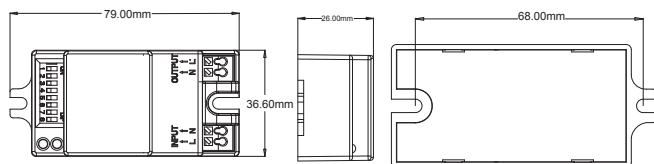


Microwave Sensor

PD-MV1027-Z Instruction



Product size



Specifications

- Power source: 220-240VAC, 50Hz/60Hz
- HF system: 5.8GHz CW electric wave, ISM band
- Rated load: 1200W Max. any load
- Protection level: IP20, Class II
- Transmission power: <math>< 0.2\text{mW}</math>
- Detection angle: 360°
- Detection range: 2m-4m-6m-8m (radii.) (adjustable)
- Time setting: 8sec-1min-6min-12min-20min, (adjustable)
- Light-control: 10LUX-50LUX-150LUX- >2000LUX, (adjustable)
- Installation sit: indoors, ceiling mounting
- Working temperature: -15°C~+70°C

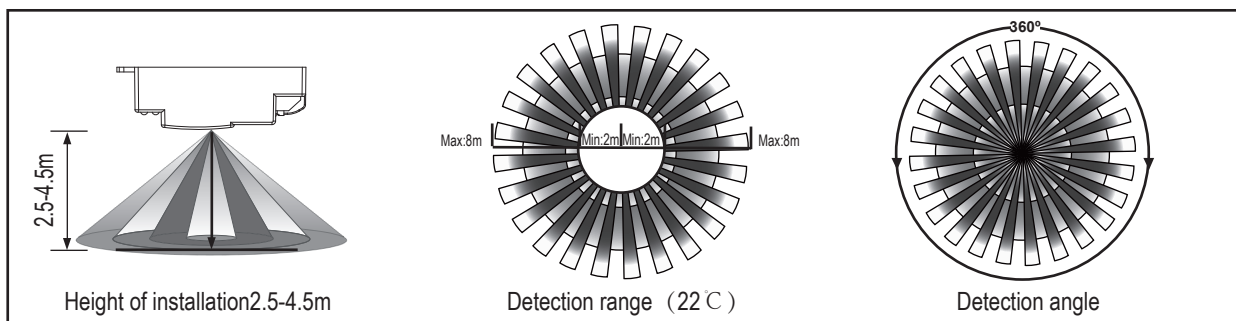
Summary

This is a hi-precision digital microwave sensor whose detection range is 360° and working frequency is 5.8GHz. It is based on doppler principle which integrates the emitting and receiving. It adopts MCU (Micro Control Unit) that greatly increases its precision and decreases its fault rate. It's delicate in appearance and compact in structure. It can be independently connected to the loads or easily installed inside the lightings with lampshade made of glass or plastic. It is widely applied in the passageway, washroom, elevator, household or other public areas for security protection or energy saving. It applies for several technical patents and is the perfect choice for your intelligent living.

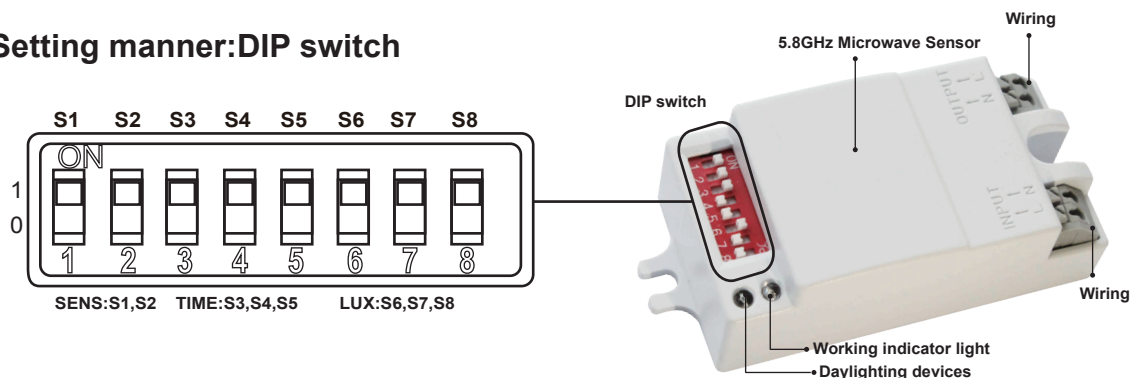
It uses the MCU to accurately calculate the switch information, and accurately controls the relay to be turned on at the zero point of the sine wave, so that each load is turned on. At the zero point of the sine wave, the inrush current problem caused by the conventional control mode when the sine wave 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.

Sensor information



Setting manner: DIP switch



Detection range setting (sensitivity) S1 S2

Detection range is the term used to describe the radii of the roughly circle casting on the ground when installed at the height of 3 m. To set the switch to ON is "1", to OFF is "0". Read through the right shown the corresponding table of the switch position to the detection range.

