Specification

Product Name: Network Sensor

Product Model: MC079D IR ZB

Version	Release / Change Date	Reason	Publishing
V1.0	2025.06.16		James.Guo

【Product Feature】

- 12Vdc Input, suitable for DC systems or LED driver with 12V DC auxiliary power output.
- 0--10V dimming terminal, 3-step or 2-step is optional, detection area adjustable
- PIR motion detection sensor
- Indoor maximum mounting height is 12m
- All sensor parameters can be set by remote control
- Support wireless 2.4G networking

【Parameter】

Input			
Rated Voltage	12±1V DC		
Working Current	35±5mA		
Ripple Voltage	<100mVp-p		
Output			
Output Signal	0-10V dimming signal		
Sensor parameters			
Detection mode	PIR detection		
Detection Area	25%/50%/75%/100% (Remote control setting)		
Hold Time	5s/30s/1min/3min/5min/10min/20min/30min (Remote control setting)		
Stand-by Period	0s/10s/1min/3min/5min/10min/30min/+∞ (Remote control setting)		
Stand-by DIM Level	10%/20%/30%/50% (Remote control setting)		
Daylight Sensor	Normal daylight:	5Lux/15Lux/30Lux/50Lux/100Lux/150Lux/Disable (Remote control setting) (Ambient light diffusion)	
	Daylight priority	ON	OFF
		5Lux/15Lux/30Lux/50Lux	on value + (50-150Lux)
		100Lux	on value + (50-150Lux)
		150Lux	on value + (50-150Lux)
		（enter daylight priority mode；reference to remote manual）	
Detection Area(Radius)	Ceiling mounting height 12m: r≥4m@0.3m/s, r≥3m@1m/s		
Mounting Height	10m (12m Max)		
Wireless parameters			
Working Frequency	2.4GHz		
Transmitting Power	6dBm		
Group nodes	Max 32 PCS （one group)		
Transmitting Distance	Point to point transmit 15m Max		
Environment			
Working Temperature	-20℃-55℃		
Storage Temperature	-40℃~80℃, humidity≤85% (Non-condensing)		
Certification Standards			
Certified	CE UL		
Environmental	Comply with RoHS 2.0, Reach requirement		

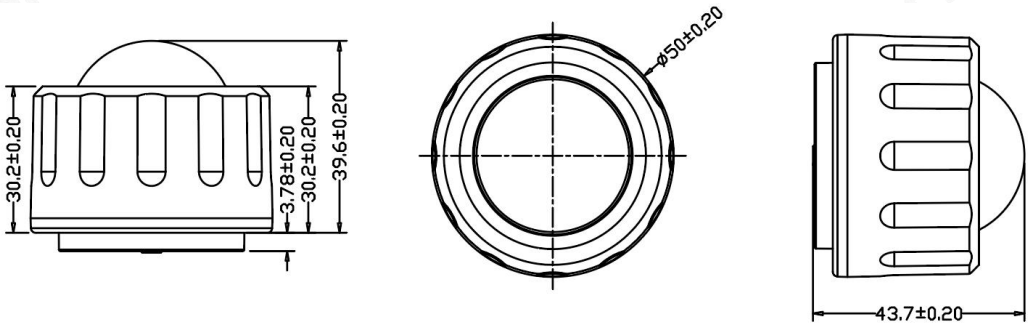
requirements	
IP Rating	IP65
Other	
Wiring	Standard Zhaga Book 18 connector
Installation	External
Package	Clapboard+box (K=A)
Net Weight	39±2g
Lifetime	5 years warranty@Ta

【Function】

☐ON/OFF function	Stand-by Period set ”0s”
☑2-step dimming function	Stand-by Period set as “+∞”
☑3-step dimming function	Stand-by Period set as “10s/1min/3min/5min/10min/30min”
☐Daylight harvesting	Remote set DH Mode+Daylight Sensor 100L/200L/300L/400L/500L/600L
☑Daylight priority	Remote set DH Mode+Daylight Sensor “5Lux/15Lux/30Lux/50Lux/100Lux/150Lux”
☑Network function	Remote control setting group (Ex: 1~16), set Rx receiving signal

