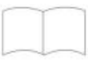
Machine Tran

ES32-V INSTALLATION GUIDE

Packing List

ES32-V Stair Light Controller
*1



User Manual
*1

Daylight sensor
(30cm)
*1

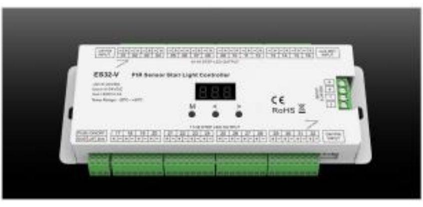
PIR sensor
(1.2m)
*2

PIR sensor extension line
(5m)
*2

Straight screwdriver
*1

Product Basic Parameters

Input voltage : 5-24VDC
Output voltage : 32 x (5-24)VDC
Output current : 32CH, 1A/CH
Output power : 32 x (5-24)W
Output type : Constant voltage
Sensitive field : ≤3m
Sensitivity angle : 30° (±10°)



Prepare installation tools and materials

1. LED strip
Select 5-24V light strip according to the demand, determine the length of each step LED strip.
Note each step of the LED strip load current does not exceed 1A.

2. Power supply
Power supply voltage must be the same as the LED strip voltage.
And the power of the supply power > LED strip total power*1.25.

3. Lead wire
Connecting controller and power supply.

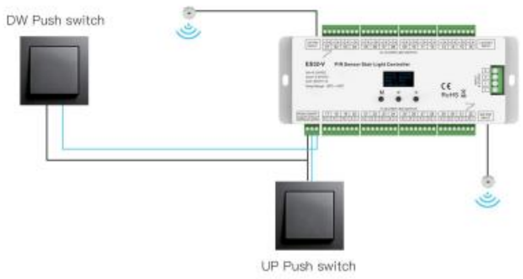
4. LED Strip extension wire
Connecting controller and LED strip.

Wire diameter selection can refer to the following table. Such as connecting 20 steps, it is suggested to select not less than 2.5mm² wire to connect the power supply. Such as the controller connected light strip distance is within 10M, it is suggested to select not less than 0.5mm² light strip extension wire. Note that each end of the wiring at the wire stripping length recommended 6-7MM. And mark the corresponding port of the line (step number, plus-minus polarity).

Copper wire cross-sectional area (mm²)	0.5	0.75	1.0	1.5	2.0	2.5	3.0
Output total current	≤5A	≤8A	≤10A	≤12A	≤15A	≤25A	≤30A

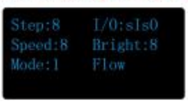
5. Electric soldering iron and solder
Soldering LED Strip Extension Cords and Light Strips.

6. Push switch (optional)
Use as manual switch to realize up/down lighting effects.
Push switch and PIR sensing can be used at same time.

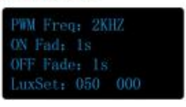


Installation Steps

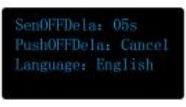
Take the installation of 8 steps of flow effect as an example, the parameter settings are:
Speed and brightness is 8, turn on and turn off light fade time is 1s, switch mode is sequence turn on light, sequential turn off light, light sensing value is 50, that is, the controller does not turn on light when the environment light is higher than 50 lumens.



```
Step:8    I/O:sIs0
Speed:8   Bright:8
Mode:1    Flow
```

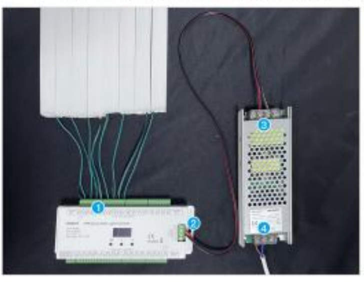


```
PWM Freq: 2KHZ
ON Fad: 1s
OFF Fade: 1s
LuxSet: 050  000
```

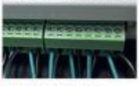


```
SenOFFDela: 05s
PushOFFDela: Cancel
Language: English
```

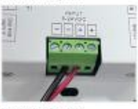
Wiring: Use LED strip extension wire to connect controller and LEDt strip; Use wire that meets the wire diameter requirements to connect the power supply and controller; The power supply is connected 220V mains; attention needs for differentiate plus and minus polarity.



