



INSTALLATION INSTRUCTIONS



VentiQuattro-LED DMX - 24 Channel Dimmer

SKU: CONTDMX24CH12V24VLED

Version 1 Rev.2 - 220525

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1 Definitions

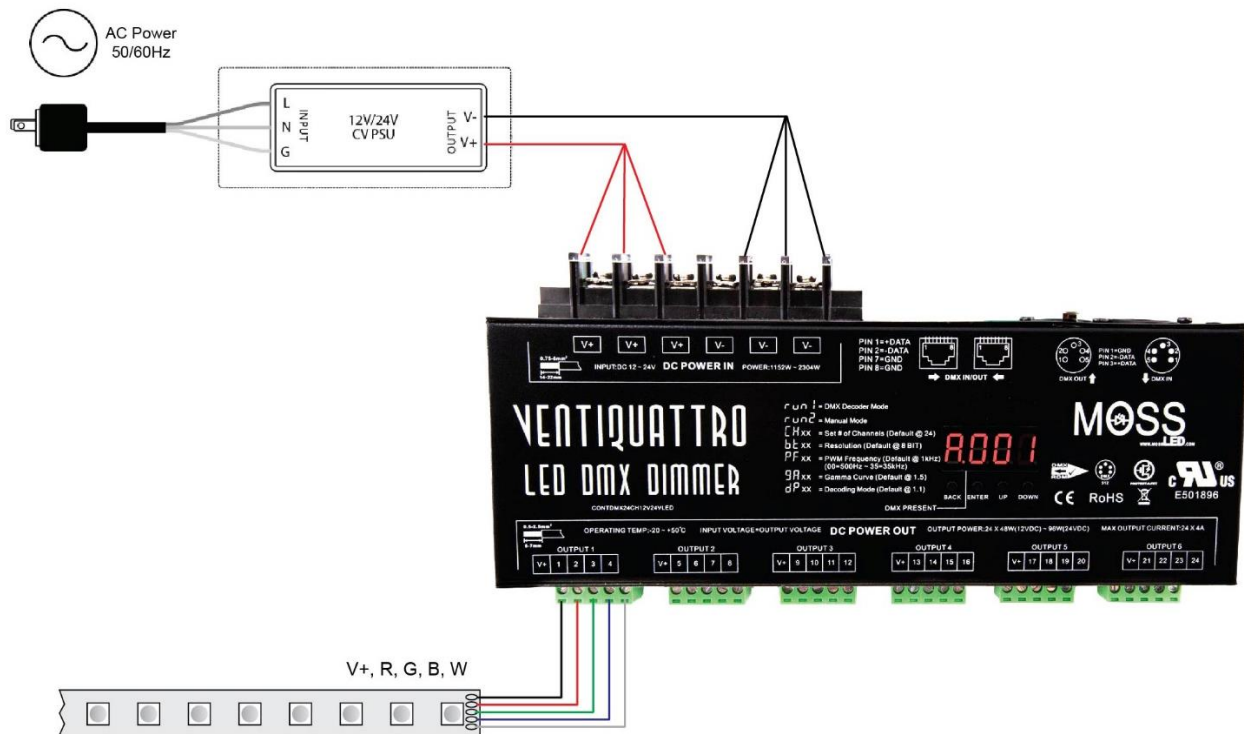
- a. Mains: AC circuit feeding the PSUs
- b. PSU or power supply unit or driver: an AC to DC converter feeding the controllers and LEDs
- c. Controllers or Dimmers: devices capable of changing their outputs based on a remote or local control signal. They can have 1 or multiple independent output channels
- d. LED fixture: a luminaire typically containing several LEDs arranged in groups to match the dimmer specifications
- e. AC or DC load: maximum Volts / Amperes / Watts in an AC or DC circuit

2 Safety notes

- It is recommended that the unit is installed in an electrical enclosure with input and output wires secured with strain reliefs
- Before commencing any installation or maintenance work, please disconnect the units from the mains
- Do not stack any object on top of it. A 10-15 cm clearance must be kept when the adjacent device is a heat source
- Make sure the installation components match the ingress protection (IP) ratings of the drivers, PSUs, LEDs, cabling etc.
- Do not install on combustible materials
- Current rating of an approved cable should be greater than or equal to the maximum connected load
- Make sure that the power supply has sufficient output power to drive the load(s) connected to it
- Make sure that your controller is capable of powering the luminaires.
- Make sure the total power supply AC requirement (under full load) is within the AC circuit capacity
- Long wire runs in the input and output circuits must be properly sized to prevent performance degradation, power loss, overheating, and voltage drop
- Do not open the drivers or controllers: there are no user serviceable parts inside
- Do not open the drivers or controllers: risk of electric shock
- Always refer to the unit's specifications
- Avoid installing electric equipment where mounting failure may result in personal injury and property damage
- Always refer to a Certified Electrician
- Always follow local Electrical Safety Standards and Guidelines
- Failure to follow above Safety Notes may cause personal injury and property damage

