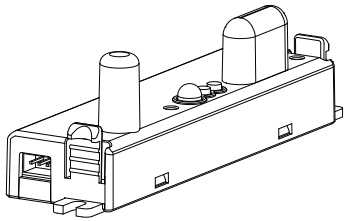
merryfek®

Model: MC087D 99 B

Networking Controller(Microwave)
User's Manual



EN
Instruction
MI260119A0

PRODUCT FEATURES

1. Grouping networking by 2.4G wireless, no need paring or gateway.
2. Patented di-pole microwave antenna, no false trigger when installed below metal LED tray.
3. Super-narrow microwave senor head, suitable to be fixed in slim LED fixtures.
4. All sensor parameters can be set by remote control.
5. Output 0-10V dim or PWM dim, 2-step/3-step dim function.
6. 6m Max. mounting height.

CAUTION

1. The sensor should be installed by qualified electrician and ensure power is OFF before installation.
2. Please read the instruction carefully before using the product and keep it well for other users to read any time.
3. We reserve the right to modify any incorrect text, image and technical parameters.
4. Any unauthorized modification is forbidden. Otherwise, all guarantees will be immediately invalid.
5. Product could be optimized without prior notice.

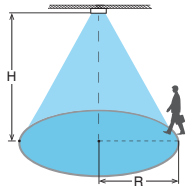
DEFAULT SETTING

Detection area: 100%; Hold Time: 5s; Stand-by Period: 0s; Daylight Sensor: Disable; Stand-by Dim Level: 10%.

PARAMETERS

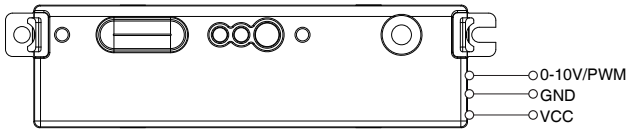
Model		MC087D 99 B	
Output Signal		0-10V signal	PMW signal
Rated Voltage		12±1VDC	
Working Current		55±5mA	
Working Frequency		5.8GHz ±75MHz, ISM band	
Transmit Power		1mW Max.	
Sensor Parameter	Hold Time	30s/1min/3min/5min/10min/20min/30min(set by MH17); 30s/1min/3min(set by MH15)	
	Stand-by Period	0s/10s/1min/3min/5min/10min/30min/+∞(set by MH17); 5min/10min/ +∞(set by MH15)	
Daylight Sensor		Set by remote MH15 or MH17	
Wireless Operating Frequency		6dBm	
Transmitting Distance		15m MAX(Point-to-point open area transmission distance)	
Detection Area(Radius)		Ceiling Mounting(height: 3m): 0.3m/s ≥3m, 1m/s ≥2.5m Wall Mounting(height: 2m): 0.3m/s ≥5m, 1m/s ≥3m	
Working Temperature		Built-in: -25~60°C	
Storage Temperature		-40°C~80°C, humidity ≤85% (non-condensing)	
Certified		CE, RED	
Environmental Requirements		Comply with RoHS 2.0 , Reach requirements	
Degree of Protection		IP20	

DETECTION AREA

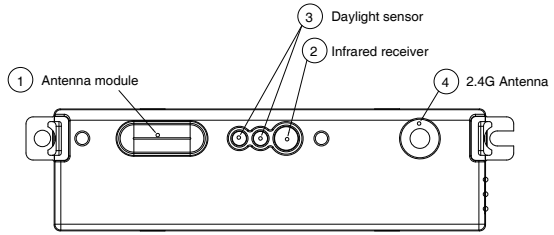


Detection Area(R) 1m/s				
Mounting height \ Detection sensitivity	100%	75%	50%	25% (Set by MH17)
2.4m	≥2.5	≥2.5	≥0.8	N/A
3m	≥2.5	≥2.5	≥0.8	N/A
6m	≥1.5	≥1.5	N/A	N/A

