

INSTALLATION INSTRUCTIONS

120-CTRL-4CH



⚠ WARNING

These products may represent a possible shock or fire hazard if improperly installed or attached in any way. Products should be installed in accordance with these instructions, current electrical codes, and/or the current National Electric Code (NEC).

⚠ WARNING

This decoder requires a 100-240V AC power source. Disconnect supply power at the source prior to installation.

SAFETY INFORMATION

- Read all instructions before beginning; Save these instructions for future use.
- To reduce the risk of fire, electric shock, or injury to person(s), pay close attention to this manual and stay within its guidelines when using this product.
- This decoder is rated IP20; avoid the sun and moisture.
- Avoid using decoder in areas where extreme hot, cold, dust, or humidity exist.
- This decoder is suitable for indoor, dry locations only.
- Always be sure to mount this controller in an area with proper ventilation to avoid overheating.
- This product has an operating temperature range of -20°C to 50°C.
- Never connect any cables while power is on and always ensure correct connections to avoid short circuits prior to switching on. Ensure all wires and cables are secured tightly in the connector prior to operation.
- For cleaning, use a soft, dry or damp cloth. Do not use harsh chemicals or abrasives.
- This decoder is rated for 100-240V AC input.
- This decoder has 4 output terminals rated for 100-240V DC, 1.66A/96-192W each.

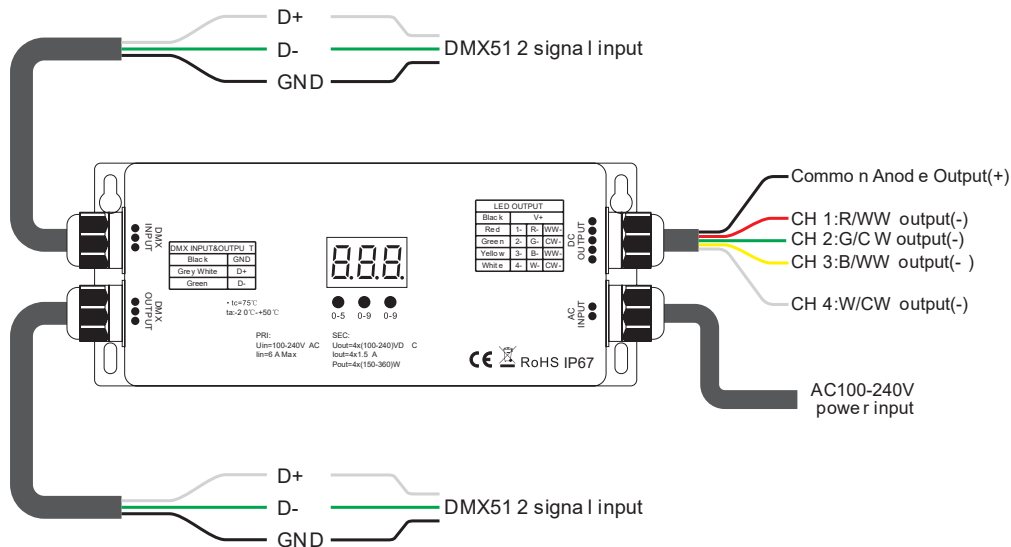
INSTALLING Decoder (SEE FIGURE 1):

This decoder requires a 100-240V AC power source.

This decoder requires a DMX master control (not included).

1. Determine desired location of decoder. Mounting tabs on either end of the decoder may be utilized to secure decoder in place via screws.
2. This decoder has 4 x 1.5A current output channels that can be used with single color, Tunable CCT, RGB, or RGBW fixtures. Wire the decoder to a fixture by following the fixture's instruction manual and wiring diagrams, ensuring to match polarity (wiring varies depending on product).
Connect fixture wiring prior to bringing any power to the system.
3. Bring 100-240V AC supply power to the decoder (See Figure 1).

FIGURE 1



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MODE OF OPERATION A (See Figure 2):

External DMX Master Controller with 120-CTRL-4CH (XLR3 connection)

This mode of operation requires the use of 120-CTRL-4CH with an external DMX master controller (both sold separately). 120-CTRL-4CH is rated for the following: 100-240V AC input, 4 channel x 1.5A output current, -20°C - 50°C, and is designed for use with 100-240V DC product only.

