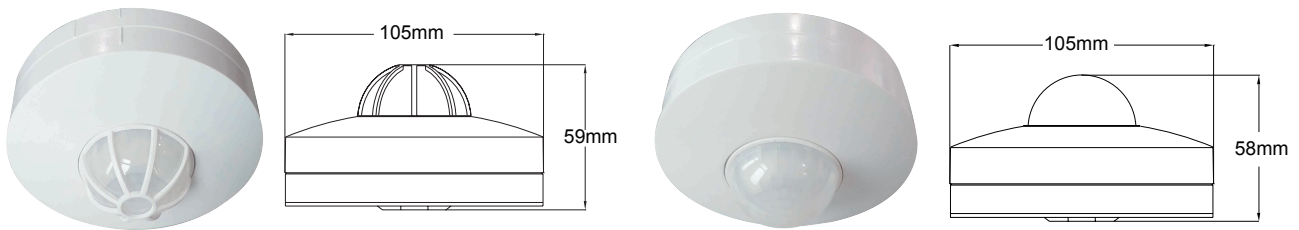


# PD-PIR101-Z Infrared Sensor Instruction



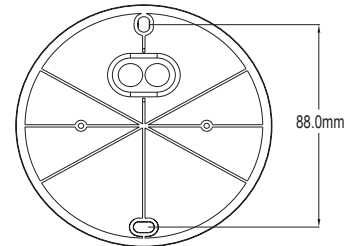
## Summary

This product is an advanced digitally controlled infrared pyroelectric intelligent sensor product. It uses the MCU to accurately calculate the switch information, and accurately controls the relay to be turned on at the zero point of the sine wave, so that each load is turned on. At the zero point of the sine wave, the inrush current problem caused by the conventional control mode when the sine wave high voltage is turned on is avoided, especially the large current damage relay generated by the large-capacity capacitor under the impact of the high voltage under the load.

Due to the diversification of current electrical loads, especially LED lamps, energy-saving lamps, and fluorescent lamps all have capacitors with different capacitances. This is a disaster for relays. Sometimes a 50W LED lamp can generate surge currents of 80 to 120A. The 10A ordinary relay can only withstand 3 times of the inrush current, and it is likely that the relay will be broken in a few days or several times. This is why the conventional sensor on the market has a short life and a small load current.

In order to overcome this problem, this product adopts advanced digital precision calculation to turn on the load when the sine wave is at zero potential, thus solving the load surge current problem, greatly enhancing the load capacity and prolonging the service life of the product. The latest control method of mass production sensor technology can easily control any load. It is a medium and high-end product. Although the cost is increased compared with the conventional version, the reliability and life of the product are greatly increased. This product is equal to choosing peace of mind, and choosing safety.

This product has a switching power supply version and a capacitor step-down version. The switching power supply version has a working voltage of up to 100V-277V and a standby power consumption of <0.5W. In principle, the capacitive step-down version can only have a single voltage, and the standby power consumption is >0.7W. You should consider it when choosing a product.



## Specifications

Power source: 220-240VAC, 50Hz/60Hz ☐  
100-130VAC, 50Hz/60Hz ☐

All loads: 1200W (220-240VAC)  
800W (100-130VAC)

Time setting: 10sec-12min (adjustable)

Light-control: <10LUX-2000LUX (adjustable)

Detection range(22°C): 3-12m (radii.) (adjustable)

Detection angle: 360° (ceiling installation)

Installation height: 2.5-4.5m

Working temperature: -10°C-+40°C

Working humidity: <93%RH

Sense motion speed: 0.6-1.5m/s

Sensor's LED:

1. After power-on for 30 seconds, it enters the normal induction state. During this time, the LED lights flash once every second.
2. It light once when the unit receives sensing signal.

