HX-DR02

DMX512/RDM Master

HX-DR02 is the DMX / RDM master control, supports DMX512 and RDM protocols, and outputs DMX / RDM signals to DMX / RDM decoders; supports the selection of 4 modes: Single color / CCT / RGB / RGBW; users can choose different change mode and change speed for different output types, also can identify the number of devices and change the device address through the RDM function of the controller.
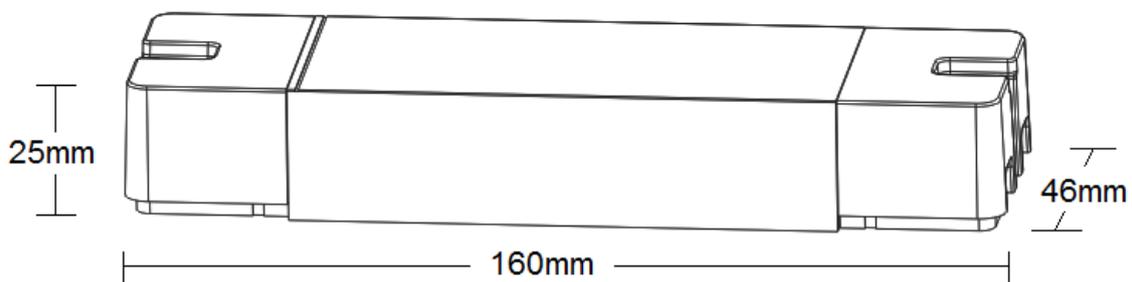

Product Features

1. Working voltage is DC12-24V;
2. 2 groups output signal with same control effect;
3. 4 in 1 functions for Single color/CCT/RGB/RGBW, different control effect to different LED types;
4. Compatible with RDM protocols to identify the number of devices and change the device address;
5. Adopts pushbuttons (MODE UP DOWN SAVE) to make setting and control, the 4-digital tube displays the setting statues intuitively;
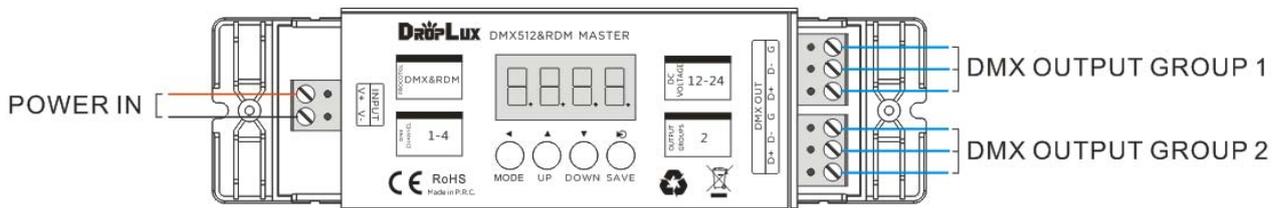6. 3-year warranty.

Technical Parameters

Working temperature	-20-60℃	Supply voltage	DC12V~24V
Static power consumption	<1W	Output signal	DMX512/RDM
Net weight	106g	Gross weight	115g
Output gray	100 levels	Speed of modes	100 levels
External dimension	L162*W46*H25 (mm)	Packing size	L170*W50*H29 (mm)
Output ports	2 groups	DMX profiles	4 profiles PH01 for RGB LED(3 CH) PH02 for RGBW LED(4 CH) PH03 for CCT LED(3 CH) PH04 for Single color LED(1 CH)

Dimensions

Interface Specifications

Use Instruction

Button	Description
MODE	1. "Long press for 2 seconds"-Turn Off, "fast single press" in off state-Turn on, "single press" in power on state can switch the mode / speed / brightness setting page; 2. In the advanced settings (in the OFF state, press and hold the UP and DOWN keys for 2 seconds to enter the advanced settings) state, the "single press" MODE key can switch the number of points / device output type (single color, CCT, RGB, RGBW) setting page.
UP	Increase the menu data entered by the MODE key, long press to quickly adjust.	In the OFF state, press the UP and DOWN keys for 2 seconds to enter the advanced settings page.
DOWN	Reduce the menu data entered by the MODE key, and long press to quickly adjust.
SAVE	1. 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; 2. Press and hold the SAVE key for 2 seconds in the power-on state to enter the RDM function mode. You can search and change the address of the device (RDM decoder).

