

**INSTALLATION INSTRUCTIONS**

AML-DEC-DMX-RJ45-5X5CH

**⚠ 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 12-24V DC power supply (LED-DR series driver recommended, sold separately). Disconnect supply power at the source prior to installation.

SAFETY INFORMATION

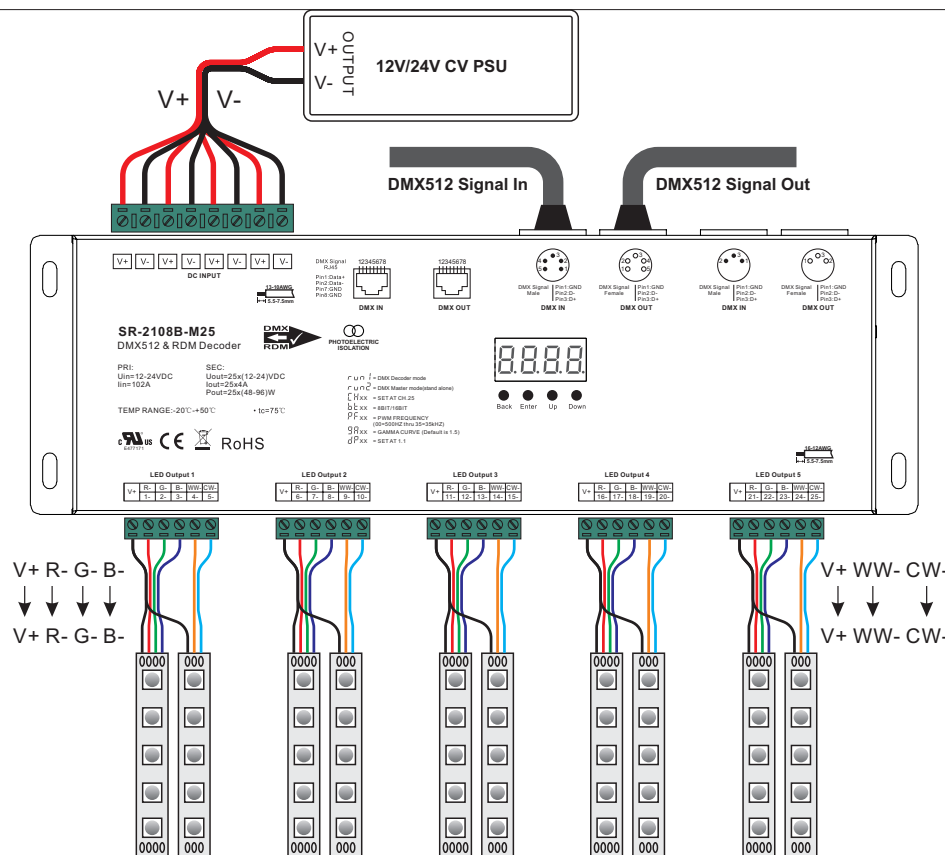
- Read all instructions before beginning; Save these instructions for future use.
- To reduce the risk of fire, electric shock, or injury to person(s), pay close attention to this manual and stay within its guidelines when using this product.
- This decoder is rated IP20; avoid the sun and moisture.
- 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 12-24V DC input with a maximum line-in of 102A.
- This decoder has 25 (5x5) output terminals rated for 4A each.

INSTALLING Decoder (SEE FIGURE 1):

This decoder requires a 12-24V DC power supply (sold separately).

This decoder can operate in standalogn mode or via external DMX controller (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 25 (5x5) x 4A current output terminals that can be used with single color, Tunable CCT, RGB/RGBW, or RGB+Tunable CCT 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 prior to bringing any power to the system.
3. Bring 12-24V DC supply power to the decoder, matching polarity (See Figure 1).

FIGURE 1

Controllers and decoders may be powered by the same driver on the secondary side

**INSTALLATION INSTRUCTIONS****AML-DEC-DMX-RJ45-5X5CH****INTERCONNECTING Decoders (SEE FIGURE 2):**

This decoder requires a 12-24V DC power supply (sold separately).
This decoder can operate in standalone mode or via external DMX controller (not included).

