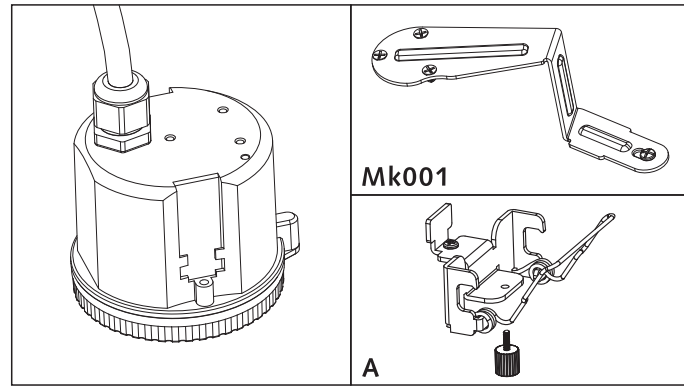




MICROWAVE MOTION SENSOR USER'S MANUAL

Model No. : 78577



Instruction
MI180919A0

FEATURE

- Sensor parameters can be conveniently set by a remote control.
- Mounting height up to 49.2 ft (15m)max. , suitable for warehouse use.
- Water proof sensor with IP65 rating.
- Automatic dimming when used in combination with 1-10V dimmable control gears.
- Built-in adjustable daylight sensor.
- 1-10V interface can match up with Merrytek stand-alone daylight sensor MS01 and achieve daylight harvesting.
- Optional mounting brackets for different application.

SPECIFICATIONS

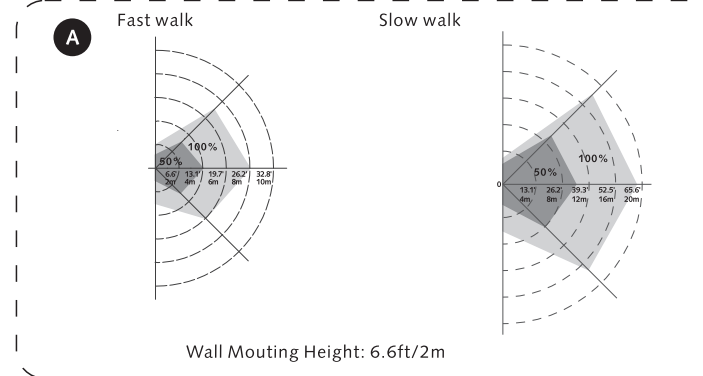
Input voltage	120/277Vac, 50/60Hz
Rated load	120Vac 50/60Hz 4A electronic/magnetic ballast 277Vac 50/60Hz 3A electronic/magnetic ballast
Detection area	26.2 ft (8m)Max.(radius) adjustable
Hold time	5s/ 30s/ 1min/ 3min/ 5min/ 10min/ 20min/ 30min
Daylight sensor	5lux/ 15lux/ 30lux/ 50lux/ 100lux/ 150lux/ Disable
Stand-by period	0s/ 10s/ 1min/ 3min/ 5min/ 10min/ 30min/ +∞
Stand-by dimming level	10% / 20% / 30% / 50%
Sensor principle	Microwave motion detector
Microwave frequency	5.8GHz±75MHz, ISM wave band
Mounting height	9.8-49.2 ft(3-15m)
Detection angle	150°(Wall installation), 360°(Ceiling installation)
Motion detection	1.6~9.8 ft/s(0.5~3 m/s)
Operating temperature	-35°C~55°C
IP rating	IP65

GENERAL GUIDELINES FOR INSTALLATION

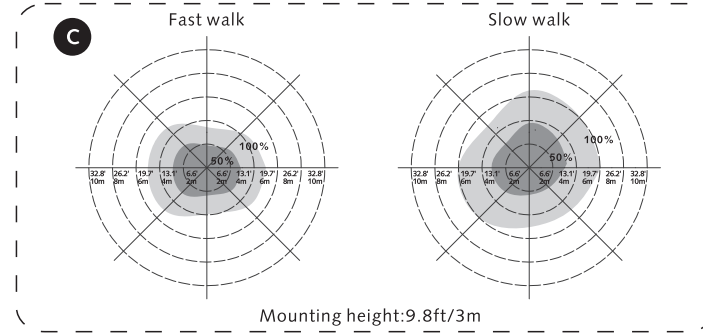
- 1, Please read the entire instruction manual before using the product and then save it for future reference. We reserve the right for any errors in text or images and any necessary changes made to technical data.
- 2, The sensor should be installed by a qualified electrician. And ensure that the electricity supply is switched off before installing or servicing the product.

