

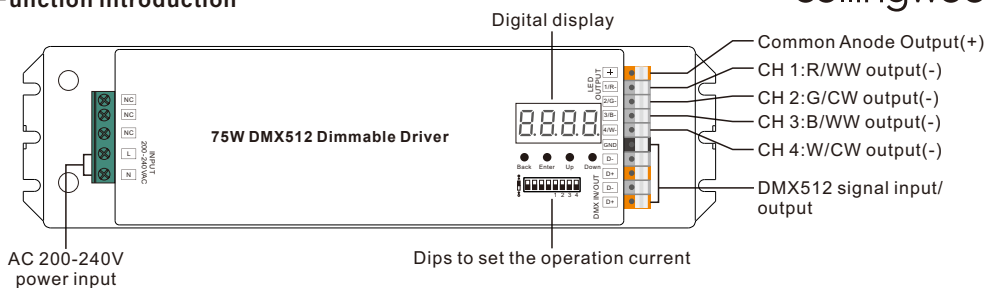
75W DMX & RDM LED Driver (Constant Current) CCDRV75DMX



collingwood

Important: Read All Instructions Prior to Installation

Function introduction



Product Data

Output	LED Channel	4							
	Selectable Current	300mA	350mA	400mA	450mA	500mA	600mA	700mA	800mA
DC Voltage Range	8-43V	8-43V	8-43V	8-43V	8-43V	8-43V	8-43V	8-43V	
Output	Selectable Current	900mA	1000mA	1100mA	1200mA	1300mA	1400mA	1500mA	
	DC Voltage Range	8-43V	8-43V	8-43V	8-43V	8-43V	8-43V	8-43V	
Current Tolerance		±3%							
Rated Power		Max. 64W/CH, CH1+CH2+CH3+CH4 ≤ 75W							
Input	Voltage Range	200-240V AC							
	Frequency Range	50/60Hz							
	Power Factor (Typ.)	> 0.9 @ 230VAC							
	Total Harmonic Distortion	THD ≤ 15% (@ full load / 230VAC)							
	Efficiency (Typ.)	87% @ 230VAC full load							
	AC Current (Typ.)	400mA @ 230VAC							
	Inrush Current (Typ.)	COLD START Max. 2A @ 230VAC							
Control	Dimming Interface	DMX/RDM							
	Dimming Range	0.1%-100%							
	Dimming Method	Pulse Width Modulation							
	Dimming Curve	Logarithmic, Linear							
Protection	Short Circuit	Yes, recovers automatically after fault condition is removed							

	Over Voltage	Yes, recovers automatically after fault condition is removed
	Over Temperature	Yes, recovers automatically after fault condition is removed
Environment	Working Temp.	-25°C ~ +45°C
	Max. Case Temp.	80°C (Ta= "45°C")
	Working Humidity	10% ~ 95% RH non-condensing
	Storage Temp. & Humidity	-40°C ~ +80°C, 10% ~ 95% RH
Safety & EMC	Safety Standards	ENEC EN61347-1, EN61347-2-13 approved
	Withstand Voltage	I/P-O/P: 3.75KVAC
	Isolation Resistance	I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH
	EMC Emission	EN55015, EN61000-3-2, EN61000-3-3
Others	EMC Immunity	EN61547, EN61000-4-2,3,4,5,6,8,11, surge immunity Line-Line 1KV
	MTBF	190200H, MIL-HDBK-217F @ 230VAC at full load and 25 ambient temperature
	Dimension	244*64*32mm (L*W*H)

Dips to set the operation current



	1	2	3	4
300mA	●	●	●	○
350mA	●	●	○	●
400mA	●	○	○	○
450mA	●	○	●	●
500mA	●	○	○	●
600mA	●	○	○	●
700mA	●	○	○	○
800mA	○	●	●	●
900mA	○	●	○	●
1000mA	○	○	○	●
1100mA	○	○	○	○
1200mA	○	○	●	●
1300mA	○	○	○	●
1400mA	○	○	○	●
1500mA	○	○	○	○

