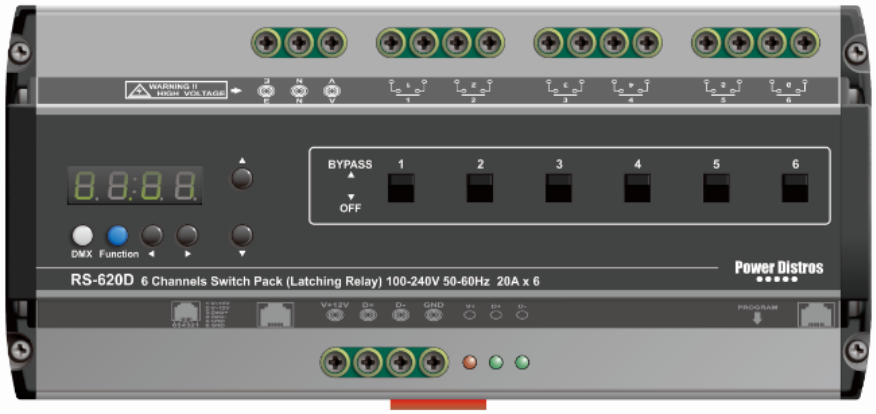
Power Distros

# RS-620D

## 6 Channels Switch Pack (Latching Relay)

## 100-240V 50-60 Hz 20Ax6



# INDEX

# 1 Before Installation

1. Working environment: Temperature: 0°C - 40°C; Humidity: 20% - 80%
2. Please read carefully this manual and refer for Power Distros for any question.

# 2 Introductions

## 2-1 Features

- DMX-512 and IDX.
- Din-rail mounted.
- 6-channel dry contact for RS-620D.

  Each channel can be manually switched on/off individually.
- Fade time of each scene can be set.
- Up to 99 zones.
- Delay time setting (0S - 10S) for each channel to avoid current surge.
- Connectable to WCP series control panels.

## 2-2 Specifications

1. AC Input: AC 100 - 240V
2. Output:

   **Resistive Loads:**

   RS-620D: 20A per channel

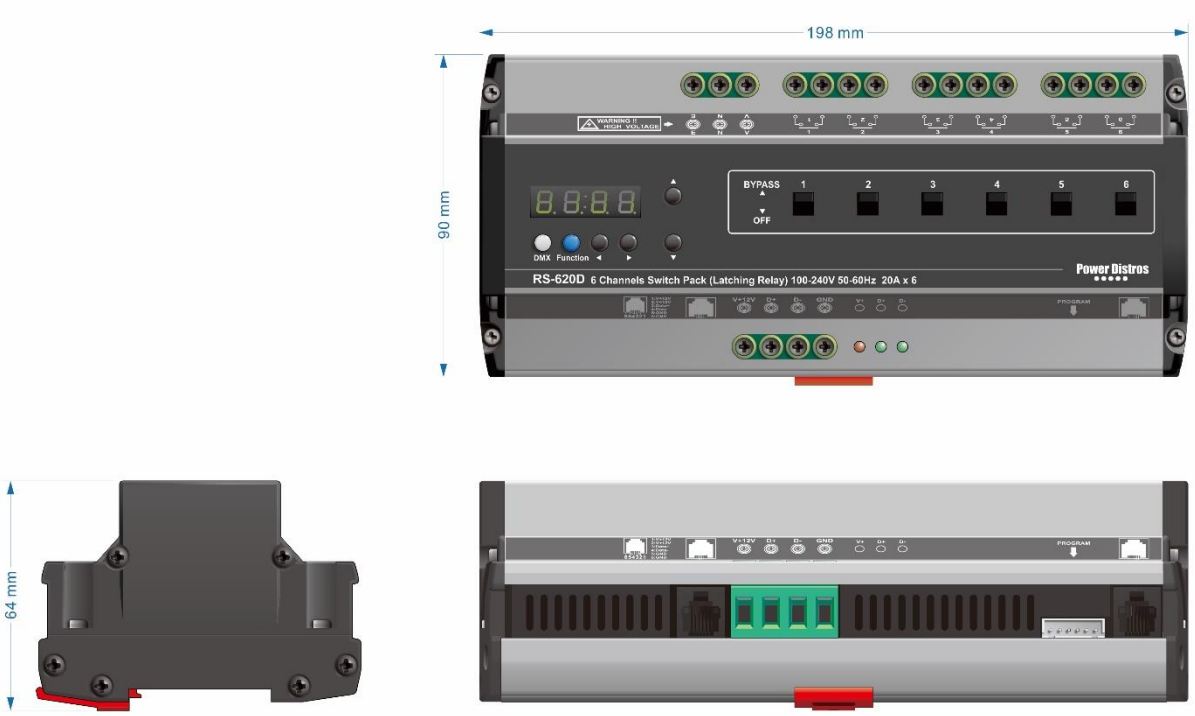
   **Capacitive/Inductive Loads/Electronic Drivers/Electronic Ballasts:**