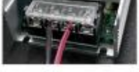
❶Controller Output Connection LED Strip



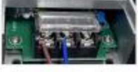
❷Controller Connection Power Input



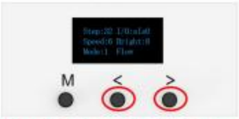
❸Power Output Connection Controller



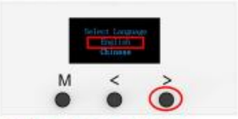
❹Power input connection mains



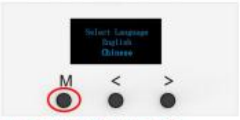
Set language:



Long press the <> key at same time for 2s,
Restore factory settings,
jump to the language interface.



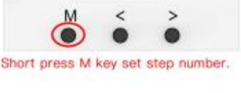
Press > key select to English.



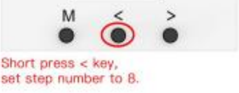
Long press the M key for 2s,
Save and exit the language setting
or wait 15s to automatically save and exit the setting.

Lighting effect setting: Following the previous example, set step is 8, speed and brightness is 8, light on/off mode is sequential light on, sequential light off.

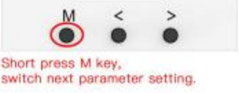
1. Step set



Short press M key set step number.

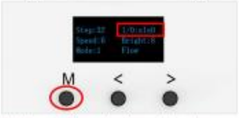


Short press < key,
set step number to 8.



Short press M key,
switch next parameter setting.

2. Light on/off mode setting

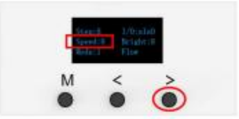


Light on/off mode already is slso,
so short press M key,
switch next parameter setting
(change other modes according right list, press < or > key to set).

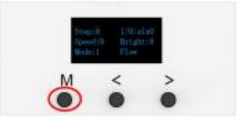
Light on/off mode list:

Display	Name
sIs0	Sequential light on, sequential light off
sIc0	Sequential light on, synchronized light off
cIs0	Synchronized light on, sequential light off
cIc0	Synchronized light on, synchronized light off

3. Speed Setting



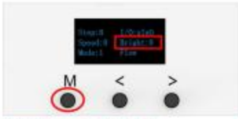
Short press > key, set speed to 8.



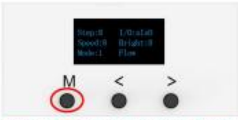
Short press M key, switch next parameter setting.

4. Brightness setting

5. Light Mode Setting and Exit Setting



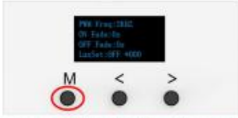
Brightness already is 8,
short press M key,
switch next parameter setting
(change other brightness can
short press < > setting).



Already is flow mode, no need change,
so long press M key for 2s or wait for 15s
to exit lighting effects setting.

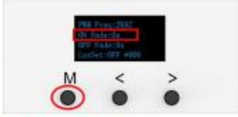
System Parameter Setting: Following the previous example, set light on and light off fade to 1s, and the controller does not turn on light when the environment light is higher than 50 lumens.

1. Enter system parameter Settings

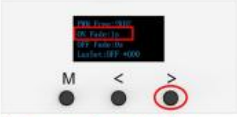


Long press M key for 2s, enter system parameter setting.

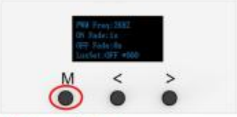
2. Lights On fade setting



Short press M key,
switch to light on fade.

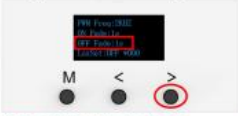


Short press > key, set to 1s.

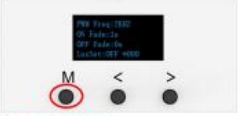


Short press M key,
switch the next parameter setting.

