

HX-DR01

DMX512 RDM Decoder

DR01 is the most advanced decoder with both DMX/RDM capable, PWM frequency / gamma curve are adjustable, the output can be set to 4 types with a total of 9 different attributes; suitable for all kinds of constant voltage LED lamps, such as Single color/CCT/RGB/RGBW LED module, LED strip, light string and so on.



Product Features

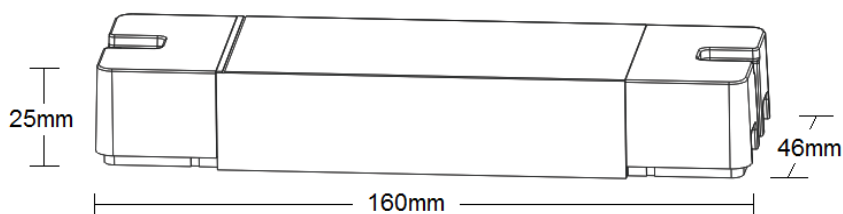
1. DR01 is a constant voltage decoder, the working voltage is: DC12-24V. The power supply in this range can be universal, please make sure the power supply voltage meets the requirements of the loading LED;
2. Adopts pushbuttons (MODE UP DOWN SAVE) to make setting and control, the 4-digital tube displays the setting statuses intuitively;
3. Automatic identification signal function. When the DMX signal is connected, it directly jumps to the DMX setting start address mode (dxxx) to receive data;

4. With power-off memory storage function, it will remember the settings saved in the last power down;
5. 4 in 1 output types, support single color/CCT/RGB/RGBW;
6. 9 different DMX512 decoding profiles are available, from CH01 to CH09;
7. PWM frequency is adjustable: 500Hz, 1KHz, 2KHz, 4KHz, 7.8KHz, 15.6KHz;
8. Variable Dimmer Response (Gamma) Curve;
9. RDM-Capable;
10. Short-circuit protection function;
11. Max. Output power: 72W*4CHs/12V, 144W*4CHs/24V;
12. 3-year warranty.

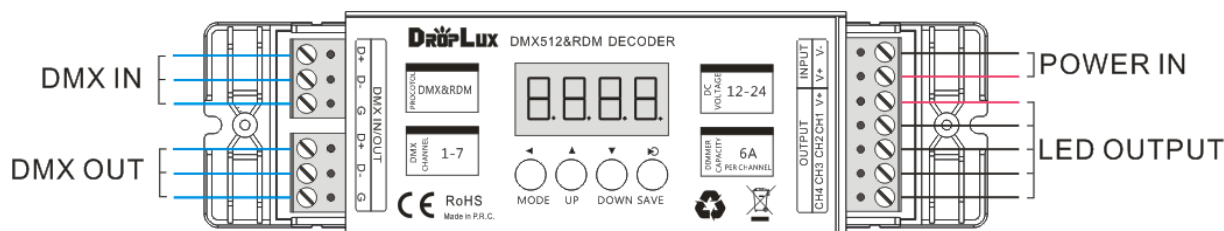
Technical Parameters

Working temperature	-20-60°C	Supply voltage	DC12V~24V
Static power consumption	<1W	Connecting mode	common anode
Net weight	110g	Gross weight	120g
Output gray	RGBW each 256 level	Transmit signal	DMX/RDM signal
External dimension	L162*W46*H25 (mm)	Packing size	L170*W50*H29 (mm)
Output ports	4 channels	DMX profiles	9 modes
Power off memory	Yes	Gamma curve	0.1,0.5,1,1.5,2.2
Short circuit protection	Yes	PWM frequency	500Hz-15.6KHz
Max. Output current	PWM<=2KHz: 6A/CH PWM=4KHz: 5A/CH PWM=7.8KHz: 4A/CH PWM=15.6KHz: 3A/CH	Max. Output power	PWM<=2KHz:288W/12V; 576W/24V PWM=4KHz:240W/12V; 480W/24V PWM=7.8KHz:192W/12V; 384W/24V PWM=15.6KH:144W/12V; 288W/24V

Dimensions



Interface Specifications



Wiring Details of LED OUTPUT

Output type	Recommended DMX Decoding Profile	CH1	CH2	CH3	CH4
RGB	CH01 CH02 CH03	R-	G-	B-	NC (no connection)
RGBW	CH04 CH05 CH06	R-	G-	B-	W-
CCT	CH07 CH08	WW-	CW-	WW-	CW-
DIM	CH09	LED1-	LED2-	LED3-	LED4-

Tips, factory default is RGBW, CH04.