   RS-620D: 12A per channel

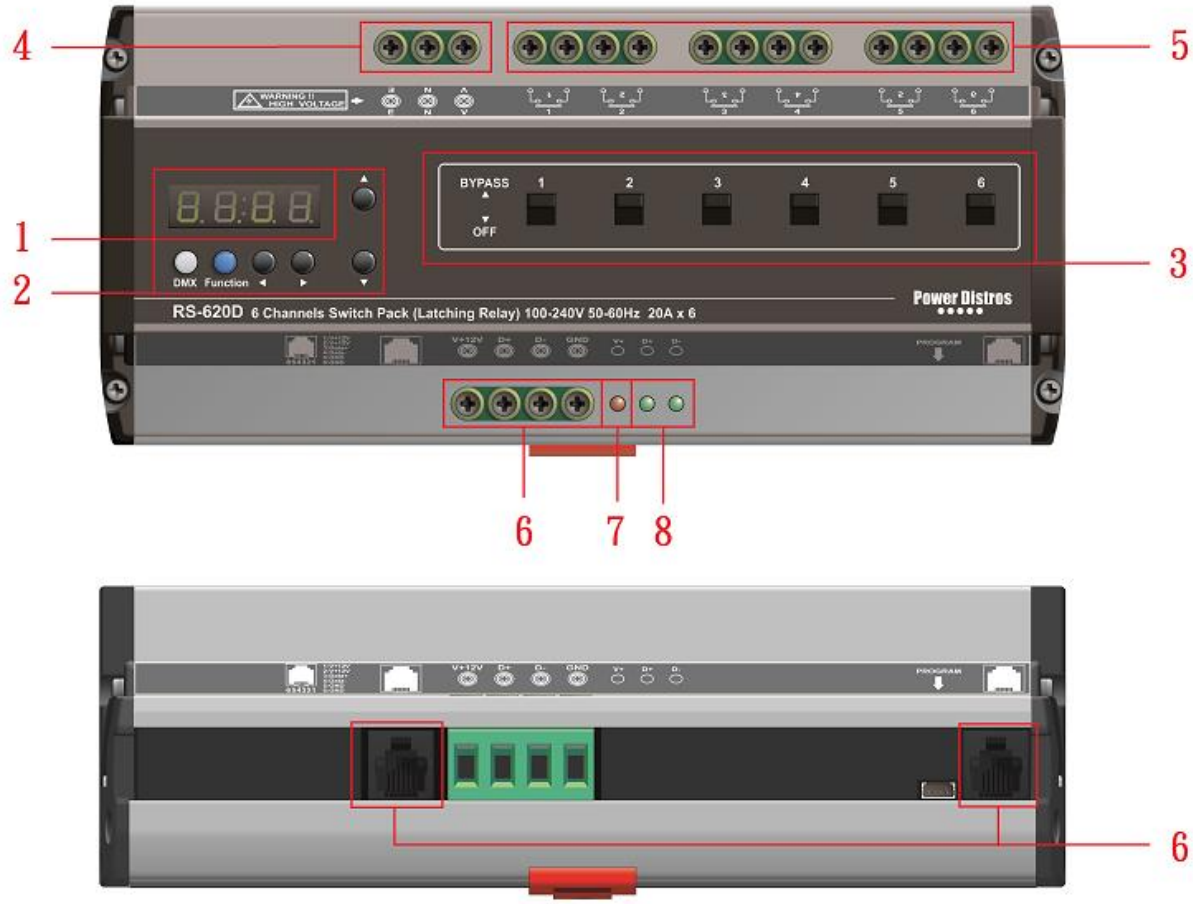
   *** Might not compatible with some high inrush current loads.**
3. Protocol: DMX-512/IDX
4. Dimensions:

   RS-620D -- 198(W) x 90(H) x 64(D) mm

## 2-3 Dimensions

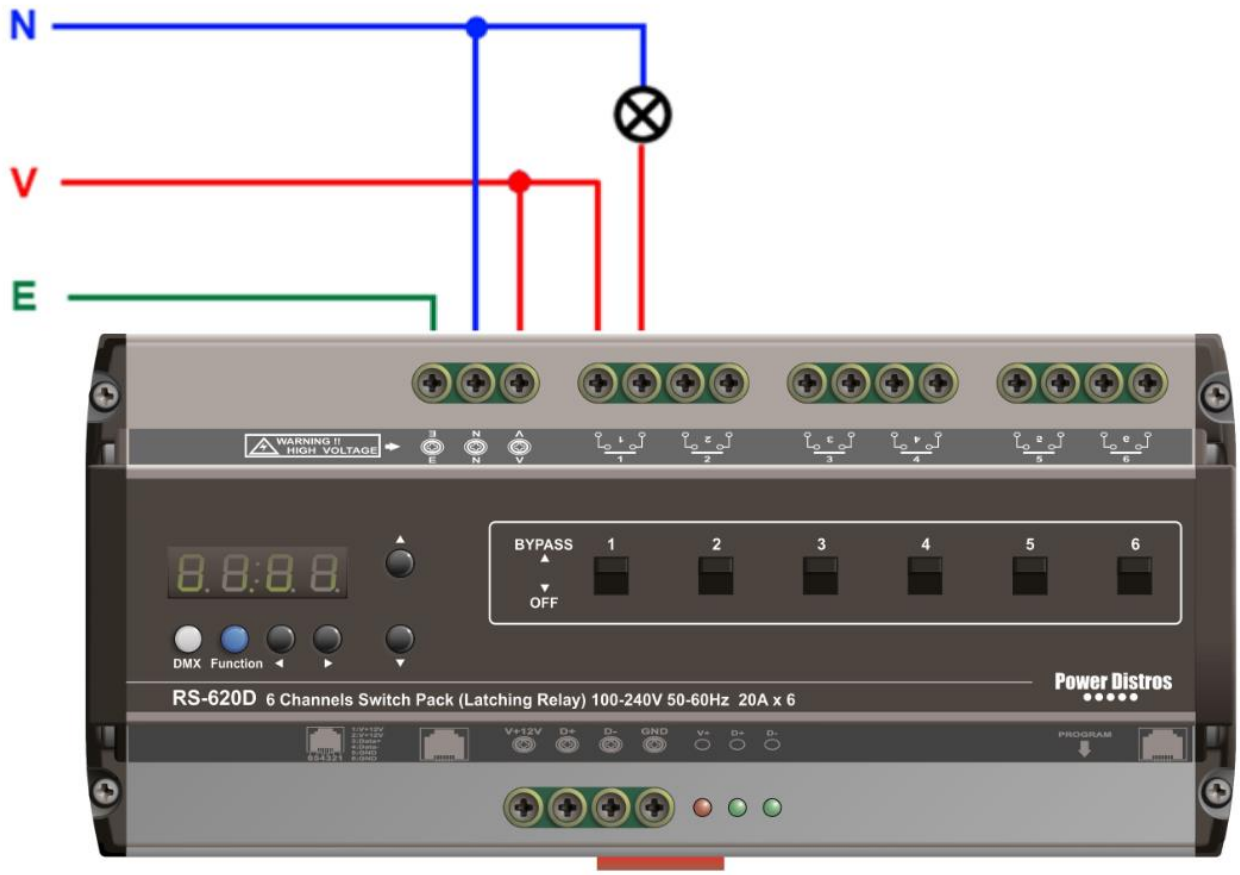


## 2-4 Functions




| | | | |
|---|---|---|---|
| 1 | LED | 2 | 【DMX】- to set DMX address<br>【FCN】- function selection, exit without saving<br>【◄】【►】【▲】【▼】 |
| 3 | Channel ON/OFF | | |
| 4 | Power input | 5 | 6-channel outputs |
| 6 | IDX/DMX-512 | 7 | IDX 12V+ indicator |
| 8 | IDX/DMX-512 signal indicator | | |

## 2-5 Wiring Diagram (One Channel)



# 3 Operations

## 3-1 Initialization

Hold【▲】and【▼】at the same time and restart the module:

The LED display shows  .

Press【DMX】to initialize the module.  .

## 3-2 DMX Address Setting

*Standard DMX console can output 512 channels and RS-620D can use 6 continuous channels as the output channel. The number of the first channel of these 6 continuous channels is start channel address.*

Press 【DMX】+【▲】or【▼】to change DMX address. For example, change DMX address from 001 to 003,

**Note:** Press【DMX】once to check the DMX address.

## 3-3 Channel Output Status

In the main screen, press【◄】 or【►】to enter channel status check.

First channel is on ON mode. Second channel is on OFF mode.

Press 【▲】and【▼】to manually turn on/off the channel.

## 3-4 DMX-512 Bypass Setting

Press【FCN】several times to enter DMX-512 Bypass setting


"d-OF" means that RS module will be controlled by DMX-512 signal (DMX-512 bypass is disabled)

Press【▲】or【▼】 to change the setting and then press【DMX】to save.


Controlled by DMX-512 signal (DMX-512 Bypass is disabled)


Not controlled by DMX-512 signal (DMX-512 Bypass is enabled)

## 3-5 Delay Time Setting

*Delay time is the time between channels to be reacted by the control signal.*

*For example, if delay time is set as 0.5 second, and RS-620D received a signal to turn off all output channels,*

*RS-620D will turn off 1st output channel immediately and then turn off 2nd output channel after 0.5 second and then turn off 3rd output channel after 1 second and then turn off 4th output channel after 1.5 second.*

