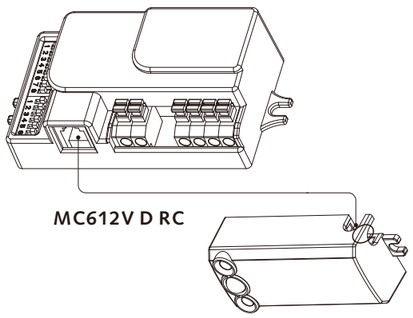
MC612V D RC

merrytek®

Lighting Control Switch USER'S MANUAL

Model No.:MC612V D RC



MC612V D RC

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EN

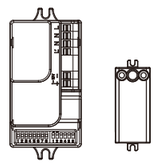
Instruction

MI20180131A0

GENERAL GUIDELINES FOR INSTALLATION

1, The sensor should be installed by a qualified electrician. And ensure that the electricity supply is switched off before installing or servicing the product.
2, The company does not accept responsibility for any consequences resulting from unauthorized modification of the product.
3, MC612V D RC should be connected to a stable power supply of 120/277Vac, 50Hz/60Hz.
4, Microwaves cannot pass through metal or brick walls if thicker than 20cm. They will pass through thinner walls but there will be some attenuation.
5, Installation inside a glass or plastic housing will result in a reduction of detection sensitivity. Expect a reduction of approximately 20% for every 3mm of thickness.
6, The sensor is designed for indoor use only. The raining or wind blowing may trigger the Lighting Control Switch even if without human motion when outdoor use.
7, Detection area will be affected by speed of motion,height of installation and volume of moving object.
8, Daylight sensor was tested on sunny environment with no lampshade.

INSTALLATION & WIRING



MC612V D RC

The sensor has 6-position terminal blocks :
L(Phase) N(Neutral) L' (Switched phase / control)
0-10V(+,-) (Connected to 0-10V interface)

The sensor is designed for installation at 8.2ft~26.2ft /2.5-8m in height.

Use 10-18 AWG copper wire only, both solid and stranded

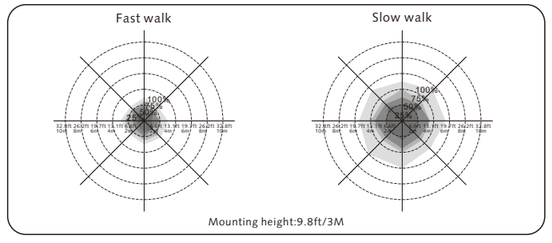
FEATURES

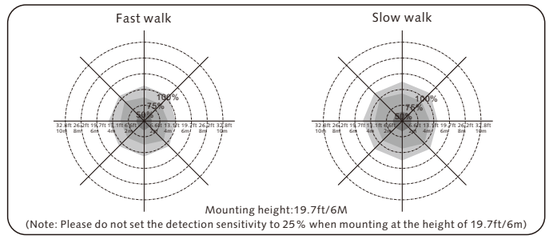
- Sensor parameters can be conveniently set by a remote controller.
- The mini motion detector is separately from sensor power part, it will be easier to fix motion detector on the surface of tri-proof light and hidden the power part behind it.
- This sensor is particularly designed for the lights which have limited space, for examples, LED linear, batten, and LED tri-proof lights.
- Using pluggable design between motion detector and power part, easy to reinstall or maintain.
- 0-10V interface can match up with Merrytek stand-alone daylight harvesting sensor Ms01.

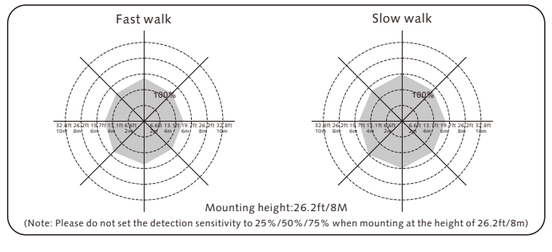
SPECIFICATIONS

Operating voltage	120/277Vac, 50/60Hz
Rated Load	120Vac 50/60Hz 3.6A Ballast; 277Vac 50/60Hz 3.4A Ballast
HF system	5.8GHz±75MHz, ISM wave band
Transmitting power	<0.5mW
Power consumption	≤1.0W(stand-by)
Detection Range(Diameter)	39.4ft/12m Max.
Max. Mounting height	26.2ft/8m
Hold time	Sensor: 8S/30S/1min/5min/10min/15min/30min Remote control: 8S/1min/5min/15min/30min
Stand-by Period	Sensor: 0S/1min/3min/5min/10min/30min/+∞ Remote Control: 0S/1min/5min/30min/+∞
Stand-by DIM Level	Sensor: 10%/20%/30%/40% Remote Control: 10%/20%/30%/40%/50%
Daylight sensor	Sensor: 5lux/15Lux/30Lux/50Lux/100lux/150lux/Disable Remote Control: 5lux/15Lux/50Lux/150lux/Disable
Operating temperature	-35°C~70°C
IP rating	IP20
UL file number	E489677

