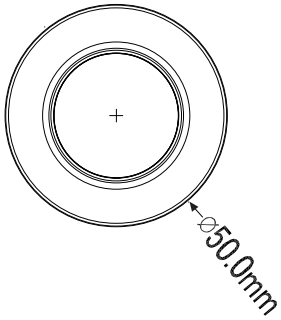
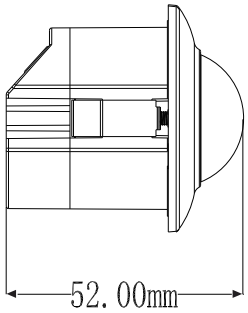
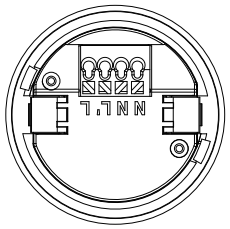
PD-PIR121-Z Infrared Sensor Instruction







Product information

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.

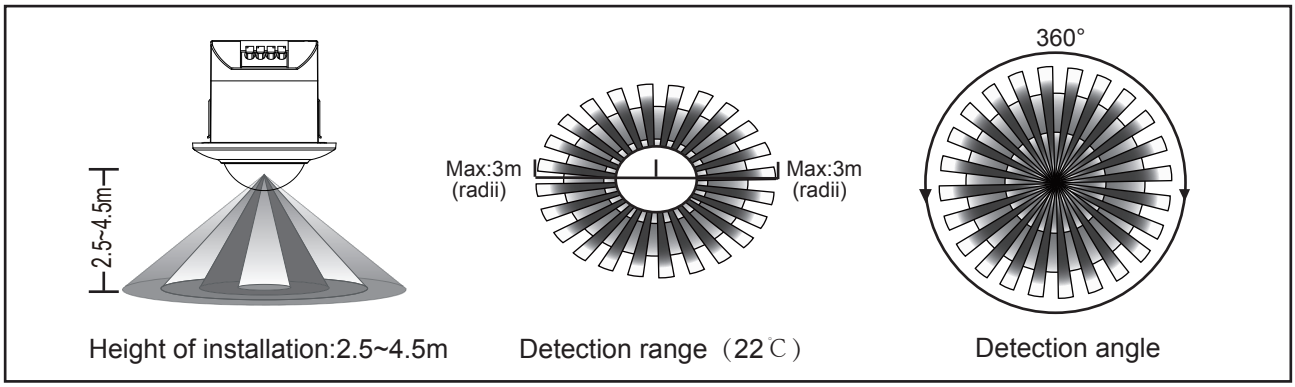
In order to overcome this problem, this product adopts advanced digital precision calculation to turn on the load when the sine wave is at zero potential, thus solving the load surge current problem, greatly enhancing the load capacity and prolonging the service life of the product. The latest control 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 50/60Hz
Rated load: 220W.any load
Time setting: 8S-8Min (adjustable)
Light-control: <10LUX~2000LUX (adjustable)
Detection range(22°C): 3m Max (radii.) (adjustable)
Detection angle: 360°
Installation height: 2.5m~4.5m
Working temperature: -10~+40°C
Detection motion speed: 0.6~1.5m/s
Working humidity: <93%RH