1. Connect wires from 100-24V DC product to the wires from 120-CTRL-4CH, being sure to match polarity as follows: Black to Black, White to White, Red to Red, Green to Green, and Blue to Yellow.
2. Connect the 120-CTRL-4CH to an external DMX master controller via bare wire conkit (included) or using RGB-H2-XLR3-PT for XLR3 connection (sold separately).
3. Plug AC input power cord from 120-CTRL-4CH into a 120V power supply.
4. To set desired DMX512 address via buttons on controller:
 - button A is to set “hundreds” position,
 - button B is to set “tens” position,
 - button C is to set “unit” position.
5. Set DMX address (Factory default DMX address is 001): Press and hold down any of the 3 buttons for over 3 seconds, digital display flashes to enter into address setting, then keep short pressing button A to set “hundreds” position, button B to set “tens” position, button C to set “units” position, then press and hold down any button for >3 seconds to confirm the setting.
 - When DMX signal input is detected, the indicator on the display “••” (located next to the “hundreds” digit position) turns RED
6. Choose DMX Channel (Factory default DMX address is 004): Press and hold down both buttons B+C simultaneously for over 3 seconds, CH digital display flashes, then keep short pressing button A to choose 1/2/3/4, which means total 1/2/3/4 channels. Press and hold down button A for >3 seconds to confirm the setting. Factory default is 4 DMX channels.

For example the DMX address is already set as 001.

 - 1CH=1 DMX address for all the output channels, which all will be address 001.
 - 2CH=2 DMX addresses , output 1&3 will be address 001, output 2&4 will be address 002
 - 3CH=3 DMX addresses, output 1, 2 will be address 001, 002 respectively, output 3&4 will be address 003
 - 4CH=4 DMX addresses, output 1, 2, 3, 4 will be address 001, 002, 003, 004 respectively
7. Choose PWM frequency (Factory default PWM frequency is PF1 1KHz): Press and hold down both buttons A+B simultaneously for over 3 seconds, digital display will show PF1, PF means output PWM frequency, the digit 1 will flash, which means frequency, then keep short pressing button C to select a frequency from 0-9 and A-J, which stand for following frequencies:
 - 0=500Hz, 1=1KHz, 2=2KHz, ..., 9=9KHz, A=10KHz, B=12KHz, C=14KHz, D=16KHz, E=18KHz, F=20KHz, H=25KHz, J=35KHz.

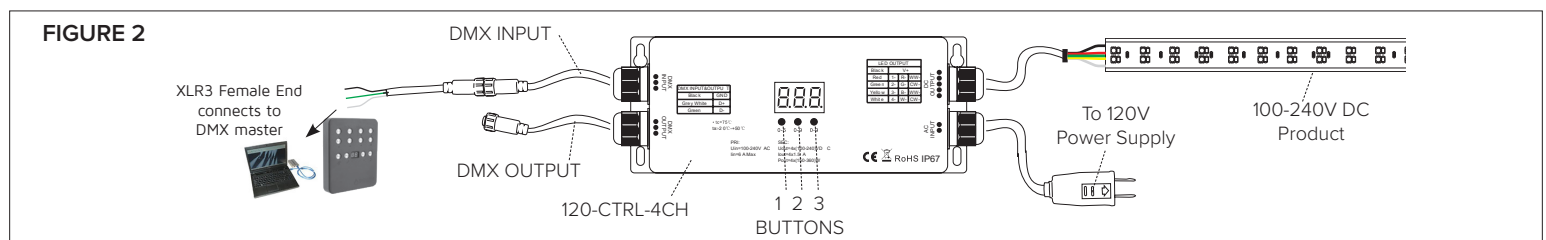
Then press and hold down button C for >3 seconds to confirm the setting.

Note: DO NOT set the PWM frequency higher than 3KHz to avoid over heat and damage to the device.
8. Choose Dimming Curve Gamma Value (Factory default dimming curve value is g1.0): Press and hold down all buttons A+B+C simultaneously for over 3 seconds, digital display flashes g1.0, 1.0 means the dimming curve gamma value, the value is selectable from 0.1-9.9, then keep short pressing button B and button C to select corresponding digits, then press and hold down both buttons B+C for >3 seconds to confirm the setting.
9. Restore to Factory Default Setting: Press and hold down both buttons A+C for over 3 seconds until the digital display turns off and then turns on again, all settings will be restored to factory default. Default settings are as follows:

DMX Address: 001
 DMX Address Quantity: 4CH
 PWM Frequency: PF1
 Gamma: g1.0

10. The supported RDM PIDs are as follows:

- | | |
|------------------------|-----------------------------|
| DISC_UNIQUE_BRANCH | DMX_PERSONALITY |
| DISC_MUTE | DMX_PERSONALITY_DESCRIPTION |
| DISC_UN_MUTE | SLOT_INFO |
| DEVICE_INFO | SLOT_DESCRIPTION |
| DMX_START_ADDRESS | MANUFACTURER_LABEL |
| IDENTIFY_DEVICE | SUPPORTED_PARAMETERS |
| SOFTWARE_VERSION_LABEL | |



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MODE OF OPERATION B (See Figure 3):

Radio Frequency Receiver + Controller with 120-CTRL-4CH

This mode of operation requires the use of 120-CTRL-4CH, REC-DMX-RF (sold separately), and RF-RGBW-3Z (sold separately). 120-CTRL-4CH is rated for the following: 100-240V AC input, 4 x 1.5A output current, -20°C - 50°C operating temperature, and is designed for use with 100-240V DC product only.

