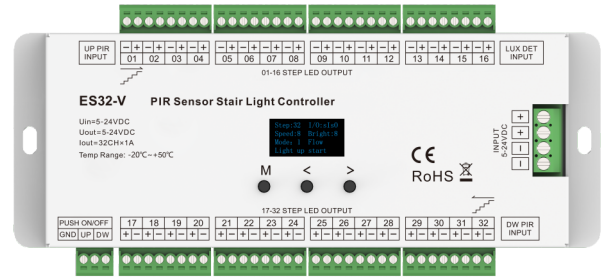


# PIR Sensor Stair Light Controller

- Dual PIR sensing + dual push switch 32 step stair light controller with daylight detection function.
- 32 channels constant voltage output drive low voltage LED strip, Max. 1A current per channel.
- OLED display screen, 3-buttons operate.
- 6 run modes are available: flow, chase, trail, float, five-step and one-step, with 1-8 levels of adjustable speed and brightness.
- Multiple steps can be set to synchronize or sequence on/off.
- 0-3 seconds on/off fade time selectable,
- 5 seconds -10 minutes auto-off delay time selectable.
- Two push switch can be connected for use as manual switch input.
- With fast self-testing function / Short circuit protection.
- Any damaged LED channel in 32 channels can be set disable.
- Use with two laser sensing heads(EL-C) for precise step sensing.