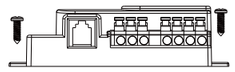
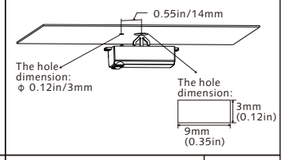
DETECTION PATTERN

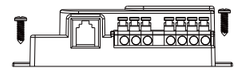
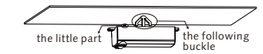
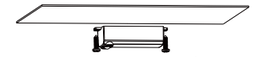




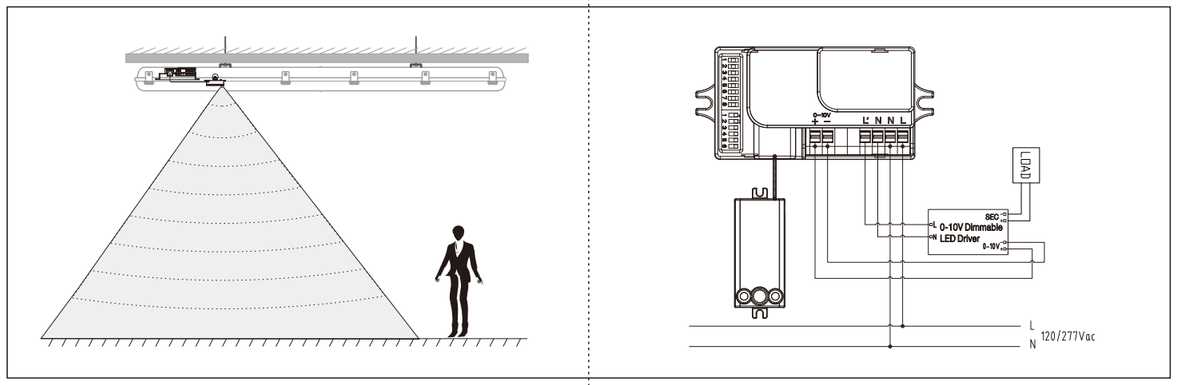


INSTALLATION

Main sensor installation	Detachable sensor installation method 1
Install the sensor on the LED plate by using 2 screws	Make two holes on the LED plate , push the sensor into the holes.
	
M0.12x0.31in/3.0x8mm Screw 2X	

Main sensor installation	Detachable sensor installation method 2
Install the sensor on the LED plate by using 2 screws	Step 1: Cut the following buckle and the little part off.
	
	Step 2: Place the sensor towards to the floor and fix it on the LED plate by screws. The hole of the wire is 0.15in/3.7mm.
	
M0.12x0.31in/3.0x8mm Screw 2X	M0.1x0.31in/2.5x8mm Screw 2X

WIRING SCHEME



SETTINGS

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

1, Detection area
I: up to 100%
II: up to 75%
III: up to 50%
IV: up to 25%

ON		1	2	
	I	ON	ON	100%
	II	ON	–	75%
	III	–	ON	50%
	IV	–	–	25%

2, Hold time
Refers to the time period the lamp remains at 100% illumination after no motion is detected.
I: 8s
II: 30s
III: 1min
IV: 5min
V: 10min
VI:15min
VII:30min

ON		3	4	5	
	I	ON	ON	ON	8S
	II	ON	–	ON	30S
	III	–	ON	ON	1min
	IV	ON	–	–	5 min
	V	–	ON	–	10min
	VI	–	–	ON	15min
	VII	–	–	–	30min

3, Stand-by period
Refers to the time period the lamp remains at a pre-setting dimming level before it completely switches off in the long absence of people.

I: 0s
II: 1min
III: 3min
IV: 5min
V: 10min
VI: 30min
VII: +∞

ON		6	7	8	
	I	ON	ON	ON	0s
	II	ON	–	ON	1min
	III	–	ON	ON	3min
	IV	ON	–	–	5min
	V	–	ON	–	10min
	VI	–	–	ON	30min
	VII	–	–	–	+∞

* When set to "+∞ "mode, the low light is maintained until motion is detected.

4,Stand-by dimming level
This is the pre-setting dimming level you would like to have after the hold time in the long absence of people.
I: 10%
II: 20%
III: 30%
IV: 40%

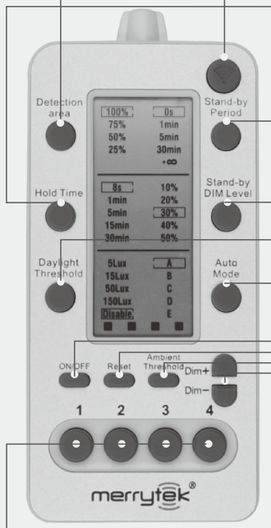
ON		1	2	
	I	ON	ON	10%
	II	ON	–	20%
	III	–	ON	30%
	IV	–	–	40%

5,Daylight sensor
The sensor can be set to only allow the lamp to illuminate below a defined ambient brightness threshold. The settings are as follows:

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, the daylight sensor will switch on the lamp when motion is detected regardless of ambient light levels.
*It should be set to Disable mode if the motion sensor is connected to stand-alone daylight sensors.