- 3, The sensor should not be modified in any way. Any modifications made to this product will immediately invalidate any warranties issued.
- 4, The company does not accept responsibility for any consequences resulting from unauthorized modification of the product.
- 5, Microwaves cannot pass through metal or brick walls if thicker than 7.9 inches (20cm). They will pass through thinner walls but there will be some attenuation.
- 6, The raining or wind blowing may trigger the microwave motion sensor even if without human motion when outdoor use.
- 7, The sensor should be connected to a stable power supply of 120/277Vac, 50/ 60Hz.
- 8, Detection area will be affected by speed of motion, height of installation and volume of moving object.
- 9, Daylight sensor was tested on sunny environment with no lampshade.
- 10, CAUTION-Risk of Electric shock-More that one disconnect switch may be required to de-energize the equipment before servicing

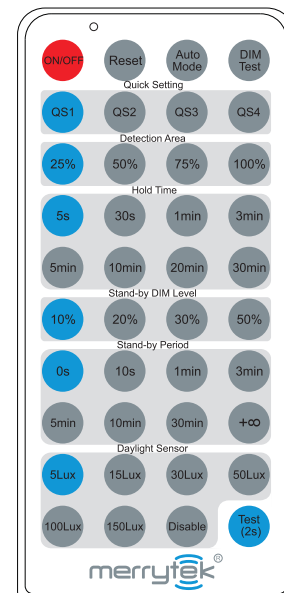
DETECTION PATTERN(FOR WALL MOUNTING)



DETECTION PATTERN(FOR CEILING MOUNTING)

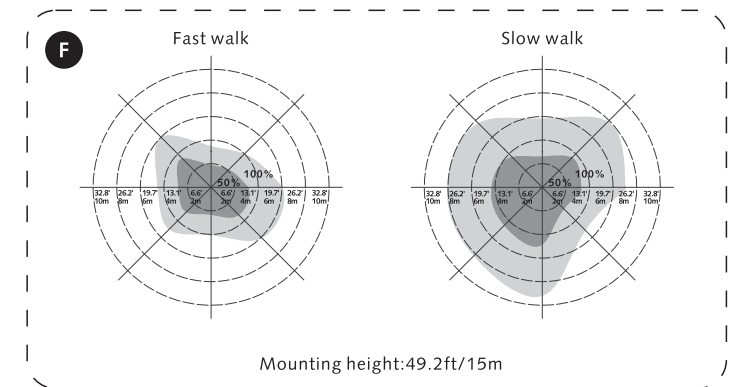
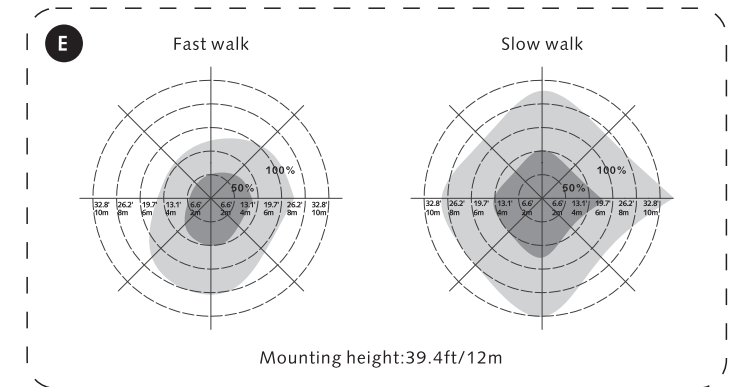
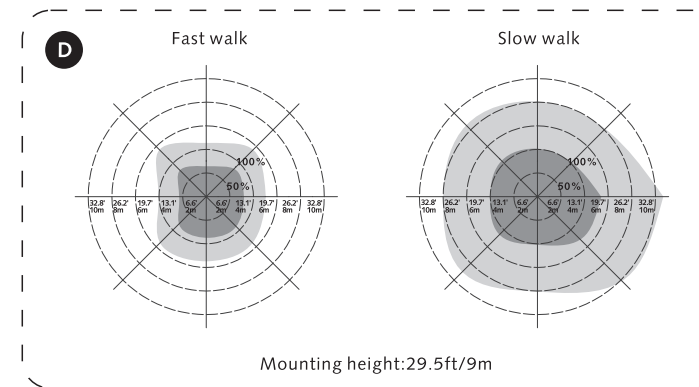
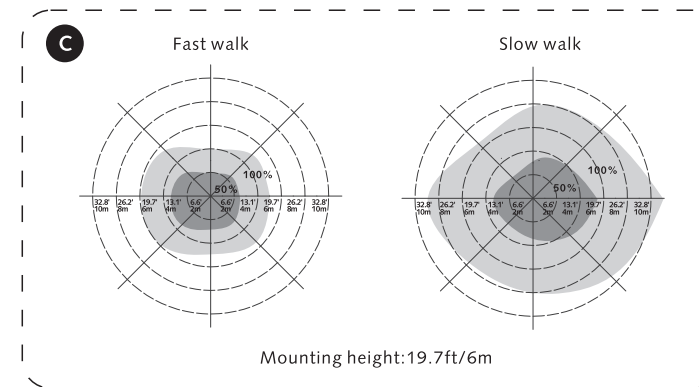


