Specification

Product Name: DC Controller（Microwave）

Product Model: MC079D 99 Series

Versions	Release/ change Date	Reason	Publishing
V1.0	2024.02.21		James Guo

【Product Feature】

- Low impedance planar antenna; High-gain
- Thimble interface;Earphone interface; Zhaga interface
- 12 meters maximum installation height, suitable for most warehouses
- Mini Microwave motion detector for High Bay Lights.
- Junction box free design, IP65 waterproof
- Ultra-low RF power output, harmless to human health
- Sensor parameters can be adjusted by remote
- The sensing range is adjustable (high sense/low sense) , suitable for different installation environments
- Not affected by temperature, humidity, noise, airflow, dust, light etc.
- Automatic swing structure , easy to plug and play.

MC079D 99 A

MC079D 99 DI

MC079D 99 Z

【Parameters】

Input	
Rated voltage	11-13VDC
Working current	<30mA
Ripple voltage	<100mVp-p
output	
Output signal	0 -10VDC dimming signal
Sensor parameters	
Working frequency	5.8GHz ±75MHz, ISM band
Transmitting power	3mW Max.
Daylight Sensor	5lux/15Lux/30Lux/50Lux/100lux/150lux/Disable
Dimming level	10%(1.4-1.6V) 20%(1.9-2.1V) 30%(2.9-3.1V) 50% (4.9-5.1V)
Detection range (radius)	Ceiling installation 10m high: 0.3m/s≥4m, 1m/s≥3m;
Installation height	10m (12m Max)
3db beam angle	82°@XZ plane
	95°@YZ plane
Environment	
Working temperature	-35~60℃
Storage temperature	-40℃~80℃, humidity ≤85% (non-condensing)

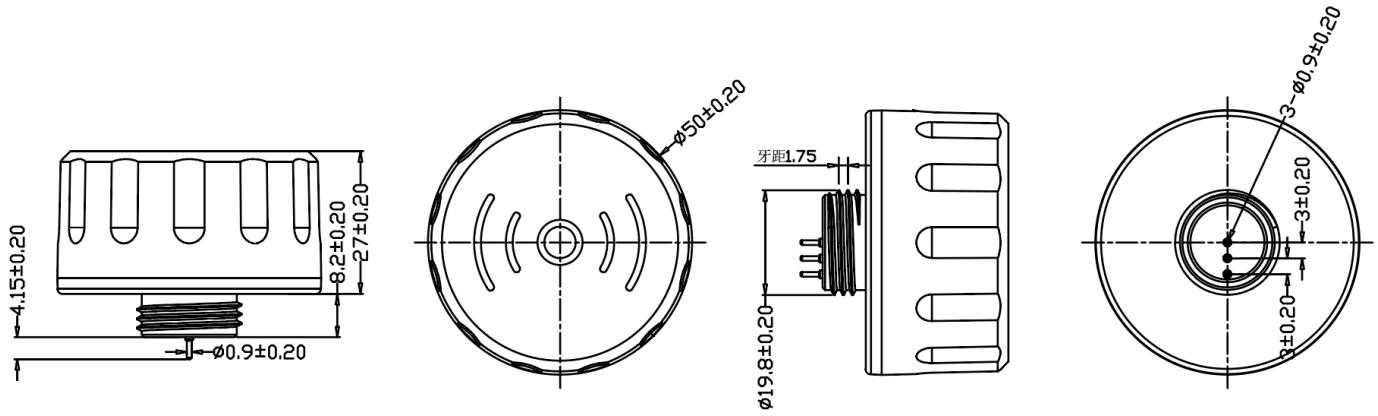
Certification standards			
Certified	CE		
Environmental requirements	Comply with RoHS 2.0 , Reach requirements		
IP Rating	IP65		
Other			
Wiring	MC079D 99 A	MC079D 99 DI	MC079D 99 Z
	Thimble interface	Earphone interface	Zhaga interface
Installation requirements	built-in installation		
Packaging requirements	Clapboard + Carton(K=A)		
Net weight	Body: 40.6±5g		
Lifetime	5 years warranty @Ta		

