ALCHEMY VIII

IP65 MICROWAVE SENSOR

PART NUMBER: AL8HBSEN16

COMPATIBLE WITH ALL AL8HB101215WTC & AL8HB101520W5K SERIES FITTINGS

With Dual Light Sensor

CE emc RED CB IP65

Ver1.0

5.8G MicroWave Sensor

IP65 MICROWAVE SENSOR

ALCHEMY VIII

Features

- Operating voltage 12VDC.
- Built-in digital circuit modulation 5.8G microwave antenna, can be installed up to 18 meters high, suitable for most of the factory, warehouse lighting applications
- Adopts advanced digital modulation 5.8G microwave design, by adjusting the 5.8G microwave band, it will not interfere with 5G WIFI communications
- Work with 0/1-10V dimmalbe LED driver, easy to achieve 2-step or 3-step dimming function.
- Built-in dual-spectrum light sensor enables daylight-prioritized automatic light-off or light-on function.With independent dimming function.
- IP65 waterproof design
- Exclusive multi-function remote control, customers can flexibly adjust the parameters according to their requirment.
- Power off memory function.
- 3 years warranty

Applicaions

It is mainly used in the application of industrial and commercial lighting fixtures such as motion sensor LED industrial lights.

Technical Data

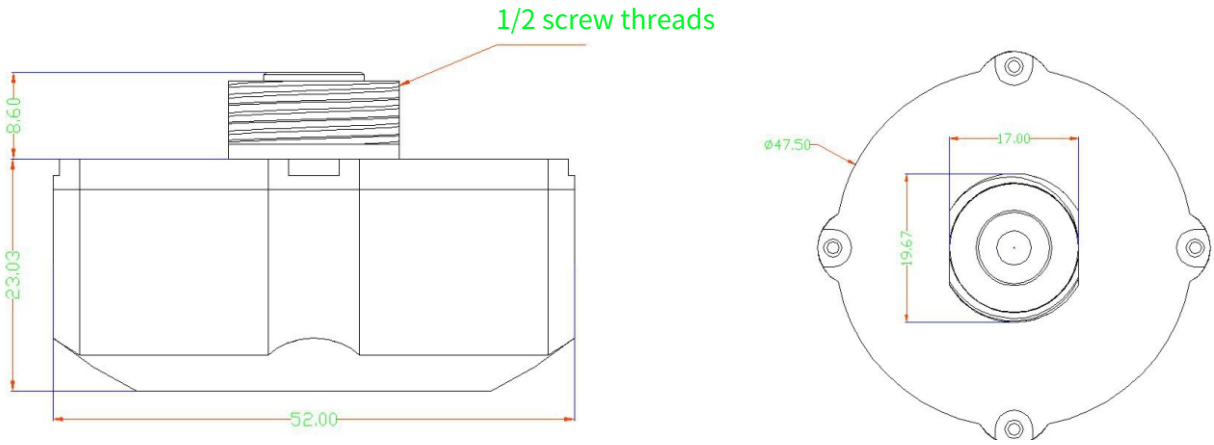
Input Characteristics	
Input Voltage	12VDC
Stand-by Power	<0.5W
Output Characteristics	
Output Mode	0-10V DC
Dimming Interface	0/1-10V (<50mA)
Headphone Plug Docking	
Certificate Standards	
Safety standards	EN60669-2-1, EN60669-1
EMC standards	EN55015, EN61000-3-2, EN61000-3-3, EN61547
Environmental Requirement	Compliant to RoHS
IP Rating	IP65
Protection Class	Class II
Working environment	
Working Temperature	-20°C ... +60°C

Sensor Parameters				
Sensor Principle	Microwave Doppler effect			
Operating Frequency	5.8 GHz @ISM Band			
Transmitting power	<0.5mW			
Detection range*1 (Max)	Installation height: (8-18)Meter Detection diamete: 18Meter			
Detection Angle	150°(wall mounting) 360°(ceiling mounting)			
Adjustable parameters				
Detection Area	25%/50%/75%/100%			
Hold Time	5S/30S/1Min/3Min/5Min/10Min/20Min/30 Min			
Stand-by Period	0s/10s/30s/1min/5min/10min/30min/60 min/+∞			
Daylight Threshold*2	2/10/30/50/60/120/200/250/300/350/40 0/Disable (Lux)			
Stand-by dimming level	10%/20%/30%/50%			
Dual light-sensor threshold (LUX)	ON	OFF	ON	OFF
	2/10	30	200	300
	30	60	250	350
	50	100	300	400
	80	150	350	500
	120	200	400	600

* 1 When installing the microwave sensor, it should be far away from metal, glass and other high-density media, so as not to cause changes in the sensing distance or false triggering phenomena
* 2 False triggering may occur if there are other motion or vibration signals in the operating environment. When installing, please make sure to keep away from irrelevant motion signal sources. For example: exhaust fans, air conditioning fans, elevators, etc.
* 3 Light-sensitive thresholds can be affected by factors such as the transmittance of different luminaire cover, mounting methods, installation locations, and dark and cloudy weather conditions.

