HM4

DMX/RDM High-Voltage Waterproof Decoder

NFC RDM DMX CE RoHS IP67

The HM4 is a high-performance LED constant-voltage controller with IP67 waterproof rating, designed for precise control of LED fixtures by receiving standard DMX/RDM protocol signals. Featuring 4 channels with a maximum output current of 6.4A and maximum output power up to 1536W, it reliably drives various constant-voltage LED fixtures.

The HM4 flexibly enables dimming, color temperature adjustment, and full-color RGB/RGBW control for diverse lighting requirements. It offers both DMX decoder mode and DMX master mode. In DMX decoder mode, parameters such as DMX address, resolution, dimming ramp time, and dimming mode can be configured. DMX master mode allows setting 33 lighting effects, speed, brightness, and other parameters. Mode switching and parameter configuration within each mode can be performed via three methods: NFC Lighting app, RDM-WIFI app, or physical buttons, balancing intuitive operation with deep customization.

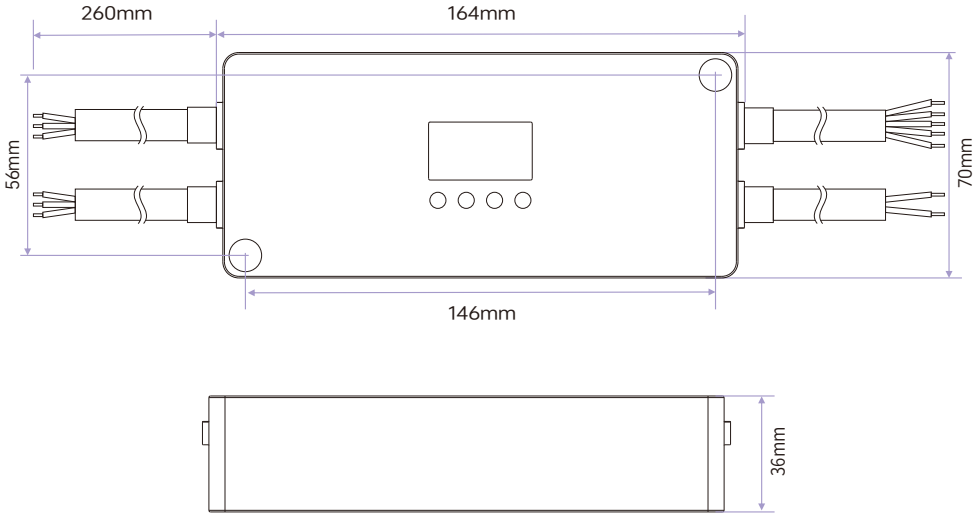
Boasting IP67 waterproof performance and stable operation, the HM4 is suitable for diverse indoor and outdoor environments. It reliably functions even in humid conditions, delivering an efficient and flexible control solution for lighting systems.

Technical Specifications

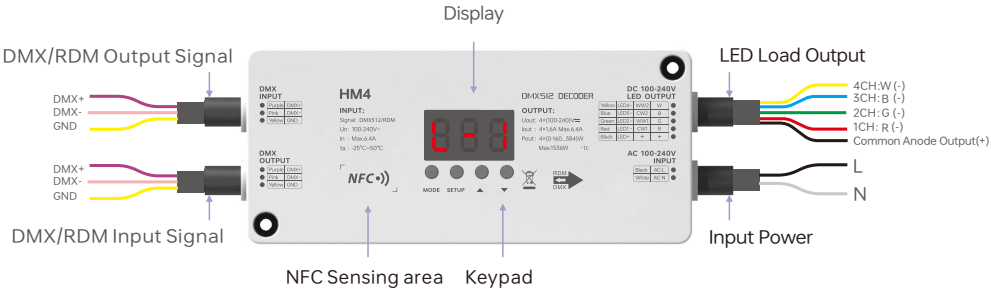
HM4

Input signal:	DMX512, RDM	Operating temperature:	-25℃-50℃
Input Voltage:	100-240V~	Product Weight:	670g
Input current:	Max. 6.4A	Product dimensions:	L164×W70×H36mm
Output Voltage:	4×(100-240)V ⎓	Package dimensions:	L230×W95×H47mm
Output Current:	4CH×1.6A Max. 6.4A	Waterproof rating:	IP67
Output Power:	4CH×(0-160...384)W Max. 1536W	Protect:	Short-circuit, over-temperature, and over-current protection
Surge:	4KV		