【Product Information】

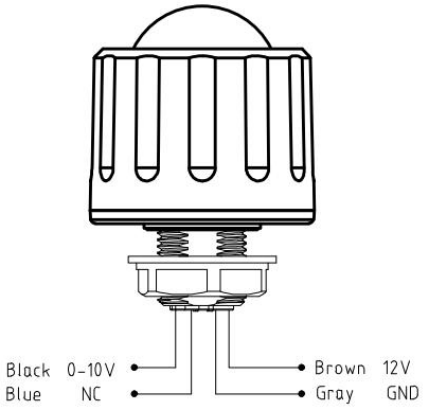
- Dimension (Unit: mm)



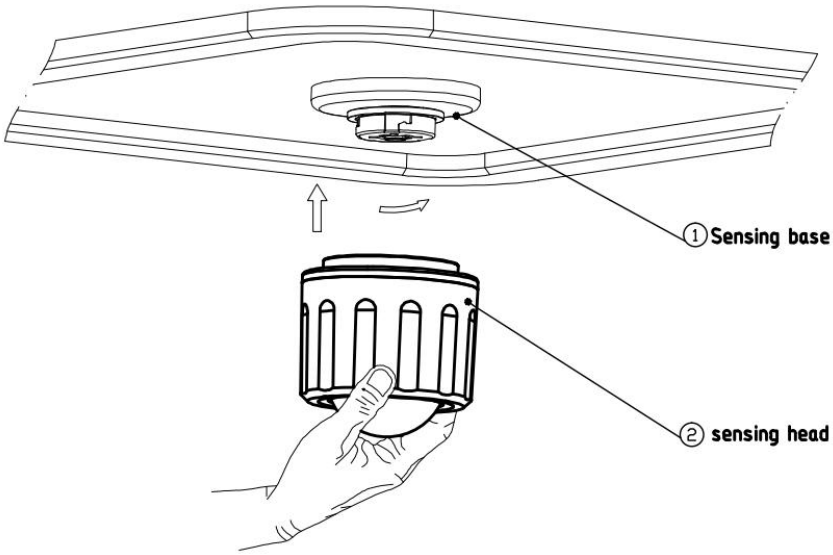
- Function

N/A

- Wiring



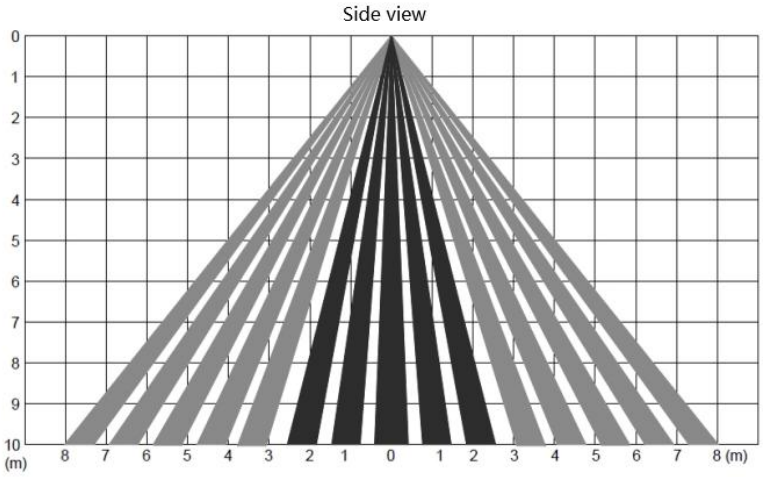
- Installation Instruction (Zhaga Book 18 can be rotatable installed)

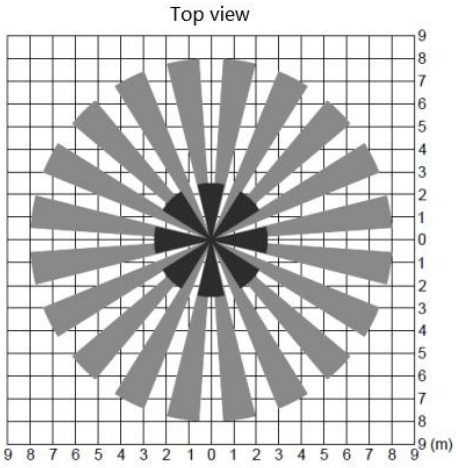


Note:

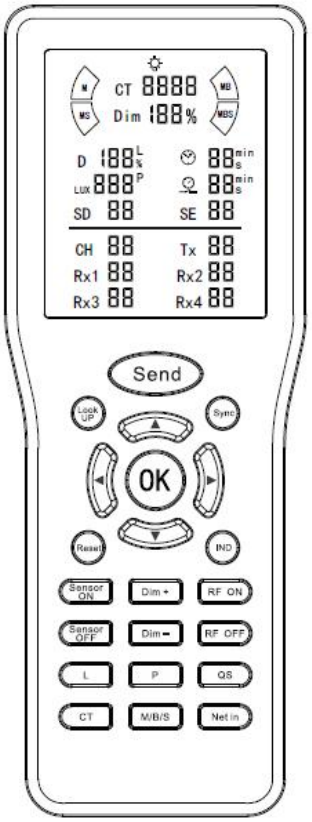
When installing, please note that the microwave antenna plane cannot be blocked by metal.

【Detection Range】





【Remote Control】MH17



Remote Control Setting	Function	Button	Remarks
	Screen wake-up	Send	Short press to wake the screen when off.
	One-click transmission of all parameters		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) 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 (see Figure 2, only available for sensors with wireless networking function) 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 (MC, MLC series products not applicable) SE / Scene selection / A total of 10 scenes can be set from 01 to 10 CH / Channel setting / A total of 30 channels can be set from 01 to 30
	Enable low sensitivity mode	L	Short press to enable low sensitivity mode for a single product, the screen will display "L" and the lamp will flash once after successful setting. This mode can be applied in highly reflective environments where the sensor is unable to turn off the light.
	Enable daylight priority/ daylight harvesting mode	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 3). Setting / Light ON below / Light OFF exceeds 5Lux/15Lux/30Lux/50Lux / 5Lux/15Lux/30Lux/50Lux / 150Lux 100lux / 100lux / 200Lux 150lux / 150lux / 300Lux Short "P" to quit daylight priority mode. The lamp flashes 1 time. "P" will not displayed on the screen.
	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. If there are several lights in the same group, all lights will be 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. If there are several lights in the same group, all lights will be ON.
	Reset	Reset	Briefly press to reset the sensor, and light flash once, restoring the sensor parameters to the default factory settings.
	Turn the screen backlight on/off	IND	Long press to turn the screen backlight on/off. Short press to turn the sensor indicator on/off (if available).
	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.
	Network pairing	Net in	For sensors with Bluetooth or ZigBee networking function, long press this button to put the sensor into pairing mode and the light flash.
	Color temperature control	CT	Briefly press to adjust the color temperature if the sensor supports color temperature control Color temperature option: 2700K/3000K/3500K/4000K/4500K/5000K
	Switch sensor mode	M/B/S	Short press to switch sensor modes (if the sensor supports the corresponding modes) M: motion mode MS: motion + minor motion MB: motion + breathing MBS: motion + minor motion + breathing

Fig.1

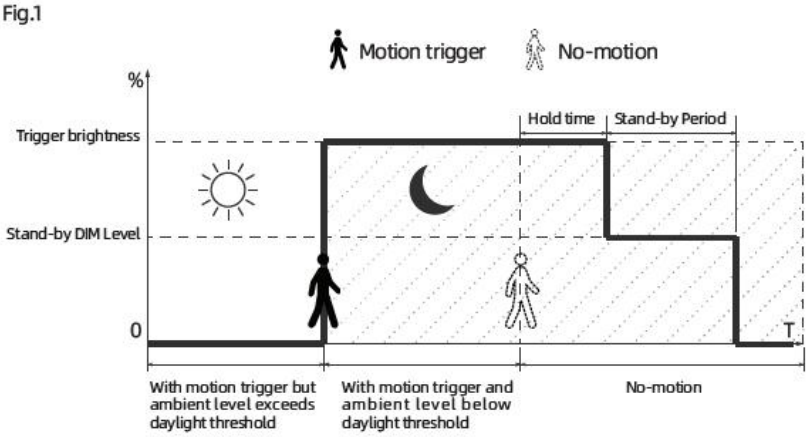
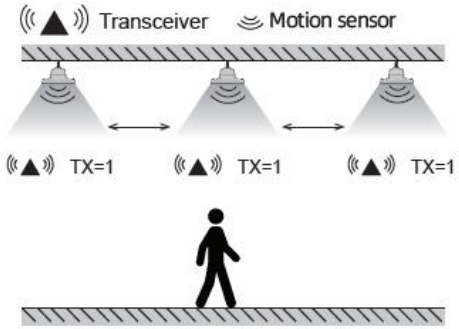
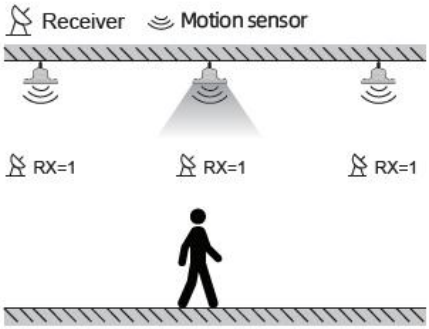