*The function is to avoid large surge current if all relays activated simultaneously.*

STEP-1: Press【FCN】several times to enter delay time setting:


It means the delay time is 0.1 second.

STEP-2: Press【▲】or【▼】to change delay time(range from 0S - 10S)

STEP-3: Press【DMX】to save or press【FCN】to cancel.

## 3-6 Channel Mode Setting

There are two modes for channel status, shown as below:

 Switch Mode

 Fade Mode

Switch Mode: only two status, 0 and 100%

Fade Mode: the value can be adjusted from 0 to 100%.

## 3-7 Channel's Switching-on Level Setting

STEP-1: In the main screen, press【FCN】to enter the switch on value setting.

It means the channel will be switched on when its level is 52%.

STEP-2: Press【▲】or【▼】to set the switching-on level from 10% to 90%.

STEP-3: After setting, press【DMX】to save.

*The switching-off level is 5% lower than switching-on level. For example, if switching-on level is 90%, the switching-off level will be 85%.*

*By default, the channel mode (refer 3-6) is switch mode. In switch mode, if you press up/down buttons or recall a scene on an WCP panel, it will instantly turn on the channels (turn on the lamps).*
*If the WCP panel also controls other dimmable loads, it might be not desirable to have some switching lamps instantly turned-on, but other dimmable loads are turned on after a while.*

*By changing channel mode from switch to fade mode can solve this issue. If you want the switching loads to be turned on when dimmable loads are turning to 80%, you can simply change the channel mode to fade mode (3-6) and make switching-on value to 80% (3-7).*

*In some applications, turning switching loads on instantly might be preferable. Setting channel mode as switching mode would be better.*

## 3-8 Date/Clock Setting

STEP-1: Press【FCN】several time until LED shows:


It means the year on the module is 2018. Press 【▲】or【▼】to change the year.