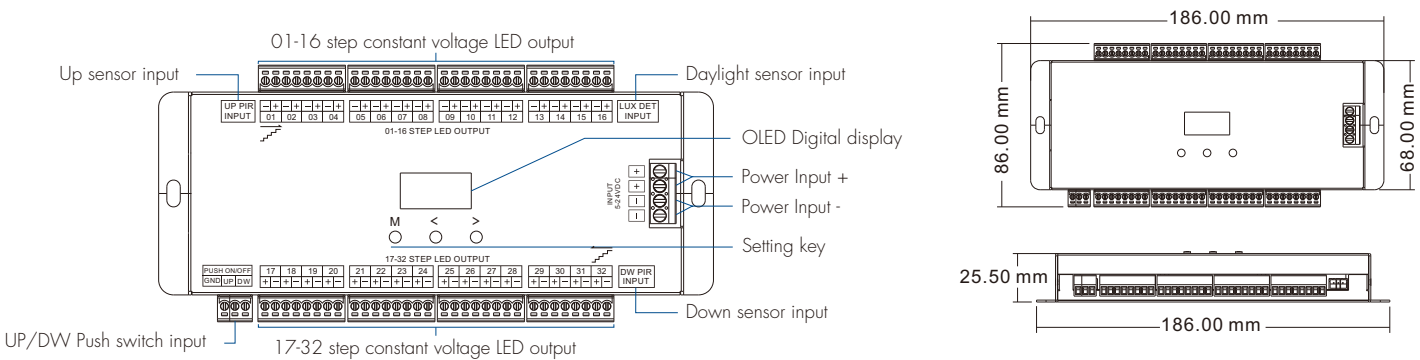


CE RoHS

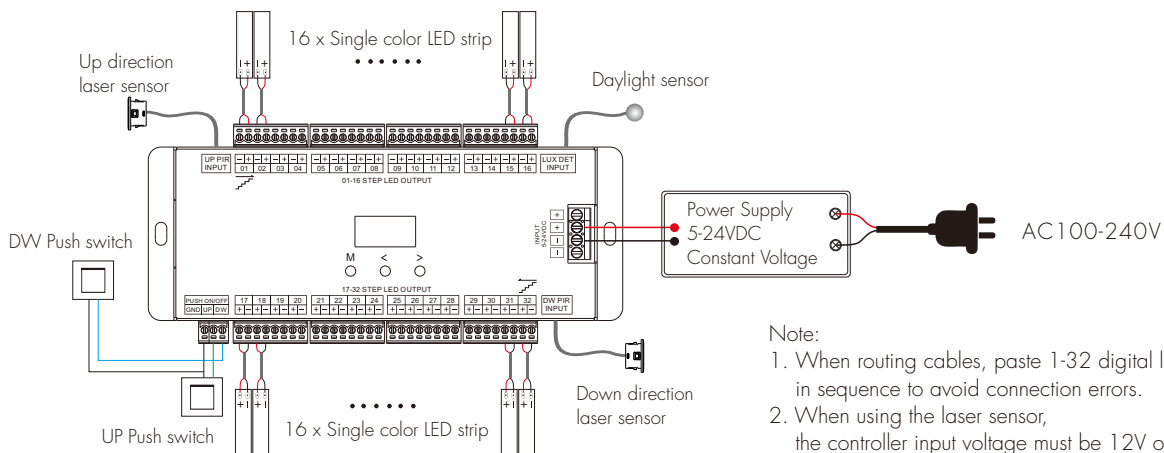
## Technical Parameters

| Input and Output |                  | Sensor data             |                   | Safety and EMC  |                           |
|------------------|------------------|-------------------------|-------------------|-----------------|---------------------------|
| Input voltage    | 5-24VDC          | Sensitive field         | ≤3m               | EMC standard    | EN IEC 55015/EN IEC 61547 |
| Output voltage   | 32 x (5-24)VDC   | Sensitivity angle       | 30°(±10°)         | Safety standard | EN 61347-1/-2<br>EN 62493 |
| Output current   | 32CH,1A/CH       | <b>Environment</b>      |                   |                 |                           |
| Output power     | 32 x (5-24)W     | Operation temperature   | Ta: -20°C ~ +55°C | Certification   | CE RoHS                   |
| Output type      | Constant voltage | Case temperature (Max.) | Tc: +85°C         | <b>Package</b>  |                           |
| <b>Warranty</b>  |                  | IP rating               | IP20              | Size            | L200 x W90 x H70mm        |
| Warranty         | 5 years          |                         |                   | Gross weight    | 0.66kg                    |

## Mechanical Structures and Installations



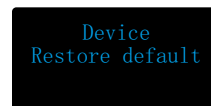
## Wiring Diagram



- Note:
1. When routing cables, paste 1-32 digital labels on the output lines in sequence to avoid connection errors.
  2. When using the laser sensor, the controller input voltage must be 12V or 24V.

## OLED Screen and Key Operations

- Long press M key for 2s, enter system parameters setting state: setting PWM frequency, ON/OFF fade time, daylight sensor threshold, sensor off delay time, push switch off delay time, system language selection.
- Short press M key, enter light effect parameter setting state: setting step number, turn on/off light mode, brightness and speed level, run mode.
- When in parameters setting state, short press M key to switch multiple parameters, press < or > key for parameters adjustment.
- Long press M key or wait 15s to quit parameter setting state.
- Long press M & > key for 2s, display "Light up test" on the 4 line of OLED screen, start up direction induction light testing.
- Long press M & < key for 2s, display "Light down test" on the 4 line of OLED screen, start down direction induction light testing.
- Long press < & > key for 2s, restore factory default parameters, jump to language select interface automatically, press < or > key to switch two languages (Chinese and English), press M key to exit language select interface.
- Long press < , > & M for 2s, enter 32 channels LED disable setting interface.
- When the controller is in induction state, the indication of inductive signal input ("Light up start" and "Light down start") is displayed first, and then the light on/off status is displayed.  
If the current detected LUX value is greater than daylight sensor threshold, display "Light up off" or "Light down off" on the fourth line.



Restore Factory Settings Interface



Language Selection Interface

## Main Interface

**Step:** Set the number of steps, 04-32.

**I/O:** Setting the light on/off mode for multiple steps.

That is, sequential or synchronized light on/off, a total of four options.

**Bright:** Brightness level, 1-8, 8 is the maximum brightness.

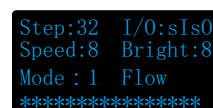
**Speed:** Speed level, 1-8, 8 is the fastest speed.

**Mode:** Run mode number, 1-6.

Note: The light on/off mode setting is not valid when in Five-step and One-step mode.

Light on/off mode list:

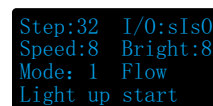
| Display | Name  |
|---------|---|
| sIs0    | Sequential light on, sequential light off     |
| sIc0    | Sequential light on, synchronized light off   |
| cIs0    | synchronized light on, sequential light off   |
| cIc0    | synchronized light on, synchronized light off |



Light on/off state on the 4 line

Run mode list:

| No. | Name  |
|-----|---|
| 1   | Flow (on one by one)                              |
| 2   | Chase (one on, one off, sequential move)          |
| 3   | Trail (light-dark gradient, sequential move)      |
| 4   | Float (dark-light-dark gradient, sequential move) |
| 5   | FiveStep (all off, five step on, sequential move) |
| 6   | OneStep (all on, one step off, sequential move)   |



Inductive indication on the 4 line

## System Parameters Setting

**PWM freq:** Set the three output PWM frequencies: 1KHz, 2KHz or 4KHz.

**ON fade:** Set 0s, 1s, 2s, 3s light on fade time.

**OFF fade:** Set 0s, 1s, 2s, 3s light off fade time.

Note:

light on/off fade is effective in flow mode;

only light off fade is effective in chase, trail and float mode when set to synchronised light off;

only light off fade is effective in five-step and one-step mode.

**Lux Set:** Daylight sensor threshold (10, 30, 50, 100, 150, 200lux, OFF),

with sufficient ambient light, the laser sensor does not turn on the light.

Daylight sensor default off. The digital value after \* is current detected LUX value.

**Sen OFF Delay:** Set auto-off light delay time at the end of sensing

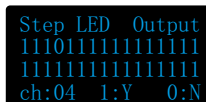
(5sec, 10sec, 15sec, 20sec, 30sec, 1min, 3min, 5min, 10min, Cancel), default 10sec.

**Push OFF Delay:** Set auto-off light delay time after push to turn on light

(5s, 10s, 15s, 20s, 30s, 1min, 3min, 5min, 10min, cancel), default cancel.