3 Installation

Typical wiring diagram (please see item 3.1 for details)



3.1 Wire Gauges

If drawing less than 30A you can use single wires for the V(-) and V(+) connections; between 30 and 60A you should use 2 pairs; if above 60A you should use 3 pairs as above diagram.

Outputs Ch1 to Ch24: Use appropriate gauge wire capable of handling at least 10A.

In any case the wires must be appropriate for the distances between PSU / dimmer / loads.

Note: the dimmer electronics alone requires less than 0.5 Amp to operate.

3.2 Important notes

- 1: Our multi-channel dimmers typically have the positive as the common output polarity. For that reason, they supply all the current from all output channels. Wire gauges must be chosen accordingly!
- 2: Some dimmers have multiple input and output connectors to increase connector current capacity. They must be used whenever the current gets close to the connector maximum capacity
- 3: We recommend using one PSU per dimmer. If you plan to use more than 1 PSU per dimmer or more than 1 dimmer per PSU, please contact our technical department in advance.

Please refer to the unit's specifications / user manual for more details

4 Mechanical installation

- a. It is recommended that the unit is installed in an electrical enclosure with input and output wires secured with strain reliefs
- b. Do not stack
- c. A 10-15 cm clearance must be kept when the adjacent device is a heat source
- d. Use the provided mounting holes to secure the unit
- e. Make sure the ambient temperature is within specification
- f. Do not install on combustible materials
- g. Periodically check that all screws are tight (mechanical and electrical)

5 Settings for operating in Manual Mode at full power with minimum heat generation

If the display shows A### (letter A followed by any 3 numbers) when you turn it on, follow this procedure:

1-press DOWN 4x to get PFxx

2-press ENTER

3-press DOWN to get PF00

4-press BACK

5-press DOWN 1x to get run1

6-press ENTER, then UP to change to run2 then BACK

You are in run2 now which is the manual mode.

7-press UP 1x to adjust ch1 power then ENTER, then either UP or DOWN until you get FL (which means Full Load or 100% power), then BACK 2x.

8-press UP 2x to adjust ch2 to 100% as above. Repeat until you have all desired channels set to full load.

If display shows run2 when you turn it on, you will need to change from run2 to run1, adjust settings then go back to run2 as below:

1-press ENTER, DOWN then BACK. Display will go back to A###

2-follow previous procedure

6 Check list

- ❖ Mains AC circuit must be rated for the total power draw from all PSU(s) at maximum load
- ❖ Incoming and outgoing wires must be secured with strain reliefs
- ❖ PSU input volts must match the AC mains
- ❖ Each PSU input AC cable must be of appropriate gauge and rating for its maximum load
- ❖ PSU output specification must match dimmers and LED luminaires Volts / Amps requirements
- ❖ PSU output cables must match the total load of all dimmer(s) connected to it (all at maximum load)
- ❖ Each dimmer output cable must be rated to match all the LEDs connected to that individual output
- ❖ Individual channel and total dimmer loads must be within dimmer specification

7 Specifications

Parameter	Specification
DC Input voltage	12V to 24V (+ / - 5%)
Maximum Current	96A
DC Input connectors	40A max per position
Maximum Power	1152W @12V / 2304W @ 24V
Output Channels	24
Output Voltage	12V to 24V (+ / - 5%), PWM controlled. Output Volts match input Volts
Output Current per channel	4A max, internal 10A fuse (one per channel), short circuit shut-off
Output connectors	20A max per position, 4mm2 max / 12 AWG
Control signal current	DMX Standard (<250mA @ 7V)
Control signal connectors	2x RJ45, 2x 5 pin XLR, 1x 5 position terminal block
Ambient temperature	-20°C to +50°C
IP rating	20

8 Contact information

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9 Personal Notes (this area was intentionally left blank for your records)