

Power Saving Motion Detection Sensor

AMS-1500 (Automatic Microwave Motion Sensor Switch)

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[Before you use this Green-Saver, you should aware of this manual. And you must pay attention to any other accident because of taking this saver apart discretionary.]

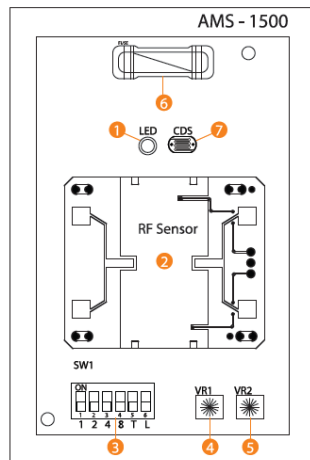
1 Feature

Model AMS-1500 is the first super power-saving human motion detection sensor switch that detects human motion and things' fine movement by humans within the human living space and turning of lights on and off of fluorescent lamps with the application of the micro wave motion sensor, a first in the world, based on Doppler radar.

It can be used in various inferior environments due to heat, temperature and humidity without causing errors in its operation. Furthermore, real-time lighting on and off can be realized because of both the extension of its sensing scope and the enhancement of its sensitivity.

No.	Features	Details
1	Intelligent Motion	Automatic on/off of fluorescent lamp by fine human motion and movement of things.
2	Maximizing Energy Saving Effects	Real-time lighting on and off due to the enhancement of the sensing scope and its sensitivity.
3	Automatic Lengthening of Light-on Time	Sensing a movement during lighting-on, it resets the timer to lengthen the light-on time automatically.
4	Punctuality of Light-on Time	Light-on time can be adjusted without any deviation from 1 minute to 90 minutes (1 minute unit).
5	Convenience of Installation	Installing the system to the wire of the fluorescent lamp switch in use to apply onto wherever.
6	Stable Loaded Power Supply	Stable loaded power supply due to high speed, noiseless, delay-less electronic contact method.
7	Lighting on/off by the intensity of illumination (lux)	Stable operation by realizing the protective circuit of an input/output, over-voltage and over-current situation.
8	Sensing Scope with no dead Angle zone	It can sense the transmitting of the bathroom partition with about 5cm in thickness. Sen-sing scope can be adjustable between 1m and 20m(It can be varied depending the space). The number of installation sensors can be reduced compared with the PIR method.
9	Each Set Value Memory	Each set value is kept even in the case of a power failure or the lights turned on/off.
10	Substitute Effects of the existing Sensor Lamp	Substitutes a high voltage incandescent electrical lamp with a low voltage fluorescent lamp (60W incandescent lamp = 11W fluorescent lamp by brightness comparison).
11	Stable Operation	Stable operation by realizing the protective circuit of an input/output, over-voltage and over-current situation.

2 Internal Composition and Name of Parts



1. Detection LED

Lighting on if a motion is sensed.

2. Sensor Module

Doppler Radar Sensor

3. Set Time Indicator (SW1), Detection LED Enable Indicator(SW1)

SW1[no5] turn on: unit of 1 minutes per Standard-Time.

SW1[no5] turn off: unit of 10 minutes per Standard-Time.

Set-Time Indicator operates each, if you set time three minutes, then fit SW2 into left, no1/no2 switch of SW1 turn on(1+2=3), and no3/no4 switch of SW1 turn off.

[Time-set is sequence of 1,2,4,8 with system of 16 HEX.]

Method of test:

If you fit SW1[no5] switch into off SW1[no1,no2,no3,no4] switch off, then time set 5 second.

If you fit SW1[no5] switch into on SW1[no1,no2,no3,no4] switch off, then time set 10 second.

SW1[no6] turn on: Detection LED Enable.

SW1[no6] turn off: Detection LED Disable.

4. Human Motion Sensing Scope Adjusting Volume (VR1)

Adjustable sensing distance of 2m at minimum ~ 15m at maximum.

If you turn right this, sensing distance is improved.

5. Lux Setting Volume (VR2)

Setting Minimum(Left): If belowed 10 Lux / human motion sensed, Lighting turn on.

Setting Middle: If belowed 250 Lux / human motion sensed, Lighting turn on.

Setting Maximum(Right): If human motion sensed without regard to Lux, Lighting turn on.

6. AC Fuse (250V 10A)

Overload Prevention Fuse

7. Lux Sensor

Sensing of the brightness of the surroundings.

