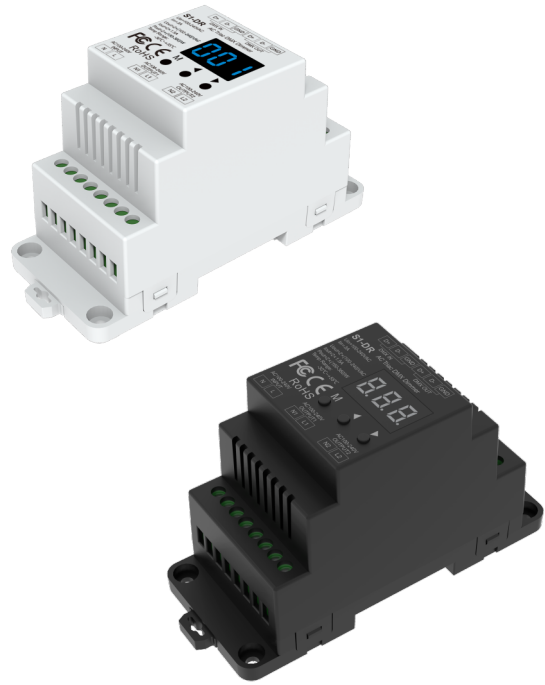# S1-DR
AC Triac DMX Dimmer

- AC phase-cut mosfet dimmer with DMX512 function, two channel output.
- Comply with the DMX512 standard protocols.
- Digital numeric display, set DMX decode start address by bottons.
- RDM function can realize intercommunication between DMX master and decoder.
- 1/2 DMX channel output selectable.
- Reverse-phase dimming or forward-phase dimming selectable.
- Minimum brightness set from 1% to 40%.
- Stand-alone dynamic mode and 2 channel dimmer mode selectable, which be controlled by buttons with built-in programs, instead of DMX signal.
- To dim and switch single color dimmable LED lamps, traditional incandescent and halogen lights.
- Over-heat protection, recover automatically.
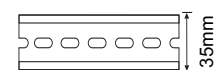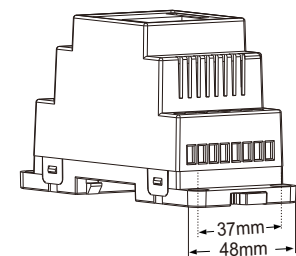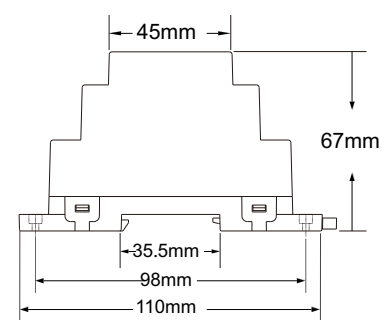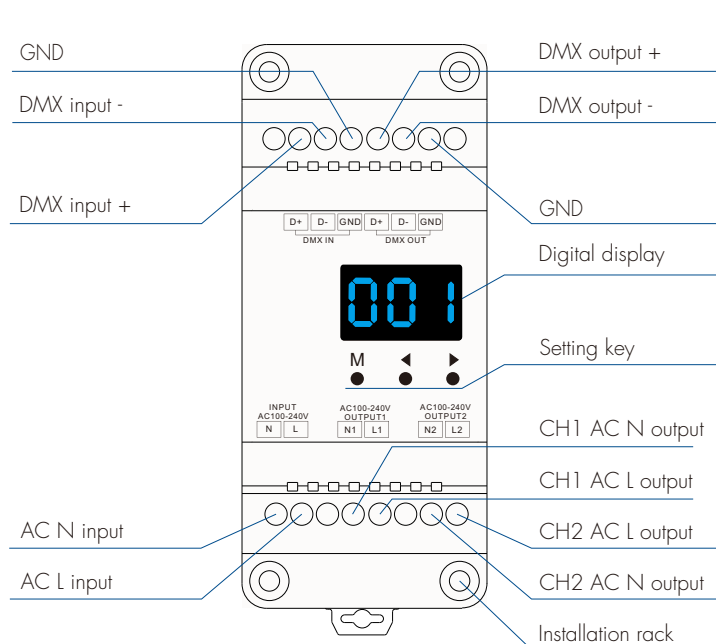- Available in white or black.

