

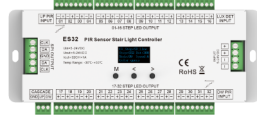
PIR Sensor Stair Light Controller

Model No.: ES32

PIR sensor/Daylight Sensor/Max 32 step/Compatible with 27 kinds IC/Max 960 pixels/OLED display

Features

- Multiple function PIR sensor stair light controller with daylight sensor.
- 32 constant voltage output drive low voltage LED strip, Max. 1A current per channel.
- 2 groups SPI(TTL) signal output, drive 27 kinds IC digital RGB LED strip, IC type and R/G/B order can be set.
Compatible ICs: TM1803, TM1804, TM1809, TM1812, UCS1903, UCS1909, UCS1912, UCS2903, UCS2909, UCS2912, WS2811, WS2812, TM1829, TM1914A, GW6205, GS8206, GS8208, LPD6803, LPD1101, D705, UCS6909, UCS6912, LPD8803, LPD8806, WS2801, WS2803, P9813, SK9822.
- Easy operation with OLED display and 3 buttons.
- four work light mode selectable.
- Two stair light controller can cascade.
- Built-in multiple color mode, speed 1-8 grade adjustable.
- Push switch can also be as induction signal input.
- With fast self-testing function.

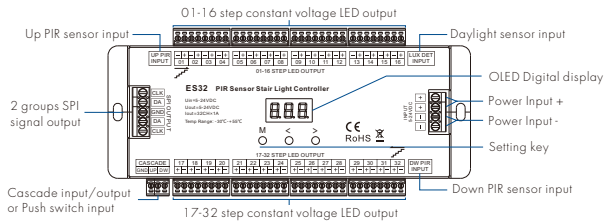


CE RoHS LVD

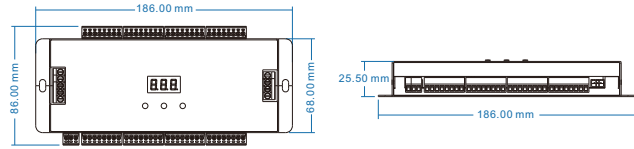
Technical Parameters

Input and Output		Environment	
Input voltage	5-24VDC	Operation temperature	Ta: -30°C ~ +55°C
Output voltage	32 x [5-24]VDC	Case temperature (Max.)	Tc: +85°C
Output current	32CH, 1A/CH	IP rating	IP20
Output power	32 x [5-24]W	Safety and EMC	
Output type	Constant voltage + SPI(TTL)	EMC standard [EMC]	EN55032:2015, EN61000-3-2:2014, EN61000-3-2:2013, EN55024:2010/A1:2015
Warranty and Protection		Safety standard[LVD]	EN 61347-1:2015 EN 61347-2-11:2015
Warranty	5 years	Certification	CE, EMC, LVD
Protection	Reverse polarity		

Mechanical Structures and Installations



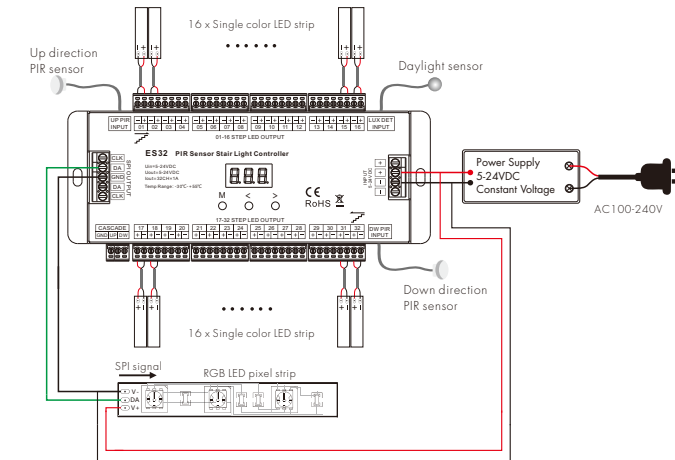
User Manual Ver 1.0.3



Accessories

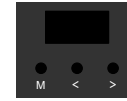


Wiring Diagram



Note: The LED pixel strip also use separate power supply.

OLED screen and key operation



1. Short press M key, enter current work light mode parameter setting state.
2. Long press M key for 2s, enter system parameter setting state, to switch four work light mode, set light off mode, set push switch input function, set chip type and RGB order, set daylight sensor threshold.
3. When in parameter setting state, short press M key to switch between multiple parameter item, press < or > key for parameter adjustment.
4. Long press M key or wait 15s to quit parameter setting state.
5. Long press M & > key for 2s, start up direction induction light testing.
6. Long press M & < key for 2s, start down direction induction light testing.
7. Long press < & > key for 2s, restore factory default parameter.
8. The fourth line display color mode name defaultly, and will display induction signal input indication or light on/off state.
9. When induction light control process is over, the light will turn off after 10s(@speed 8) automatically. For speed 1-8 level, the turn off delay time is 45/40/35/30/25/20/15/10s respectively.

System parameter setting

WorkMode: CV_Step
Off: Delay sync
Push: Cascade
LuxSet: OFF *050

WorkMode: CV+SD_L
Chip: TM1809 RGB
DeFRGB: FF FF 80
LuxSet: OFF *050

WorkMode:

Switch between four work light mode.

CV_Step: Only multiple constant voltage LED strip light mode.

SD_Line: Only 1 or 2 straight line digital pixel LED strip light mode.

SD_Step: Only multiple Z-shape digital pixel LED strip light mode.

CV+SD_L: Multiple constant voltage LED strip + 1 or 2 straight line digital pixel LED strip light mode.

Off: Switch between two light turn off mode when induction light control process is over.