SETTINGS (OPTIONAL REMOTE CONTROL MH01)



The green work light of microwave sensor will flash 3 times if set successfully by remote control.
Pls use Two AAA battery 1.5V in the remote control MH01.

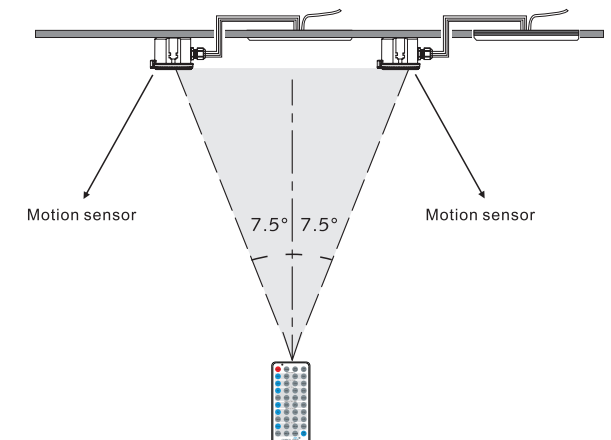
DETECTION PATTERN



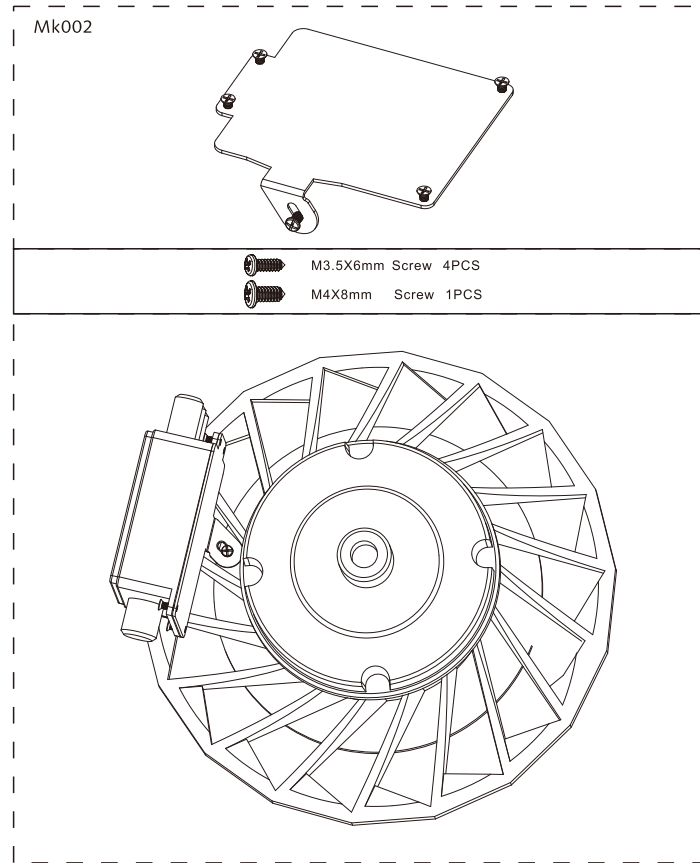
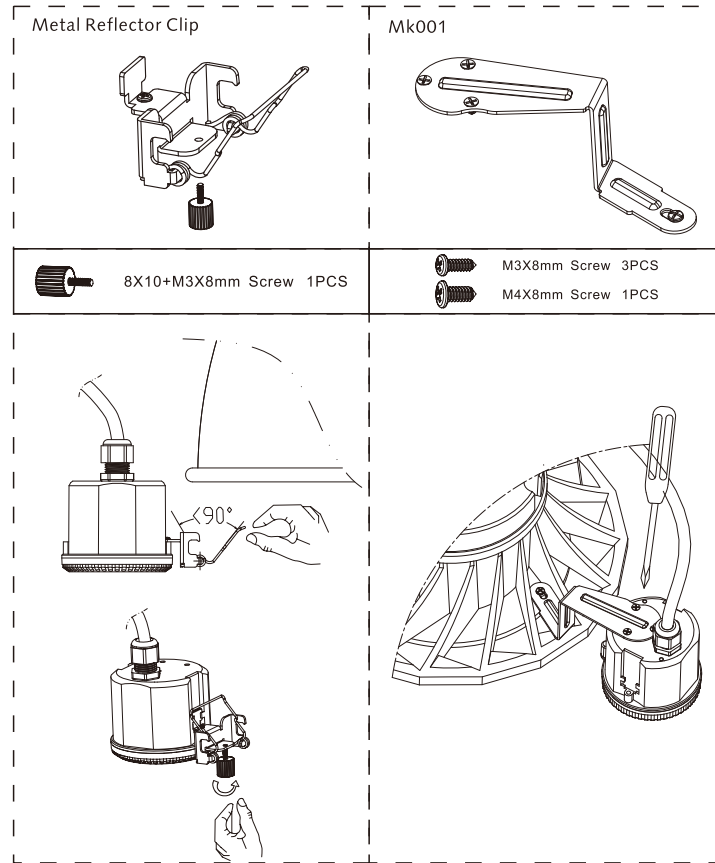
Button	Remarks																														
	Press the "ON/OFF" button, the light goes to constant on or constant off mode, sensor is disabled. Press "Reset" or "Auto Mode" button to quit from this mode.																														
	Press "Reset" button, all parameters are same as setting of DIP switch.																														
	Press "Auto Mode" button, the sensor starts to work and all parameter setting will be remained the same as the previous status before the light was switched on/off.																														
	Press "DIM Test" button to test dimming function. Sensor will dim automatically and return to normal work mode.																														
	The button "Test(2s)" is for factory testing purpose only. The sensor will go to test mode, Detection sensitivity: 100% Hold time: 2sec stand-by dim level:10% Stand-by period: 0s Daylight sensor: Disable Test mode can be quit by pressing any button.																														