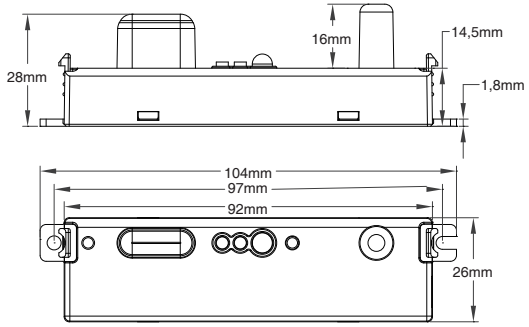
WIRING INSTRUCTION



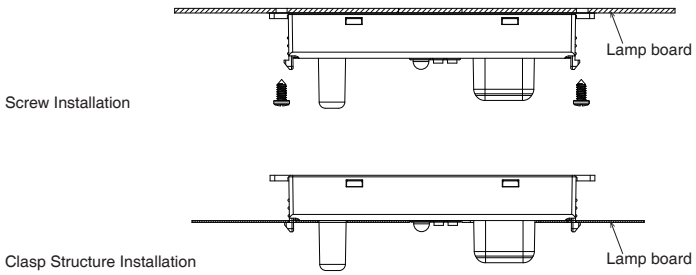
PRODUCT INTRODUCE



DIMENSION

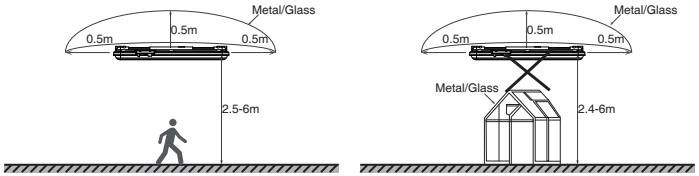


INSTALLATION



APPLICATION NOTICE

1. The sensor should be installed by a professional electrician. Please cut off the power before installing, wiring etc..
2. The detection distance is related to factors such as the moving speed of the moving object, the size of the moving object, the installation height, the installation angle, whether the installation environment is open, and the material of the reflector. The detection distance given in the specification is a typical value, which is 165cm/65kg tester, and it is tested in an open indoor environment.
3. When the microwave sensor is installed on the wall, the detection distance will be greatly increased compared with that installed on the ceiling. If you use the wall installation method, please reduce the sensitivity to use or contact our company to confirm the use settings.
4. This sensor is not designed for office lighting applications that require minor motion detection.
5. The light sensitivity threshold is in a sunny environment, no shadows, and ambient light diffuse reflection conditions. In different time periods, climates, and environments, the illuminance value detected by the light sensor may be different.
6. Sensor parameters may need to be reconfigured in different installation environments, please refer to the following instructions or contact the manufacturer.
7. This sensor is only for indoor use, outdoor wind and rain, and surrounding moving objects will cause false triggering.
8. The installation height of the sensor product cannot exceed 6 meters, and the optimal height is 3 meters; the distance between the two sensors should be greater than 3 meters.
9. When the sensor is installed in a metal lamp, on a metal reflective surface, or in a narrow closed environment, microwaves will be reflected multiple times and cause false triggering. Please reduce the sensor sensitivity or contact the manufacturer for technical support.
10. Please make sure that there are no moving objects such as fans, DC motors, sewer pipes, air outlets, etc. around the sensor, otherwise the sensor may cause false triggering.The moving object's distance sensor detects a distance greater than 3 meters.
11. To avoid mutual interference with Wi-Fi router, the distance between sensor and Wi-Fi router, which works on auto mode, should be larger than 3 meters. If the Wi-Fi router works on fixed Wi-Fi channel 161, the sensor should be far away at least 6 meters from router.
12. Microwaves cannot penetrate metal, avoid installing in closed or semi-closed metal lamps, and there should be no metal or glass obstructions above the product.



13. Sensor with different PWM/0-10V driver, the Stand-by Dim Level may be different.
14. DC regulated power supply with stable output voltage and LOW ripple coefficient must be used. The ripple of the power supply should be less than 100mV ; the load current should be greater than 100 mA.
15. Product specifications and parameters may be optimized without prior notice.
16. For the new installation environment, it is recommended to test 5pcs samples before installation.

Fig 1

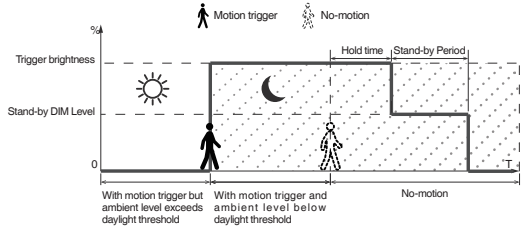
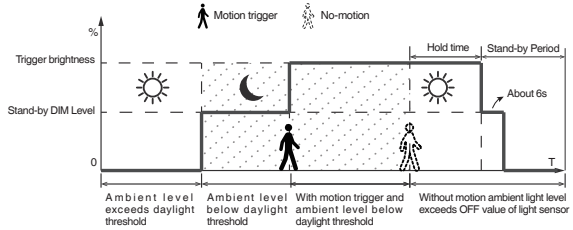