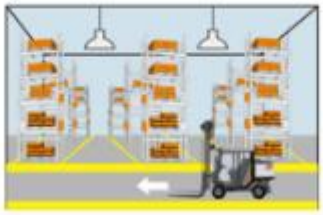
Mechanical Dimensions

Unit:mm



Functions and Features

1) Automatic On/OFF Function (Standby time is set to "0 "s and the light sensing function has been set)



1.During daytime when the ambient light is bright enough (when the ambient light is higher than the set lux value), the luminaire will not light up even if there are moving objects.

2. At night (when the ambient light is lower than the set lux value) when a moving object is detected to enter the sensing area, the luminaire will automatically switch to 100% brightness state.

3. When the moving object leaves the sensing area and the leaving time exceeds the set holding time, the luminaire will power off automatically.

2) 2-step dimming function (stand-by period be set to"+∞")

1. If no moving object is detected, the luminaire will remain at the set low brightness state.

2. When a moving object is detected to enter the sensing area the luminaire will automatically switch to 100% brightness.

3. When the moving object leaves the sensing area, and the leaving time exceeds the set holding time theluminaire will automatically switch to the set low brientness state.

3) 3-step dimming function stand-by period be set to “10s/30s/1min/5min/10min/30min/60min"

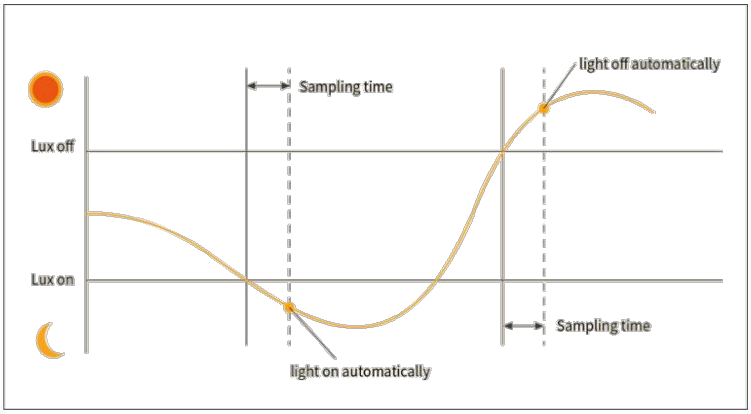
1. When a moving object is detected to enter the sensing area, the luminaire will automatically switch to 100% brightness.

2. If no moving object is detected, the luminaire will enter standby low brightness state

3. When the moving object leaves the sensing area, and the leaving time exceeds the set standby time, the lamps and lanterns will be turned off automatically.

4) Dual Light Sensor Daylight Priority Setting Method

With the unique dual light sensing technology, the microwave controller can recognize the difference between natural light and LED light, realizing a more intelligent light control function. It can automatically turn on or off the lamps according to the intensity of natural light.



Setting Method

1. The standby time is set to +oo.
2. Standby brightness set to 10%/ 20%/30%/50%
3.The light sensing threshold is set at any level from (2-400) LUX.

Dual Light Sensor Daylight Priority	ON LUX	OFF LUX	ON LUX	OFF LUX
	2/10	30	200	300
	30	60	250	350
	50	100	300	400
	80	150	350	500
	120	200	400	600

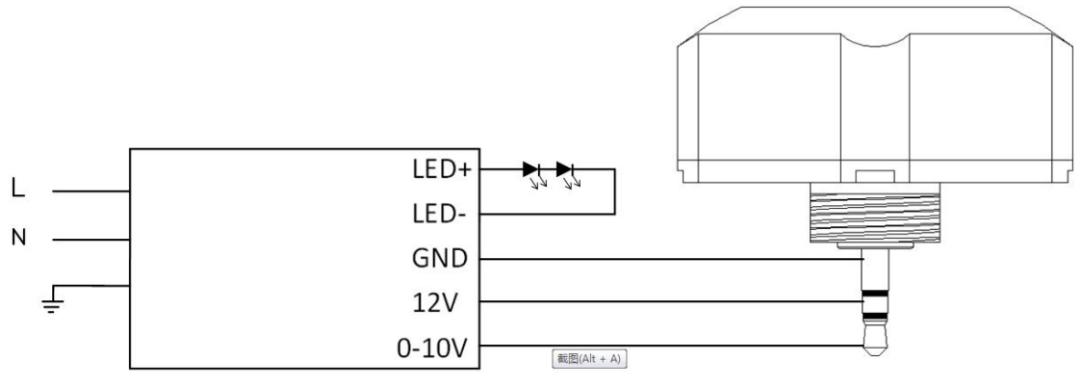
1.When night comes, the fixture will automatically light up and go into standby brightness