1. Interconnect DMX signal via XLR3 or RJ45 ports. This requires the use of XLR3 or RJ45 cable (not included). See Figure 2.
2. Bring 12-24V DC supply power to each decoder in succession, matching polarity. See Figure 2.

OPERATING DMX Decoder (SEE FIGURE 4):

This decoder requires a 12-24V DC power supply (sold separately).

1. This decoder can operate in Standalone Mode or Decoder Mode. Before choosing any other setting, **select which mode you wish to operate: run1** for DMX Decoder Mode and **run2** for Standalone Mode.
2. Utilize the Up and Down buttons to toggle through menu selections.
3. Utilize the Enter button to select and the Back button to return to main menu.
4. To restore factory default settings, press and hold both the Back and Enter buttons until the digital display turns off, then release the key. The system will reset and the digital display will turn on again with all settings restored to default.

run2 Standalone Mode

Utilize the Down button to locate run2 setting. Once set, use the Up button to select settings as follows:

0000 Means brightness for each output PWM channel. First 01 means PWM output channel 1 and it is selectable from 01 to 25 by clicking "UP" or "Down" button. Second 01 means brightness level, click "Enter" button, the display flashes, then click "UP" or "Down" button to select from 00-99-FL, which means 0%-99%-100% brightness, then click "Back" button to confirm.

0000 means chasing effects, total 4 effects selectable from 01-04. Click "Up" or "Down" button to select the menu, then click "Enter" button to enter into the effect, then click "Up" or "Down" button to select from 01-04.

CA01: Fade-up (0%-100%) and fade-down (100%-0%) of output 1, then output 2, output 3,, output 25, output 1,, cycling chasing

CA02: Fade-up (0%-100%) of output 1, then simultaneous fade-down (100%-0%) of output 1 and fade-up (0%-100%) of output 2, simultaneous down of output 2 and up of output 3,, simultaneous down of output 24 and up of output 25, simultaneous down of output 25 and up of output 1,, cycling chasing

CA03: Fade-up (0%-100%) of output 1, then output 2, output 3,, output 25, output 1,, cycling chasing

Ca04: Fade-down (100%-0%) of output 1, then output 2, output 3,, output 25, output 1,, cycling chasing

9999 means chasing speed, it is selectable from 01-09, 01 is the slowest, 09 is the fastest.

run1 DMX Decoder Mode

Utilize the Down button to locate run2 setting. Once set, use the Up button to select settings as follows:

8.XXX **DMX signal indicator** : When DMX signal input is detected, the indicator on the display following after **8** turns on red

8.XXX Means DMX address. factory defaults setting is 001.

88XX Means DMX channels quantity. factory defaults setting is Ch25

88XX Means Bit (8bit or 16bit). factory defaults setting is 16bit

88XX Means output PWM frequency. factory defaults setting is 10K HZ

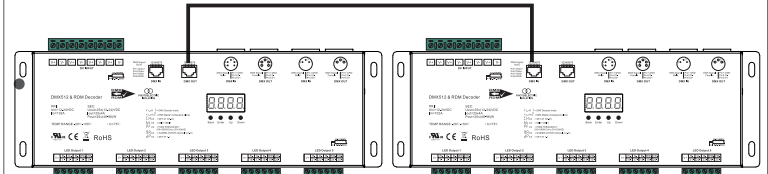
88XX Means output dimming curve gamma value, factory defaults setting is ga 1.5

88XX Means Decoding mode, factory defaults setting is dp1.1

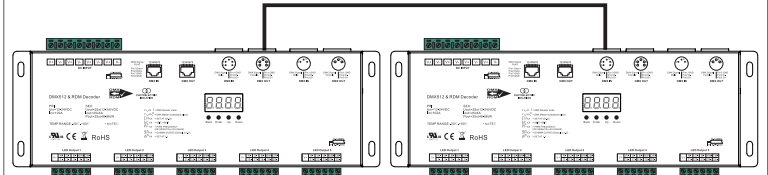
run1 Means the device at run1 mode (DMX decoder mode).