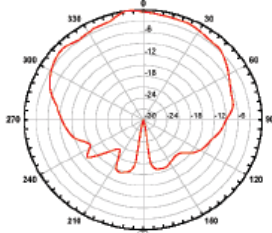
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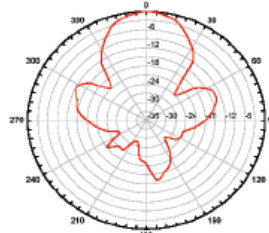


3 Sensing Scope

- Sensing scope is a 135° horizontal angle, a 40° vertical angle with the maximum distance of 20m (Adjustable 1m ~ 20m)
- Sensing the obstacle within about 3cm in thickness usually by transmitting it.
- Enhancing both the sensing scope and its sensitivity in a little bit of closed space.
For instance, bathrooms, narrow and long corridors, and etc.



Horizontal Sensing Scope



Vertical Sensing Scope

4 Rating and Specification

Classification		Specification	Remarks
Power Supply (Rated Voltage)		AC110~220V/50~60Hz	
Consumption Rated Load (Rated Power Spontaneous Load)	Rated Power Spontaneous Load	1,200W	
	Maximum	1,500W	
Operation	Set RangeTime	1minute ~ 90minutes	Adjusting each unit of 1 minute using FND and Switch
	Deviation of Time	+/- 1sec/min	
	Time Lengthening	Reset the timer in sensing while turning the lighting-on	Prevention of unnecessary lighting
AC Load Control		Power control by electronic contact	Noiseless, Delay-less
Operation Method	Sensor	Microwave motion sensor	Doppler Radar
	Started Lighting	Sensing a motion below the Lux set before	
	Motion Feature	High reliable, high speed Continuous detection	
Installation Method		Installing it onto the wire of an existing switch	Refer to the wiring method

5 Installation

Considerations prior to installation

1. Location Selection

Select the location at which the power saving effect can be maximized with the application of Sensing Scope.

2. Selection Power Load

- Select the fluorescent lamps that are operable within the rated load of 220V, 1,500W.
- If it is necessary to exceed the rated load, you can extend the distance of 5 km with setting up the additional monolithic element SSR

3. Lighting-on Time Set

- Set the time according to the special features of the lighting-on location.
- Lighting-on time should be 5 minutes at minimum to avoid unnecessary lighting-on and -off. (Recommended)
- The timer of the sensor can be adjusted at any time if a change of lighting-on time is necessary.

4. How to Install

Wire reference to the map of wiring.

Precautions of Green Saver's wiring

- Black and white wires is used power source that operates Green Saver.
- Two yellow wire is Switching-Wire.

It turns on when human motion sensed, and turns off when Time-Set pass.

Notice: A circuit is out of use, if yellow wire is connected power source.

(Don't service free charge, because of mistake of wiring)

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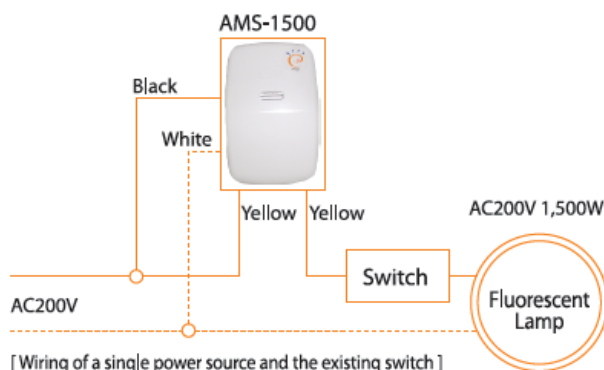
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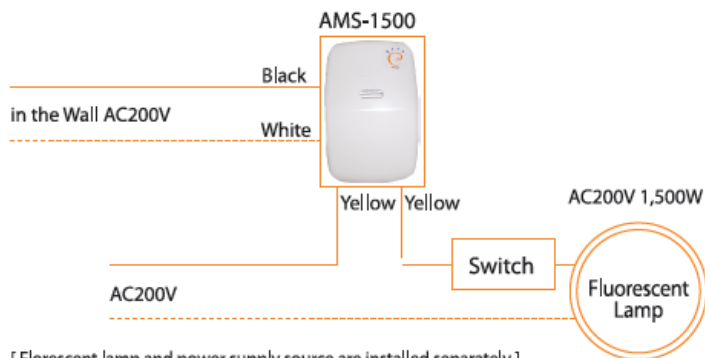
6 How to Wire