STEP-2: Press 【►】once, the LED display will show month and date:


Press 【▲】or【▼】to change the month.

Press 【►】once to shift the cursor to date and then press 【▲】or【▼】to change the date.

STEP-3: Press 【►】once, the LED display will show weekday:


press 【▲】or【▼】to change the weekday.

*d-01: Monday*

*d-02: Tuesday*

*d-03: Wednesday*

*d-04: Thursday*

*d-05: Friday*

*d-06: Saturday*

*d-07: Sunday*

STEP-4: Press 【►】once, the LED display will show the time/clock:


Press 【▲】or【▼】to change the hour.

Press 【►】once to shift the cursor to minute and then press 【▲】or【▼】to change the minute.

STEP-4: Press 【DMX】to save the date/clock setting.

## 3-9 NO/NC Setting

STEP-1: Press【FCN】several time until LED shows:

It means 1st output is NO (Normally Open) mode.

STEP-2: Press【▲】or【▼】to change the mode between NO (Normally Open) or NC (Normally Close)

For example, change 1st output to NC mode:

STEP-3: Press 【◄】 or【►】to change the output number.

For example, press 【►】twice to change the selected output to 3rd output:

STEP-4: Repeat STEP 2,3,4 to set NO/NC mode of each output channel.

STEP-5: Press【DMX】to save the setting.

*If the output is set to NO (default), the output switch will be opened when the input level is lower than switching-on level, and the switch will be closed when input level is higher than switching-on level.*

*If the output is set to NC, the output switch will be closed when the input level is lower than switching-on level, and the switch will be opened when input level is higher than switching-on level.*

## 3-10 Firmware Version Check

Press【FCN】several time until LED shows:

It means that the firmware version is 1.1.

# 4 IDX Systems

IDX/RS devices can work either in DMX-512 mode or IDX mode.

**DMX-512 Mode**: IDX/RS devices can be controlled by DMX-512 controllers.

**IDX Mode**: IDX/RS devices can be recalled its stored lighting scenes by connecting to WCP scene control panels.

Please refer IDX wiring guide.

## 4-0 IDX Mode

*IDX is a protocol specifically designed for architectural and environmental lighting applications. IDX/RS dimmers/switches or devices are able to store scenes in themselves.*
*Each IDX/RS device or WCP panel can be specified by a zone number. The scenes stored in IDX/RS devices can be recalled by WCP panels with the same zone number.*

For example, IDX/RS devices configured as zone 1 can be controlled (recall scenes) by WCP panel configure as zone 1. IDX/RS devices configured as zone 5 can be controlled (recall scenes) by WCP panel configure as zone 5.