Use Instruction

DR01 is controlled by the DMX signal system. At the same time, a built-in test function can be used to illuminate the LED load without a DMX signal during the installation process, and press the "MODE" key to switch between different test modes (displayed as "PLxx") and speed (displayed "SPxx"). DR01 has the function of automatically recognizing DMX signals. When there is a DMX signal, it will automatically enter the DMX control state. The digital tube displays the start address of the DMX (displayed as "Dxxx").

Button functions

Button	Description
MODE	1. Single press the MODE button to switch: 1) "Dxxx": DMX start address setting, D001-D512; 2) "PLxx": test modes setting, PL01-PLFL; 3) "SPxx": the speed of test modes setting, SP01-SP99. 2. Long pressing the MODE and SAVE buttons for 3 seconds to enter the advanced settings; after entering the advanced settings, press the MODE button to switch: 1) "CHxx": DMX decoding profile setting, CH01-CH09; 2) "PFxx": PWM frequency setting, PF05-PFF0; 3) "gAxx": Gamma curve selection, gA01- gA22; 4) "rst0": Restore factory settings selection, RST0-RST1.
UP	Increase the menu data entered by the MODE key.
DOWN	Decrease the menu data entered by the MODE key.
SAVE	After any setting operation is completed, please press SAVE to save, the digital tube will display "SAVE" and automatically exit the setting state after 1 second.

Note: please refer to the corresponding parts for specific function description.

Set DMX start address

By pressing the MODE key, when the digital tube displays dxxx (xxx is 001-512), it enters the address setting mode. Press the UP / DOWN key to set the address (long press for quick adjustment), the digital tube displays the current address in real time (e.x. d032-start address is 32), and then press the "SAVE" key to save. DR01 is also compatible with the RDM protocol, so it can also set its address through the RDM controller. The digital tube will display the address given to it by the RDM controller in real time and save it automatically (no need to press the "SAVE" key).

Select test mode

Press the "MODE" key, when the digital tube displays PLxx, enter the test mode selection; the mode can be switched by the UP / DOWN keys.

Output type	DMX decoding profile	PL01	PL02	PL03	PL04	PLFL
RGB	CH01 CH02 CH03	CH1/ R fade	CH2/G fade	CH3/B fade	Non-used	RGB fade
RGBW	CH04 CH05 CH06	CH1/R fade	CH2/G fade	CH3/B fade	CH4/W fade	RGBW fade
CCT	CH07	WW fade	CW fade CH2+CH4	Non-used	Non-used	WW+CW fade

		CH1+CH 3				
CCT	CH08	WW fade CH1	CW fade CH2	WW fade CH3	WW fade CH4	CW+WW fade
DIM	CH09	Non- used	Non-used	Non-used	Non-used	CH1-CH4 fade

Note: The test mode list is determined by the DMX decoding type set.

Set test mode speed

Press the "MODE" key, when the digital tube displays SPxx (xx is 01-99), enter the test mode speed adjustment. Press the UP / DOWN key to adjust the speed (long press for quick adjustment), the digital tube displays the current speed in real time (sp01 is the slowest, sp99 is the fastest).

Please press SAVE to save the setting operation, the digital tube will display "SAVE" and automatically exit the setting state after 1 second.

Advanced settings

Long pressing the MODE and SAVE buttons for 3 seconds to enter the advanced settings. After entering the advanced settings, press the MODE button can switch to DMX decoding profile setting, PWM frequency setting, Gamma curve selection and Restore factory default.

DMX decoding profile setting

Press "MODE" key, when the digital tube displays CHxx (xx is 01-09), enter DMX512 decoding profile setting. Select the DMX512 decoding profile by pressing the UP / DOWN keys.

Display	Output type	# of DMX address	Description (assumes DMX start address of d001)
CH01	RGB	3	DMX address 1= RED channel 1 DMX address 2= GREEN channel 2 DMX address 3= BLUE channel 3
CH02	RGB	4	DMX address 1= RED channel 1 DMX address 2= GREEN channel 2 DMX address 3= BLUE channel 3 DMX address 4= Master intensity/flash/full light*
CH03	RGB	6	DMX address 1= RED channel 1 DMX address 2= GREEN channel 2 DMX address 3= BLUE channel 3 DMX address 4= Master intensity/flash/full light* DMX address 5= Preset chase speed DMX address 6= Preset chase**
CH04	RGBW	4	DMX address 1= RED channel 1 DMX address 2= GREEN channel 2 DMX address 3= BLUE channel 3 DMX address 4= WHITE channel 4
CH05	RGBW	5	DMX address 1= RED channel 1 DMX address 2= GREEN channel 2 DMX address 3= BLUE channel 3 DMX address 4= WHITE channel 4