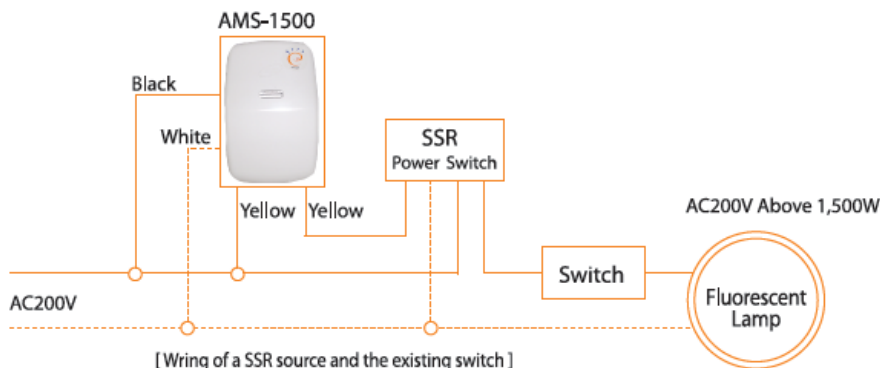
[General Wiring of Fluorescent Lamp]



[Wiring of a single power source and the existing switch]



[Florescent lamp and power supply source are installed separately]
Recommended Advantage: The existing switch can be used in case of an error in the system.



[Wring of a SSR source and the existing switch]

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7 Abnormal Symptom

Abnormal Symptom	Cause	Solution	Remark
No reaction even though the power to sensor is "On" (The number indicator of FND does not turn-on)	Cut off the power supply	Check power supply device and its connection cable or the power source	
	The fuse for sensor operation is cut due to an input power problem	Input power problem or inferior quality of the insides of the sensor system	Inquire or request for a repair to the maker
LED does not light-on to a motion	Low sensitivity (sensing scope)	Extend the sensing scope by a VR1	Sensing scope is increased clockwise
	Low performance of RF sensor	Inquire and request to the maker for after service	
	Inconsistent with the detection direction of the sensor	Adjust the direction of the sensor	Utilize the sensing scope
	Impossible to detect due to large obstacle	Remove the obstacle or adjust the location of the sensor	Sensing the object with about 5cm in thickness by transmitting it.
Fluorescent lamp lights-off during the sensor's operation	The sensing scope is narrow.	Extend the sensing scope by a VR1	
	Inconsistent with the detection direction of the sensor	Adjust the direction of the sensor	Utilize the sensing scope
	The scope and frequency of the sensor operation is low.	Increase the lighting-on time	
	Wider space than the sensing scope	Relocation of the sensors or additional sensors are required.	Inquire to the maker
Sensor LED lights-on, but fluorescent lamp does not light-on	The brightness of the sensor's surroundings is higher than the pre-set Lux.	Increase the operation of the Lux by turning the VR2 anticlockwise.	
	Cut off the fuse for output load	Adjust the load capacity because it is the fuse cut due to an over rated load.	Replace the fuses after cutting off the input power to sensor.
		The cut of fuse due to load problem. Replace the fuses after solving it.	
The fluorescent lamp does not light-on.	The lighting-on time is too long.	Decrease the time for lighting-on	
	Continuous and repeated motions within the sensing scope. For instance, the turning of the fan, window curtains moving because of the wind, pet animals, etc.	Remove the obstacle, or relocate the sensors.	

8 Precautions

This manual has been made for users to use the product in its appropriate way, as well as, prevent any damage to users' properties and to maintain safety. Please read the instructions of this manual carefully prior to the product's installation.

Instruction for Installation

- The product should be installed by an electrician or other qualified personnel.
- The product is made suitably for the lighting-on/off action of indoor lighting instruments. (Please do not install it outdoors.)
- Avoid medical equipment and wireless equipment in the installation of the product due to errors in operation by their wireless wave (RF)
- Applying impact or excessive force to the product causes a problem to its performance and function.
- Do not touch the product with wet hands because of the possibility of getting an electric shock.
- The location at the upper end of a corner, with a command of a whole view, is suitable for the installation of the product, though it can be different depending on the sensing scope.
- A large obstacle or a source interrupting the product's RF wireless signal in the sensing scope may cause errors in its operation.
- If there is a continuously moving object within the sensing scope, remove it from there, or relocate the sensor to where no such moving object exists.
- Please contact the maker or the agency nearby if you have any inquiries concerning the product when a problem arises.
- This product is subject to modification or improvement without prior notice to improve its performance and function

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FCC Warning:

FCC Part 15 Rules prohibits any modification/changes to the device and could void the user's authority to operate the equipment. Cables or other connectors should comply with the emissions limits.



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