Delay sync: The light turn off at the same time after the delay time.

One by one: The light turn off one by one from the tail end.

Push: Switch between two push switch function.

Cascade: The push switch input work as cascade input/output or simulate PIR inductive input.

Light on: The push operation will turn on all light and turn off automatically after the delay time.

Chip: Switch between 10 class chip (below table)

and 6 kinds RGB order (RGB, RBG, GRB, GBR, BRG, BGR).

These parameter is valid only for the work mode with SPI signal output.

DeFRGB: RGB hex value for user-define color.

The parameter is valid only for the work mode with SPI signal output.

LuxSet: Daylight sensor threshold or disable (10, 30, 50, 100, 150, 200lux, Off).

With sufficient ambient light, the PIR sensor does not turn on the light.

The digital value after * is current detected LUX value.

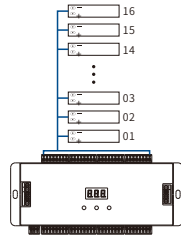
Digital pixel RGB LED strip compatible IC type list:

No.	IC type	Output signal
1	TM1809, TM1804, TM1812, UCS1903, UCS1909, UCS1912, UCS2903, UCS2909, UCS2912, WS2811, WS2812	DATA
2	TM1829	DATA
3	TM1914A	DATA
4	GW6205	DATA
5	GS8206, GS8208	DATA
6	LPD6803, LPD1101, D705, UCS6909, UCS6912	DATA, CLK
7	LPD8803, LPD8806	DATA, CLK
8	WS2801, WS2803	DATA, CLK
9	P9813	DATA, CLK
10	SK9822	DATA, CLK

Constant voltage LED strip light mode

CV_Step
Step:032
Mode:01 Speed:6
ON one by one

Step: Total step number, 008-032
Mode: White mode number, 01-03
Speed: Speed grade, 1-8, 8 is the fastest speed.



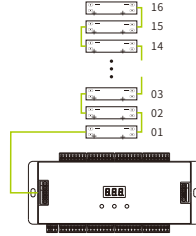
White mode list:

No.	Name
01	ON one by one
02	All OFF, Five ON
03	All ON, one OFF

Z-shape digital pixel LED strip light mode

SD_Step
Step:030 Dot:010
Mode:09 Speed:6
Color queue

Step: Total step number, 008-160
Dot: Pixel dot number of each step, 002-120
The Step number x Dot number must < 960
Mode: Color mode number, 01-12
Speed: Speed grade, 1-8, 8 is the fastest speed

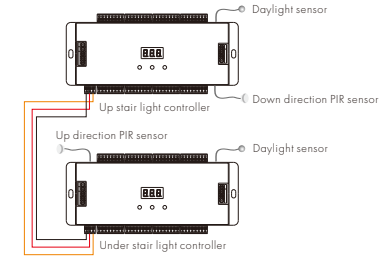


Color mode list:

No.	Name
01	Red
02	Orange
03	Yellow
04	Green
05	Cyan
06	Blue
07	Purple
08	White
09	Color queue (7 color + White)
10	Color chase (7 color + White)
11	Color fade (6 color fade)
12	Rxxx Gxxx Bxxx (User define)

Two stair light controller cascade connection

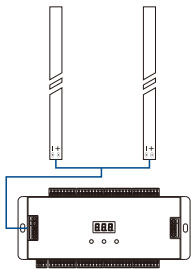
The under stair light controller connect Up direction PIR sensor and daylight sensor.
The up stair light controller connect Down direction PIR sensor and daylight sensor.
Two stair light controller connect cascade UP/DW line.
The push switch function must be set as cascade input.



Straight line digital pixel LED strip light mode

SD_Line
Dot: 300
Mode:09 Speed:6
Color queue

Dot: Pixel dot number, 032-960
Mode: Color mode number, 01-12
Speed: Speed grade, 1-8, 8 is the fastest speed.



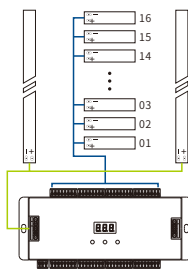
Color mode list:

No.	Name
01	Red
02	Orange
03	Yellow
04	Green
05	Cyan
06	Blue
07	Purple
08	White
09	Color queue (7 color + White)
10	Color chase (7 color + White)
11	Color fade (6 color flow)
12	Rxxx Gxxx Bxxx (User define)

Constant voltage LED strip + Straight line digital pixel LED strip light mode

CV_Step-SD_Line
Step:032 Dot:300
Mode:09 Speed:6
Color queue

Step: Total step number, 008-032
Dot: Pixel dot number, 032-960
Mode: Color mode number, 01-12
The mode number is used for straight line digital pixel LED strip only.
The mode for constant voltage LED strip is fixed On one by one.
Speed: Speed grade, 1-8, 8 is the fastest speed.



Color mode list:

No.	Name
01	Red
02	Orange
03	Yellow
04	Green
05	Cyan
06	Blue
07	Purple
08	White
09	Color queue (7 color + White)
10	Color chase (7 color + White)
11	Color fade (6 color flow)
12	Rxxx Gxxx Bxxx (User define)

Two Push switch as up/down induction signal input connection

The under push switch connect cascade UP port of the stair light controller.
The up push switch connect cascade DW port of the stair light controller.
The push switch operation will ignore daylight sensor threshold setting.

When the push switch function be set as cascade input/output,
the push operation will start induction light control process.

When the push switch function be set as light on input,
the push operation will turn on all light, and the light will turn off after 20s@(speed 8) automatically.
For speed 1-8 level, the turn off delay time is 90/80/70/60/50/40/30/20s respectively.