【Function description】

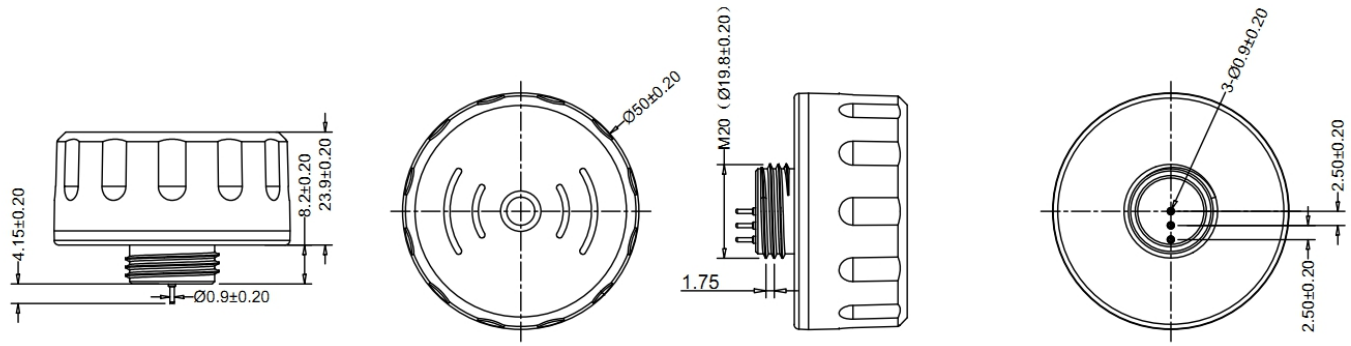
☑ON-OFF function	Stand-by Period be set to “0s”
☑2-step dimming	Stand-by Period be set to “+∞”
☑3-step dimming	Stand-by Period be set to “10s/1min/3min/5min/10min/30min”
☐Daylight priority	N/A
☐Daylight harvesting	N/A

【Product Information】

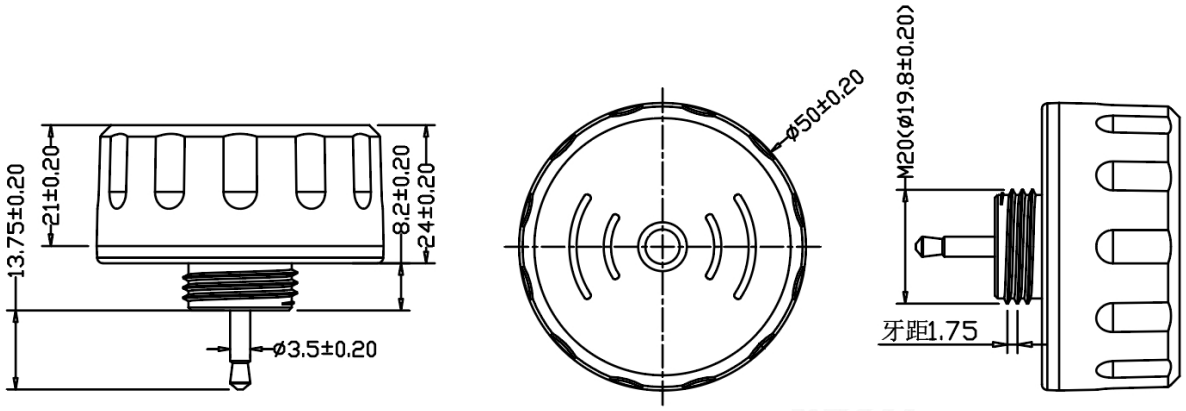
- Dimension (Unit：mm)



