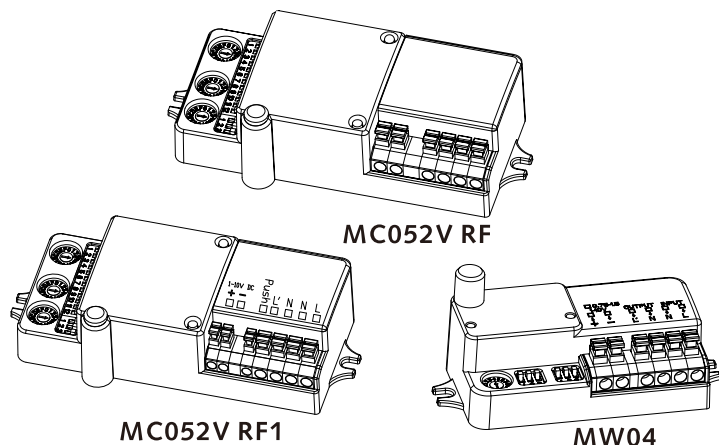




## MICROWAVE MOTION SENSOR USER'S MANUAL

Model No.: MC052V RF/MC052V RF1+MW04

Instruction  
MI20170911

## FEATURES

- 3-step dimming function for high bay and low bay, linear and batten light.
- Microwave motion detecting and wireless transmitting functions.
- Using the rotary coding switch, easy to create groups.
- Up to 16 different groups can be created.
- Creating a group or network between the master and slave through the wireless RF communication technology.
- Adopt digital receiving and transmitting method, high anti-interference capability and no interference to other RF sensitivity devices.
- Parameters such as stand-by period, stand-by dimming level can be set by DIP switches.

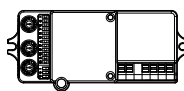
## SPECIFICATIONS

	MC052V RF/MC052V RF1	MW04
Operating voltage	220~240Vac 50/60Hz	220~240Vac 50/60Hz
Rated LED Load	400W(Inductive), 800W (Resistive)	400W(Inductive), 800W (Resistive)
HF system	5.8GHz±75MHz, ISM wave band	868MHz
Transmitting power	<0.5mW	
Power consumption	<1.0W(stand-by)	≤0.5W(stand-by)
Detection Area(Radius)	6m Max.	N/A
Max. Mounting height	12m	N/A
Hold time	5s/30s/90s/3min/20min/30min/+∞	0s/5s/5min/10min/30min/60min
Stand-by Period	0s/5s/5min/10min/30min/60min/+∞	N/A
Stand-by DIM Level	10%/20%/30%/50%	10%/20%/30%/50%
Daylight sensor	5lux/15lux/30lux/50lux/100lux/150lux/Disable	N/A
Operating temperature	-35℃~70℃	-35℃~70℃
IP rating	IP20	IP20

## GENERAL GUIDELINES FOR INSTALLATION

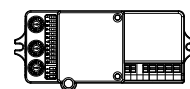
- 1, The sensor should be installed by a qualified electrician. And ensure that the electricity supply is switched off before installing or servicing the product.
- 2, The company does not accept responsibility for any consequences resulting from unauthorized modification of the product.
- 3, The sensor should be connected to a stable power supply of 220-240Vac, 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 microwave motion sensor 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 &amp; WIRING



Pic 1 MC052V RF

The sensor has 6 position terminal blocks as:  
L(Phase) N(Neutral) L'(Switched phase / control) 1-10V (Connected to 1-10V(+,-) interface)



Pic 2 MC052V RF1

The sensor has 7 position terminal blocks as:  
L(Phase) N(Neutral) L'(Switched phase / control) Push (Push dimming), 1-10V(+,-) (Connected to 1-10V interface)

## PUSH BUTTON SWITCH FOR DIMMING (FOR MC052V RF1 ONLY)

## Short Push (120ms~1sec): on/off function

1. On->off: the light turns off immediately and the sensor function will be restored until the hold time of the master elapsed even motion is detected.
2. Off->On: The light turns on and goes to sensor mode immediately even if ambient Lux level exceeds the preset daylight sensor. Meanwhile, the master will transmit the "ON" signal to all slaves as well as the "OFF" signal. If there are any exceptional situations, the master did not send the "OFF" signal to the slaves, the slaves will be off after 30s of the hold time.