Fig.2

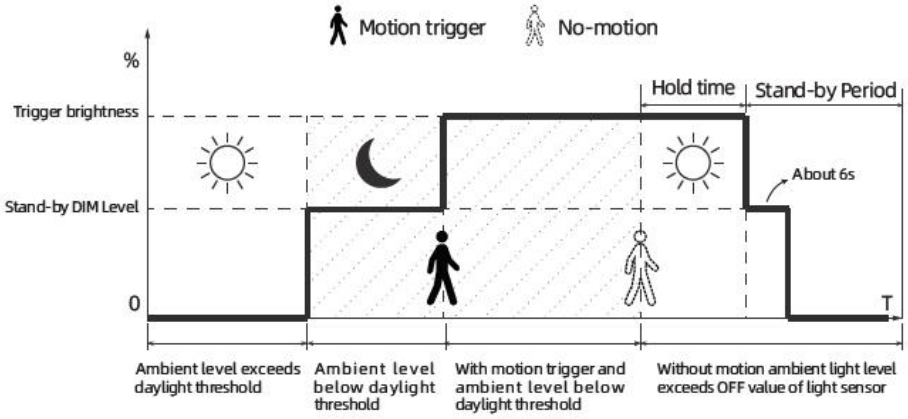


Tx has both transmitting and receiving function

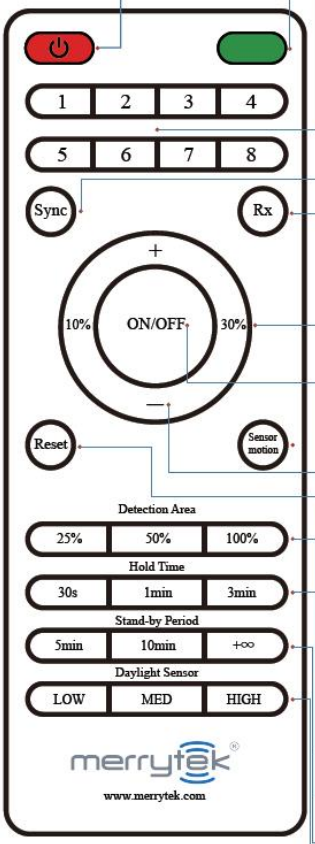


Rx has only receiving function. The lamp with Rx mode only can be lighted up with motion trigger.