1. Basic settings

In the power-on state, you can directly perform "basic settings", including control settings of mode / speed / brightness.

1) Mode setting

Turn on the power or press the "MODE" key briefly, when the digital tube displays Hxxx (xxx is determined by the effect), enter the setting page of mode. Press the "UP" / "DOWN" keys to set the effect. The effect is shown in the table below. Then press "SAVE" key to save and finish the operation(display SAVE 1 second and return to Hxxx).

2) Speed setting

By short pressing the "MODE" key, when the digital tube displays Sxxx (xxx is 000-255), enter the setting page of speed. Set the effect speed by short pressing the "UP" and "DOWN" keys. Then press the "SAVE" key to save and finish the operation (display SAVE for 1 second and return to Sxxx).

3) Brightness setting

By short pressing the "MODE" key, when the digital tube displays bxxx (xxx is 010-255), enter the setting page of brightness. Set the effect brightness by short-pressing (long-pressing the address quickly) "UP" and "DOWN" keys. Then press "SAVE" key to save and finish the operation (display SAVE 1 second and return to bxxx).

2. Advanced settings

In the Off state, press and hold the "UP" and "DOWN" keys for 2 seconds to enter the "Advanced Settings", can achieve the number of pixels and output type settings.

1) Set the number of pixels (number of devices)

By short pressing the "MODE" key, when the digital tube displays Pxxx (xxx for RGB is 005-170, RGBW for xxx is 005-128, CCT for xxx is 005-256, monochrome for xxx is 005-512), enter the setting The number of pixels. Select by short pressing the "UP" and "DOWN" keys, the minimum setting is 10. After setting, press the "SAVE" key (display SAVE 1 second and return to Hxxx) to save and exit the advanced settings.

2) Set the output type (PH01 is RGB, PH02 is RGBW, PH03 is CCT, and PH04 is monochrome).

By short pressing "MODE" key, when the digital tube displays PHxx (xx is 01-04), enter to set the output type. Select by short pressing the "UP" and "DOWN" keys. After setting, press the "SAVE" key (display SAVE 1 second and return to Hxxx) to save and exit the advanced settings.

Attachment: DR02 output type setting and DR01 decoding type setting coordination table

LED type	DR02(master)	DR01(decoder)	DMX channels	DMX Address of DR01(assumes DMX start address of d001)
RGB	**PH01**	**CH01**	3	d001-d003; d004-d006; d007-d009……
RGBW	**PH02**	**CH04**	4	d001-d004; d005-d008; d009-d0012……
CCT	**PH03**	**CH04**	4	d001-d004; d005-d008; d009-d0012……
Single color	**PH04**	**CH09**	1	d001; d002; d003……

3. RDM function and instructions

In the power-on state, long press the "SAVE" button for about 2 seconds to enter the RDM function mode, you can achieve the search and address settings of the decoder, long press the "SAVE" button for 2 seconds to save and exit the RDM function after operation.

1) Search the decoder device through DR02

In the RDM function state, short press the "MODE" key, the digital tube displays Lxxx (xxx is 000-128, representing the number of decoders found). L000 means no device was found. For example, L032 means 32 decoders have been searched. At this time, by short pressing the "UP" and "DOWN" keys on the main control, the value on the digital display will increase or decrease accordingly, and at the same time, the load light on the decoder at the corresponding address will flash 2 times to confirm The current decoder position is Lxxx (xxx is 001-032, because only 32 devices are found). If the LED displays L008, the load light of the 8th decoder will flash twice.