## Long Push:

- (1s~15s): dim up/ down the hold-time brightness between 10% - 100%.  
(>15s): The master will automatically transmit the "OFF" wireless signal and after releasing the PUSH switch, the master be off automatically.

## SETTINGS(MC052V RF/MC052V RF1)

By selecting the combination on the DIP switches, sensor data can be precisely set for each specific application. 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%

	1	2	
ON	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: 5s  
II: 30s  
III: 90s  
IV: 3min  
V: 20min  
VI: 30min  
VII: +∞

		3	4	5	
I	ON	ON	ON		
II	ON	ON	-	3	
III	ON	-	ON	9	
IV	ON	-	-	3n	
V	-	ON	ON	20n	
VI	-	ON	-	30n	
VII	-	-	-	+∞	

When set to "+∞" motion sensor and daylight sensor is disabled.

### 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: 5s  
III: 5min  
IV: 10min  
V: 30min  
VI: 60min  
VII: +∞

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

When stand-by period set to "0s", the light will achieve ON/OFF function only, and MODE must be set to "100%".

	6	7	8	
I	ON	ON	ON	0S
II	ON	ON	-	5S
III	ON	-	ON	5min
IV	ON	-	-	10min
V	-	ON	ON	30min
VI	-	ON	-	60min
VII	-	-	-	+∞

### 4, 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 daylight sensor will switch on the lamp when motion is detected regardless of ambient light level.  
30lux, 50lux, 100lux, 150lux: twilight operation, 15lux, 5lux: darkness operation only.  
Note that daylight sensor is active only when lamp totally switches off.

	9	10	11	12	
I	ON	ON	ON	ON	5Lux
II	-	ON	ON	ON	15Lux
III	ON	-	ON	ON	30Lux
IV	-	ON	ON	ON	50Lux
V	ON	ON	-	ON	100Lux
VI	ON	ON	ON	-	150Lux
VII	-	-	-	-	Disable

### 5, Stand-by DIM 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%

	1	2	
I	ON	ON	10%
II	ON	-	20%
III	-	ON	30%
IV	-	-	50%

### 6, Mode

100% means the light (connect to the slaves) lights up to 100% light when receive the RF signal from master. 10%-50% means the fixture (connect to the slaves) lights up to a low light level when receive the RF signal from the master, which is defined by stand-by DIM level. When stand-by period set to 0s, the sensor will achieve ON/OFF function only and mode must be set to "100%".

	3	
I	ON	100%
II	-	10%-50%

### SETTINGS(MW04)

	1	2	3	
I	ON	ON	ON	0S
II	-	ON	ON	5S
III	ON	-	ON	5min
IV	-	ON	-	10min
V	ON	ON	-	30min
VI	-	ON	-	60min

#### Stand-by period

Refers to the time period the lamp remains at a low light level before it completely switches off in the long absence of people. When stand-by period set to 0s, the light will achieve ON/OFF function.

#### Stand-by DIM level

Stand-by DIM level means the light dims to a low level when hold time of master elapse.