	<table border="1"> <thead> <tr> <th>scene Options</th> <th>Detection Area</th> <th>Hold Time</th> <th>Stand-by period</th> <th>Stand-by dim level</th> <th>Daylight Sensor</th> </tr> </thead> <tbody> <tr> <td>QS1</td> <td>100%</td> <td>30s</td> <td>1min</td> <td>10%</td> <td>5Lux</td> </tr> <tr> <td>QS2</td> <td>100%</td> <td>1min</td> <td>3min</td> <td>10%</td> <td>10Lux</td> </tr> <tr> <td>QS3</td> <td>100%</td> <td>5min</td> <td>10min</td> <td>10%</td> <td>30Lux</td> </tr> <tr> <td>QS4</td> <td>100%</td> <td>10min</td> <td>30min</td> <td>10%</td> <td>Disable</td> </tr> </tbody> </table> <p>Note: Detection area / Hold time /Stand-by period / Stand-by dim level / Daylight sensor can be adjust by pressing corresponding button. The latest setting stays in validity.</p>	scene Options	Detection Area	Hold Time	Stand-by period	Stand-by dim level	Daylight Sensor	QS1	100%	30s	1min	10%	5Lux	QS2	100%	1min	3min	10%	10Lux	QS3	100%	5min	10min	10%	30Lux	QS4	100%	10min	30min	10%	Disable
scene Options	Detection Area	Hold Time	Stand-by period	Stand-by dim level	Daylight Sensor																										
QS1	100%	30s	1min	10%	5Lux																										
QS2	100%	1min	3min	10%	10Lux																										
QS3	100%	5min	10min	10%	30Lux																										
QS4	100%	10min	30min	10%	Disable																										