## Function

### ➤ LUX adjustment:

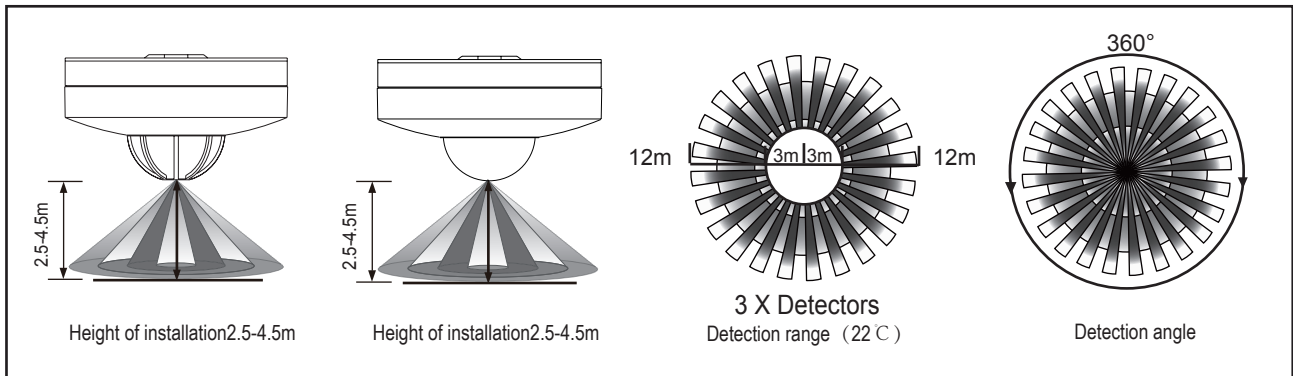
LUX refers to the illuminance of the environment. Adjusting the LUX adjustment knob allows you to choose which illuminance you want to get the sensor into the induction. Choose the habit that suits you.

Some of the choices in the 20LUX solution are to be illuminated. Some choose 50LUX ambient illumination to be inductive lighting, and some choose to be inductive lighting at any time, as long as the LUX adjustment knob is adjusted to the maximum.

➤ Time adjustment:

The time adjustment knob is used to adjust the time after the sensor senses the light, and the user can reasonably select the delay time after the induction.

## Sensor information



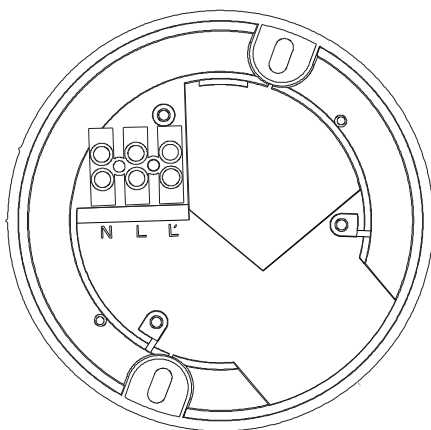
## Knob setting

- ① SENS: Adjust detection range. Turn clockwise to increase it and turn anti-clockwise to decrease it. It is 3m when turn to min, and it is 12m when turn to max.
- ② TIME: Adjust time setting of load work. Turn clockwise to increase it and turn anti-clockwise to decrease it. The time setting is about 12min when turn to max, and the time setting is about 10sec when turn to min .
- ③ LUX: Adjust working light. Turn clockwise to increase it and turn anti-clockwise to decrease it. When turn to min, it will only work below the light-control about 10LUX, when turn to max, it can work any light-control.

**ATTENTION: When use this product, please adjust the sensitivity to an appropriate position you need, please do not adjust the sensitivity to maximum, to avoid the product does not work normally caused by wrong motion. Because the sensitivity is too high easily detect the wrong motion by wind blowing leaves & curtains, small animals, and the wrong motion by interference of power grid & electrical equipment. All those lead the product does not work normally !**