- Dimmable LED driver, max. output power 75W total
- 4 channels constant current output, 300mA-1500mA output current optional
- Dips to set the operation current
- PWM output resolution ratio 8bit, 16bit settable.
- Output PWM frequency from 500HZ ~ 35K HZ settable.
- Output dimming curve gamma value from 0.1 ~ 9.9 settable.
- Class II power supply, full isolated plastic case
- High power factor and efficiency
- To control single color, dual color, RGB/RGBW LED lighting
- Built-in DMX512 interface, support RDM bi-directional communication
- Compatible with universal DMX512 master controllers
- IP20 rating, suitable for indoor LED lighting applications
- 5 years warranty

Safety & Warnings

- DO NOT install with power applied to device.
- DO NOT set the operation current with power applied
- DO NOT expose the device to moisture.

Operation

Before you do other settings, please set the device to be Master or Decoder mode.

run1 = DMX Decoder mode, **run2** = DMX Master mode(stand alone).

Keep on clicking Down button, to get run1 or run2, then click Enter, then click Down button to choose 1 or 2, then click Back button.

I. For run2 DMX Master mode: Keep on clicking Up button, you will find following menus on display:

0000 Means brightness for each output PWM channel. First 0 means PWM output channel 1 and it is selectable from 1 to 5 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.

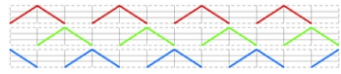
P.XXX Means programs, total 1~31 programs.

B-XX Means RGB running effect's brightness, total 1~8 levels brightness

SP-X Means effect play speed. total 1~9 levels speed.

P-XX means RGB color changing modes, total 31 programs:

- 00- RGB off
- 01- Static red
- 02- Static green
- 03- Static blue
- 04- Static yellow (50% red+50% green)
- 05- Static orange (75% red+25% green)
- 06- Static cyan (50% green+50% blue)
- 07- Static purple (50% blue+50% red)
- 08- Static white (100% red+100% green+100% blue)
- 09- Any two colors of RGB mix fade, changing diagram as follow:



11- RGB FADE OUT & FADE IN, changing diagram as follow:



13- RGB FADE IN, changing diagram as follow:



15- RGB 3 colors strobe

16- White color strobe (100% red+100% green+100% blue)

17- 7 colors FADE OUT & FADE IN (red, orange, yellow, green, cyan, blue, purple FADE OUT & FADE IN)

18- 7 colors jump changing (red, orange, yellow, green, cyan, blue, purple jump changing)

19- 7 colors strobe (red, orange, yellow, green, cyan, blue, purple strobe)

20- Red-white (100% red+100% green+100% blue) circle gradual changing

21- Green-white (100% red+100% green+100% blue) circle gradual changing

22- Blue-white (100% red+100% green+100% blue) circle gradual changing

23- Red-orange circle gradual changing

24- Red-purple circle gradual changing

25- Green-yellow circle gradual changing

26- Green-cyan circle gradual changing

27- Blue-purple circle gradual changing

28- Blue-cyan circle gradual changing

29- Red-yellow-green circle gradual changing

30- Red-purple-blue circle gradual changing

31- Green-cyan-blue circle gradual changing



● ● ● ●
Back Enter Up Down

II. For run1 DMX decoder mode: Keep on clicking Up button, you will find following menus on display:

DMX signal indicator ● :: When DMX signal input is detected, the indicator on the display following after **0** turns on red **0.XXX**.