FIGURE 2

Interconnecting via XLR3 Ports

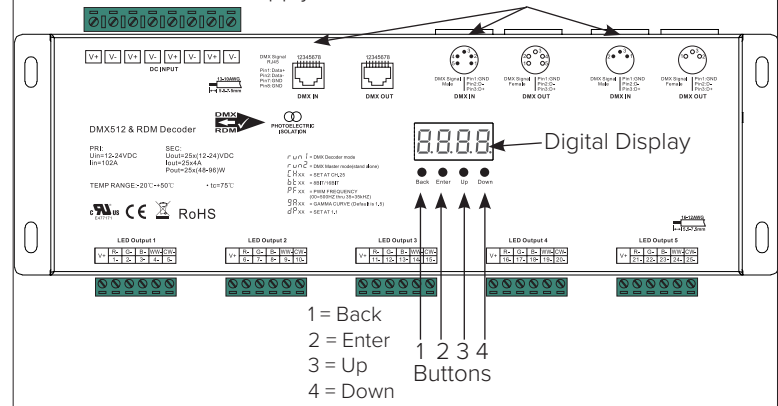


Interconnecting via RJ45 Ports

**FIGURE 4**

To 12-24V DC Power Supply

To Master DMX Controller





INSTALLATION INSTRUCTIONS

AML-DEC-DMX-RJ45-5X5CH

**1. DMX address setting:**

Select menu **8 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:

Select menu **08 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 as 001.

CH01=1 DMX address for all the output channels, which are all address 001.

CH02=2 DMX addresses, output channels 1, 3, 6, 8, 11, 13, 16, 18, 21, 23 are address 001, output channels 2, 4, 7, 9, 12, 14, 17, 19, 22, 24 are address 002. Output channels 5, 10, 15, 20, 25 are not controlled.

CH03=3 DMX addresses, output channels 1, 6, 11, 16, 21 are address 001, output channels 2, 7, 12, 17, 22 are address 002, output channels 3, 8, 13, 18, 23 are address 003. Output channels 4, 5, 9, 10, 14, 15, 19, 20, 24, 25 are not controlled.

CH04=4 DMX addresses, output channels 1, 6, 11, 16, 21 are address 001, output channels 2, 7, 12, 17, 22 are address 002, output channels 3, 8, 13, 18, 23 are address 003, output channels 4, 9, 14, 19, 24 are address 004. Output channels 5, 10, 15, 20, 25 are not controlled.

CH05=5 DMX addresses, output channels 1, 6, 11, 16, 21 are address 001, output channels 2, 7, 12, 17, 22 are address 002, output channels 3, 8, 13, 18, 23 are address 003, output channels 4, 9, 14, 19, 24 are address 004, output channels 5, 10, 15, 20, 25 are address 005.

CH25=25 DMX addresses, output 1-25 is address 001-025 respectively.

3. PWM output resolution Bit setting:

Select menu **88 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:

Select menu **88 XX**, click button "Enter", display flashes, then click button "Up" / "Down" to choose 00~35, then click button "Back" to confirm. 00=500HZ, 01=1kHz, 02=2kHz.....25=25kHz, 35=35kHz.

5. Output dimming curve gamma value setting:

Select menu **88 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:

Select menu **88 XX**, click button "Enter", display flashes, then click 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.

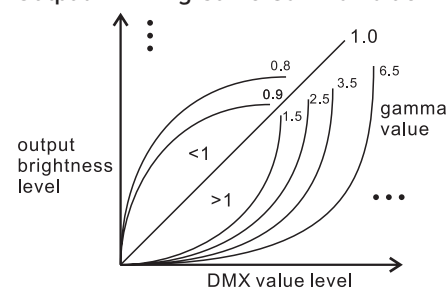
Fine dimming: the fine dimming effect can only be visible when the dimming curve gamma value is set lower than 1.4, and the lower the value is, the more visible the fine dimming effect will be.

