

0/1-10V dimming is an analog signal dimming standard, the principle is to adjust the brightness of LED lights by controlling the level of 0/1-10V voltage.

Difference between 0-10V and 1-10V dimming:

0-10V dimming range 0-100%, can turn off the light when adjusted to the lowest;

1-10V dimming range 10-100%, retains 10% brightness when adjusted to the lowest.

Skydance's 0/1-10V dimming range is compatible with other brands of 0/1-10V products.

For 0/1-10V dimmers, either 0-10V or 1-10V output can be selected. 0-10V signal output a minimum 0.3V voltage signal.

1-10V signal output a minimum 1V voltage signal.

For controllers or dimming drivers that receive a 0/1-10V signal, the input voltage at the minimum light level is $\geq 1.3V$.

Skydance's 0/1-10V product line includes 0/1-10V dimming panels, RF 0/1-10V dimmers, DMX 0/1-10V signal converters, DALI 0/1-10V dimmers, 0/1-10V constant voltage LED controllers, 0/1-10V triac dimmer, 0/1-10V dimming constant voltage LED driver, 0/1-10V dimming constant current LED driver and so on.

Users can choose a single 0/1-10V dimmer + multiple 0/1-10V constant voltage LED controllers or 0/1-10V dimming driver to combine into a 0/1-10V dimming system.

Packing List

	
0/1-10V dimming panel (optional) 1 pcs	User manual 1 pcs

Outsourced parts

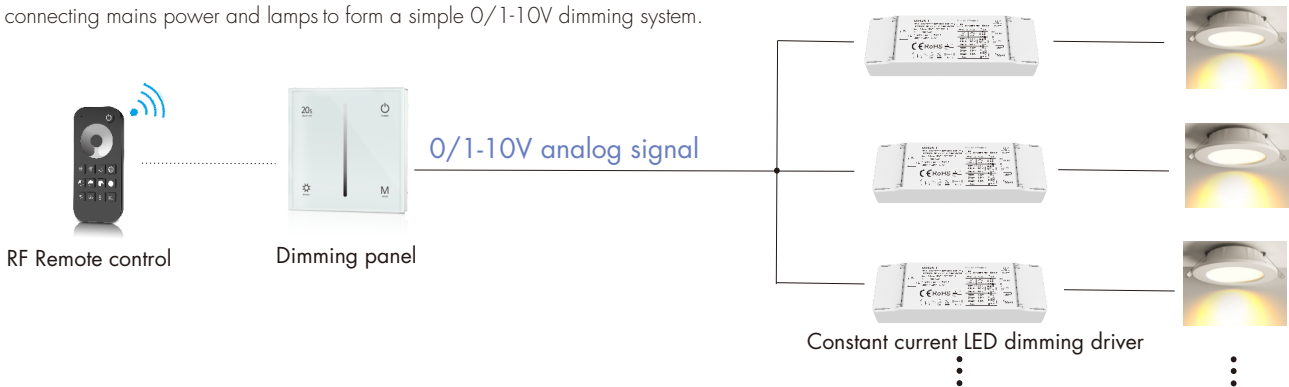
						
Switching power supply	0/1-10V Constant Voltage LED Dimmer (Optional)	0/1-10V constant voltage/current LED dimming driver (optional)	RF Dimming Remote Control (Optional)	Signal wire (cuts required)	Power wire (cuts required)	Downlight or spotlight

- Notes:
1. The output voltage of the switching power supply must be the same as the supply voltage of the light strip, and the output power of the switching power supply ≥ 1.25 times the total output power of all the connected light strips
 2. When the controller is dimmed, the switching power supply may emit noise that can be heard by the human ear (20~20KHz), and it is recommended to use the glue filling switching power supply in places with noise requirements.
 3. The controller is a constant voltage type, for the switching type constant voltage/constant current conversion lamps, not guaranteed adaptation, dimming process may flicker, subject to actual measurement, the maximum access power of such lamps can not be higher than 50% of the rated power of the controller, otherwise it is easy to cause damage to the controller.
 4. The 0/1-10V signal transmission distance is related to the wire diameter and material of the signal wire, the signal current, and the number of 0/1-10V products connected.
 5. In order to ensure the consistency of dimming brightness of multiple 0/1-10V controllers/drivers, it is recommended to use a copper wire with a cross-sectional area of $0.75mm^2$ as the 0/1-10V signal wire when within 50 meters, and a copper wire with a cross-sectional area of $1.5mm^2$ as the 0/1-10V signal wire when within 50-100 meters.