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

00 XX Means DMX channels quantity. factory defaults setting is Ch05

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

00 XX Means output PWM frequency. factory defaults setting is 1K HZ

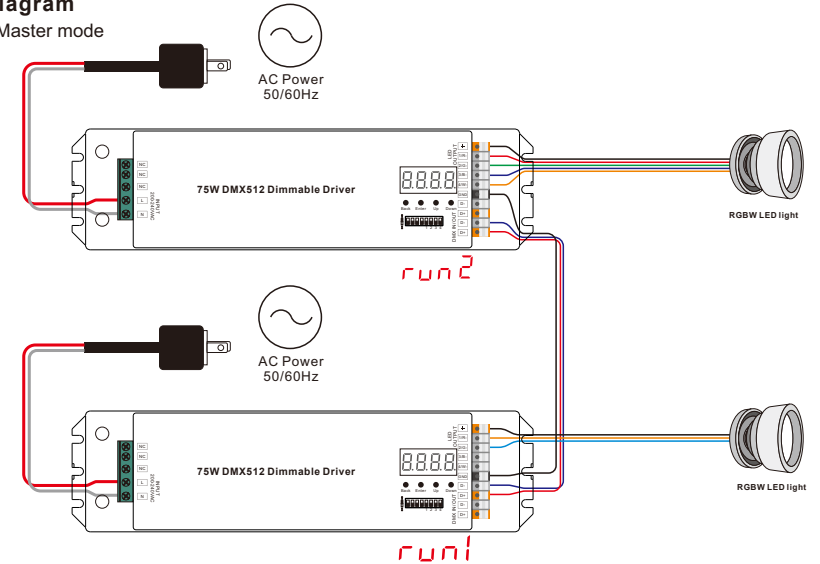
00 XX Means output dimming curve gamma value, factory defaults setting is ga 1.5

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

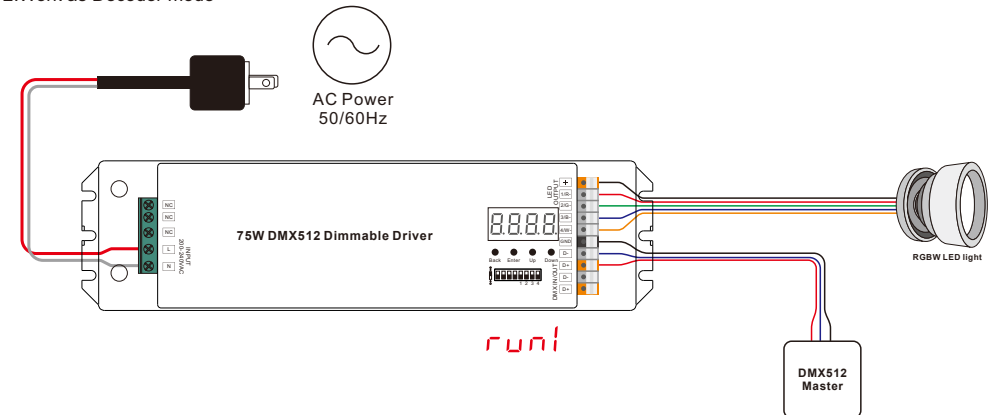
By holding button Back + Enter together at the same time over 5 seconds until the display goes off, it will restore to default settings.

Wiring diagram

1. Work as Master mode



2. Work as Decoder mode



Note: When DMX channel is set as CH01 and 4 PWM output channels are wired to LED loads simultaneously, please make sure the operation current of the LED loads does not exceed 1100mA.

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 **88 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 001.

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

CH02=2 DMX addresses, output 1&3 is address 001, output 2,4&5 is address 002

CH03=3 DMX addresses, output 1, 2 is address 001,002, output 3,4&5 is address 003

CH04=4 DMX addresses, output 1,2,3 is address 001,002,003, output 4&5 is address 004

3. PWM output resolution Bit setting:

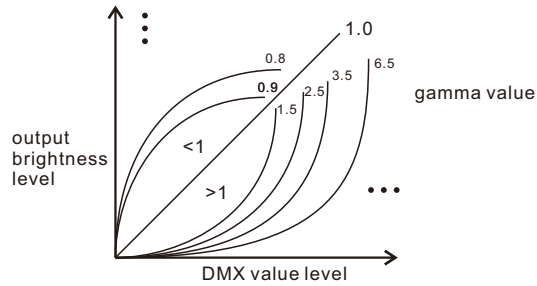
select menu **88 XX**, click button "Enter", display flashes, then click button "Up" / "Down" to choose 08 or 16 bit, then click button "Back" to confirm.