***Figure 1: One IDX/RS device with one WCP scene panel***

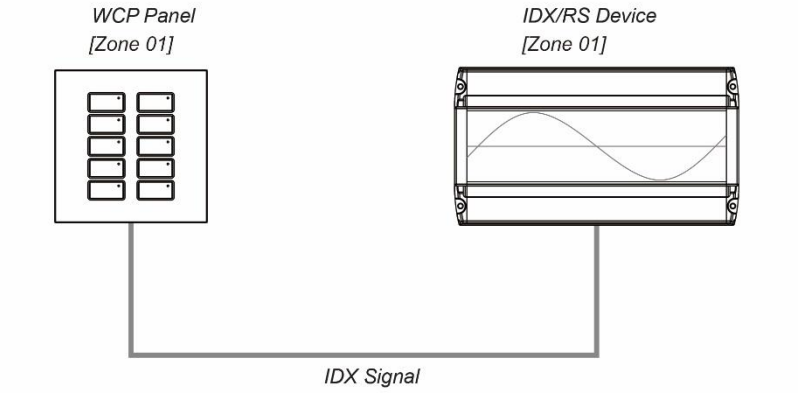
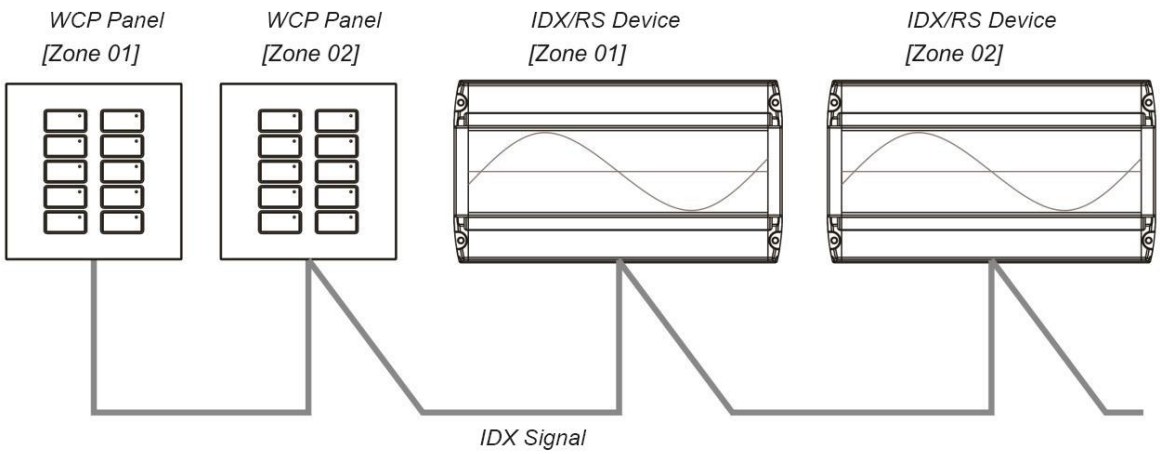


***Figure 2: Multiple IDX/RS devices with WCP scene panels***




WCP scene panel 1 controls IDX/RS device 1.

WCP scene panel 2 controls IDX/RS device 2.

** If there are both DMX-512 and IDX signal present, DMX-512 signal has the highest priority.*

## 4-1 ID Number Setting

*Each RS/IDX series device must have an ID number. When one device's working alone, there is no need to adjust the ID number, but when several devices' working together, each device must have a different ID number.*

STEP-1 In the main screen, press【FCN】to enter ID number setting.

STEP-2 Press【▲】or【▼】to change the ID number.



Press 【▲】twice to change ID number from 001 to 003.

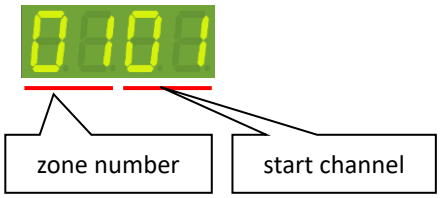
STEP-3 Press【DMX】to save.

## 4-2 Zone Number Setting

*Definition of zone: The device must set the zone number before use, which consists of two parts, one is the zone number and another is the start channel address.*

*For example: There is 6 RS-620D (24 channels in total) in the first zone, the zone number of each device should be 01-01, 01-05, 01-09, 01-13 separately.*

STEP-1: In the main screen, zone and start channel setting is shown as below:




Press【▲】or【▼】to change zone number (up to 99 zone). After setting, press【DMX】to save.


STEP-2: Press right button once shift to start channel setting. Press【▲】or【▼】to modify the start channel address (up to 99 channel). After setting, press【DMX】to save.

For example: change channel address from 02 to 03.


## 4-3 Save Scene

STEP-1: In the main screen, press【◄】 or【►】to select a channel. Here we select channel one.

STEP-2: Press【▲】or【▼】to set the level of channel 1. Here we press【▲】to make the output of channel one to 100%.

STEP-3: Press【◄】 or【►】to select other channel. Repeat step 2 and 3 to edit the scene.

STEP-4: Press【DMX】, LED shows

It means that the current scene is going to be stored in scene 01.

STEP-5: Press 【▲】or【▼】to select a scene number to store the current scene.

STEP-6: Press【DMX】to save the scene.