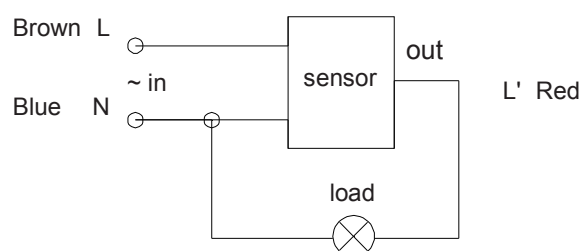
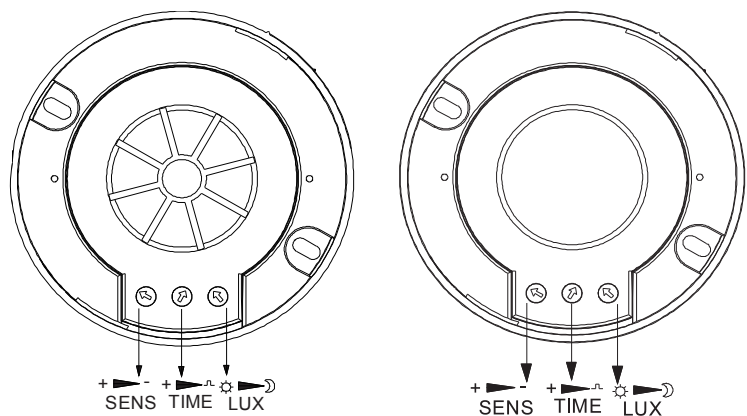
**When the product does not work normally, please try to lower the sensitivity appropriately, and then test it.**

## Connection-wire diagram



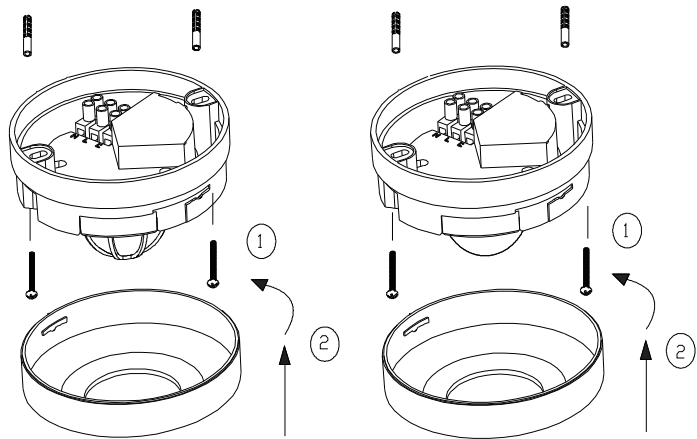
L Brown  
N Blue  
L' Red

connect L and N with power;  
connect L' and N with load.



## Installation instruction

- (1) Before installing switch off power;
- (2) Rotate top cover anti-clockwise and take off it, tighten off the screws fixing bottom cover;
- (3) Install the bottom cover on selected position with screw (like ①);
- (4) According to the connection-wire diagram connect the power wire and load wire into the connection line column in sensor;
- (5) Button top cover on sensor and rotate it tighten clockwise (like ②), the installing finished.



## Note

- Should be installed by electrician or experienced man.
- Avoid installing it on the unrest objects.
- There shouldn't be hindrance and moving object in front of the detection window effecting detection.
- Avoid installing it near air temperature alteration zones such as air condition, central heating, etc.
- Considering your safety, please don't open the cover when you find the hitch after installation.
- If there is difference between product and instruction, please refer to product mainly.

## Some problem and solved way

- The load don't work:
  - a. Please check the power and load connect is correct.
  - b. Check if the load is good.
  - c. Check if the show lamp accelerates its speed after detecting.
  - d. Check if the working light corresponds to the light-control.
- The sensitivity is poor:
  - a. Please check if there is hinder in front of the detection window to effect receiving the signals.
  - b. Please check if the ambient temperature is too high.
  - c. Please check if the signals source is in the detection fields.
  - d. Please check if the installation height corresponds to the height showed in the instruction.
  - e. Please check if the moving orientation is correct.
- The sensor can't shut the load automatically:
  - a. Check if there are continual signals in the detection fields.
  - b. Check if the time setting is set to the longest.
  - c. Check if the power corresponds to the instruction.
  - d. Check if the temperature change obviously nears the sensor, such as air condition or central heating etc.



## Warning!

- Please confirm with professional installation.
- Please cut off power supply before installation and removal operations.
- Make sure that you have cut off the power for safety purposes.
- Improper operation caused losses, the manufacturer does not undertake any responsibility.

This manual is for the current content programming of this product, there are any changes and modifications to the manufacturer without notice!

This instruction, without our permission, should not be copied for any other purposes.