Sensor information

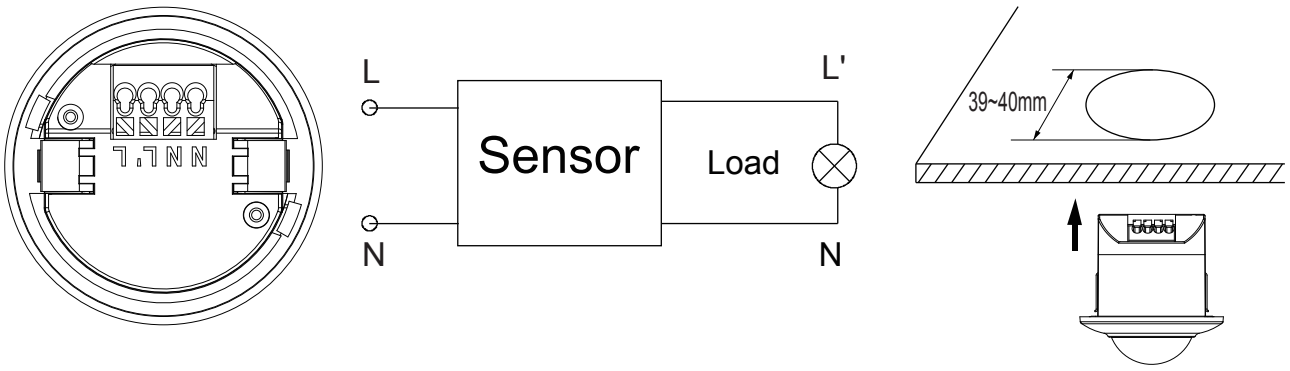


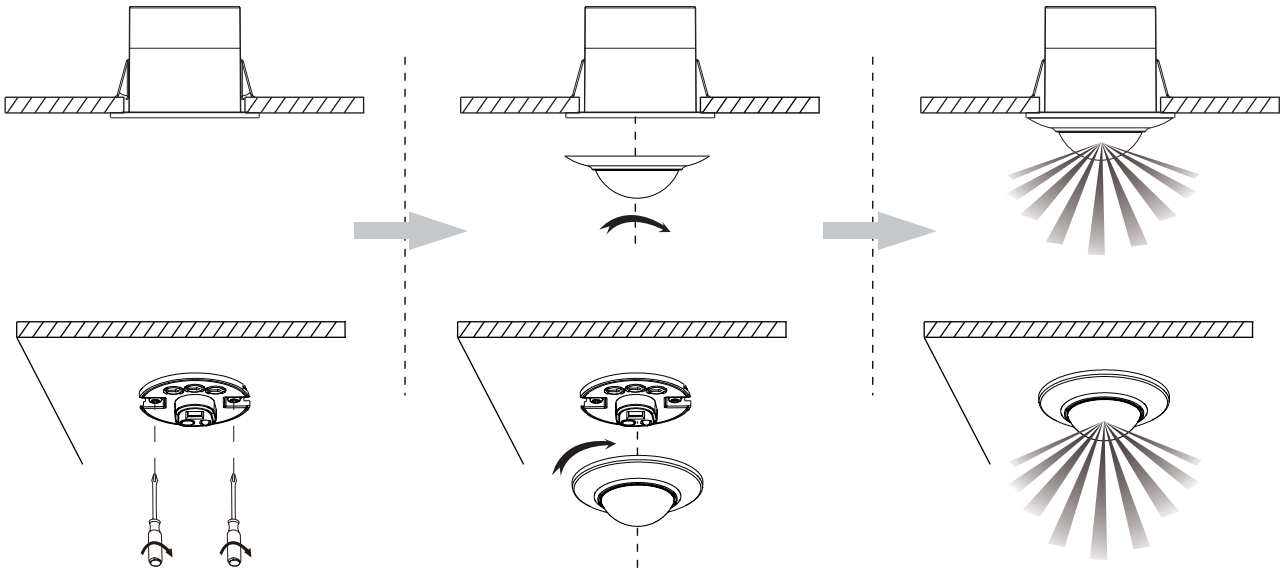
Function

- Detection field: the detection field is made up of up and down, left and right service field, it can be selected according to the consumer's desire. But the moving orientation has great relationship with the sensitivity.
- Can identify day and night: the light control can be adjusted freely when it works. It can work in the daytime and at night when it is adjusted on the "sun" position (max); but it can only work in the light control less than 10lux when it is adjusted on the "moon" position (min). As for the adjustment pattern, please refer to the testing pattern.
- Time delay can be added continually: when it received the second induction signal after the first it will compute time once more on the rest of the first time delay basic.(Set time)
- Light-control potentiometer (LUX): clockwise the knob to increase its value; anti-clockwise the knob to decrease its value.
- Time potentiometer (TIME): clockwise the knob to increase its value, the maximum delay time is 8 minutes; anti-clockwise the knob to decrease its value, the minimum delay time is 8 seconds.
- Sensitivity potentiometer (SENS): clockwise the knob to increase its value, the maximum distance is 3m(radii.).

