF XX Means output PWM frequency. factory defaults setting is 1K HZ
gA XX Means output dimming curve gamma value, factory defaults setting is ga 1.5
dP XX Means Decoding mode, factory defaults setting is dp1.1

By holding button Back + Enter together at the same time over 5 seconds until the display go off, it will restore default settings .

1. DMX address setting (factory default is A001):

select menu A.XXX , click button “Enter”, display flashes,then click or hold button “Up” / “Down” to set DMX address (click is slow, hold is fast.), then click button“Back” to confirm.

2. DMX channel quantity setting (factory default is CH05):

Select menu CH XX, click button “Enter”, display flashes, then click button “Up” / “Down” to set DMX channel quantity , then click button“Back” to confirm.
For example the DMX address is already set 001.
CH01=1 DMX address for all the output channels, which are all address 001.
CH02=2 DMX addresses , output 1&3 is address 001, output 2,4&5 is address 002
CH03=3 DMX addresses, output 1, 2 is address 001,002, output 3,4&5 is address 003
CH04=4 DMX addresses, output 1,2,3 is address 001,002,003, output 4&5 is address 004
CH05=5 DMX addresses, output 1,2,3,4,5 is address 001,002,003,004,005.

3. PWM output resolution Bit setting (factory default is bt16):

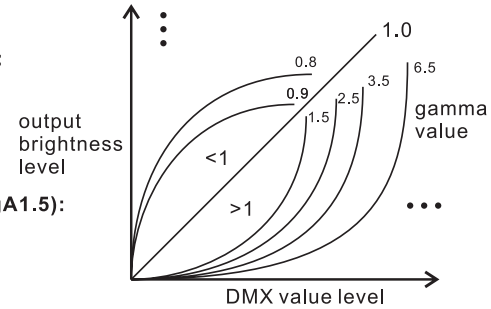
select menu bt XX, click button “Enter”,display flashes, then click button “Up” / “Down” to choose 08 or 16 bit, then click button“Back” to confirm.

4. output PWM frequency setting (factory default is PF01):

select menu PF XX, click button “Enter”, display flashes,then click button “Up” / “Down”to choose 00~30, then click button“Back” to confirm. 00=500HZ, 01=1kHZ, 02=2kHZ.....30=30kHZ.

5. output dimming curve value setting (factory default is gA1.5):

select menu gA XX, click button “Enter”, display flashes, then click or hold button “Up” / “Down” to choose 0.1~9.9, then click button“Back” to confirm.