1. Connect wires from 100-24V DC product to the wires from 120-CTRL-4CH, being sure to match polarity as follows: Black to Black, White to White, Red to Red, Green to Green, and Blue to Yellow.
2. Connect the 'DMX input' cord from 120-CTRL-4CH to the 'DMX output' cord from REC-DMX-RF. Tighten the screw-on connection securely. Each zone will require one (1) REC-DMX-RF.
3. Plug AC input power cord from REC-DMX-RF and the AC input power cord from 120-CTRL-4CH into a 100-240V AC power supply.
4. Set DMX address (Factory default DMX address is 001): Press and hold down any of the 3 buttons for over 3 seconds, digital display flashes to enter into address setting, then keep short pressing button A to set "hundreds" position, button B to set "tens" position, button C to set "units" position, then press and hold down any button for >3 seconds to confirm the setting.
5. For single zone operation, (1 or more Radio Frequency controllers controlling 1 or more sets of product synchronously), utilize address 001. For multiple zone operation, (multiple Radio Frequency controllers controlling multiple sets of product individually), set the addresses in multiples of 4 (e.g. 001 - 005 - 009 - 013 - 017 - etc) with each address signifying a zone. To set DMX address, press and hold button 1 for 2 seconds until the digital display flashes. Use buttons 1, 2, and 3 to select address, then press and hold any button for 2 seconds to confirm. As a note, there can be only one dedicated address per zone; more than one 120-CTRL-4CH can share the same address and be controlled as a single zone.
6. 120-CTRL-4CH can be interconnected (DMX 512 signal limited to 700ft max run) by connecting the 'DMX Output' cable from first 120-CTRL-4CH unit to 'DMX Input' cable from second 120-CTRL-4CH unit; Tighten the screw on connection securely. RGB-H2-CTRL-EC15 signal linking cables are also available to increase distance between controllers (also sold separately). See Figure 4.
7. To sync a Radio Frequency controller with REC-DMX-RF, first ensure the Radio Frequency controller is powered on. Press the learning key on the first REC-DMX-RF of the zone to be controlled; The red indicator light on the REC-DMX-RF should flash. If applicable, press the chosen zone button on the Radio Frequency controller, then touch and scroll the color wheel to complete sync. Press and hold the "Learning Key" to clear out saved sync data when wanting to reset scenes or zones.
8. Follow the instructions for the respective Radio Frequency controller (sold separately) for specific color control information.

FIGURE 3

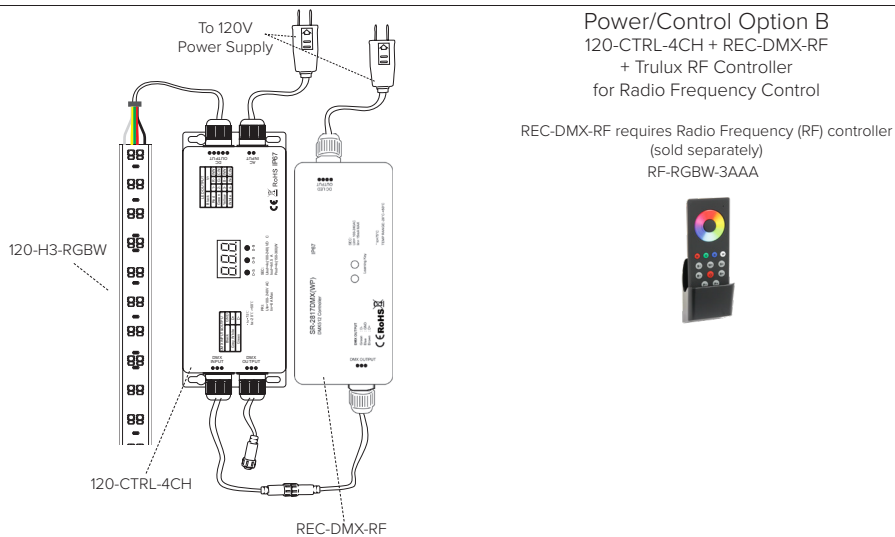


FIGURE 4