Fig 2



MH17 REMOTE CONTROL

Remote Control Setting	Function	Button	Remarks
	Screen wake-up		Short press to wake the screen when off.
	One-click transmission of all parameters	Send	Short press to transmit the parameters displayed on the screen. The transmission will take 3-5 seconds, during this period, make sure the remote control is aimed at the sensor. The lamp will flash once if transmit successfully.
	Transmit a single parameter	OK	Short press to transmit the flashing parameter on the screen, and the light will flash once after successful transmission.
	Parameters & configuration		Press" ▲▼ " button to select parameter items, and press " ◄► " to choose desired gear or value. 1. General parameters (see Figure 1) 2. Wireless grouping parameters 3. Other parameters
	Enable daylight priority	P	Short press and the screen display "P" to enable daylight priority mode, the lamp flashes once after successful setting. The lamp will be turned on when the lux level is below pre-set turn on value and turned off when lux level exceeds the pre-set turn off value (see Figure 2).
	Dim level	Dim + / Dim –	Short press Dim + to increase the dim level by 2% each time. Long press to continuously increase the brightness. Short press Dim – to decrease dim level by 2% each time. Long press to continuously decrease the brightness, with a minimum brightness of 15% (The minimum brightness of some products can be adjusted to 50%. Please refer to the actual product for specific details).
	Quick setting	QS	Long press to save parameters displayed on the screen to the QS (Quick Setting) mode. When need to quickly set parameters for a single lamp, briefly press this button to recall the stored parameters, then short press Send to quickly configure each parameter, the light will flash once after successful setting.
	Disable sensor mode/ light permanently OFF	Sensor OFF	Short press to turn off the sensor function. The light will flash once after successful setting. If multiple products are in the same group, briefly press to turn off the sensor function for all products in the same group. Long press to turn off the light, which can be controlled to permanently OFF.
	Enable sensor mode/ light permanently ON	Sensor ON	Short press to restore the sensor function. The light will flash once after successful setting, and sensor parameters will be the last configured settings. If multiple products are in the same group, briefly press to turn on the sensor function for all products in the same group. Long press to turn ON the light, which can be controlled to permanently ON.
	Enable wireless settings options/ wireless networking function	RF ON	Long press to open the wireless settings options on the remote control. Briefly press to enable the wireless networking function. Upon successful setting, the light will flash once.
	Disable wireless settings options/ wireless networking function	RF OFF	Long press to close the wireless settings options on the remote control. Briefly press to disable the wireless networking function. Upon successful setting, the light will flash once.
	Look up	Look UP	Short press to query the specific parameter settings of the current wireless networking sensor. Upon successful query, the sensor will flash once, and the screen will display all sensing parameters and networking parameters of the sensor. Note: 1. After each query, wait 5 seconds before querying again. 2. Sensors without wireless networking function not available for parameter query.
	Synchronize	Sync	Short press to synchronize the current sensor parameter settings to other sensors in the same group (network settings cannot be synchronized). The synchronization process takes 3-5 seconds, during this period, make sure the remote control is aimed at the sensor. Upon successful synchronization, the lights in the same group will flash three times.
	Reset	Reset	Briefly press to reset the sensor, and light flash once, restoring the sensor parameters to the default factory settings.
	Enable low sensitivity mode	L	N/A
	Network pairing	Net in	
	Color temperature control	CT	
	Switch sensor mode	M/B/S	
	Turn the screen backlight on/off	IND	

1. General parameters (see Figure 1)

Icons	Parameter Items	Options
D	Detection Sensitivity	100%/75%/50%/25%
LUX	Daylight Sensor	5lux/15lux/30lux/50lux/100lux/150lux/999 (999: daylight sensor disable)
SD	Stand-by Dim Level	15%/20%/30%/50%
⏲	Hold time	5s/30s/1min/3min/5min/10min/20min/30min
⏲	Stand-by Period	0s/10s/1min/3min/5min/10min/30min/99(99: stand-by period +∞)

2. Wireless grouping parameters

Icons	Parameter Items	Options
Tx	Transceiver (Master device transmit group code)	A total of 16 groups can be set from 00 to 15, and sensors in the same group can network with each other
Rx1 Rx2 Rx3 Rx4	Receiver (Slave device receive group code)	16 groups can be set from 00 to 15 respectively, and wireless signals with the same group code as Tx can be received

3. Other parameters

Icons	Parameter Items	Options
SE	Scene selection	A total of 10 scenes can be set from 01 to 10

Setting	Light ON below	Light OFF exceeds
5Lux/15Lux/30Lux/50Lux	5Lux/15Lux/30Lux/50Lux	150Lux
100lux	100lux	200Lux
150lux	150lux	300Lux