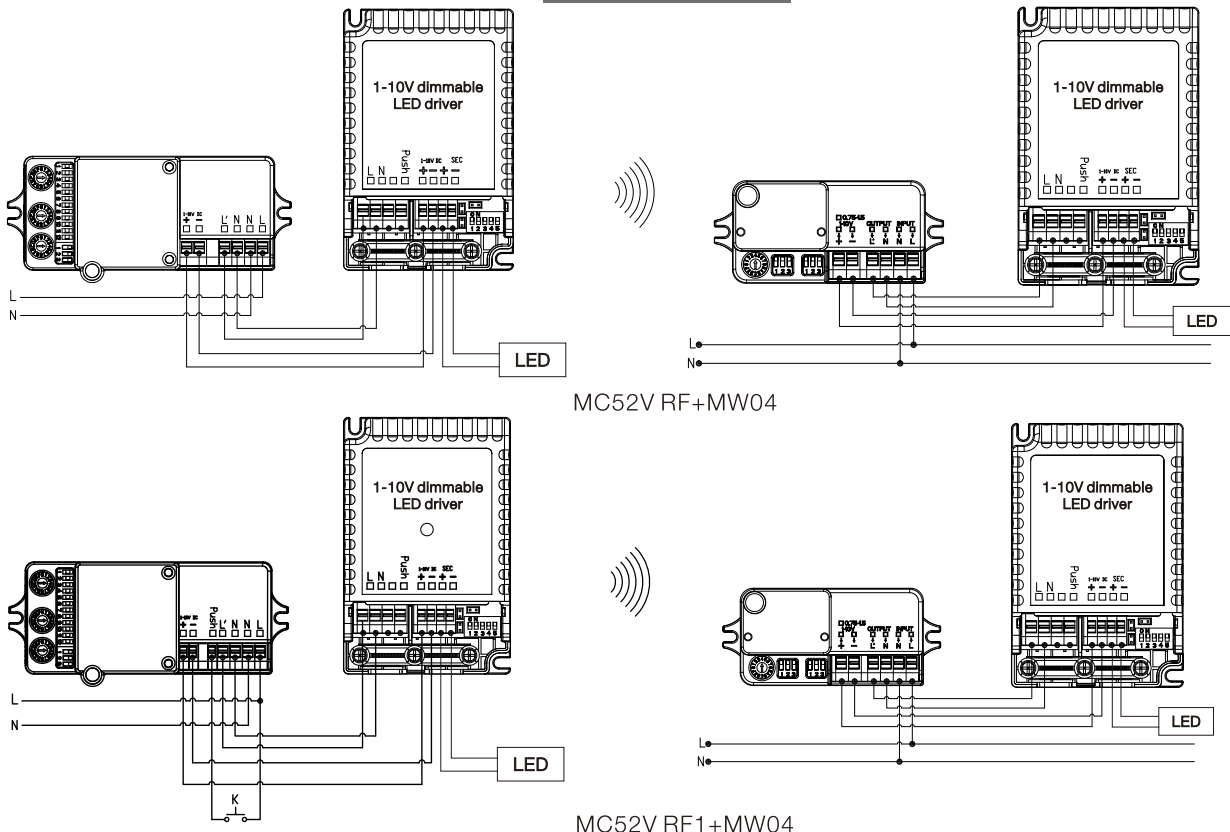
Note: Hold time of slave is defined by master unit.

	1	2	3	
I	ON	-	-	50%
II	-	ON	-	30%
III	-	-	ON	20%
IV	-	-	-	10%

### 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.

### Wiring scheme



Shenzhen Merrytek Technology Co., Ltd

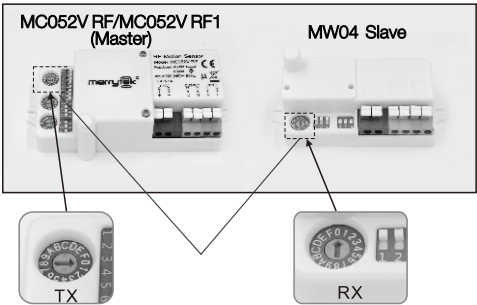
No.3 Building, 380 Xiangshan Avenue, No.3 Industrial Park Luotian, Songgang Town, Bao'an District, Shenzhen 518105, Guangdong, China