			DMX address 5= Master intensity/flash/full light*
CHO 6	RGBW	7	DMX address 1= RED channel 1 DMX address 2= GREEN channel 2 DMX address 3= BLUE channel 3 DMX address 4= WHITE channel 4 DMX address 5= Master intensity/flash/full light* DMX address 6= Preset chase speed DMX address 7= Preset chase**
CHO7	CCT (WW+CW)	3	DMX address 1= Master intensity for CW+WW (CH1-CH4) DMX address 2= WW channel 1+channel 3 DMX address 3= CW channel 2+channel 4
CHO 8	CCT (WW+CW)	6	DMX address 1= Master intensity for WW channel 1 + CW channel 2 DMX address 2= WW channel 1 DMX address 3= CW channel 2 DMX address 4= Master intensity for WW channel 3 + CW channel 4 DMX address 5= WW channel 3 DMX address 6= CW channel 4
CHO 9	DIM (single color)	1	DMX address 1= Dimmer channels 1-4

* Master intensity/flash/full light: DMX value 0-127 master intensity, 128-250 flash, 251-255 full light.

** Preset chase list

DMXvalue	Chase (assumes DMX start address of d001)
0-20	(RGB : d001-d004 ; RGBW : d001-d005) control effects
21-40	3 colors fade
41-60	7 colors fade
61-80	3 colors jump
81-100	7 colors jump
101-120	GREEN-RED fade
121-140	RED-BLUE fade
141-160	BLUE- GREEN fade
161-180	RGB bloom fade
181-200	WHITE fade
201-220	7 colors bloom fade
221-255	The loop of above chases

Please press SAVE to save the setting operation, the digital tube will display "SAVE" and automatically exit the setting state after 1 second.

PWM frequency setting

Press "MODE" key, when the digital tube displays PFxx, enter the PWM frequency setting. Set the PWM frequency by pressing UP / DOWN.

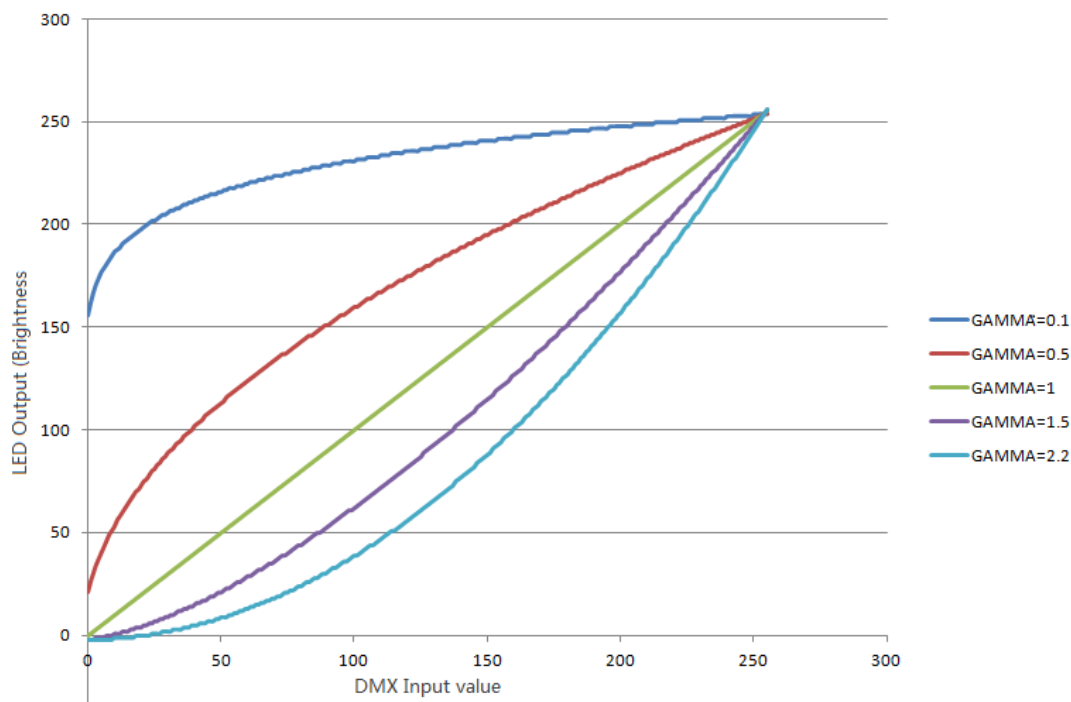
Display	PWM frequency
PF05	500Hz
PF10	1KHz
PF20	2KHz
PF40	4KHz
PF80	7.8KHz
PF00	15.6KHz

Please press SAVE to save the setting operation, the digital tube will display "SAVE" and automatically exit the setting state after 1 second.

