

# TRONIX

# Easy connect

## 213-538

### Laser Sensor Head

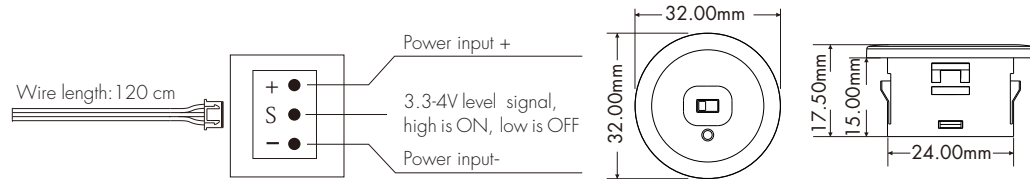
#### Features

- 3-wire laser sensor head, powered by low voltage 5VDC, output high or low level.
- When the sensor head detects the person or object in front of it, it will output high level.
- Detection distance 0.05-2.5m, sensing angle  $\pm 10^\circ$ .
- Auto ranging and manual ranging modes are available.
- Set the sensing detection distance by powering up or pressing the key.
- Six delay times can be set (2, 5, 10, 30, 60, 0s).
- Suitable for lighting staircases, courtyards, aisles, corners, corridors, etc.



CE RoHS

#### Mechanical Structures



#### SET Key Function

##### Detection distance setting:

The detection distance range is 0.05-2.5m, and switch auto or manual ranging modes by double click the SET key.

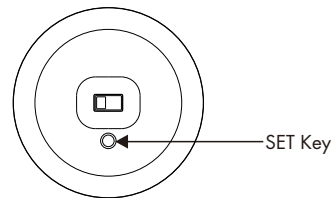
##### Auto ranging (factory default mode):

The distance is automatically detected and set every time the power is on, and the distance parameter is not memorised.

If there is no obstacle in front of the sensor head at the time of power-on, the detection distance is automatically set to 2.5 m.

If there is an obstacle in front of the sensor head at the time of power-on, for example: the sensor head is 1 m away from the wall in front of it, the detection distance is automatically set to 1 m.

You can also set the detection distance by pressing the SET key within 60 seconds of powering up the sensor head, the distance parameter is only for temporary use and is not memorised.



##### Manual ranging:

Double click the SET key after power on, switch to manual distance measurement mode, the output LED blinks 3 times.

Then short press the SET key, the distance measurement will be completed within 2 seconds and the distance parameter will be saved, the output LED will flash 1 time.

Double click the SET key again to return to automatic ranging mode, the output LED will flash 2 times.

Manual ranging remembers the last saved distance parameter, which is suitable for the scenarios where the detection distance needs to be fixed (e.g. locking the detection range after the device is installed).

Note: When short press the SET key to measure the distance, people should not block in front of the sensor head.

#### Delay time setting:

Within 60 seconds of powering up the sensor head,

long press the SET key for 2 seconds to set 6 delay times (2, 5, 10, 30, 60, 0 seconds).

When set to 2 seconds delay time, the indicator and output LED will flash once;

When set to 5 seconds delay time, the indicator and output LED will flash twice;

When set to 10 seconds delay time, the indicator and output LED will flash 3 times;

When set to 30 seconds delay time, the indicator and output LED will flash 4 times;

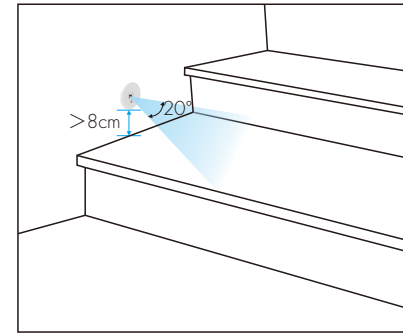
When set to 60 seconds delay time, the indicator and output LED will flash 5 times;

When set to 0 seconds delay time, the indicator and output LED will flash 6 times;

Note:

1. The first long press after powering up the sensor head does not change the delay time, but only indicates the current delay time by flashing the light.
2. The factory default delay time is 2 seconds, i.e., after the human body/objects leave the sensing range, the output signal will become low after 2 seconds delay.

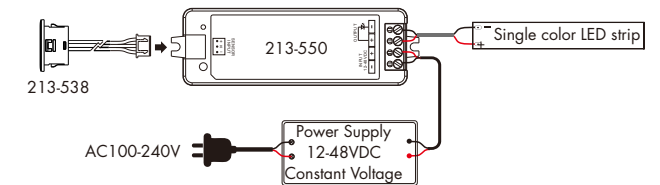
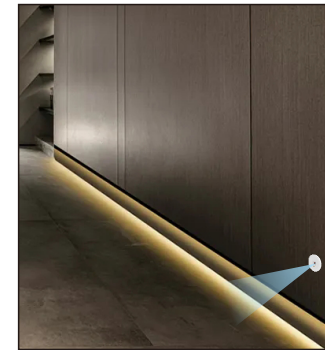
#### Sensor Head Installation Position



When installing on stairs, install at a height of 8cm or more, as far away from the foot elevation as possible. Make sure that your foot steps up just enough to block the laser and trigger the sensor to light up.