2) Set the address of the decoder through DR02 (should be after the search and positioning operation；here L008 is used as an example for further explanation.)

After finding the L008 decoder (the load light of the L008 decoder flashes twice), press the "MODE" key on the main control（DR02）, the digital tube will display dxxx, which is the current DMX512 address of the decoder (L008). At this time, by short pressing the "UP" and "DOWN" keys, you can set the address of L008. For example: Assuming that the initial DMX starting address of L008 is d001, it needs to be changed to d004 through the main DR02. That is, change the value on the digital tube from d001 to d004 by short pressing the "UP" and "DOWN" keys, and then press the "SAVE" key to save to complete the operation. Correspondingly, the digital tube of DR02 will display SAVE and return to d004. It means that the starting address of L008 decoder has been changed from d001 to d004.

If the starting address of the L008 decoder is changed on the decoder side, the digital tube display on the DR02 will also change in real time.

4. Mode table for different output type

1) Modes under PH01 for RGB

No.	Mode	Marks	No.	Mode	Marks
1	Static red	Brightness is adjustable	21	Red right way chase	Speed is adjustable
2	Static green		22	Green left way chase	
3	Static blue		23	Blue right way chase	
4	Static yellow		24	White left way chase	
5	Static purple		25	Red right way slide	
6	Static cyan		26	Green right way slide	
7	Static white		27	Blue right way slide	
8	Red flash	Speed is adjustable	28	Yellow right way slide	
9	Green flash		29	Purple right way slide	
10	Blue flash		30	Cyan right way slide	
11	White flash		31	White right way slide	
12	White right way stream		32	7-color right way slide	
13	7-color right way stream		33	7-color jump & right way slide	
14	7-color double way stream		34	7-color right way refresh	
15	7-color opening		35	7-color double way stream	
16	7-color closing		36	7-color right way heap with 7-color background	
17	3-color jump		37	7-color right way heap with white background	
18	7-color jump		38	Full color right way float	
19	3-color fade		39	7-color right way flow	
20	7-color fade		40	1-39 auto loop	

2) Modes under PH02 for RGBW

No.	Mode	Marks	No.	Mode	Marks
1	Static red	Brightness is adjustable	24	RGBW fade	Speed is adjustable
2	Static green		25	7-color fade	
3	Static blue		26	Red right way chase	
4	Static yellow		27	Green left way chase	
5	Static purple		28	Blue right way chase	
6	Static cyan		29	White left way chase	
7	Static white (W)		30	Red right way slide	
8	Static RGBW full light		31	Green right way slide	
9	Red flash	Speed is adjustable	32	Blue right way slide	
10	Green flash		33	Yellow right way slide	
11	Blue flash		34	Purple right way slide	
12	White flash(W)		35	Cyan right way slide	
13	RGBW full flash		36	White right way slide	
14	RGBW full fade		37	7-color right way slide	
15	RGBW full stream		38	7-color jump & right way slide	
16	7-color right way stream		39	7-color right way refresh	
17	7-color double way stream		40	7-color double way stream	
18	7-color opening		41	7-color right way heap with 7-color background	
19	7-color closing		42	7-color right way heap with white background	
20	3-color jump		43	Full color right way float	
21	RGBW jump		44	7-color right way flow	
22	7-color jump		45	1-44 auto loop	
23	3-color fade				

3) Modes under PH03 for CCT

No.	Mode	Marks	No.	Mode	Marks
1	Static WW	Brightness is adjustable	8	WW/CW alternating chase	Speed is adjustable
2	Static CW		9	WW+CW chase	
3	Static WW+CW		10	WW/CW alternating stream	
4	WW/CW alternating flash	Speed is adjustable	11	WW/CW alternating double way stream	
5	WW+CW flash		12	WW+CW stream	
6	WW/CW alternating fade		13	WW+CW double way stream	
7	WW+CW fade		14	1-13 auto loop	