ON		3	4	5	6	
	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

Remote Control Setting



	Button	Name	Description
		Transmit	Uploads the settings
	Detection area	Detection Area	25%/50%/75%/100%
	Hold Time	Hold time	The timeout from 100% to dim 8S/1min/5min/15min/30min
	Daylight Threshold	Daylight Threshold	5Lux/15Lux/50Lux/150Lux/ Disable
	Stand-by Period	Stand-by period	The timeout from dim to off 0S/1min/5min/30min/+∞
	Stand-by DIM Level	Stand-by DIM level	10%/20%/30%/40%/50%
	Auto Mode	Auto mode	A. Movement Motion detect 9.8ft~19.7ft/3-6m B. Presence detect 9.8ft~19.7ft/3-6m C. Presence detect with daylight harvesting 9.8ft~19.7ft/3-6m D. High mounting: 19.7ft~49.2ft/6-15m E. High mounting with daylight harvesting : 19.7ft~49.2ft/6-15m
	ON/OFF	ON-OFF	Permanent ON/OFF
	Reset	Reset	Press “Reset” button for factory testing purpose only. Detection Area: 100% / Hold Time: 1min / Daylight sensor: Disable / Stand-by period: 3min / Stand-by dim level: 20%
	Ambient Threshold	Ambient Threshold	Press this button to set the current suitable daylight threshold.
	Dim+ Dim−	Dim+ / Dim -	Adjust the light level when motion detected.
	1 2 3 4	*1/2/3/4	4 optional quick settings

*Note 1: MH02 is a common used remote control for a various of sensor, MC612V D RC only works under Mode A.
*Note 2: 1/2/3/4: These 4 optional quick setting are factory default settings, see table chart 1 below.
1. Factory default settings:
According to the default settings, short press 1/2/3/4, then press to transmit.
2. Modification:
Short press 1/2/3/4 number key, select your own sensor settings such as "Detection Range / Hold Time / Daylight Sensor / Stand-by Period / Stand-by Dimming Level", then press to transmit.
3. Save the modification:
After you have set the customized parameters, long press the numeric keys 1/2/3/4 number key for more than 3s and will save the current settings to the 1/2/3/4 number key.

Quick Setting	Detection Area	Hold Time	Daylight sensor	Stand-by period	Stand-by dim level
1	100%	8S	Disable	0S	10%
2	100%	8S	5Lux	1min	10%
3	100%	1min	15Lux	1min	10%
4	100%	5min	50Lux	30min	10%

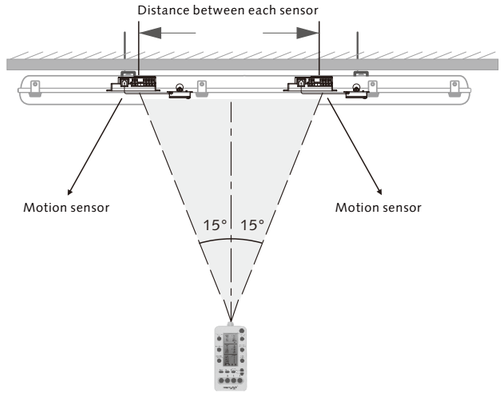
(Table chart 1: 1/2/3/4 Quick Setting for MC612V D RC)

FAQ

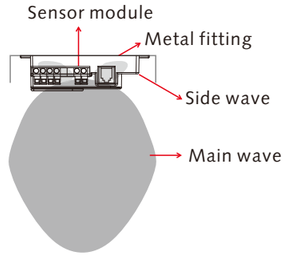
Question	Cause	Remedy
The load will not illuminate	Incorrect daylight sensor setting selected.	Adjust setting.
	Load has failed.	Replace load.
	Power is switched off.	Switch on.
The load is permanently illuminated.	Continuous movement in the detection area.	Check detection area setting.
	The lamp (containing 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 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 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.

As the control angle of the Infrared Remote Control is fixed (30°), if the sensors are installed too close to each other, the settings of both sensors will be configured. Please refer to the below chart for the distance of the installation of each sensor:

Mounting height	Distance between each sensor
26.2ft/8m	14ft/4.28m
19.7ft/6m	10.5ft/3.2m
9.8ft/3m	5.2ft/1.6m
8.2ft/2.5m	4.3ft/1.32m



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 senor might not perform optimally. Reducing the detection sensitivity or the side wave will help to solve such problems.

FCC Warnning:

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.

Caution:

Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

ISED Statement
English: This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device. The digital apparatus complies with Canadian CAN ICES-3 (B)/NMB-3(B).
French: Le présentappareilestconforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitationestautorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareildoit accepter tout brouillageradioélectriquesubi, mêmesi le brouillageest susceptible d'encompromettre le fonctionnement.

Radiation Exposure Statement
This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.
Déclaration d'exposition aux radiations
Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé. Cet équipement doit être installé et utilisé à distance minimum de 20cm entre le radiateur et votre corps.

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