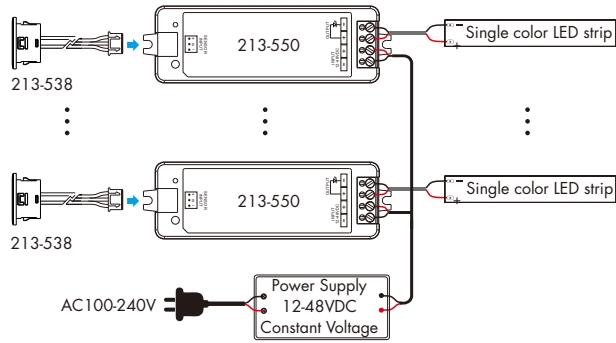
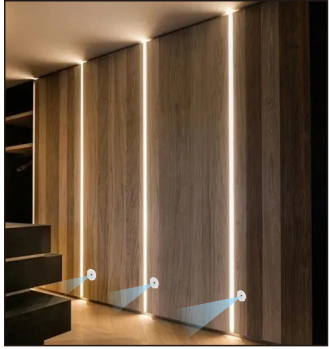
#### Sensor Head Installation and Application

- One 213-538 sensor head + one 213-550 sensor constant voltage LED controller



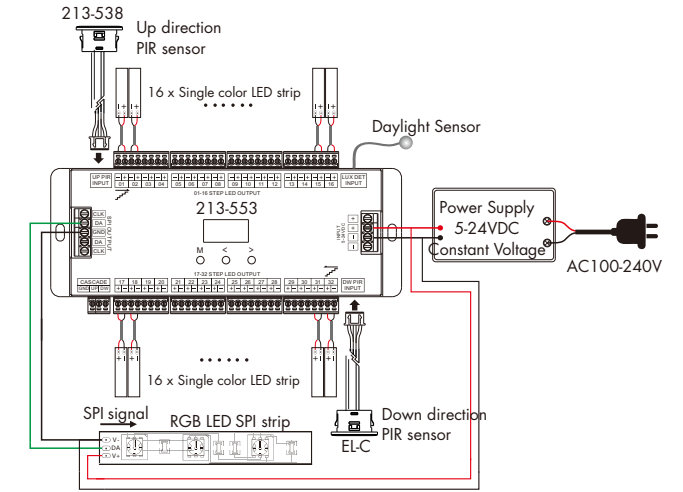
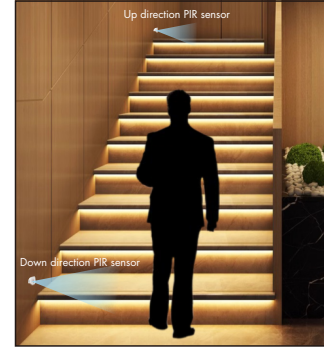
For a single application, it is recommended to set the delay time of the laser sensor head to 30 or 60s. Realize people come and light up, and turn off the light at a delayed time when people leave.

• Multiple 213-538 sensor head + multiple 213-550 sensor constant voltage LED controller



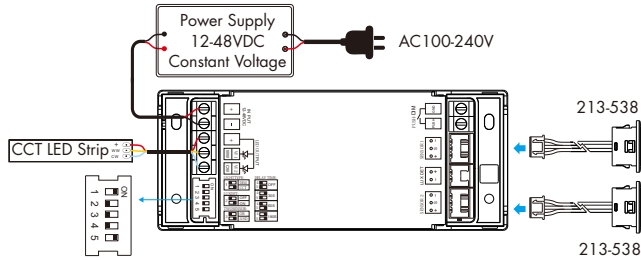
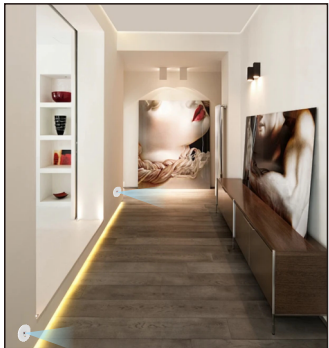
For multiple applications, it is recommended to set the delay time of all laser sensor head to 5 or 10s. Realize the sequential switching control of multiple lights according to the direction of human walking.

• Dual 213-538 sensor head + ES32 sensor stair light controller



Connect the 213-553 sensor stair light controller to two laser sensor head, which are installed at the top and bottom of the stairs. Set the delay time of the laser sensor head to 2s (default). Set the delay off time by the OLED screen (5s, 10s, 15s, 20s, 30s, 1min, 3min, 5min, 10min). Achieve sequential switching control of multiple staircase lights.

• Dual 213-538 sensor head + dual sensor Dimming & CCT constant voltage LED controller



The constant voltage controller is connected to two laser sensor head which are installed on each side of the corridor. The delay time of the laser sensor head is set to 2s (default value), Set DIP switch 3 to OR (light on when any one of the sensing inputs is on). Set DIP switch 4-5 to 30, 60 or 180s. Realize the light will be on when people come to the corridor and turn off the light when people leave. Note: Since the detection distance of the sensor head is 2.5 meters, when the width of the corridor or staircase is 2.5-5m, two sensor head can be installed opposite to each other.

Installation Precaution

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.