As the control angle of the Infrared Remote Control is fixed (15°), if sensors are installed too close to each other, settings of both sensors will be configured. Please refer to the below chart for the distance of the installation of the sensor:

Mounting height	Distance between sensors
49.2'/15m	13.1'/4m
39.4'/12m	11.2'/3.4m
29.5'/9m	7.9'/2.4m
19.7'/6m	5.2'/1.6m
9.8'/3m	2.6'/0.8m



INSTALLATION



SETTINGS (DIP SWITCH)

Detection area, hold time, stand-by period, stand-by DIM level and daylight sensor can be set by using DIP switches on the sensor. Note that reducing the detection area will also reduce the sensitivity.

Detection area	
	I ON 100%
	II - 50%

I: up to 100%
II: up to 50%

Hold time	
	I ON ON ON 5S
	II - ON ON 30S
	III ON - ON 1min
	IV - - ON 3min
	V ON ON - 20min
	VI - - - 30min

I: 5s
II: 30s
III: 1min
IV: 3min
V: 20min
VI: 30min

Stand-by period	
	I ON ON ON 0S
	II - ON ON 1min
	III ON - ON 3min
	IV - - ON 10min
	V ON ON - 30min
	VI - - - +∞

I: 0s
II: 1min
III: 3min
IV: 10min
V: 30min
VI: +∞

*When set to 0s, the lamp will work as on/off function
*When set daylight sensor to "Disable" and stand-by period to "+∞", the lamp will work as 2-step dimming control (Motion detected, 100% lumens, no motion, remains at pre-setting level lumens)