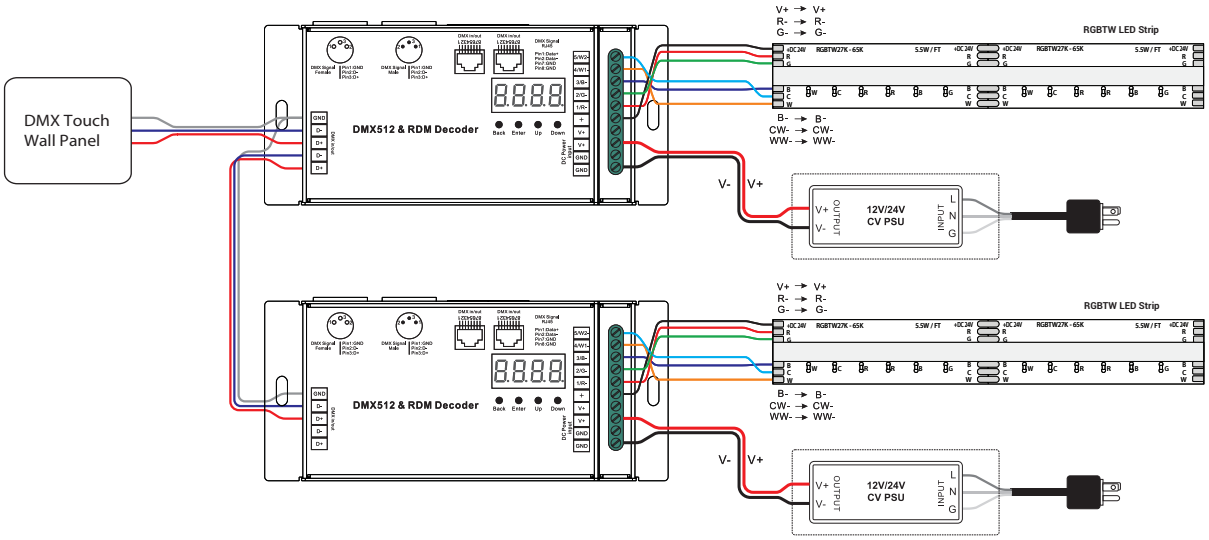


6. DMX decoding mode setting (factory default is dP1.1):

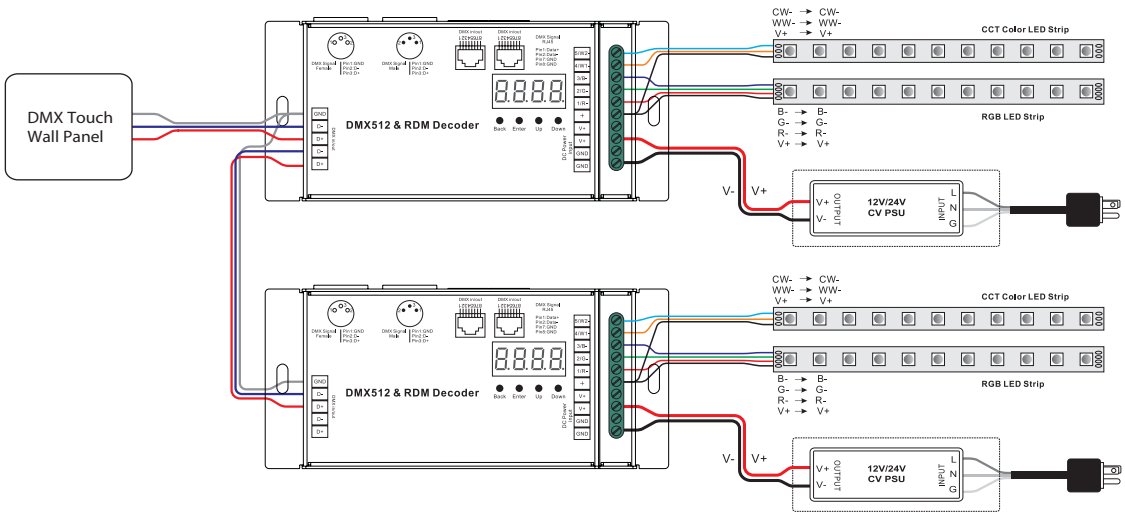
Select menu dP XX , click button “Enter”, display flashes, then click or hold button “Up” / “Down”to choose the decoding mode, then click button“Back” to confirm. “dPxx” means the DMX address quantity used for control of corresponding PWM output channel quantity. 1st “x” is DMX address quantity, 2nd “x” is PWM channel quantity.

Micro dimming: the micro dimming effect can only be visible when the dimming curve gamma value is set lower than 1.4, and the lower the value is, the more visible the micro dimming effect will be.