FC CE RoHS RED

Technical Parameters

Input and Output		Dimming data		Safety and EMC	
Input voltage	100-240VAC	Input signal	DMX512	EMC standard	EN 62479:2010 ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4
Output voltage	2 x (100-240)VAC	Dimming level	256 levels	Safety standard	EN 61347-1:2015+A1:2021 EN 61347-2-13:2014+A1:2017
Output current	2CH, 1.5A/CH	Dimming range	0-100%	Radio Equipment	ETSI EN 300 328 V2.2.2
Output power	2 x (150-360)W	**Environment**		Certification	CE RED
Package		Operation temperature	Ta: -30℃ ~ +55℃	**Warranty**	
Size	L120 x W78 x H55mm	Case temperature (Max.)	Tc: +85℃	Warranty	5 years
Gross weight	0.160kg	IP rating	IP20		

Mechanical Structures and Installations

- GND
- DMX input -
- DMX input +
- DMX output +
- DMX output -
- GND
- Digital display
- Setting key
- CH1 AC N output
- CH1 AC L output
- CH2 AC L output
- CH2 AC N output
- Installation rack
- AC N input
- AC L input

D+ D- GND GND D+ GND
DMX IN DMX OUT

001
M ◄ ►

INPUT AC100-240V N L
AC100-240V OUTPUT1 N1 L1
AC100-240V OUTPUT2 N2 L2

45mm
67mm
35.5mm
98mm
110mm
37mm
48mm
35mm

DIN Rail Mounting Size:
TS-35/7.5 or TS-35/15

Compatible Load Types
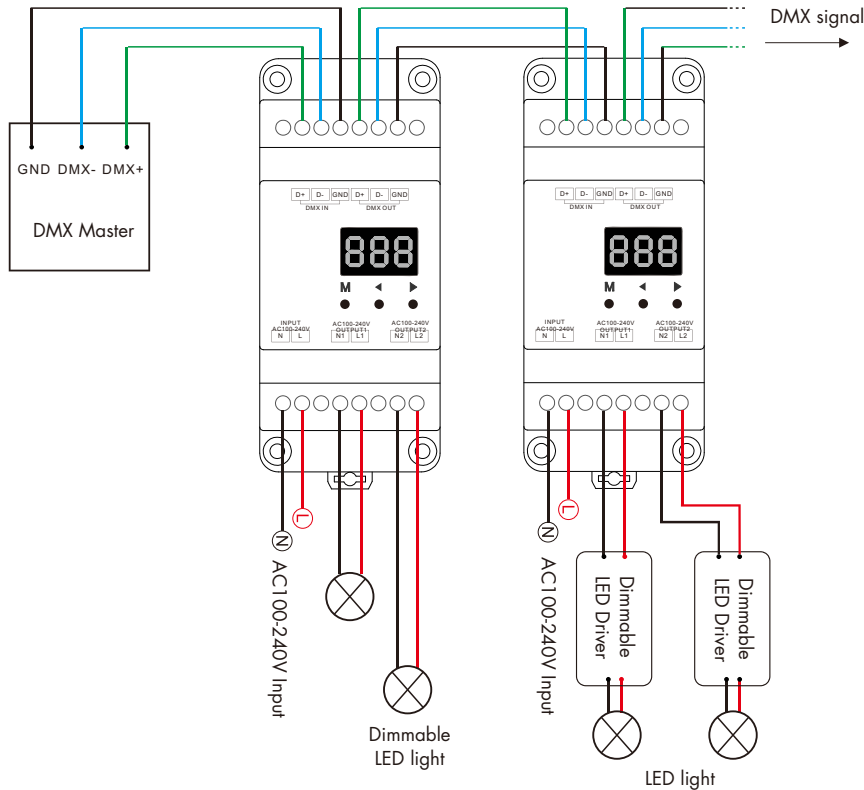
Load Type	Maximum Load	Remarks
Dimmable LED lamps	200W @ 220V 100W @ 110V	Due to variety of LED lamp designs, maximum number of LED lamps is further dependent on power factor result when connected to dimmer.
Triac Dimmable LED drivers	200W @ 220V 100W @ 110V	Maximum permitted number of drivers is 200W divided by driver nameplate power rating, and make sure the surge current is no more than 2 times 65A.
Incandescent lighting, HV Halogen lamps	400W @ 220V 200W @ 110V	

Wiring Diagram

⚠ Caution:

Please carefully ensure all wire connections and polarities are correct and secure before applying power, otherwise this controller will be damaged.

