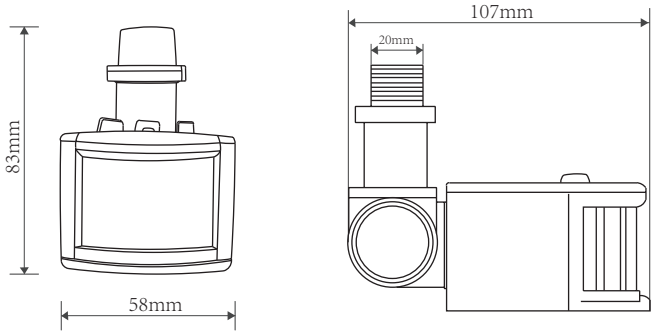
PD-PIR112-Z Infrared Sensor Instruction



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)
Detection range: 11m max. (22℃) (adjustable)
Detection angle: 180°

Working temperature: -10℃-+40℃
Working humidity: <93%RH
Time setting: 10sec-12min (adjustable)
Light-control: ＜10LUX-2000LUX (adjustable)
Detection motion speed: 0.6-1.5m/s
Installation height: 1.8m-2.5m

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.

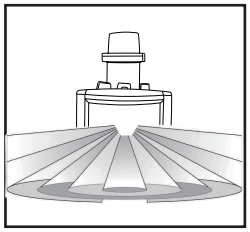
Some of the choices in the 20LUX solution are to be illuminated. Some choose 50LUX ambient illumination to be inductive lighting, and some choose to be inductive lighting at any time, as long as the LUX adjustment knob is adjusted to the maximum.

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.

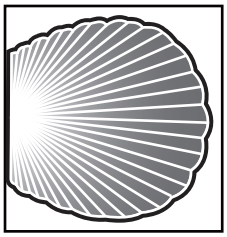
Feature

- Can identify day and night automatically. Ambient-light can be adjusted. So it will work at night and stop in the daytime. The consumer can adjust it freely.
- Detection range can be adjusted according to the local place.
- The time setting can be adjusted vary to the place.
- The light-time can be added automatically. When human moves in the detection fields when the lamp is lighting, it can compute time once more and delay automatically the light-time after the light-time detect the signals every time.
- Installation diversify: we can fit connection –line box, connection-mouth, 1/2"spiralling connection-hand.

Senser Information

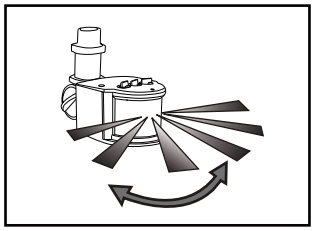


Height of installation1.8-2.5m



11m

Detection range（22℃）

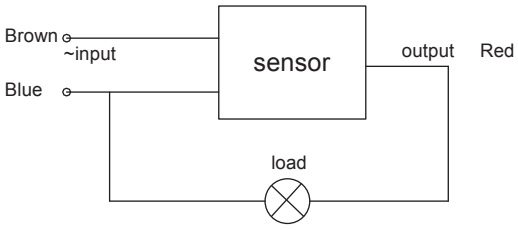


180°

Detection angle

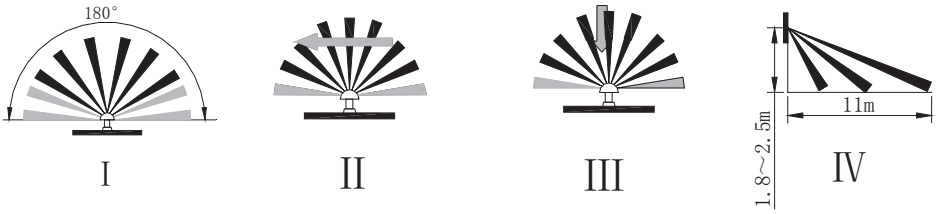
Installation

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



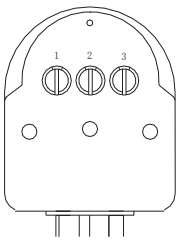
Connect

The detailed installing is confirmed according to the right figure.
Ⅰ.Detection Angle(top view) Ⅱ.Good sensitivity(arrow is the moving orientation)
Ⅲ.Poor sensitivity Ⅳ.Detection Distance and Range(side view)



Operation

1) Sensitivity: turn the knob “1” clockwise to raise its sensitivity and turn it anti-clockwise to reduce its sensitivity.
2) Turn the knob “2” clockwise to increase it and turn anti-clockwise to decrease it.
3) Light control: turn the knob”3”,this product can operate in different ambient-light.(See the fig.)



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.

Notes

Avoid installing it where there is sunshine or air stream and temperature alter obviously.
Avoid impacting the lens device with sharp things or coarse pollutant.

Some problem and solved way

- **The load don't work:**
  a: Check the power and the load;
  b: If the load is good;
  c: If the indicator lamp is green;
  d: Please check if the working light correspond to the light-control.
- **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 the ambient temperature;
  c: Please check if the signals source is in the detection field;
  d: Please check the installation height;
  e: If the moving orientation is correct.
- **The sensor can't shut automatically the load:**
  a: If there are continual signals in the detection fields;
  b: If the time setting 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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