MC054V RC

MICROWAVE MOTION SENSOR USER'S MANUAL
Model No.: MC054V RC

MC054V RC A | MC054V RC B
MC054V RC C | MC054V RC D

CE

EN
Instruction

MI.161108

FEATURE

• Sensor parameters can be conveniently set by a remote control.
• Mounting height up to 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	400W@120Vac; 800W@220-277Vac (Inductive load)
	800W@120Vac; 1200W@220-277Vac (Resistive load)
Detection area	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
Transmitting power	<0.5mW (1% of transmitting power for cell phone)
Mounting height	3-15m
Detection angle	150°(Wall installation),
	360°(Ceiling installation)
Motion detection	0.5~3m/s
Operating temperature	-35℃~70℃
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 20cm. They will pass through thinner walls but there will be some attenuation.
6, The sensor is designed for indoor use only. 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.
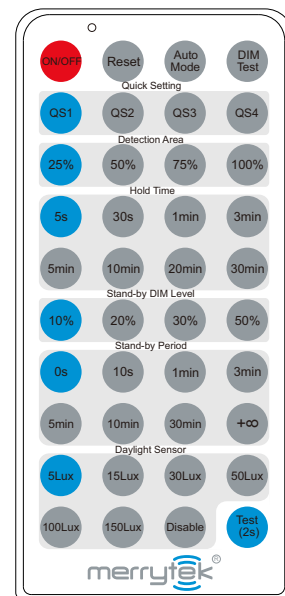9, Daylight sensor is tested on sunny environment with no lampshade.

DETECTION PATTERN

A
Fast walk | Slow walk
Mounting height:3M
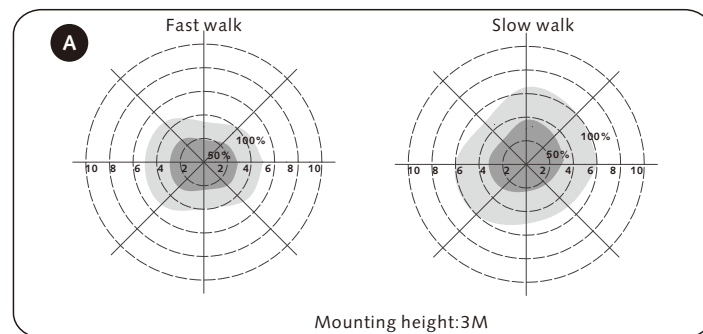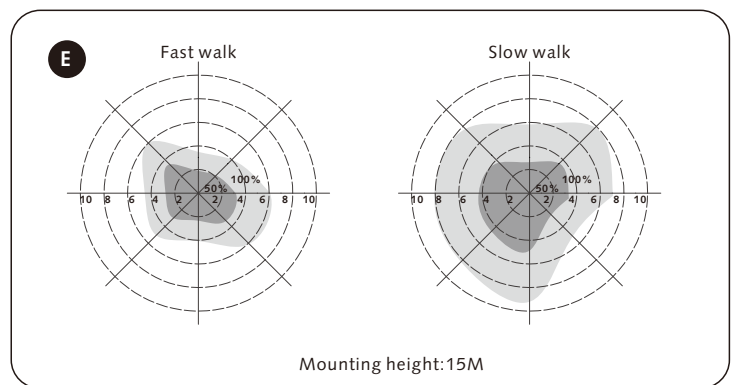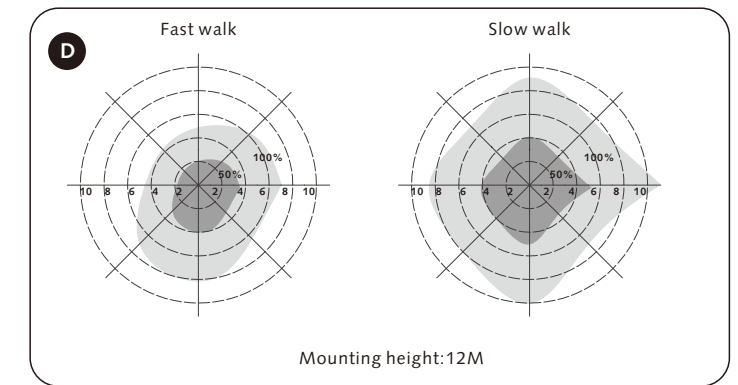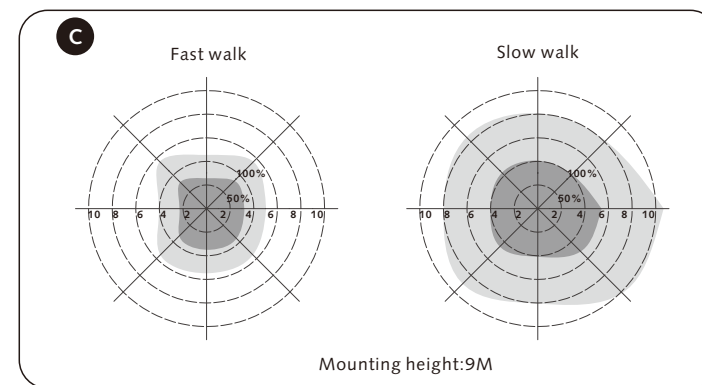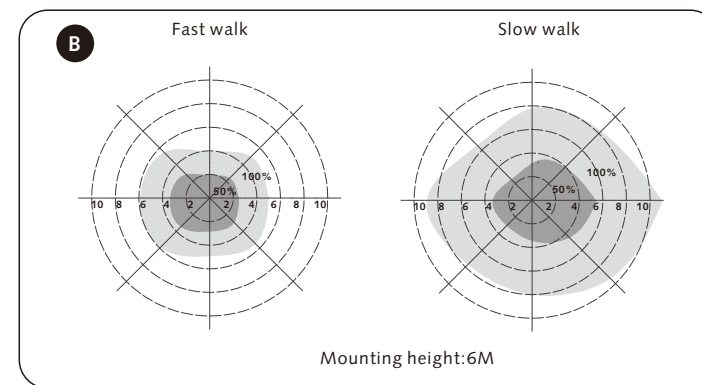
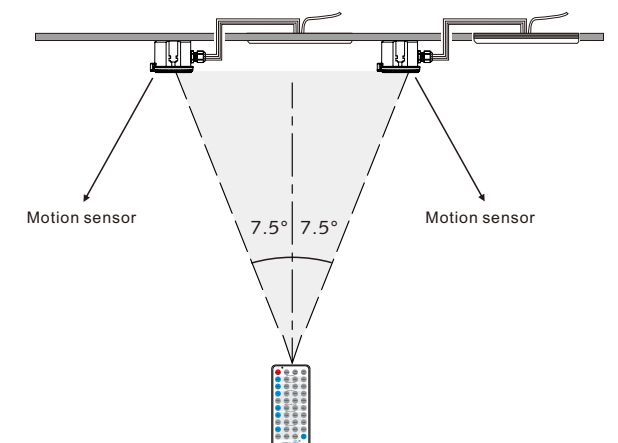## SETTINGS (REMOTE CONTROL MH01)