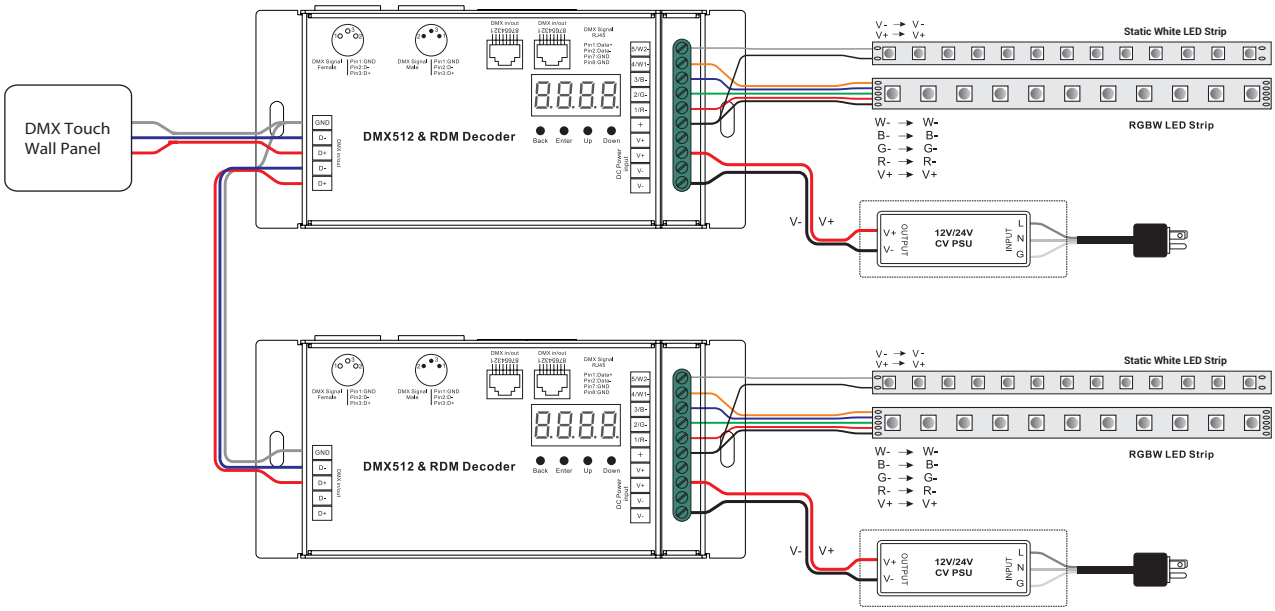
WIRING DIAGRAM : RGBTW



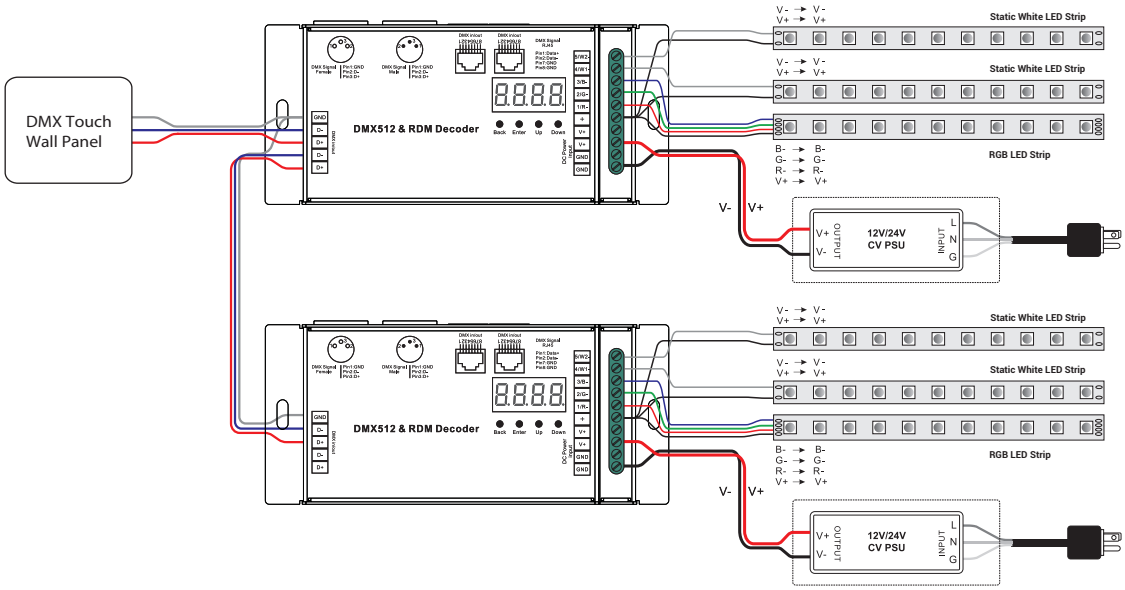
WIRING DIAGRAM : RGB & TUNABLE WHITE