DMX address is 001, CH01

DMX Console Slider number	dp1.1	dp2.1	dp2.2	dp3.1
DMX channel				
1	all output dimming	all output dimming	all output dimming	all output dimming
2		all output fine dimming	all output strobe effects	all output fine dimming
3				all output strobe effects

DMX address is 001, CH02

DMX Console Slider number	dp1.1	dp2.1	dp2.2	dp3.2	dp4.3
DMX channel					
1	output1,3,6,8,11,13,16,18,21,23dimming	output1,3,6,8,11,13,16,18,21,23dimming	output1-4,6-9,11-14,16-19,21-24dimming	output1-4,6-9,11-14,16-19,21-24dimming	output1-4,6-9,11-14,16-19,21-24dimming
2	output2,4,7,9,12,14,17,19,22,24dimming	output1,3,6,8,11,13,16,18,21,23fine dimming	output1+2,3+4,6+7,8+9,11+12,13+14,16+17,18+19,21+22,23+24color tuning	output1,3,6,8,11,13,16,18,21,23dimming	output1,3,6,8,11,13,16,18,21,23dimming
3		output2,4,7,9,12,14,17,19,22,24dimming		output2,4,7,9,12,14,17,19,22,24dimming	output2,4,7,9,12,14,17,19,22,24dimming
4		output2,4,7,9,12,14,17,19,22,24fine dimming			strobe effects

Output Dimming Curve Gamma Value

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

INSTALLATION INSTRUCTIONS

AML-DEC-DMX-RJ45-5X5CH

**DMX address is 001, CH03**

DMX Console Slider number DMX channel	dp1.1	dp2.1	dp4.3	dp5.3
1	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming	output1-3,6-8,11-13 16-18,21-23dimming	output1-3,6-8,11-13 16-18,21-23dimming
2	output2,7,12, 17,22dimming	output1,6,11, 16,21fine dimming	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming
3	output3,8,13, 18,23dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming
4		output2,7,12, 17,22fine dimming	output3,8,13, 18,23dimming	output3,8,13, 18,23dimming
5		output3,8,13, 18,23dimming		strobe effects
6		output3,8,13, 18,23fine dimming		

DMX address is 001, CH04

DMX Console Slider number DMX channel	dp1.1	dp2.1	dp5.4	dp6.4
1	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming	output1-4,6-9,11-14, 16-19,21-24dimming	output1-4,6-9,11-14, 16-19,21-24dimming
2	output2,7,12, 17,22dimming	output1,6,11, 16,21fine dimming	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming
3	output3,8,13, 18,23dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming
4	output4,9,14, 19,24dimming	output2,7,12, 17,22fine dimming	output3,8,13, 18,23dimming	output3,8,13, 18,23dimming
5		output3,8,13, 18,23dimming	output4,9,14, 19,24dimming	output4,9,14, 19,24dimming
6		output3,8,13, 18,23fine dimming		strobe effects
7		output4,9,14, 19,24dimming		
8		output4,9,14, 19,24fine dimming		

DMX address is 001, CH05

DMX Console Slider number DMX channel	dp1.1	dp2.1	dp6.5	dp7.5
1	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming	output1-25 dimming	output1-25 dimming
2	output2,7,12, 17,22dimming	output1,6,11, 16,21fine dimming	output1,6,11, 16,21dimming	output1,6,11, 16,21dimming
3	output3,8,13, 18,23dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming	output2,7,12, 17,22dimming
4	output4,9,14, 19,24dimming	output2,7,12, 17,22fine dimming	output3,8,13, 18,23dimming	output3,8,13, 18,23dimming
5	output5,10,15, 20,25dimming	output3,8,13, 18,23dimming	output4,9,14, 19,24dimming	output4,9,14, 19,24dimming
6		output3,8,13, 18,23fine dimming	output5,10,15, 20,25dimming	output5,10,15, 20,25dimming
7		output4,9,14, 19,24dimming		strobe effects
8		output4,9,14, 19,24fine dimming		
9		output5,10,15, 20,25dimming		
10		output5,10,15, 20,25fine dimming		

The supported RDM PIDs are as follows:

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

The data definitions for strobe channel are as follows:

```

{0, 7},//undefined
{8, 65},//slow strobe-->fast strobe
{66, 71},//undefined
{72, 127},//slow push fast close
{128, 133},//undefined
{134, 189},//slow close fast push
{190, 195},//undefined
{196, 250},//random strobe
{251, 255},//undefined
  
```

FCC Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the decoder.
- Connect the equipment into an outlet different from that to which the decoder is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.