## 4-4 Scene Overlap Function ON/OFF

*Scene Overlap Function:*

*On usual, when user recall a scene, the previous scene will be replaced. This function is to overlap output of SC5/SC6 to any other scene, which means the previous scene should not be replaced but appears the effect of several overlapped scenes.*

*For example:*

*SC2: the first channel of RS-620D is OFF*

*SC5: the first channel of RS-620D is ON*

*When overlap SC5 to SC2, the first channel is ON.*

STEP-1: In the main screen, press 【FCN】several times until LED shows:


STEP-2: Press【▲】or【▼】to select from Scene Overlap ON/OFF.

A. Scene overlap function is OFF.

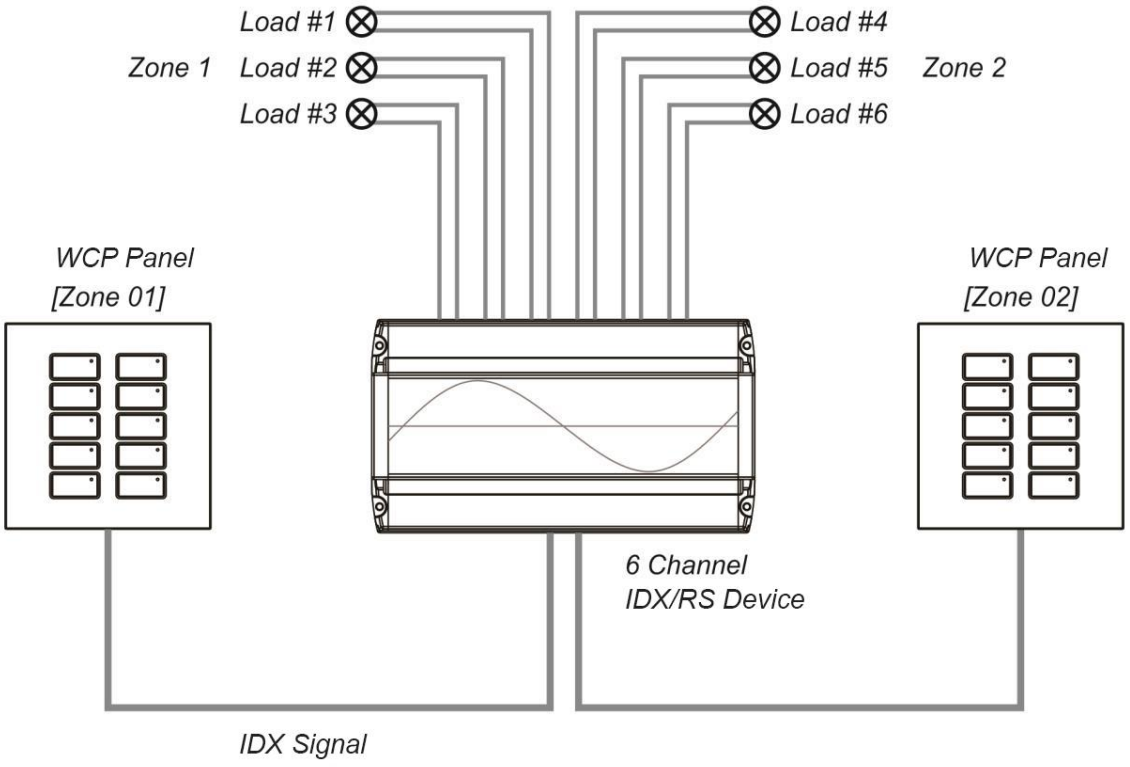

B. Scene overlap function is ON


STEP-3: After setting, press【DMX】to save.