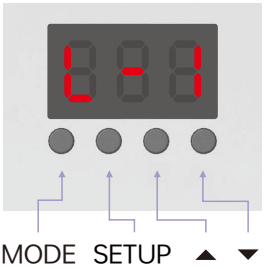
Product Dimensions



Parts Diagram



Address Display :



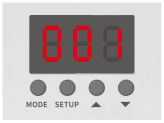
- Enter Configuration: Short press or long press the MODE key for 2 seconds.
- Adjust Values: Short press the ▲ or ▼ key.
- Return to Initial Page: Long press the MODE key again for 2 seconds or no operation for 15 seconds.
- Save Configuration: Long press the SETUP key for over 2 seconds.
- Restore Factory Settings: Simultaneously long press the MODE, ▲ , ▼ keys for 2 seconds.

DMX decoder mode

DMX Decoding Mode Interface

Press and hold both the MODE and ▲ keys simultaneously. When the display shows “L-1,” the device enters DMX decoding mode. Press the MODE key briefly to access the menu (if entering settings after saving or timeout, press and hold the MODE key to enter).
After completing parameter settings, press and hold the SETUP key for over 2 seconds to save the configuration.

1. DMX Address Setup



Press the ▲ or ▼ key to select and configure the DMX address.
Range: 1 to 512

2. Resolution

Press the MODE button briefly to switch the menu to “r”.
Press the ▲ or ▼ button to select; the third digit will display 1 or 2.
Options: r-1 (8bit) / r-2 (16bit)

3. Dimming transition time

Press the MODE button briefly to switch the menu to “d”.
Press the ▲ or ▼ button to select; the third digit will display 1 or 2.
Options: d-1 (Smooth) / d-2 (Standard)

4. Dimming Mode

Press the MODE key briefly to switch the menu to “C”.

Press the ▲ or ▼ key to select. The third digit display shows 1 to 6.

Options:

Model	Addr.	Number and type of lamps installed	Instruction
C-1	1	4 DIM lights	Address 001 controls 4 output channels, uniformly regulating the brightness of 4 lights.
C-2	2	2 CT lights	Addr. 001 controls outputs CH1 and CH3, corresponding to CW light for lights 1 and 2; Addr. 002 controls outputs CH2 and CH4, corresponding to WW light for lights 1 and 2.
C-3	3	1 RGB light	Addr. 001 controls CH1 output, corresponding to R brightness; Addr. 002 controls CH2 output, corresponding to G brightness; Addr. 003 controls CH3 and CH4 outputs, corresponding to B brightness.
C-4	4	1 RGBW light	Addr. 001 controls CH1 output, corresponding to R brightness; Addr. 002 controls CH2 output, corresponding to G brightness; Addr. 003 controls CH3 output, corresponding to B brightness; Addr. 004 controls CH4 output, corresponding to W brightness.
C-5	4	2 CT lights	Addr. 001 controls CH1 output, corresponding to the CW lamp of light 1; Addr. 002 controls CH2 output, corresponding to the WW lamp of light 1; Addr. 003 controls CH3 output, corresponding to the CW lamp of light 2; Addr. 004 controls CH4 output, corresponding to the WW lamp of light 2.
C-6	4	4 DIM lights	Addr. 001 controls CH1 output, corresponding to the brightness of light 1; Addr. 002 controls CH2 output, corresponding to the brightness of light 2; Addr. 003 controls CH3 output, corresponding to the brightness of light 3; Addr. 004 controls CH4 output, corresponding to the brightness of light 4.

5. Displayed time

Press the MODE button briefly to switch the menu to “n”.

Press the ▲ or ▼ key to select; the third digit will display 1 or 2.

Options: n-1 (Digital tube stays lit) / n-2 (Will turn off if no operation within 30 seconds)

DMX control mode

DMX Control Mode Interface

Press and hold the MODE and ▼ key simultaneously.

When the display shows “L-2”, the device enters DMX master control mode.