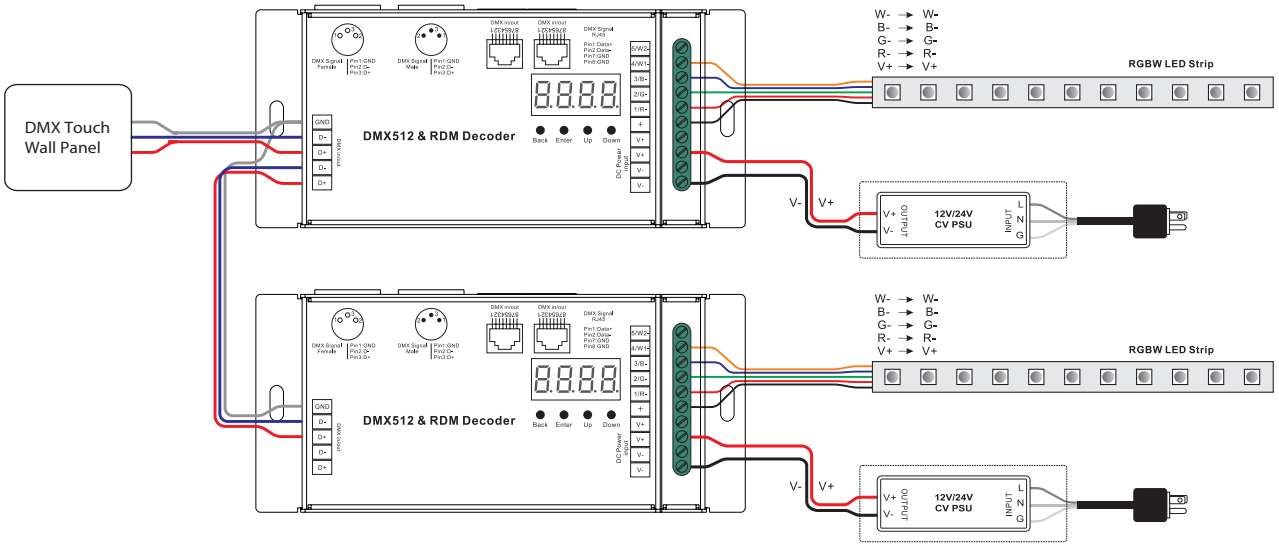
WIRING DIAGRAM : RGBW & STATIC WHITE



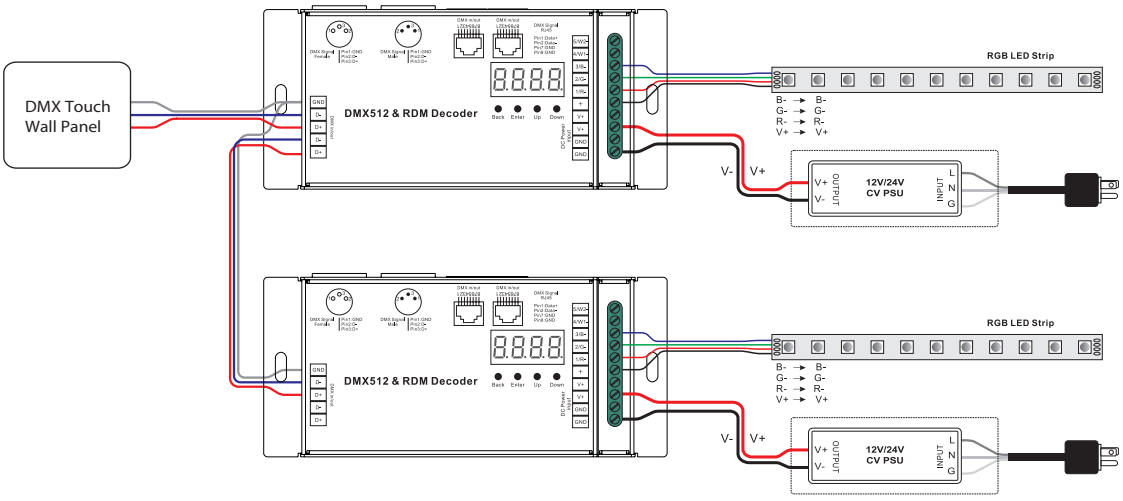
WIRING DIAGRAM : RGB + COOL WHITE & WARM WHITE