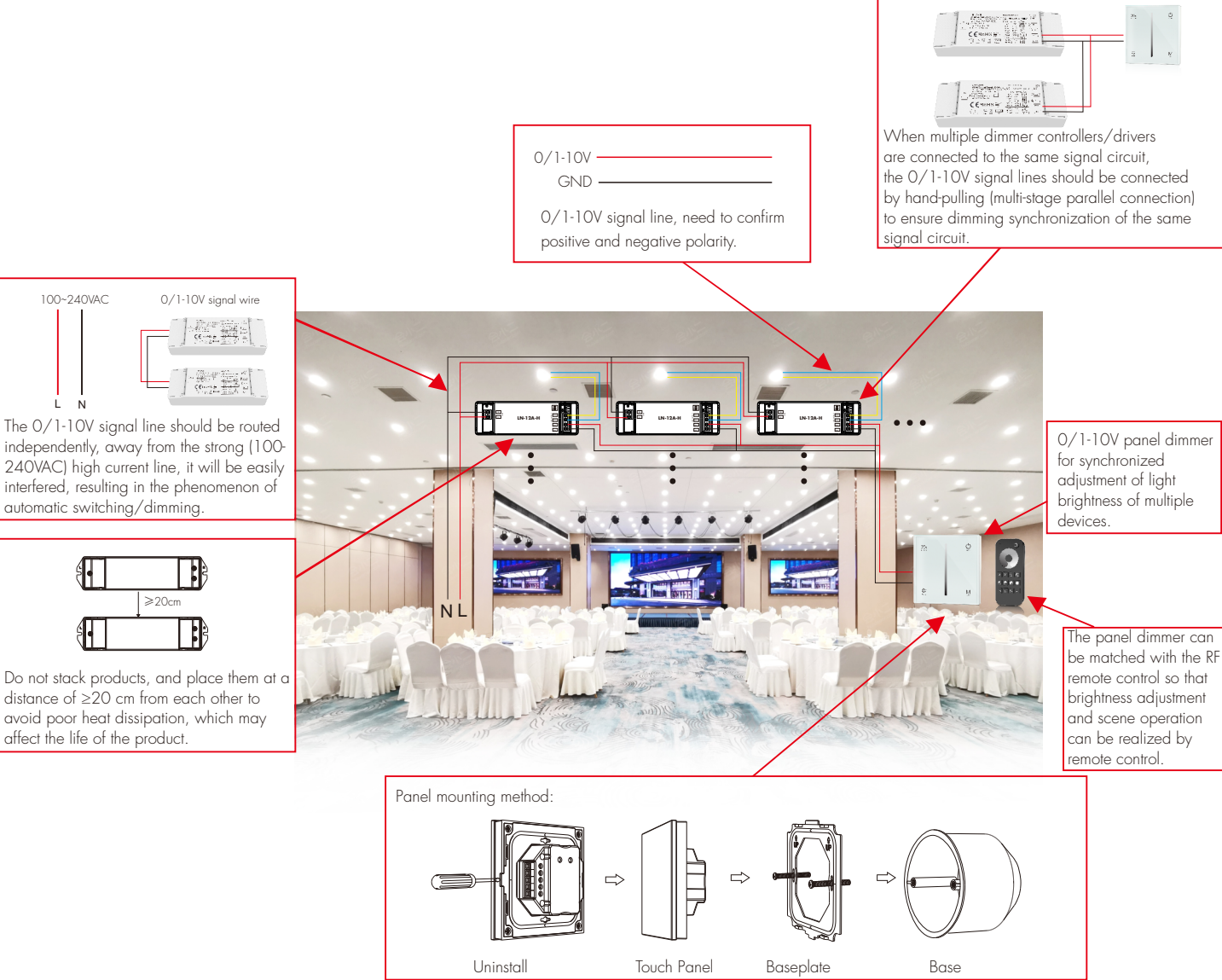
Installation steps

1 According to the application scenario, confirm the number and type of products to be controlled to form a 0/1-10V dimming system

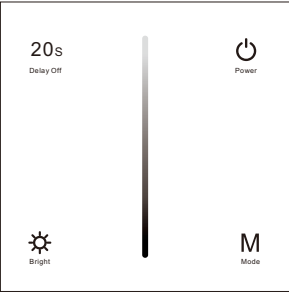
Example: install 35 downlights for overall synchronized dimming, each downlights 12W, need a 0/1-10V dimmer, 35 pcs 12W constant current dimming driver. RT1 is used as the remote control, T18 is used as the 0/1-10V dimming panel, and LN-12A-L is used as the constant current dimming driver, connecting mains power and lamps to form a simple 0/1-10V dimming system.