Press the MODE key briefly to access the menu (if entering settings after saving or timeout, press and hold the MODE key to enter). After completing parameter settings, press and hold the SETUP key for over 2 seconds to save the configuration.

1. Light Effects

Example: E-1 (Black)

Example: E17 (Rainbow Fade-In/Fade-Out)

Press the MODE key briefly to switch the menu to “E”.

Press the ▲ or ▼ key to select. The display will show options 1 to 33.

Options:

E-1 (Black)	E12 (RGB Strobing)	E23 (Blue-Purple Gradient)
E-2 (Red)	E13 (Rainbow Strobing)	E24 (Green-Yellow Gradient)
E-3 (Green)	E14 (RGB Jumping)	E25 (Blue-Cyan Gradient)
E-4 (Blue)	E15 (Rainbow Jumping)	E26 (Red-Purple Gradient)
E-5 (Yellow)	E16 (RGB Fade-in/Fade-out)	E27 (Blue-White Gradient)
E-6 (Purple)	E17 (Rainbow Fade-in/Fade-out)	E28 (Yellow-Purple-Cyan Gradient)
E-7 (Cyan)	E18 (Red-Green Gradient)	E29 (RGB Gradient)
E-8 (White)	E19 (Red-Blue Gradient)	E30 (Rainbow Gradient)
E-9 (Red Strobe)	E20 (Green-Blue Gradient)	E31 (RGB+White Gradient)
E-10 (Green Strobe)	E21 (Red-Yellow Gradient)	E32 (RGBW Gradient)
E-11 (Blue Strobe)	E22 (Green-Cyan Gradient)	E33 (RGBY Gradient)

2. Speed

Press the MODE key briefly to switch the menu to “S”.
Press the ▲ or ▼ key to select. The third digit displays 1 to 8.
Default value: S-5
Options: S-1 / S-2 ····· S-7 / S-8
Speed levels, ascending in order

3. Brightness

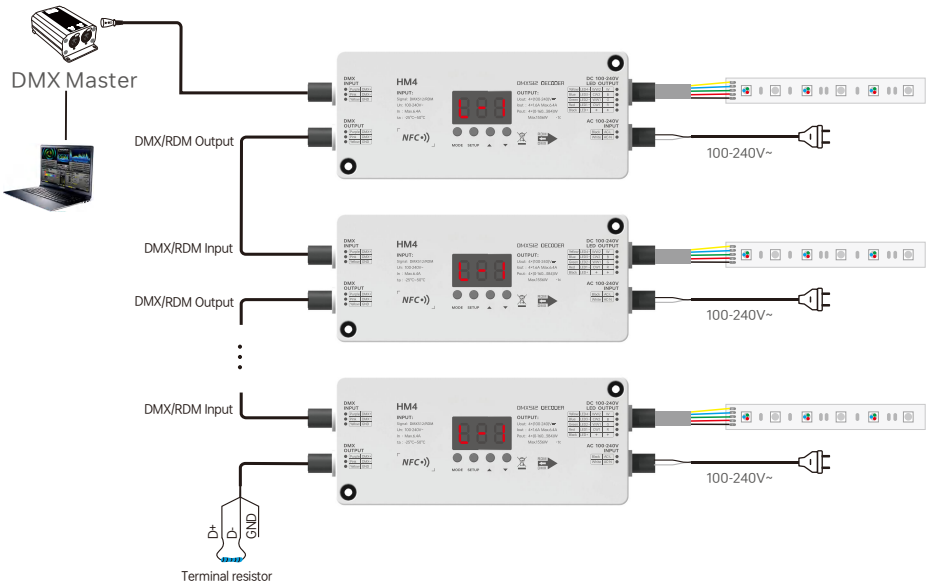
Press the MODE key briefly to switch the menu to “b”.
Press the ▲ or ▼ key to select. The second and third digit displays 00 to FF.
Default value: bFF
Options: b00 / b01 ····· bFE / bFF
Brightness levels, in ascending order