3. Lights Off fade setting

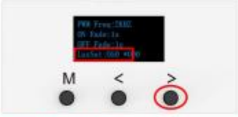


Short press > key, set to 1s.

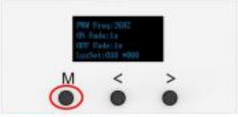


Short press M key,
switch the next parameter setting.

4. Light Sensitivity Setting

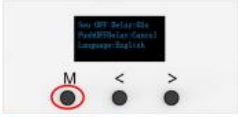


Short press > key,
adjust the value to 050.

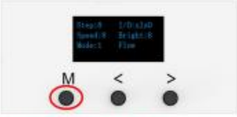


Short press M key,
switch the next parameter setting.

5. System parameter setting is complete, exit the system parameter setting interface



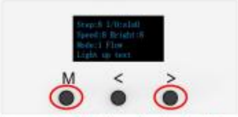
Short press M key,
this page is not set.
Adjustments can be made on
demand if required



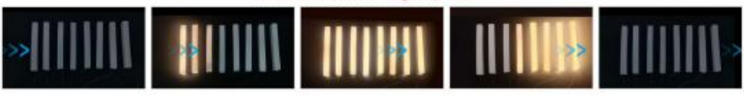
Long press M key for 2s,
exit the system parameter setting interface.

Controller light test run

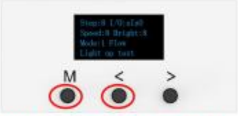
Up light test



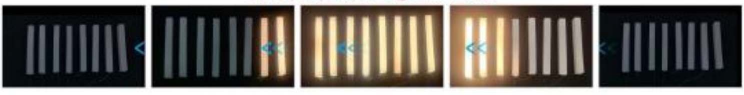
Long press the M and > key for 2s
at the same time for Light up test.



Down light test

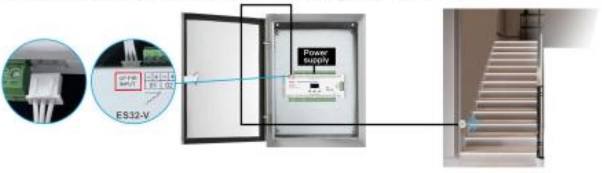


Long press the M and < key for 2s
at the same time for Light down test.

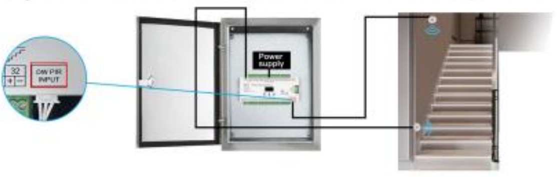


Installation of Up and Down Sensor Heads

Confirm the LED strip running effect is no error, the upward sensor head is installed at the location where the sensor trigger needs to be triggered before going up the stairs, connect the up senspr head to the UP PIR INPUT port of the controller;

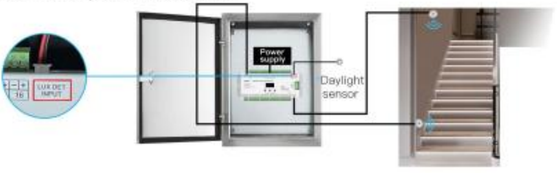


Downward sensing head is installed at the location where the sensing trigger needs to be triggered before descending the stairs, connect the down sensor head to the DW PIR INPUT port of the controller;

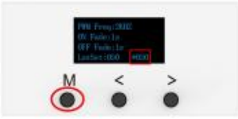


Installation daylight sensor head

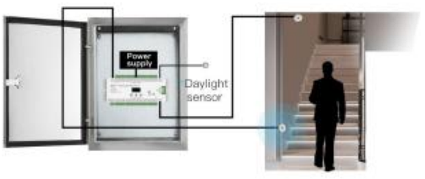
Daylight sensing head is installed in a position where it can sense ambient light, connected to the LUXDET INPUT port of the controller.



Long press the M key for 2s to enter the system parameter setting interface, check the light sense value:
* Displayed after the value indicates that the lumen value of the detected ambient light, that is, daylight sensing head is working properly.