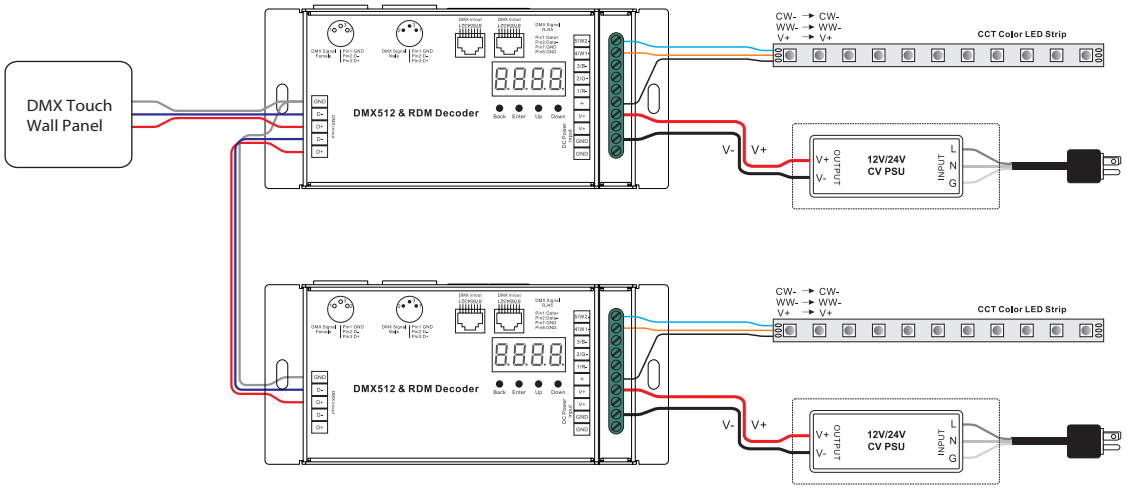
WIRING DIAGRAM : RGBW



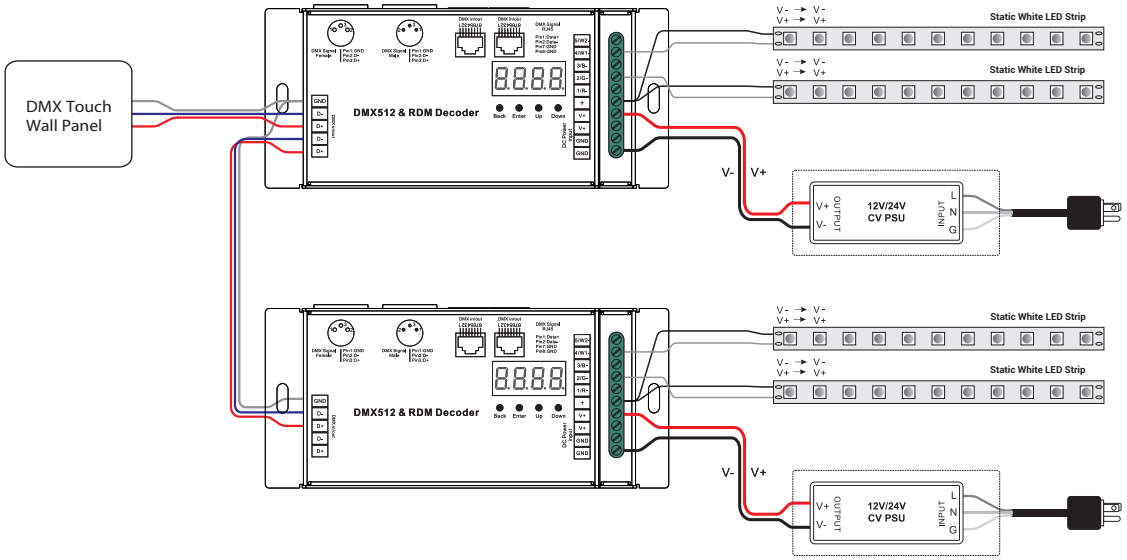
WIRING DIAGRAM : RGB



WIRING DIAGRAM : TUNABLE WHITE



WIRING DIAGRAM : STATIC WHITE



TROUBLESHOOTING

Lights responding incorrectly?

1. Make sure that all wiring connections are correct per the wiring instructions mentioned above. Reversing the Data + and Data - wires can cause lights to flicker and not respond to the controller.
2. Check the power connections of all components (controller, fixtures, drivers, etc).
3. Check DMX data connections.
4. Check DMX fixture connections

SAFETY & WARNINGS

• This product should be installed and serviced by a qualified technician
• Alloy LED strongly recommends installing these in-wall controllers in a PVC or plastic junction box if they are intended to be used wirelessly
• Do not expose this unit to water. When installed outdoors, ensure it is mounted in a waterproof enclosure
• Always mount this unit in an area with proper ventilation to avoid overheating
• Never connect any cables while power is on
• Before switching power on, ensure connections are correct to avoid short circuits