4. Displayed time

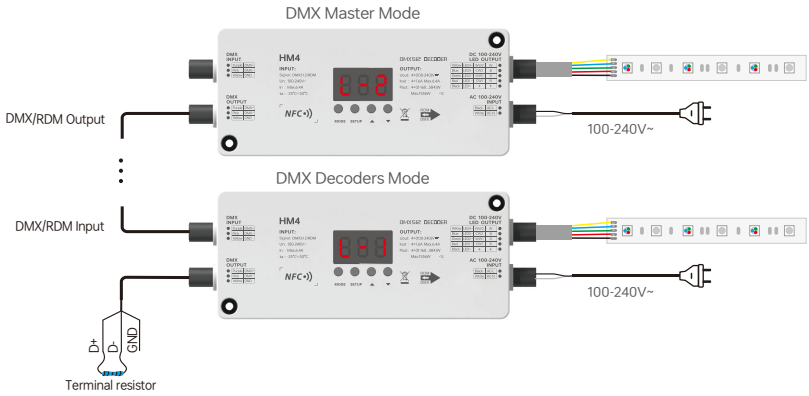
Press the MODE key briefly to switch the menu to “n”.
Press the ▲ or ▼ key to select. The third digit display shows 1 or 2.
Options: n-1 (Digit display stays on) /
n-2 (Digit display turns off after 30 seconds of inactivity)

Connection Diagram

DMX Decoder Mode Connection
(The decoder mode can be set to DIM, CT, RGB, or RGBW via the NFC Lighting App or WiFi-RDM App.)

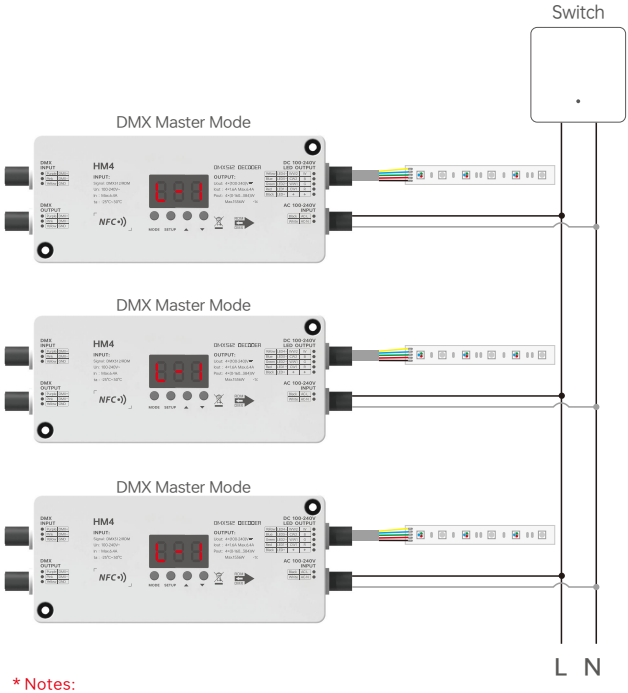


DMX Master Mode Connection (Set one decoder to DMX master mode via the NFC lighting app or WiFi-RDM app, while configuring the others as DMX decoders to form a single DMX control system.)



AC Synchronization (Multiple controllers in the same circuit can be powered up simultaneously and synchronized dynamically via AC power.)

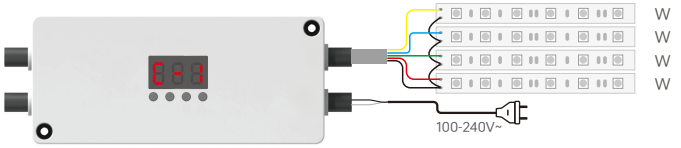
* The controller must be set to DMX master mode, and all controllers must be in the same dynamic mode with identical speed settings.



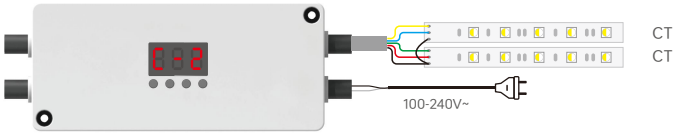
* Notes:
1. If a DMX signal is received during operation, AC synchronization will cease.
2. If speed or dynamic effects are altered mid-operation, visual desynchronization may occur, requiring a power cycle to restore synchronization.