2.The luminaire adjusts to 100% brightness when a moving object is detected

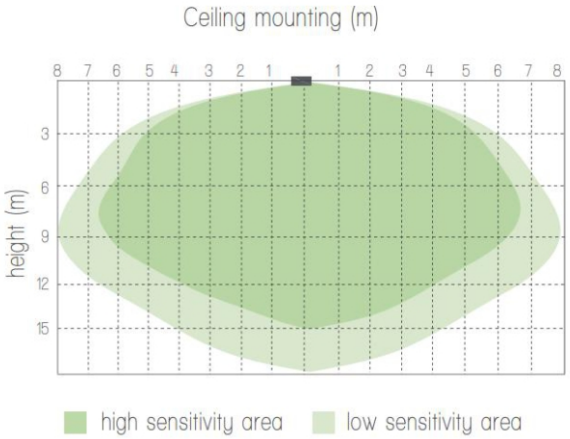
3.When the moving object leaves the sensing area and after a holding time, it enters the standby low-brightness state

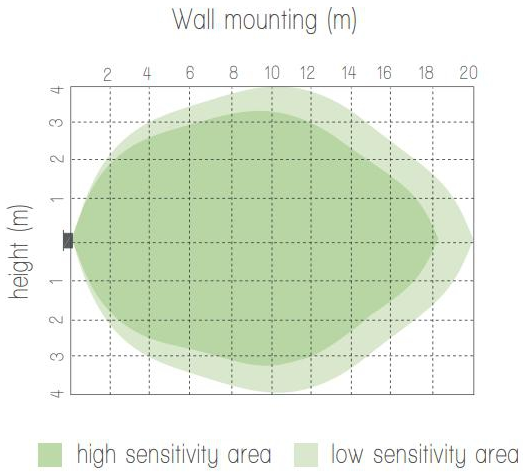
4.When daylight arrives, the fixtures automatically turn off

Wiring Diagram



Detection Pattern





Remote Setting(Remote Controller **AL8HBREM01**)

Permanent ON/OFF function

Press the “ON/OFF” button, the light goes to permanent on or permanent off mode, and the sensor is disabled.
* Press “Scene mode" buttons to quit this mode

Switch the working mode

Switch the working mode between MicroWave mode and PIR mode.(Not use on this product)

Sensor mode

Press "Scene”button, the sensor starts to function with default settings(Detection Area 100%, Hold Time 5s, Standy-by-dimming 10%, Standy-by-period 0s, Daylight sensor dissabled).
Can be also use as reset function

Start setting

Save setting

Send Setting

Use these key to setting parameters combination under“Sensor Mode”
1.Press “Start” key, the letter “s" will be flash at the right corner on the LCD screen, It means user can start to set the payameters;
2.After setting all parameters, Press “Memory” to save the setting parameters into the remoter
3.Press“Apply”key, send the parameters to the MicroWave controller.
Notes: All the setting parameters which showed on the LCD will be save in the remoter

Detection range

Under “Sensor Mode”, Press the Key, the detection range icon will be flashed on the LCD screen,
Press the “+”/”-” to set the detection range at 100% ,75%,50%,25%

Under “Sensor Mode”, Press the Key, the Hold time icon will be flashed on the LCD screen,
Press the “+”/”-” to set the Hold time at 5S,30S,1min,3min,5min,10min,20min and 30min

Remote Setting(Remote Controller AL8HBREM01)

Stand-by dimming level

Under “Sensor Mode”, Press the Key, the Stand-by dimming icon will be flashed on the LCD screen,
Press the “+”/”-” to set the Standy-by dimming 50%, 30%, 20%, 10%.

Standy-by period

Under “Sensor Mode”, Press the Key, the Stand-by period icon will be flashed on the LCD screen,
Press the “+”/”-” to set the Standy-by period 0S,10S,30S,1min,5min,10min,30min,60min, ∞.

Daylight Threshold

Under “Sensor Mode”, Press the Key, the Daylight Threshold icon will be flashed on the LCD screen,
Press the “+”/”-” to set the daylight threshold at disable,2lux,10lux,30lux,50lux,80lux,120lux, 200lux,250lux,300lux,350lux,400lux

Test Mode

Press the Key, the microwave controller enter the test mode.
The parameters under test mode are: Detection range at 100%, hold time at 2s, dalylight at disable,standy-by period at 0s and stand-by dimming level at 10%

Power

Under “Sensor Mode”, Press the Key, the PW icon will be flashed on the LCD screen,
Press the “+”/”-” to increase or decrease the output power.

Up

Down

1. Under “Sensor Mode”, Press the Key to select the paraments
2. Under “Power On ” mode. Press the key to increrase or decrease the output power.