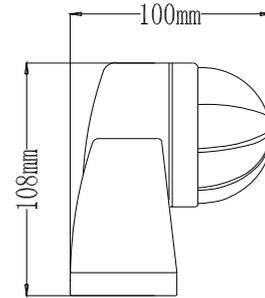
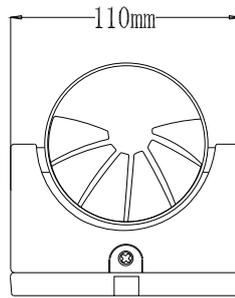


# PD-PIR105-Z Infrared Motion Sensor Instruction



## Summary

This product is an advanced digitally controlled infrared pyroelectric intelligent sensor product. This product uses one high-resolution sensor that is almost twice the sensitivity of a single traditional sensor. 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)

Detection range(22°) :15m Max.

Detection angle: 120°

Light-control: <10LUX~daylight (adjustable)

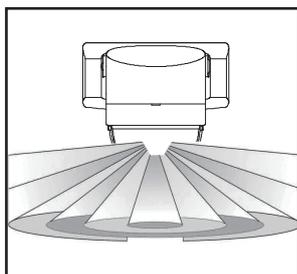
Working temperature: -10~+40°C

Working humidity: <93%RH

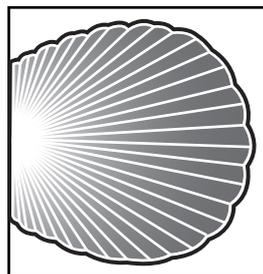
Installation height: 1.8m~2.5m

Detection moving speed: 0.6~1.5m/s

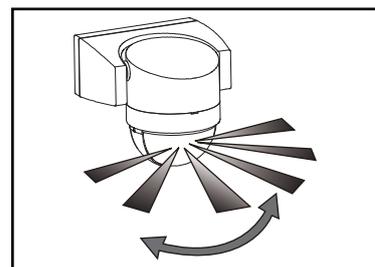
## Sensor information



Height of installation 1.8-2.5m



15m Max  
 Detection range (22°)



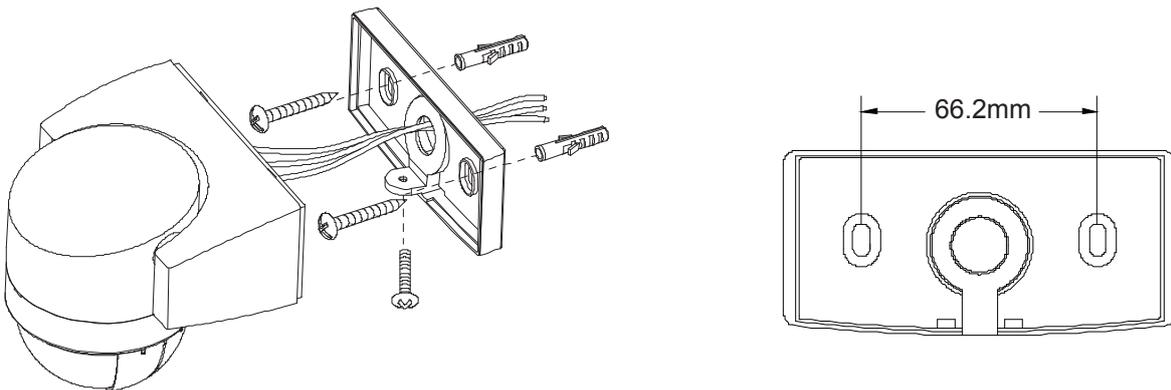
120°  
 Detection angle

## 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.

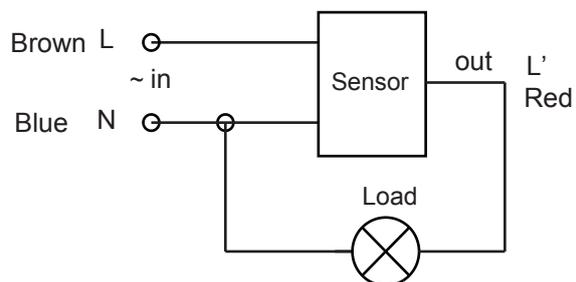
## Installation (see the following diagram)

- Before installing switch off power;
- Untighten the base screw, and install the base on needed position with dilatants and screws;
- According to the connection wire figure connect the power wire and load wire into the connection line column in sensor;
- Fix the sensor body on bottom cover;
- Button top cover on sensor and tighten the base screw.



## Connection-wire diagram

L Brown  
N Blue  
L' Red  
connect L and N with power;  
connect L' and N with load.



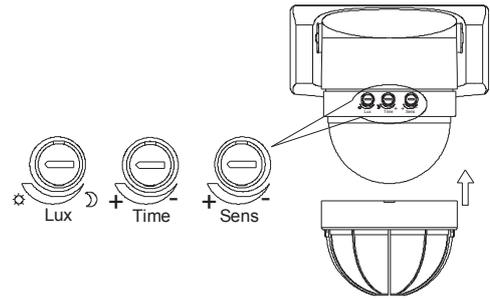
## Test

- Turn Lux knob clockwise to the max (☀); Time knob anti-clockwise to min(-) and the Sens knob clockwise to max(+).
- Switch on power, the LED is green and about 30sec later the sensor is in stable working state;
- When the load is extinguished for the first time, make it sense again after 5sec, the load should work, the LED turn orange. And under no sense condition, the LED resume green, the load should stop working after about 10sec;
- If turn the Lux knob anti-clockwise to min(☾) and test it in the ambient light beyond 10LUX, after the load stop working, sense it the load should not work; with an opaque object (for example towel, etc) cover the detection window, the load should work, under no sense condition, it is normal that the load stop working within about 10sec.

## 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.



## Attentions for installation

- Let electrician or experienced person install it;
- Don't regard unrest object as its installation basis.
- In front of the detection window there should be no obstruction or moving object to effect its detection;
- Don't install it where air current change obviously; for example: air condition and air heater.

## Some problems and solutions

- **The load does not work:**
  - Check whether the connection of the power and load is correct or not.
  - Check whether the load is good or not.
  - Check whether the working light you set accords with the ambient light or not.
- **The sensitivity is very low:**
  - Please check whether in front of the detection window there is obstruction to effect the sensor receiving signal or not;
  - Please check whether the ambient temperature is too high or not.
  - Please check whether the sense signal is in the detection field or not.
  - Please check whether the installation height is in the range of the instruction's require or not.
  - Please check whether the moving orientation is correct or not.
- **The sensor can't shut off the load automatically:**
  - Whether there is continual sense signal in the detection field or not.
  - Whether the time setting is set to the max or not.
  - Whether the power accords with the instruction's require or not.
  - Whether the air temperature near the sensor change obviously, for example air condition, air heater etc.

## **Warning!**

- **When used in different environments, please do not to adjust the sensitivity to the highest. Because that could easily lead to malfunction.**
- **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.**

We are committed to promoting the product quality and reliability, however, all the electronic components have certain probabilities to become ineffective, which will cause some troubles. When designing, we have paid attention to redundant designs and adopted safety quota to avoid any troubles.

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