Mode Connection Diagram

1. C-1(DIM Synchronous control)

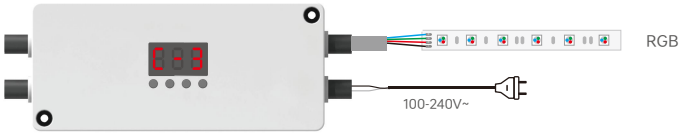


2. C-2(CT Synchronous control)

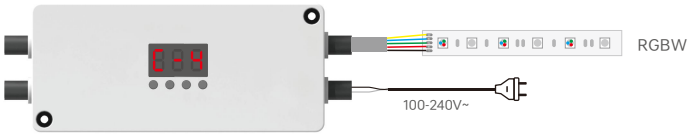


*C-2 CT mode: The output of CW is constant power; Address 001 is to adjust the brightness; Address 002 is to adjust the color temperature.

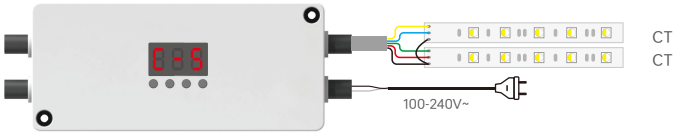
3. C-3(RGB)



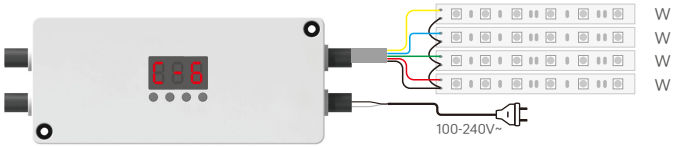
4. C-4(RGBW)



5. C-5(CT Independent control)



6. C-6(DIM Independent control)

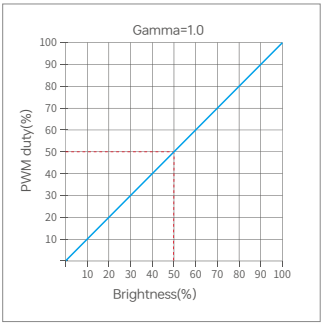


Address Setting Table

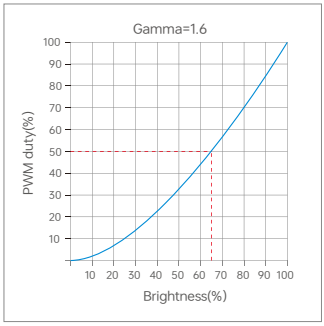
Mode	C-1 (DIM Synchronized Control)	C-2 (CT Synchronized Control)	C-3(RGB)	C-4(RGBW)	C-5 (CT Independent Control)	C-6 (DIM Independent Control)
Channel 1	001	001	001	001	001	001
Channel 2	001	002	002	002	002	002
Channel 3	001	001	003	003	003	003
Channel 4	001	002	003	004	004	004

*C-2 CT mode： The output of CW is constant power; Address 001 is to adjust the brightness; Address 002 is to adjust the color temperature.

Dimming Curve Setting



Linear dimming curve

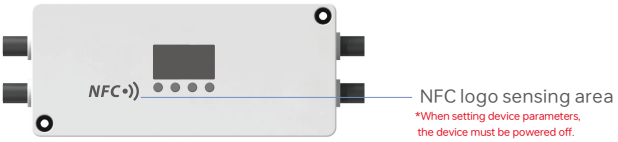


Logarithmic dimming curve

Use the NFC Lighting APP

Scan the QR code below with your mobile phone and follow the prompts to complete the APP installation (According to performance requirements, you need to use a NFC-capable Android phone, or an iphone 8 and later that are compatible with iOS 13 or higher).

Scan to download APP
IOS/Android



1.Read the LED driver

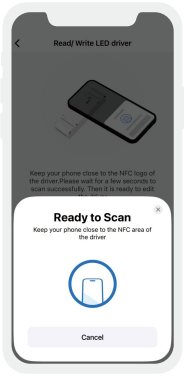
On the APP home page, click【Read/Write LED driver】, then keep the programmer's sensing area close to the NFC logo sensing area to read the driver parameters.