Fig.3



Instruction

Remote Control Setting	Button	Remarks
		Turn off wireless transmission
		Recover wireless transmission
		Set the main channel number: Long press a channel number to group the sensors. One flash of the indicator indicates successful grouping. Up to 8 different groups can be established. Short press the channel number, and the light in the same group flashes 3 times. Each sensor can only be set to 1 main channel number at most, based on the most recently set main channel number. Note: Each channel number can be set to a maximum of 32 sensors.
		Short press the channel No. , the lights in the same group will flash 3 time. And then short press the sync button to synchronize sensor parameters to all lights in the same group, including detection area, hold time,stand-by period, daylight senor and stand-by dim level. After the synchronization is successful, the lights in the same group will flash 3 time.
		Set the secondary channel number: Press the Rx button first, and then press any button of groups 1-8 within 3s, and the sensor can receive the signal of the channel. Up to 4 groups of signals can be set to receive. For example: Device A first presses Rx and 1, and then presses Rx and 2, and the device can receive networking signals of groups 1 and 2. If all 4 groups of signals are set, and then a new secondary channel number is set, the first set channel will be removed. For example, device B has set secondary channel numbers of groups 1, 2, 3, and 4. At this time, press Rx and 5, and the sensor can receive secondary channel numbers of groups 2, 3, 4, and 5. Note: Each channel number can set up to 32 sensors.
		Short press this button to set the stand-by dim level, 10% or 30%.
		In any state, short press this button to turn on the current lamp, and the lamp is in a constant on state; long press this button to turn off the current lamp, and the lamp is in a constant off state (memory after power failure). Press the Sensor Motion button to exit and restore the sensing mode, and the parameters will remember the last setting.
		Detection Area (10%-100%)
		Long pressing for 3s to recover factory setting and clear groups. Detection Sensitivity: 100%, Hold time: 10s, Daylight sensor: disable, Stand-by period: 0s, stand-by dim level: 10%.
		Short press to select detection area, 25% is the shortest range. 100% is the maximum.
		Hold Time: 30s, 1min, 3min
		Stand-by Period: 5min, 10min, +∞
		Daylight sensor: 1. Stand-by period set to 5min or 10min or +∞. Enable daylight threshold mode. Light will turn on when ambient light level below the threshold value if with motion trigger. 2. Long press +∞, daylight priority is enabled. Light will automatically turn ON/OFF according to ambient light level against setting below. 3. Press "HIGH" button, Daylight sensor is disabled.

Conditions	Stand-by period Long Press +∞		Stand-by period 5min 10min +∞
Daylight Priority	ON	OFF	Daylight Threahold
LOW	5Lux	55-105Lux	5Lux
MED	50Lux	100-150Lux	50Lux
HIGH	Disabled		

【Initialization】

After switch on power,sensor will be warmed 45-60s then start to work.

【Default Setting】

Sensitivity: 100%, Hold time: 5s, Daylight sensor: Disable, Stand by period: 0s,Stand by DIM Level: 10%

【Application Notice】

- The sensor should be installed by a professional electrician. Please turn off the power before installing, wiring and changing parameters.
- PIR sensor can't penetrate any materials, please make sure no obstacle between sensor and moving people/object.
- Sensor may hard to detect people if wear thick clothes in cold winter.
- Heat signals will be regarded as moving signals to trigger the sensor. Avoid facing sensor to air condition or other heating source.
- Sensor is for indoor use only. Outdoor sunlight could affect the detection of sensor.
- Due to continuous improvement, the contents of this instruction could be changed without prior notice.
- The dimming performance could be different when work with different 0-10V drivers.
- The daylight threshold is measured in a sunny environment without shadow and ambient light diffuse reflection. Ambient lux level could be different in different environment, weather, climate, time-of-day and season.

- Detection distance is related to height of people, mounting height, mounting angle, working environment temperature and etc. When ambient temperature approaches the human body temperature range (36℃~37℃/96.8~98.6℉), PIR motion detection will significantly weaken or non-responsive. When ambient temperature or LED tray temperature is higher than 55℃/131℉, false triggering may happen, please try to reduce detecting sensitivity to improve. If stays false triggering, the PIR sensor should not suitable to be used in the space.

- Given detecting area is typical value that was measured by 165cm high testers in an indoor open environment.
- This product have to use with voltage-stabilized DC power supply whose input voltage is stable and ripple factor is low(ripple factor is lower than 100mV; load current is greater than 25mA).
- When installing in new environment, please install and test at least 5pcs product firstly before mass installation.

- PIR is a pyroelectric infrared sensor that detects changes in infrared rays. Pls pay attention to the following matters during actual use, such as: detecting heat sources other than the human body, the temperature of the heat source does not change or the heat source does not move, and other related

environmental factors and violations of the PIR application principle impact.

- When detecting heat sources other than the human body due to the following phenomena, the PIR may be falsely triggered.
  1. When small animals enter the detection range
  2. When far-infrared rays from sunlight, car headlights, incandescent lamps, etc. are directly exposed to the sensor
  3. When the temperature in the detection range changes drastically due to warm air, cold air from cold greenhouse equipment, water vapor from humidifiers, etc.
- When detecting heat sources due to the following phenomena, the PIR may not trigger
  1. When there are substances such as glass and acrylic that block the transmission of far-infrared rays between the sensor and the detection object.
  2. The heat source within the detection range hardly moves or moves at high speed.
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