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

# RF grouping (up to 16 different groups possible)

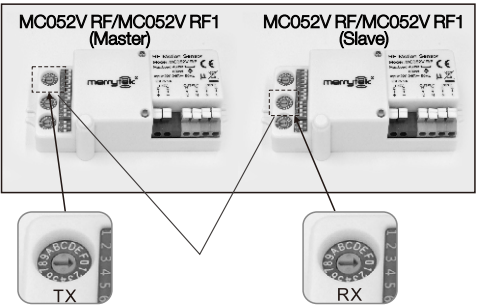
MC052V RF/MC052V RF1 has one TX channel and MW04 has one RX channel . The TX channel is used for transmitting RF signal and the RX channel is used for receiving RF signal. Use a small screwdriver to rotate the rotary switches and keep them pointed to the same channel, groups will be created automatically.

MC052V RF/MC052V RF1 work as master and MW04 work as slave.



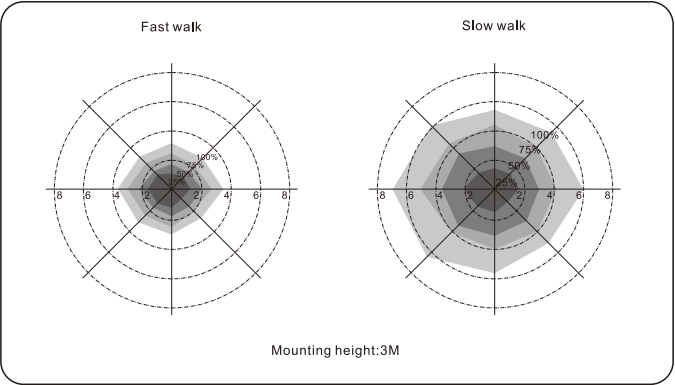
Using a screwdriver to point the arrow to the same channel on both master and slave.

MC052V RF/MC052V RF1 work as both master and slave.

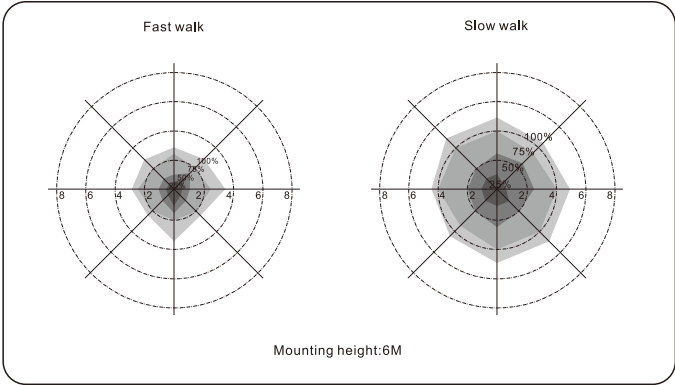


Using a screwdriver to point the arrow to the same channel on both master and slave.

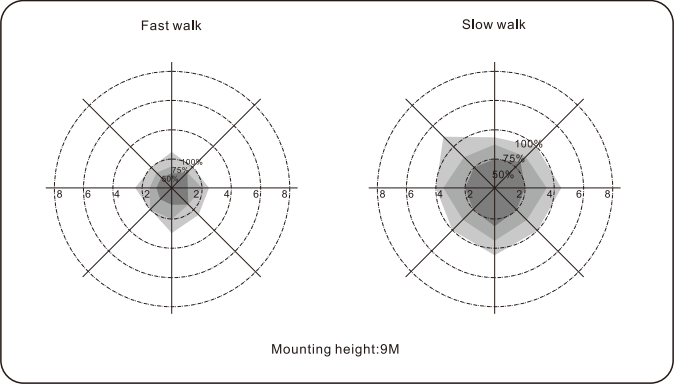
## DETECTION PATTERN



## DETECTION PATTERN



## DETECTION PATTERN



## DETECTION PATTERN