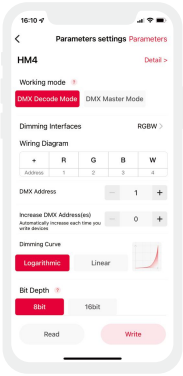
2. Edit parameters

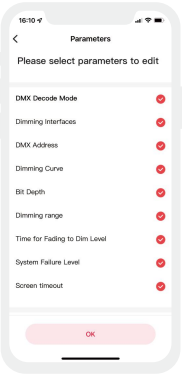
Click [Parameters] to edit parameters such as DMX decoding mode, dimming interface, DMX address, dimming curve, bit depth, dimming range, dimming fade time, system fault state, on-screen display.

3. Write to the driver

After completing the parameter settings, click 【Write】in the upper right corner, and keep the programmer's sensing area close to the NFC logo sensing area, so the parameters can be written to the driver.







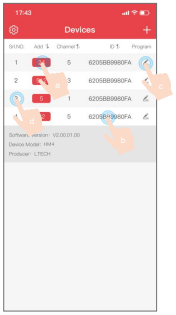
RDM Operations

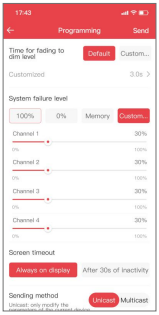
1. HM4 can work with a RDM-compliant address editor.
It is recommended to use the LTECH RDM editor (Model:WiFi-RDM01). Through the APP, set the screen timeout, unicast/multicast, and other parameters for Hm4. For detailed operations, please refer to the WiFi-RDM01 manual.

APP

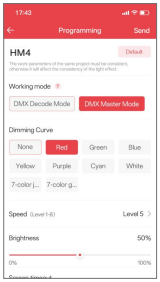
✻ The WiFi-RDM01 editor and the constant voltage decoder are sold separately.

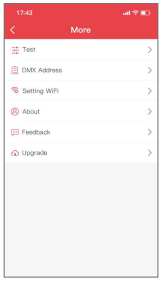
2. Select the working mode through the APP.
DMX Decoder mode: Set the dimming curve, bit depth, dimming mode, dimming range, etc.
DMX Control mode: Set lighting effects, speed, brightness, etc.

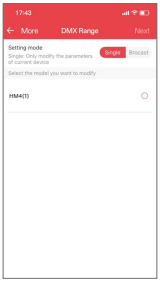




a: Click the box corresponding to "Address" to edit the address.
b: Click"ID", get more product details.
c: Click" ", enter edited interface.
d: Click"No.", issue the recognizing command.







Transportation and Storage

1. Transportation

Products can be shipped via vehicles, boats and planes.

During transportation, products should be protected from rain and sun. Please avoid severe shock and vibration during the loading and unloading process.

2. Storage

The storage conditions should comply with the Class I Environmental Standards. The products that have been stored for more than six months are recommended to be re-inspected and can be used only after they have been qualified.

Warranty Agreement

- Warranty periods from the date of delivery: 5 years.
- Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:
Following conditions are not within the guarantee range of free repairing or replacement services:

- Beyond warranty periods.
- Any artificial damage caused by high voltage, overload, or improper operations.
- Products with severe physical damage.
- Damage caused by natural disasters and force majeure.
- Warranty labels and barcodes have been damaged.
- No any contract signed by our company.

1. Repair or replacement provided is the only remedy for customers. Our company is not liable for any incidental or consequential damage unless it is within the law.
2. Our company has the right to amend or adjust the terms of this warranty, and release in written form shall prevail.

Attention

- Product installation and commissioning should be done by a qualified professional.
- Our company products are and not lightningproof non-waterproof(special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure they are mounted in a water proof enclosure or in an area equipped with lightning protection devices.
- Good heat dissipation will prolong the working life of products. Please ensure good ventilation.
- Please check if the working voltage used complies with the parameter requirements of products.
- The diameter of wire used must be able to load the light fixtures you connect and ensure the firm wiring.
- Before you power on products, please make sure all the wiring is correct in case of incorrect connection that causes damage to light fixtures.
- If a fault occurs, please do not attempt to fix products by yourself. If you have any question, please contact your suppliers.

* This manual is subject to changes without further notice. Product functions depend on the goods. Please feel free to contact our official distributors if you have any question.