Dimming response gamma curve setting

Press "MODE" key, when the digital tube displays gAxx. Enter the gamma curve selection. Select the desired gamma curve by pressing the UP / DOWN keys.

Display	Gamma value
gA01	0.1
gA05	0.5
gA10	1.0
gA15	1.5
gA22	2.2

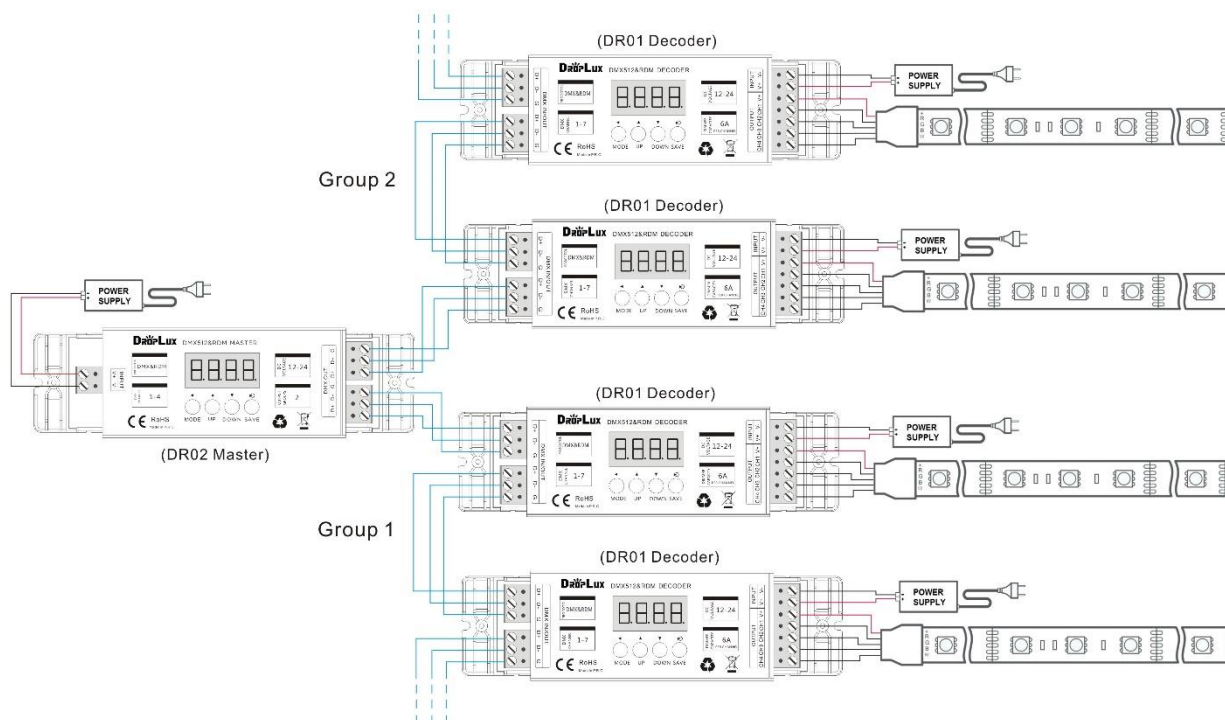


Please press SAVE to save the setting operation, the digital tube will display "SAVE" and automatically exit the setting state after 1 second.

Restore factory settings

Press the "MODE" key, when the digital tube displays rst0, enter the factory reset. By pressing the UP / DOWN key and pressing the "SAVE" key when the digital tube displays rst1, the decoder enters the factory reset. The digital tube will display rst- and switch to d001 automatically after 1 second to finish the operation.

Application diagram



Notice

1. The power supply voltage of this product is DC12V ~ 24V, other voltages may damage it;
2. The lead-out wires should be correctly wired according to the labels provided in the wiring diagram;
3. When more than 32 decoders are connected, it needs to be used with DMX signal amplifiers, the number of DMX signal amplifiers does not exceed 5.
4. If the signal has a kickback effect due to short circuit or poor quality of the signal cable, please use a 0.25W90-120 ohm resistor at the end of the last decoder D + and D-;
5. This product has short-circuit protection function, but it should not be overloaded;
6. The warranty period of this product is 3 years, exclude man-made damage or the form of overload work.

Product information for placing order

Product name	Item number
DMX512 RDM decoder	HX-DR01
DMX512 RDM master	HX-DR02
DMX512 signal amplifier	HX-DR03