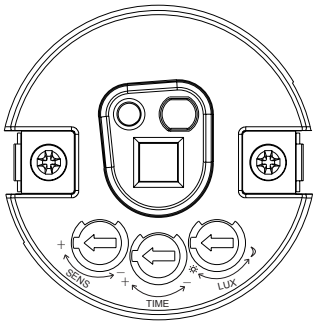
Installation (see the following diagram)

- Switch off the power.
- Set threaded tubes into the power cord and control line.
- Connect the power and the load with the sensor according to the connection-line diagram.





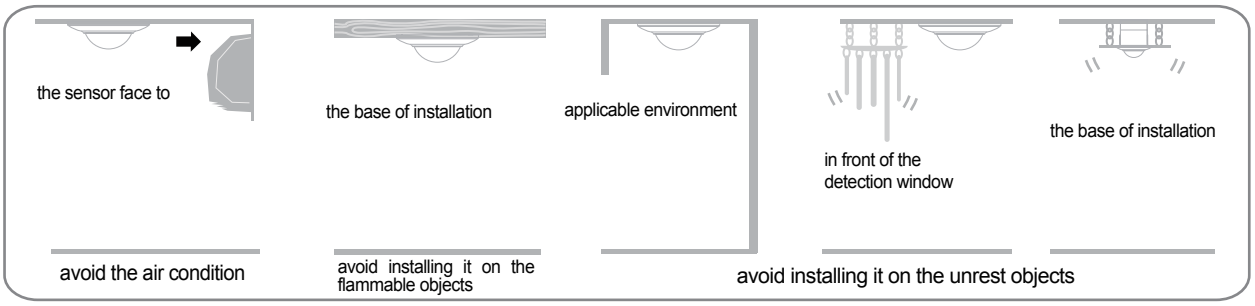
Test

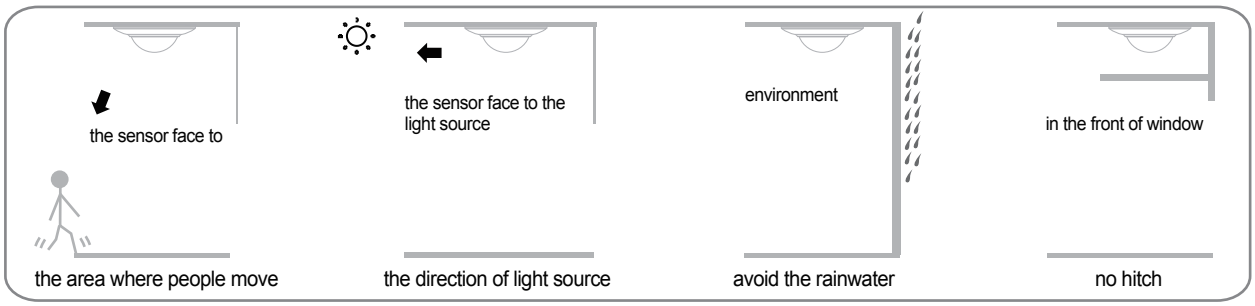


① SENS: Adjust detection range. Turn clockwise to increase it and turn anti-clockwise to decrease it. It is 1m when turn to min, and it is 6m when turn to max.
② TIME: Adjust time setting of load work. Turn clockwise to increase it and turn anti-clockwise to decrease it. The time setting is about 8min when turn to max, and the time setting is about 8sec 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.

Pay attention to installation





Notes

- Electrician or experienced human can install it.
- The unrest objects can't be regarded the installation basis-face.
- In front of the detection window there should be no hinder or unrest objects effecting detection.
- Avoid installing it near air temperature alteration zones for example: air condition, central heating, etc.
- Please don't open the case for your safety if you find the hitch after installation.

Remark

1. Keep the sensor face to the area where human usually move.
2. Keep the sensor face to the position of the ambient light in order to get much more exact illuminance setting.
3. If detect the signal again within the time-delay, the time-delay will be over lied.

Some problem and solved way

- The load don't work:
  a: Check the power and the load.
  b: If the load is good.
  c: Please check if the working light correspond to the ambient light.
- The sensitivity is poor:
  a: Please check if in front of the detection window there is hinder that effect to receive 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: If the moving orientation is right.
- The sensor can't shut automatically the load:
  a: If there is continual signal in the detection fields.
  b: If the time delay is set to the longest.
  c: If the power correspond to the instruction.
  d: If the air temperature change near the sensor, for example air condition or central heating etc.

! Warning!

- **Please confirm with prefessional 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!
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