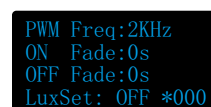
**Language:** Change language, Chinese or English optional.

## LED Channel Output Disable Setup

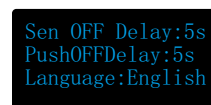


- ch: the channel which is set
- 1: enable the channel to work
- 0: disable the channel

**For example:** If the fourth channel output is damaged, please long press M , < & > key 2s to enter LED disable interface, then change the corresponding channel(04) from 1(on) to 0(off). namely the damaged channel can be ignored.



System Parameter Setting Interface 1



System Parameter Setting Interface 2

## Factory Set Default Parameters

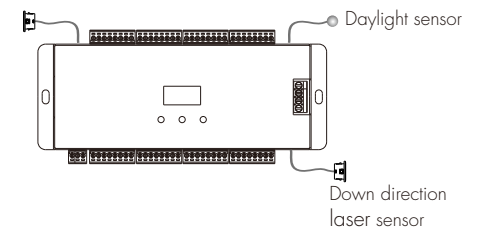
Number of steps is 32, sequential light on, sequential light off, speed level is 6, brightness level is 8, run mode is Flow, PWM freq is 2KHz, on and off fade time is 0s, disable daylight sensor, sensor auto-off delay time is 10s, cancel push auto-off delay time, system language is English.

## Induction Switch Control

Connect two laser sensors to realize staircase light automatic sensing control:

- The upward laser sensor is installed at the bottom of the staircase, when sensing a person, the light turns on automatically.
- The downward laser sensor is installed at the top of the staircase, when sensing a person, the light turns on automatically.
- After the sensing light control process is finished, wait for the delay time, the light will automatically turn off.

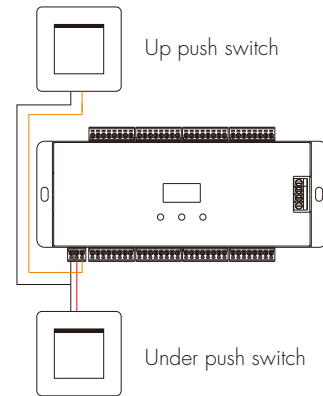
Up direction laser sensor



## Manual Switch Control

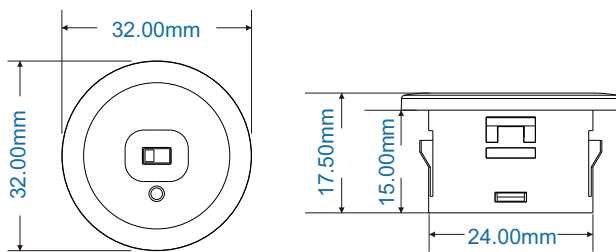
Connect two push switch to realize staircase light manual control:

- The UP push switch is installed at the bottom of the staircase, short press the UP push switch to turn on or off the light, the fourth line of the OLED main interface display "Upward switch on" / "Switch off".
- The DW push switch is installed at the top of the staircase, short press the DW push switch to turn on or off the light, the fourth line of the OLED main interface display "Upward switch on" / "Switch off".
- When the light is on, press the push switch to turn off the light immediately. If it is in the delay light-off timing state, it will automatically cancel the delay light-off timing and turn off the light immediately.
- Push switch and laser sensing can be used at the same time, after the laser sensing turns on the light, the light can be turned off through the push switch.
- Laser sense detection is not active for 5 seconds before the push switch is operated.
- The push switch operation ignores the threshold setting of the daylight sensor.

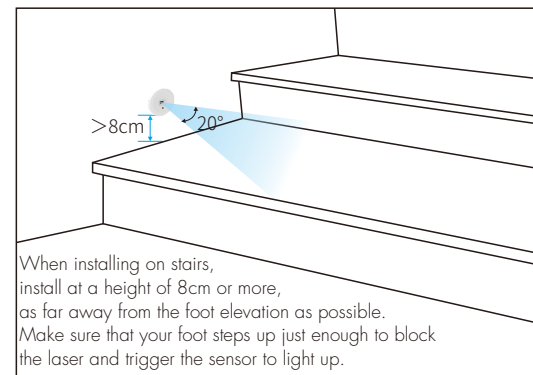


## Installation of Laser Sensor

Size of detector:



Laser sensor detection scope:



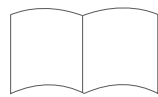
Notice for installation of laser sensor

1. The sensing head should be installed in a dry environment and keep away from windows, air conditioner and fans.
2. The sensing head should be installed in the correct direction and angle.
3. There should not be shelter(screen, furniture, large bonsai) within the range of detection.
4. Avoid touching the surface of the detector and clean the surface of the optical lens with a damp soft cloth or cotton cloth regularly to prevent dust from affecting the sensitivity.
5. This product is not fireproof, do not immerse in water or use near fire source.

## Packing List



LED Controller  
1 pcs



User Manual  
1 pcs



Daylight sensor  
(30cm)  
1 pcs



Laser sensor  
(1m)  
2 pcs



PIR sensor  
extension line (5m)  
2 pcs



Slotted  
screwdriver  
1 pcs