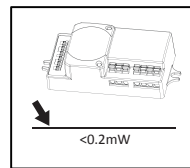
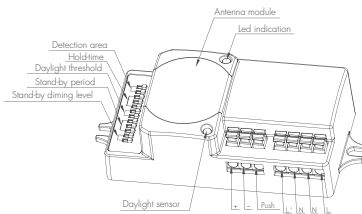


User Manual of Microwave Motion Sensor New advanced version Model No.:HC018V

Technical Specifications

PRODUCT TYPE:	Microwave Motion Sensor
OPERATING VOLTAGE:	220-240VAC 50Hz/60Hz
HF SYSTEM:	5.8GHz CW radar
TRANSMISSION POWER:	<0.2mW
RATED LOAD:	800W(capacitive Load)
DETECTION ANGLE:	30°~150°
POWER CONSUMPTION:	Approx. 0.5W
DETECTION RANGE:	Max. 12 x 6m (DxH)
TIME SETTING:	5s~30 min.
DAYLIGHT SENSOR:	2~50Lux, disable
STAND-BY PERIOD:	0s, 10s ~ 1h, +∞
STAND-BY DIMMING LEVEL :	10% ~ 50%
MOUNTING:	Indoors, ceiling & walling mounted
Working temperature:	-20 ~ +60°C



The sensor is an active motion detector; it emits a high-frequency electro-magnetic wave 5.8GHz and receives its echo. The sensor detects the change in echo from movement in its detection zone. A microprocessor then triggers the switch light ON command. Detection is possible through doors, panels of glasses thin walls.

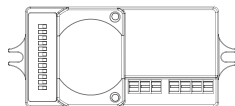
NOTE:the high-frequency output of this sensor is <0.2mW;approximately just 1% of the transmission power of a mobile telephone.

IMPORTANT

PLEASE READ THESE INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION AND RETAIN THIS LEAFLET IN A KNOWN AND SAFE PLACE FOR FUTURE REFERENCE.

SECTION 1 INSTALLATION & WIRING

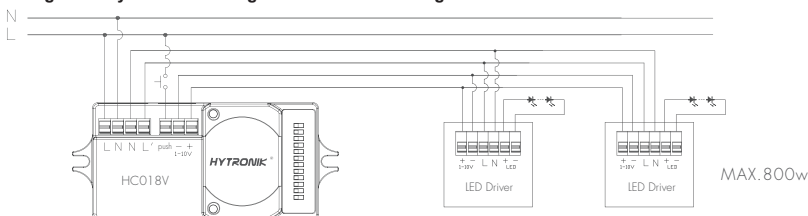
1.1 ENSURE THAT THE ELECTRICITY SUPPLY IS SWITCHED OFF COMPLETELY BEFORE INSTALLING OR SERVICING THIS PRODUCT



The sensor works with a main voltage of 220-240VAC 50/60 Hz.
The sensor has a 7-wire electrical interface:

- | | |
|------------------------------|-----------------------------|
| Nx2(neutral / 220-240VAC) | Push(push switch interface) |
| L (phase / 220-240VAC) | - (1-10v " - " interface) |
| L' (switched phase / output) | + (1-10v " + " interface) |

Wiring with any 1~10V control gear to achieve dimming function.




SECTION 2 SETTINGS

Detection Area:

This determines the effective range of the motion detector and is set by DIP switches at the sensor itself, refer to figure. Note that reducing the sensitivity will also narrow the detection range. The following settings are available:

- I – 100%
- II – 75%
- III – 50%
- IV – 10%

	1	2	
I	●	●	100%
II	●	○	75%
III	○	●	50%
IV	○	○	10%



Hold time:

This determines the time the fitting remains at 100% level on motion detection and is set with DIP switches at the sensor itself, refer to figure. The walk test setting is useful when installing the fitting to establish correct operation and range. The following settings are available:

- I – 5S
- II – 30S
- III – 1min
- IV – 5min
- V – 10min
- VI – 20min
- VII – 30min

	1	2	3	
I	●	●	●	5s
II	●	●	○	30s
III	●	○	○	1min
IV	●	○	○	5min
V	○	●	○	10min
VI	○	●	○	20min
VII	○	○	○	30min




Daylight sensor:

This setting holds off the 100% light output should there sufficient daylight and is set using DIP switches at the sensor, refer to figure. The following settings are available:

- I – Disable
- II – 50Lux
- III – 10Lux
- IV – 2Lux

	1	2	
I	●	●	Disable
II	●	○	50Lux
III	○	●	10Lux
IV	○	○	2Lux




*In disable mode the lamp(s) will always be on with motion detected and operate at 100% light output, even in bright daylight.

Stand-by period (corridor function)

This is the time period you would like to keep at the low light output level before it is completely switched off in the long absence of people.

- I – 0s
- II – 10s
- III – 1min
- IV – 5min
- V – 10min
- VI – 30min
- VII – 1h
- VIII – +∞

	1	2	3	
I	●	●	●	0s
II	●	●	○	10s
III	●	○	○	1min
IV	●	○	○	5min
V	○	●	○	10min
VI	○	●	○	30min
VII	○	○	●	1h
VIII	○	○	○	+∞




Note: 0 means on/off control; +∞ means 2 steps of dimming control, fixture never switch off.

Stand-by dimming level

This is the dimmed low light output level you would like to have after the hold-time in the absence of people.

- I – 10%
- II – 20%
- III – 30%
- IV – 50%

	1	2	
I	●	●	10%
II	●	○	20%
III	○	●	30%
IV	○	○	50%



SECTION 3 FUNCTIONS

3.1 Zero-cross relay operation

Designed in the software, the sensor switches on/off the load right on the zero-cross point, to ensure the min. current passing through the relay contact point, and enable the max. load and life-time of the relay.

3.2 Loop-in and loop-out

Double "L" and "N" terminal makes it easy for wire loop-in and loop-out, saves the cost of terminal block and assembly time.

3.3 Manual override

This sensor reserved the access of manual override function for end-users to switch on/ off, or adjust the stand-by dimming level with the push-switch. which makes the product more user-friendly and more options to fit for some extra-ordinary demands.

* short push (<1s): on/off;

ON → OFF: the light turns off immediately and can not be lighten for a certain time (equals to hold time preset) even movement is detected. After this period, the sensor goes to auto sensor mode.

OFF → ON: the light turns on 100% and goes to hold time period directly even movement is detected. As soon as the sensor goes to stand-by period, it can detect movement and turn on the light(100%) again (auto sensor mode).

* long push (>1s): dim up/down the hold-time brightness between 10% to 100%. Both the settings on DIP switch and manual override can overwrite each other, the latest action controls.

* if customers do not want to have this manual override function, we can just leave this “push” terminal alone , not connected to any wire.

Note: this 1-10V output is non-isolated, it can be connected to isolated 1-10V LED driver only.

SECTION 4 TROUBLE SHOOTING

MALFUNCTION CAUSE REMEDY	CAUSE	REMEDY
The load will not work	Incorrect light-control setting selected	Adjust setting
	Load faulty	Replace load
	Mains switch OFF	Switch ON
The load is always on	Continuous movement in the detection zone	Check zone setting
The load is on without any identifiable movement	The sensor is not mounted for reliably detecting movement	Securely mount enclosure
	Movement occurred, but not identified by the sensor (movement behind wall, movement of small object in immediate lamp vicinity etc.)	Check zone setting
The load will not work despite movement	Rapid movements are being suppressed to minimize malfunctioning or the detection radius is too small	Check zone setting