2 According to the application scenario, determine and mark the installation position of the remote control, switching power supply, constant current dimming driver, 0/1-10V dimmer panel, downlight



3 Panel synchronized dimming



- Turn on/off light.
- Play dynamic mode, 6 level speed.
- Turn off light after 20s.
- Brightness, 10 levels.

4 Match RF remote control to realize remote control dimming

Match:
Turn on light, turn off, immediately press the On/Off key of the panel for 5s, then press on/off key (single zone remote) or zone key (multiple zone remote) of the RF remote within 5s. The LED indicator fast flash 3 times means match is successful.

Delete:
Turn on light, turn off, immediately press the On/Off key of the panel for 10s to delete all match, The LED indicator fast flash 6 times means all matched remotes were deleted.

5 Troubleshooting

The 0/1-10V dimming system consists of the 0/1-10V dimmer, dimming controller/driver, lamps, and switching power supply, first confirm whether each part is normal, and then further confirm the replacement.

1. Confirm that the fixture parameters are in accordance with the dimmer controller/driver:

Connect the dimmer controller/driver and the fixture according to the manual, the fixture will show 100% brightness normally, if the fixture does not light up, check if the parameters are within the range or replace the fixture.

Example:



Fixture parameters

Power: 12W
Hole size: 95mm
Beam angle: 60°
Color temperature specification: 3000K
Lamp color: black inside and white outside

LED driver selection

Model No: LN-12A-L
Output power: 12W
Output current range: 100-450mA

2. Judge whether the 0/1-10V dimmer panel is normal:

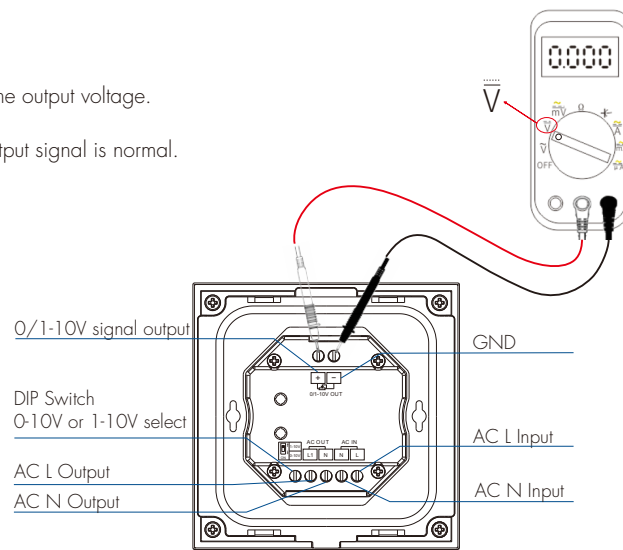
Disconnect the 0/1-10V output signal line, meter to measure the output voltage.

Touch the ON/OFF key or brightness slide.

If the value of multimeter voltage changes, it means that the output signal is normal.



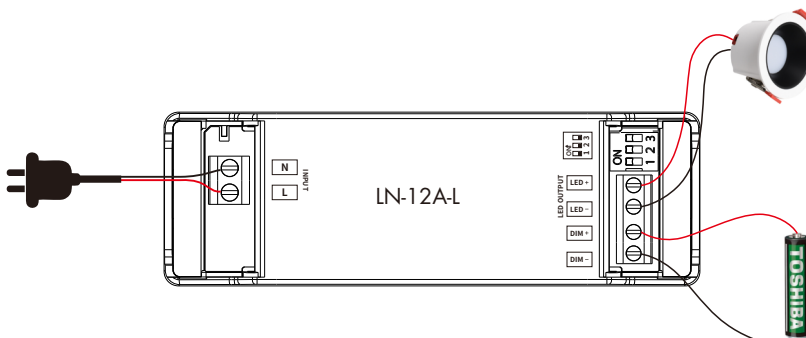
Panel front



Back of panel

3. Determine if the dimmer controller/driver is receiving a normal signal:

Confirm that the terminals have been connected, 0/1-10V signal receiving terminal connected to a single 7# (AAA) battery, according to the battery and signal terminal polarity connection, if the device is normal, due to the battery voltage of about 1.5V, the lamps output about 15% brightness.



Note:

1. When the 0/1-10V output signal line is short-circuited, the 0/1-10V dimmer panel will be automatically protected and need to be re-powered to reset the signal output.
2. 0/1-10V dimmer controller/driver will output 100% brightness when disconnecting the signal during use.
3. If signal receiving terminal is short-circuited, the lamps will have no output or save the minimum brightness.
4. Some brands of products with reverse signal connection, also can be normal switch but not dimming.