Notice: when using this product, please adjust the sensitivity (detection range) to an appropriate value but the maximum to avoid the abnormal reaction caused by the easy detection of the wrong motion by the blowing leaves & curtains, small animals or the interference of power grid & electrical equipment. All the above mentioned will lead to the error reaction. When the product does not work normally, please try to lower the sensitivity appropriately, and then test it. Human movement will cause the sensor induction, so when you under the function testing, please leave the induction region and don't make movement to prevent the sensor continuous work.

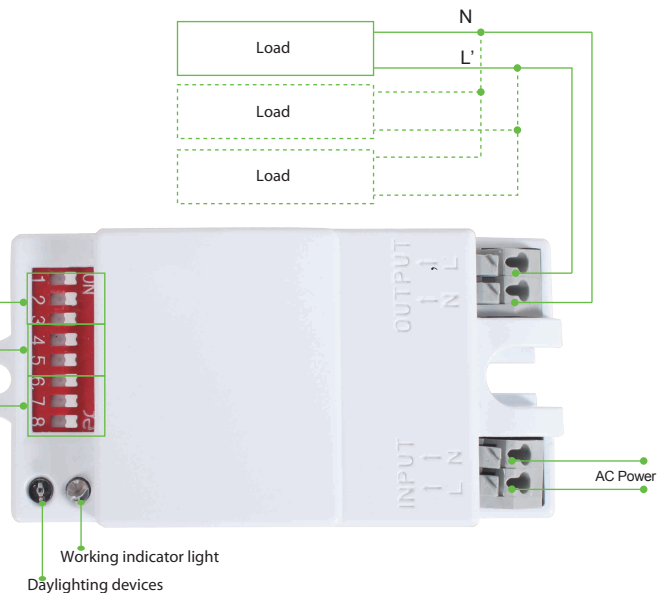
Time setting S3 S4 S5

It can be defined from 8 seconds to 20minute. Any movement detected before this time elapse will re-start the timer. It is recommended to select the shortest time for adjusting the detection range and for performing the walk test. To set the switch to ON is "1", to OFF is "0". Read through the right shown the corresponding table of the switch position to the delay time.

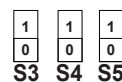
It is mainly for the adjustment of the delay time from the moment the signal detected and light auto-on till the light auto-off. You can define the delay time to your practical need. But you'd better lower the delay time for the sake of energy saving, since the microwave sensor has the function of continuous sensing, that is, any movement detected before the delay time elapses will re-start the timer and the light will keep on only if there is human in the detection range.

Light-control setting S6 S7 S8

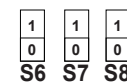
It can be defined in the range of 10->2000 LUX. To set the switch to ON is "1", to OFF is "0". Read through the right shown the corresponding table of the switch position to the light-control value.



S1	S2	Detection range
0	0	2m
0	1	4m
1	0	6m
1	1	8m



S3	S4	S5	Time setting
0	0	0	8s
0	0	1	1min
0	1	0	6min
0	1	1	12min
1	0	0	20min



S6	S7	S8	Light-control
0	0	0	10 LUX
0	0	1	50 LUX
0	1	0	150 LUX
1	0	0	2000 LUX

Load type

- CFL Energy-saving lamp
- Security alarming system
- Pure resistive load

Features

1. Non-radiation harm: its transmitter power is lower than 0.2mW, which does no harm to human body.
2. Strong anti-interference ability, can work in the temperature range of -15 C ~+70 C.
3. The frequency is constant and the frequency drift will not occur in the frequency range.

Applications

Microwave can penetrate the glass, plastic and wood, thus the microwave sensor can be installed inside the shade made of certain thickness of glass, plastic or wood. For example, the application in lightings, only if making connection as below shown can you change the common lightings into auto-sensing lightings. The application inside the lightings is one of multiple practical utilizations. You can also install one or more inside the ceiling or floor to control the whole passageway. Friendly reminder: when installing two or more microwaves together, you are required to keep 4 meters one from another, otherwise the interference among them will lead to error reaction.

Fault	Failure cause	Solution
The load fails to work.	Light-illumination is set incorrectly.	Adjust the setting of the load.
	The load is broken.	Change the load.
	The power is off.	Turn the power on.
The load works all the time.	There is a continuous signal in the region of the detection.	Check the settings of the detection area.
The load works when there is no motion signal detected.	The lamp isn't installed well so that sensor fails to detect reliable signals.	Re-adjust the installation place.
	Moving signal is detected by the sensor (movement behind the wall, the movement of small objects, etc.)	Check the settings of the detection area.
The load fails to work when there is motion signal detected.	The motion speed is too fast or the defined detection area is too small.	Check the settings of the detection area.



Warning! The following situations will lead to error reaction.

1. Being installed on the rocking object will lead to error reaction.
2. The shaking curtain blown by wind will lead to error reaction. Please select the suitable place to install.
3. Being installed where the traffic is busy will lead to error reaction.
4. The sparks produced by some equipment nearby will lead to error reaction.

- Please confirm with professional installation.
- For safety purposes, please cut off power before installation and removal operations.
- Any losses caused by improper operation, the manufacturer does not undertake any responsibility.