4) Modes under PH04 for Single color

No.	Mode	Marks	No.	Mode	Marks
1	Static	Brightness is adjustable	5	Stream	Speed is adjustable
2	Flash	Speed is adjustable	6	Double way stream	
3	Fade		7	Segmented double way stream	
4	Chase		8	1-7 auto loop	

5. Marks

1) The RDM controller can search up to 128 devices (DMX/RDM decoder) in the Max.;

2) The controller has 2 groups equivalent output signals. When both of outputs are connected to the DMX / RDM signal amplifier, the RDM function will be invalid (the DMX function is normal);

3) The number of DMX / RDM amplifiers cascaded under cannot exceed 5 pcs, please refer to DR03 product description for more details.

6. Application
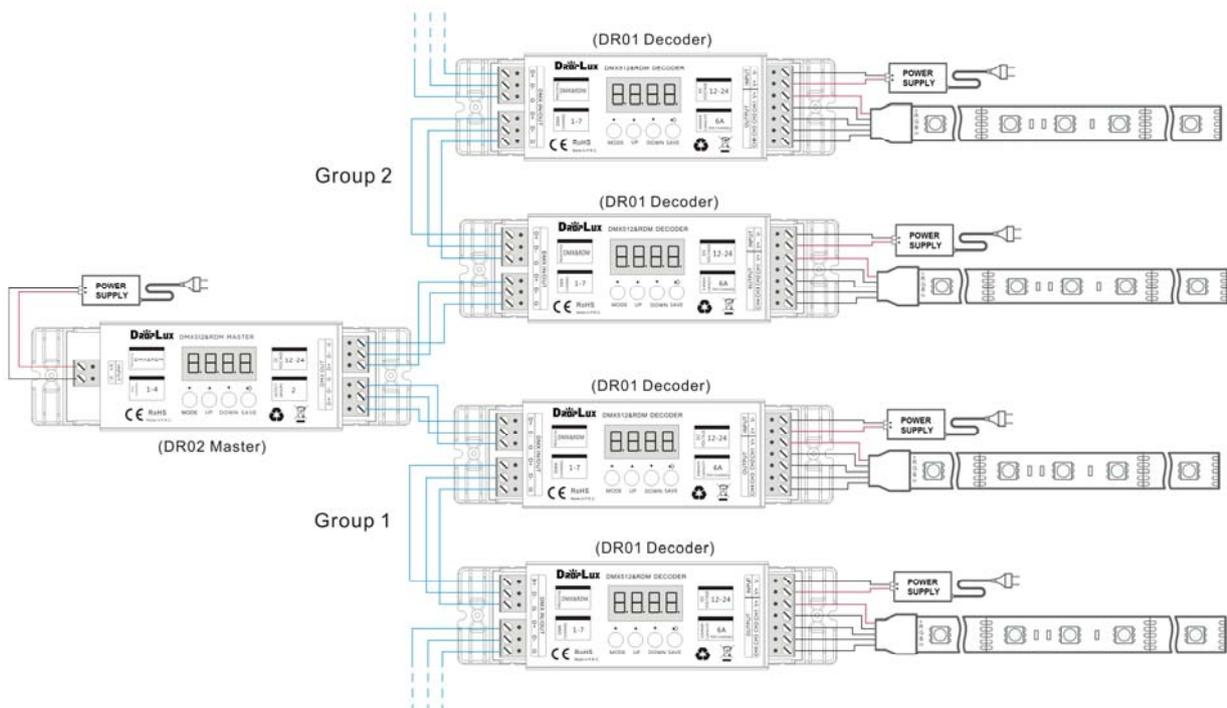
Product information for placing order

Product name	Item number
DMX512/RDM Master	HX-DR02
DMX512 RDM DECODER	HX-DR01
DMX512 Signal Amplifier	HX-DR03