Stand-by dimming level	
	I ON ON ON 10%
	II ON - 20%
	III - ON 30%
	IV - - 50%

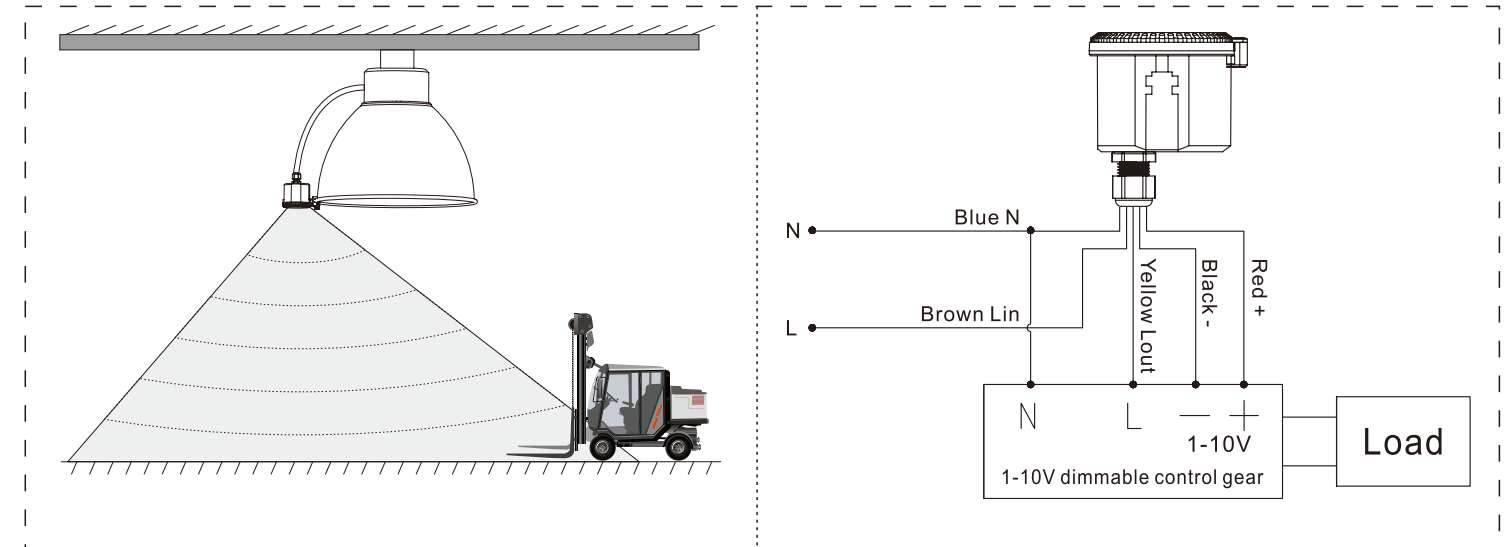
I: 10%
II: 20%
III: 30%
IV: 50%

Daylight sensor	
	I ON ON ON ON 5lux
	II - ON ON ON 15lux
	III ON - ON ON 30lux
	IV - - ON ON 50lux
	V ON ON - ON 100lux
	VI ON ON ON - 150lux
	VII - - - Disable

I: 5lux, darkness operation only
II: 15lux, darkness operation only
III: 30lux, twilight operation
IV: 50lux, twilight operation
V: 100lux, twilight operation
VI: 150lux, twilight operation
VII: Disable*

*When set to Disable Mode, the sensor will switch on the lamp when motion is detected regardless of ambient light levels.

WIRING

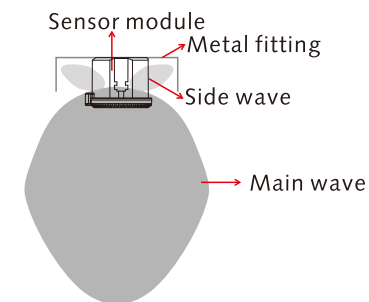


NOTE: Lord bushing of the torque is 2.5NM, Torgue of nut is 2.5NM.

FAQ

Question	Cause	Remedy
The load will not illuminate.	Incorrect daylight sensor setting selected.	Adjust setting.
	Load has failed.	Replace load.
	Power is switched off.	Switch on.
The load is permanently illuminated. (SEE NOTE1)	Continuous movement in the detection area.	Check detection area setting.
	The lamp (containing sensor) is installed in an area too close to reflective surfaces, i.e. metal, glass or concrete walls.	1, Make sure installation area suitable with at least 11.8inches(30cm) space between lamp and surrounding reflective surfaces. 2, Reduce sensitivity (detection area).
The load will not illuminate despite movement.	Speed of moving object is not in the range of 1.6~9.8ft/s(0.5~3m/s) or the detection radius is too small.	Check detection area setting.
The remote control is not working.	The battery on the remote control is run out.	Change the battery.
	The remote control is not aligned with sensor.	Change the remote angle.

NOTE1:



Microwave detection includes two parts called main wave and side wave. Main wave normally detects the motion signal. Side wave does not effect motion detection but might disturb main wave if the microwave motion sensor is built-in a sealed metal luminaire as microwave can not pass through metal.

When the microwave module is built into a metal lighting luminaire or installed in a sensor near a wall, the side wave will be reflected by the metal base or the wall. It can disturb the main wave. As the result of this, the microwave motion sensor might not perform optimally. Reducing the detection sensitivity or the side wave will help to solve such problems.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following

Measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shenzhen Merrytek Technology Co.,Ltd

Address: 2nd and 3rd Floor, No. 3 building, 380 Xiangshan Avenue, Luotian, Yanluo, Baoan, Shenzhen, Guangdong, China, 518105

Phone: +86(755)2305 7253/59 • Fax: +86(755)27863012 • Email: sales@merrytek.com • www.merrytek.com