## 4-5 Partition Setting

*Generally, all channels on IDX/RS devices can be only set to only 1 zone (Please refer 3-2). To make IDX/RS devices more flexible, you can assign each channel on IDX/RS devices to different zones by using partition function. For example, you assign channel 1 – 2 on RS-620D to partition 1 and channel 3 – 4 on RS-620D to partition 2. There are 2 control panels (WCP-106) connected to RS-620D, one is set to zone 1; the other is set to zone 2. If scenes are recalled by WCP-106 of zone 1, only channel 1 – 2 on RS-620D will change their dimming levels. If scenes are recalled by WCP-106 of zone 2, only channel 3– 4 on RS-620D will change their dimming levels.*

***Figure: Channel 1 and 2 on IDX/RS device in zone 1 (channel 1 and 2 are controlled by WCP panel in zone 1)***
***Channel 3 and 4 on IDX/RS devices in zone 2 (channel 3 and 4 are controlled by WCP panel in zone 2)***



## 4-5-1 Enable/Disable Partition Function

STEP-1: Press【FCN】several times until LED shows


It means partition function is disabled.

Press 【▲】to turn on partition function


.

## 4-5-2 Partition Setting

STEP-1: Press【FCN】several times until LED shows


The left two digits “01” represents 1st output channel of the RS module.

The right two digits “01” represents zone 01.

STEP-2: Move the cursor to the right two digits and press 【▲】or【▼】to change the zone number which 1st output channel belongs to.

STEP-3: Press【►】to go to channel number


Press 【▲】or【▼】to change the channel number.

**Example1- To set 1st output of RS module to zone 2, channel 1**



**Example2 – To set 2nd output of RS module to zone 2, channel 2.**


## 4-6 Timer Setting

The timer feature of the RS module is able to automatically recall a scene in a specific time.

### 4-6-1 Enable/Disable Timer

STEP-1: Press【FCN】several times until LED shows


“t-OF” means that the timer in disabled (OFF).

STEP-2: Press 【▲】or【▼】to enable/disable the timer.

timer is disabled

timer is enabled

STEP-3: Press【DMX】to save the setting.

### 4-6-2 Add a Timer

STEP-1:: Press【FCN】several times until LED shows


This is 1st timer. Up to 20 timers can be stored in the module.

STEP-2: Press 【DMX】once to enter the 1st timer setting.


Press 【▲】or【▼】to change the hour.

Press 【►】to shift the cursor to minute and then press 【▲】or【▼】to change the minute.

For example, we set 13:30 as the clock of the timer:

STEP-3: Press 【►】once to go to weekday setting:


*d-01: valid on Mondays*

*d-02: valid on Tuesdays*

*d-03: valid on Wednesdays*

*d-04: valid on Thursdays*

*d-05: valid on Fridays*

*d-06: valid on Saturdays*

*d-07: valid on Sundays*

*d-08: valid on Monday to Friday*

*d-09: valid on Saturdays and Sundays*

*d-10: valid everyday*

Press 【▲】or【▼】to change the weekday setting

STEP-4: Press 【►】once to go to scene setting:


Press 【▲】or【▼】to change the scene number.

STEP-5: Press 【►】once to go to zone setting:


Press 【▲】or【▼】to change the zone number.

STEP-6: Press 【►】once to go to delay setting:


Press 【▲】or【▼】to change the delay from 0.1 second to 10 second.

STEP-7: Press【DMX】to save the timer.

*Once 1st timer is stored, you can then add.2nd timer. Up to 20 timers can be stored in the module.*

Please enable timer feature (refer 4-6-1) to make the timers valid.

## 4-6-3 Delete Timer

STEP-1:: Press【FCN】several times until LED shows


01 means 1st timer is selected.

Press 【▲】or【▼】to select a timer.

STEP-2: Press 【DMX】to delete the timer.

# Limited Warranty

1. Should a defect appear in the product, please deliver the product to Power Distros or your local distributor.

2. The Limited Warranty does not cover:

a. Any fault caused by false usage or imprudence (collision, inadequate installation or adjustment, insufficient ventilation, or improper repairs)

b. Force majeure factors (flooding, earthquake, volcanic eruption, or other factors beyond Power Distros control).

c. Labor costs incurred in diagnosis of defects; installation, reinstallation, wiring, rewiring, repairing, adjustment, or reprogramming of a product; or any other consequential expenses.

d. Other products or devices offered, packaged, or sold with the product.

3. Please refer to Power Distros or local distributor for warranty details.