The green work light of microwave sensor will flash 3 times if set successfully by remote control.

DETECTION PATTERN
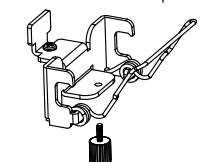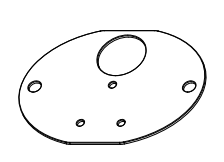

B
Fast walk | Slow walk
Mounting height:6M

C
Fast walk | Slow walk
Mounting height:9M

D
Fast walk | Slow walk
Mounting height:12M

E
Fast walk | Slow walk
Mounting height:15M

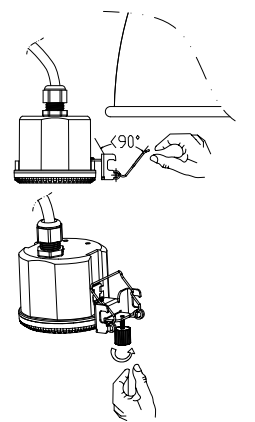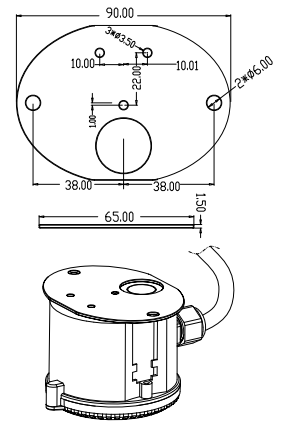| Button	Remarks
ON/OFF	Press the "ON/OFF" button, the light goes to constant on or constant off mode, sensor is disabled. Press " Reset " or " Auto Mode" button to quit from this mode.
Reset	Press "Reset" button, all parameters are same as setting of DIP switch.
Auto Mode	Press "Auto Mode" button, the sensor starts to work and all parameter setting will be remained the same as the previous status before the light was switched on/off.
DIM Test	Press "DIM Test" button to test dimming function. Sensor will dim automatically and return to normal work mode.
Test (2s)	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.

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

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.

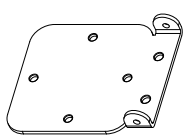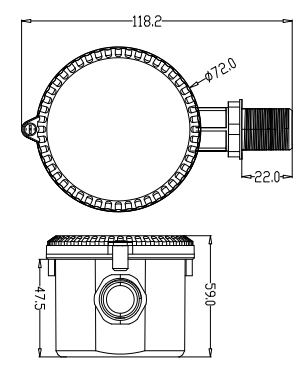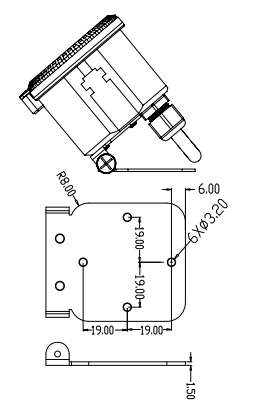As the control angle of the Infrared Remote Control is fixed (15°), if sensors are installed too close to each other, settings of both sensors will be configured. Please refer to the below chart for the distance of the installation of the sensor:

Mounting height	Distance between sensors
15m	4m
12m	3.4m
9m	2.4m
6m	1.6m
3m	0.8m

Motion sensor | 7.5° 7.5° | Motion sensor
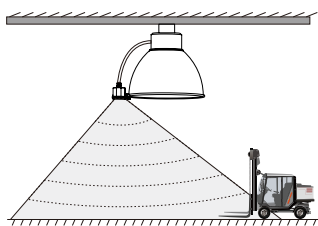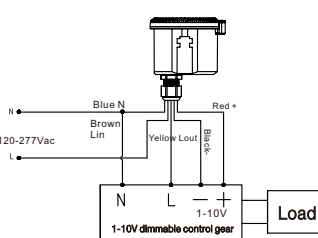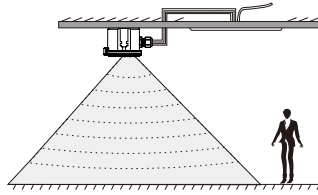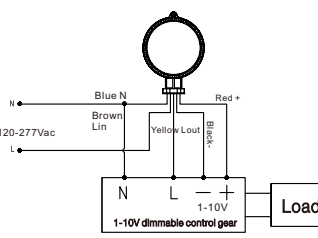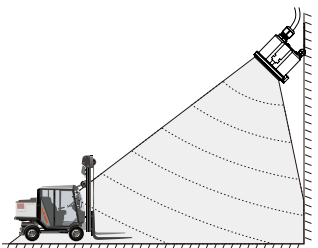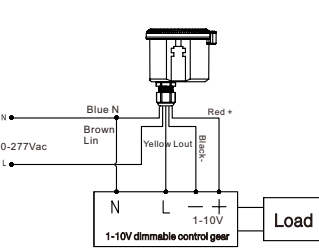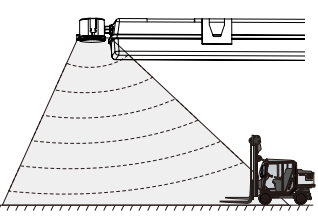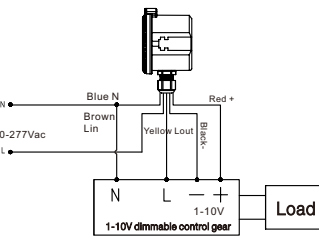
INSTALLATION

MC054V RC A	MC054V RC B
Metal Reflector Clip	Oval Surface Mounted Bracket

	1X		2X
8X10+M3.0X8mm Screw		M4.0X25mm Screw	

MC054V RC C	MC054V RC D
Rotatable Metal Bracket	

	4X
M3.0X8mm Screw	
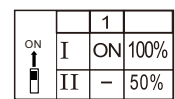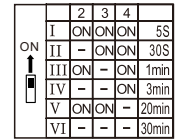
WIRING

MC054V RC A

MC054V RC B

MC054V RC C

MC054V RC D

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: up to 100%
II: up to 50%

		1	
ON	I	ON	100%
	II	–	50%

Hold time
Refers to the time period the lamp remains at 100% illumination after no motion detected.
I: 5s
II: 30s
III: 1min
IV: 3min
V: 20min
VI: 30min

		2	3	4	
ON	I	ON	ON	ON	5S
	II	–	ON	ON	30S
	III	ON	–	ON	1min
	IV	–	–	ON	3min
	V	ON	ON	–	20min
	VI	–	–	–	30min

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: 10min
V: 30min
VI: +∞

		1	2	3	
ON	I	ON	ON	ON	0S
	II	–	ON	ON	1min
	III	ON	–	ON	3min
	IV	–	–	ON	10min
	V	ON	ON	–	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
This is the pre-setting dimming level you would like to have after the hold time in the long absence of people.
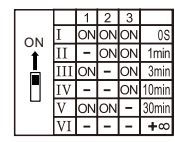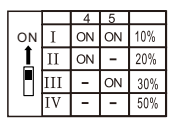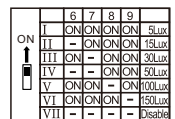I: 10%
II: 20%
III: 30%
IV: 50%

		4	5	
ON	I	ON	ON	10%
	II	ON	–	20%
	III	–	ON	30%
	IV	–	–	50%

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 Mode, the sensor will switch on the lamp when motion is detected regardless of ambient light levels.

		6	7	8	9	
ON	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	–	–	150Lux
	VII	–	–	–	–	Disable

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.

Shenzhen Merrytek Technology Co..Ltd

No.3 Building, 380 Xiangshang Avenue, No.3 Industrial Park Luotian, Songgang Town,

Bao'an District, Shenzhen 518105, Guangdong, China

www.merrytek.com   Email:sales@merrytek.com