Note:

When calculating the maximum number of load lamps or drivers, the input power or input current parameters of a single lamp or driver must be used, the output power parameters can not be used.
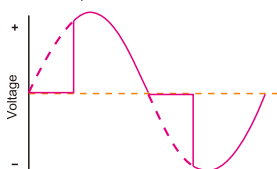
In addition, the maximum surge current of the dimmer is 65A, the sum of surge current of multiple dimmable LED drivers should not exceed 2 times. otherwise, the product will be overloaded and damaged.
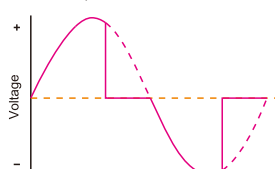
Operation

System parameter setting

- Long press M and ◀ key for 2s, prepare for setup system parameter: decode mode, control method, default output level, minimum brightness curve, automatic blank screen. short press M key to switch five item.
- Decode mode: short press ◀ or ▶ key to switch one-channel decode("d-1") or two-channel decode("d-2").
  When set as 1 channel decode, the decoder occupy only 1 DMX address, and two channel output the same brightness of this DMX address.
- Control method: short press ◀ or ▶ key to switch forward-phase("C-F") or reverse-phase("C-R").

Forward-phase control dimmer   Reverse-phase control dimmer

- Minimum brightness: short press ◀ or ▶ key to set minimum brightness, from 1% to 40%("b01" to"b40"). You need set suitable minimum brightness to avoid flick.
- Default output level: set output level when no DMX input signal. short press ◀ or ▶ key to switch maintain DMX output("d- -") or output default level ("d00" to "dFF", 0-100%), long press ◀ or ▶ key to change output default level.
- Automatic blank screen: short press ◀ or ▶ key to switch enable("bon") or disable("boF") automatic blank screen.
- Long press M key for 2s or timeout 10s, quit system parameter setting.

DMX mode

- Short press M key, when display 001~512, enter DMX mode.
- Press ◀ or ▶ key to change DMX decode start address(001~512), long press for fast adjustment.
- If there is a DMX signal input, will enter DMX mode automatically.
- DMX Dimming: Each S1-DR DMX decoder occupy 2 DMX address when connecting the DMX console.
  For example, the defaulted start address is 1,
  their corresponding relationship in the form:

DMX mode
(001~512)

DMX Console	DMX Decoder Output
CH1 0-255	CH1 0-100%
CH2 0-255	CH2 0-100%

Stand-alone dimmer mode

- Short press M key, when display L-1~L-8, enter stand-alone dimmer mode.
- Press ◀ or ▶ key to change dimmer mode number(L-1~L-8).
- Each dimmer mode can adjust each channel brightness independently.
  Long press M key for 2s, prepare for setup two channel brightness.
  Short press M key to switch two channel(100-1FF, 200-2FF).
  Press ◀ or ▶ key to setup brightness value of each channel.
  Long press M key for 2s, or timeout 10s, quit setting.
- Enter stand-alone dimmer mode only when DMX signal is disconnected or lost.

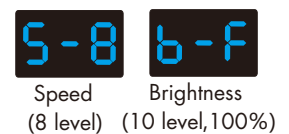Stand-alone dimmer mode
(L-1~L-8)

Stand-alone dynamic mode

- Short press M key, when display P-1~P-4, enter stand-alone dynamic mode.
- Press ◀ or ▶ key to change dynamic mode number(P-1~P-4).
- Each mode can adjust speed and brightness.
  Long press M key for 2s, prepare for setup mode speed, brightness.
  Short press M key to switch two item.
  Press ◀ or ▶ key to setup value of each item.
  Mode speed: 1-10 level speed(S-1, S-9, S-F).
  Mode brightness: 1-10 level brightness(b-1, b-9, b-F).
  Long press M key for 2s, or timeout 10s, quit setting.
- Enter stand-alone dynamic mode only when DMX signal is disconnected or lost.

Stand-alone dynamic mode
(P-1~P-4)

Dynamic mode list

No.	Name
P-1	2ch light on/off synchronously
P-2	2ch single light on/off in sequence
P-3	2ch light fadein and fadeout synchronously
P-4	2ch light fadein and fadeout in sequence

Speed   Brightness
(8 level)   (10 level,100%)

Restore factory default parameter

- Long press ◀ and ▶ key for 2s, restore factory default parameter, display"RES".
- Factory default parameter: DMX decode mode, DMX decode start address is 1, two channel decode, rerverse-phase control, 10% minimum brightness, dimmer mode number is 1, dynamic mode number is 1, output 100% level when no DMX input, disable automatic blank screen.