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 or hold 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
1	for all output dimming	for all output dimming
2	No use	for all output fine dimming

DMX address is 001, CH02

DMX Console Slider number	dp1.1	dp2.1	dp3.2
1	for output 1&3 dimming	for output 1&3 dimming	for output 1&3 dimming
2	for output 2,4 &5 dimming	for output 1&3 fine dimming	for output 2,4 &5 dimming
3		for output 2,4 &5 dimming	for all output dimming
4		for output 2,4&5 fine dimming	

DMX address is 001, CH03

DMX Console Slider number	dp1.1	dp2.1	dp4.3	dp5.3
1	for output 1 dimming	for output 1 dimming	for output 1 dimming	for output 1 dimming
2	for output 2 dimming	for output 1 fine dimming	for output 2 dimming	for output 2 dimming
3	for output 3,4 &5 dimming	for output 2 dimming	for output 3,4&5 dimming	for output 3,4&5 dimming
4		for output 2 fine dimming	for all output master dimming	for all output master dimming
5		for output 3,4 &5 dimming		strobe effects
6		for output 3,4&5 fine dimming		

DMX address is 001, CH04

DMX Console Slider number	dp1.1	dp2.1	dp5.4	dp6.4
1	for output 1 dimming	for output 1 dimming	for output 1 dimming	for output 1 dimming
2	for output 2 dimming	for output 1 fine dimming	for output 2 dimming	for output 2 dimming
3	for output 3 dimming	for output 2 dimming	for output 3 dimming	for output 3 dimming
4	for output 4&5 dimming	for output 2 fine dimming	for output 4&5 dimming	for output 4&5 dimming
5		for output 3 dimming	for all output master dimming	for all output master dimming
6		for output 3 fine dimming		strobe effects
7		for output 4 &5 dimming		
8		for output 4&5 fine dimming		

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

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
MODULATION_FREQUENCY
MODULATION_FREQUENCY_DESCRIPTION
CURVE
CURVE_DESCRIPTION

Restore to Factory Default Setting

Press and hold down both "Back" and "Enter" keys until the digital display turns off, then release the keys, system will reset and the digital display will turn on again, all settings will be restored to factory default. Default settings are as follows:

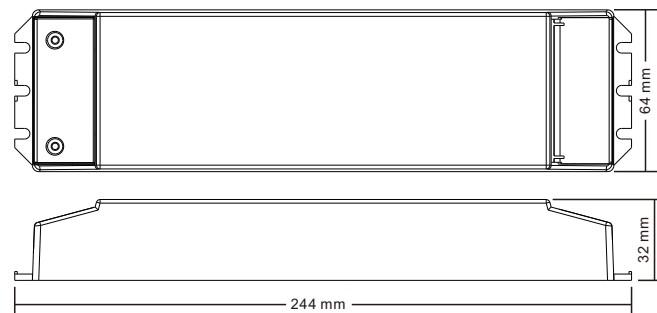
DMX Address Code: a001
DMX Address Quantity: SW1=0: ch04, SW1=1: ch03
PWM Resolution Mode: bt16
PWM Frequency: pf01
Gamma: ga1.5
Decoding Mode: dp1.1

CCDRV75DMX

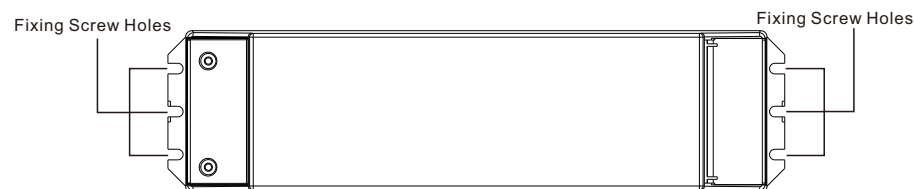


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Product Dimension



Installation



Note: when mounting the driver, please choose any one of the three fixing screw holes to fix with a screw at each end.