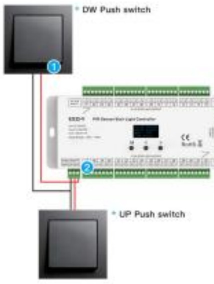
Finally test for up and down sensing headers to trigger properly.



Connecting Push switch (optional)

The controller supports connecting the Push switch to trigger up and down lighting effects:

Connect the Push switch that triggers the up effect to the PUSH ON/OFF of the controller's GND and UP terminals, and the Push switch for triggering the down effect to the GND and DW terminals.



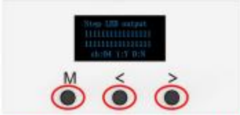
1 Push switch back wiring diagram

2 Controller connected to up and down Push switch wiring diagram

* Push switch and PIR sensor can be used at same time. For example, up stairs are triggered with the PIR sensor and down stairs are triggered with the Push switch. During 5s after pressing the Push switch to trigger the effect, the PIR sensor does not detect the Push switch operation and ignores the threshold of the daylight sensor.

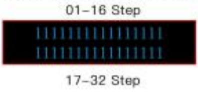
Skip damaged output channel

Such as this example to install 8 steps (01–08), 04 steps are damaged, you can long press the M, < and > key at same time for 2s, to enter the 32-step output setting.

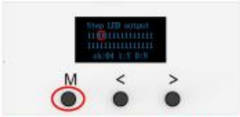


Long press the M, < and > key at same time for 2s, to enter the 32-step output setting.

At this time, the controller screen displays two lines of numbers, from left to right corresponds to the status of 01–16 and 17–32 step output channel, the number 1 means use, 0 means skip.

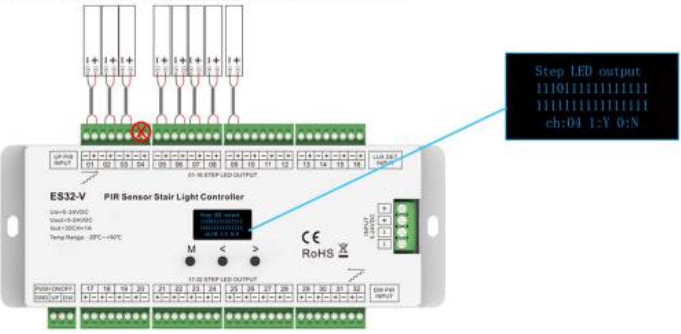


Short press M to switch to the 4th digit 1, press > to set 1 to 0, then long press M key for 2s or wait for 15s, save and exit setting.



Short press M to switch to the fourth digit "1", press > to set 1 to 0.

Connect the output LED strips of channels 4–8 to the outputs of channels 5–9, skipping channel 4, so that channels 5–9 replaces the previous channels 4–8.

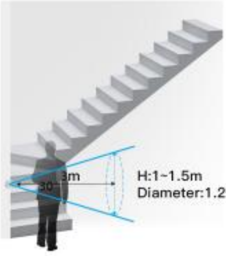


Notice for installation of PIR sensor

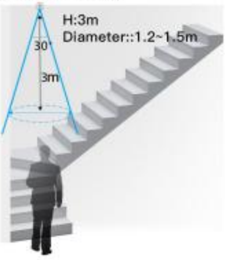
1. The sensor head should be installed in dry environment as possible, avoiding wind and rain.
2. Make sure to avoid heat source interference, such as heaters, stoves, refrigerators, and other places that are sensitive to temperature changes.
3. We recommended that wall-mounted installation height is1–1.5 meters and that ceilling mounting heightis no more than 3 meters.

PIR sensor detection scope (±10° Error):

Wall mounting



Ceilling mounting



* For wall mounting and ceiling mounting, note that the sensing holes are perpendicular to the direction of human movement.

4. When wiring the terminal and copper wire head should be tightened. If loose contact is poor, the contact resistance will increase, and the terminals will be hot when working with high power loads, which may cause damage and the corresponding channel will not work properly.