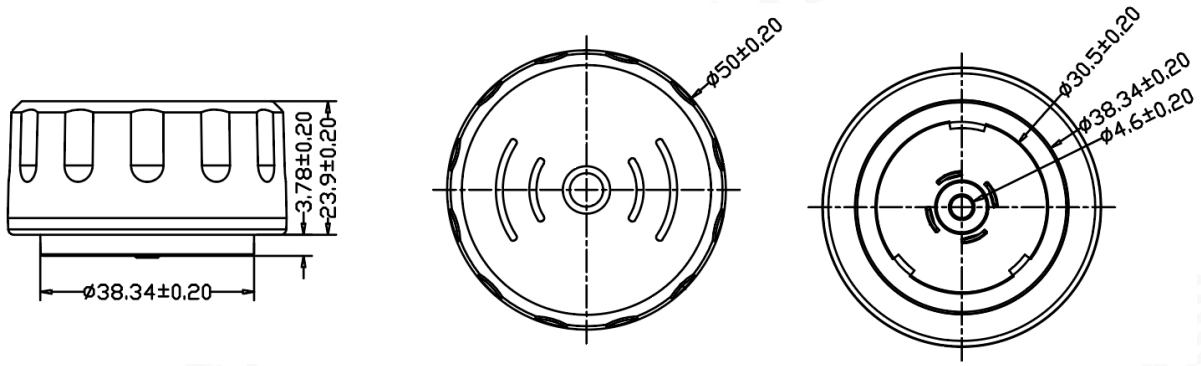
MC079D 99 A（pin3.0）



MC079D 99 A（pin2.5P）

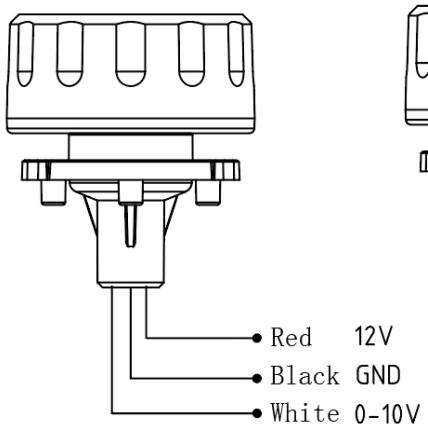


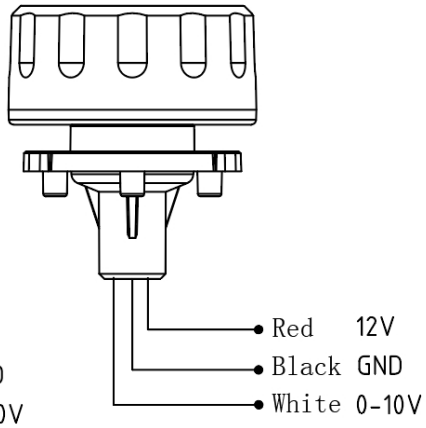
MC079D 99 DI

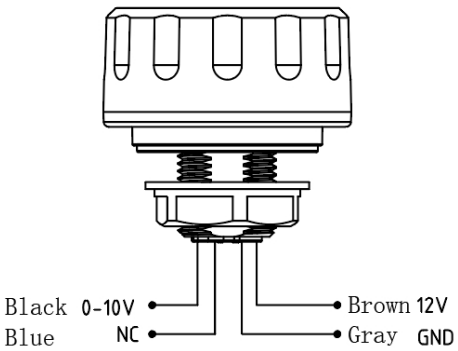


MC079D 99 Z

- Wiring

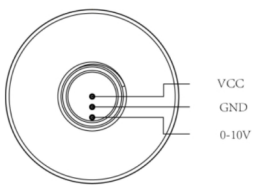


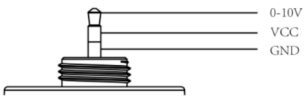


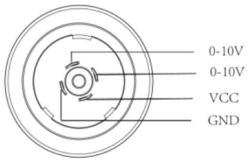


MC079D 99 A	MC079D 99 DI	MC079D 99 Z

- Function



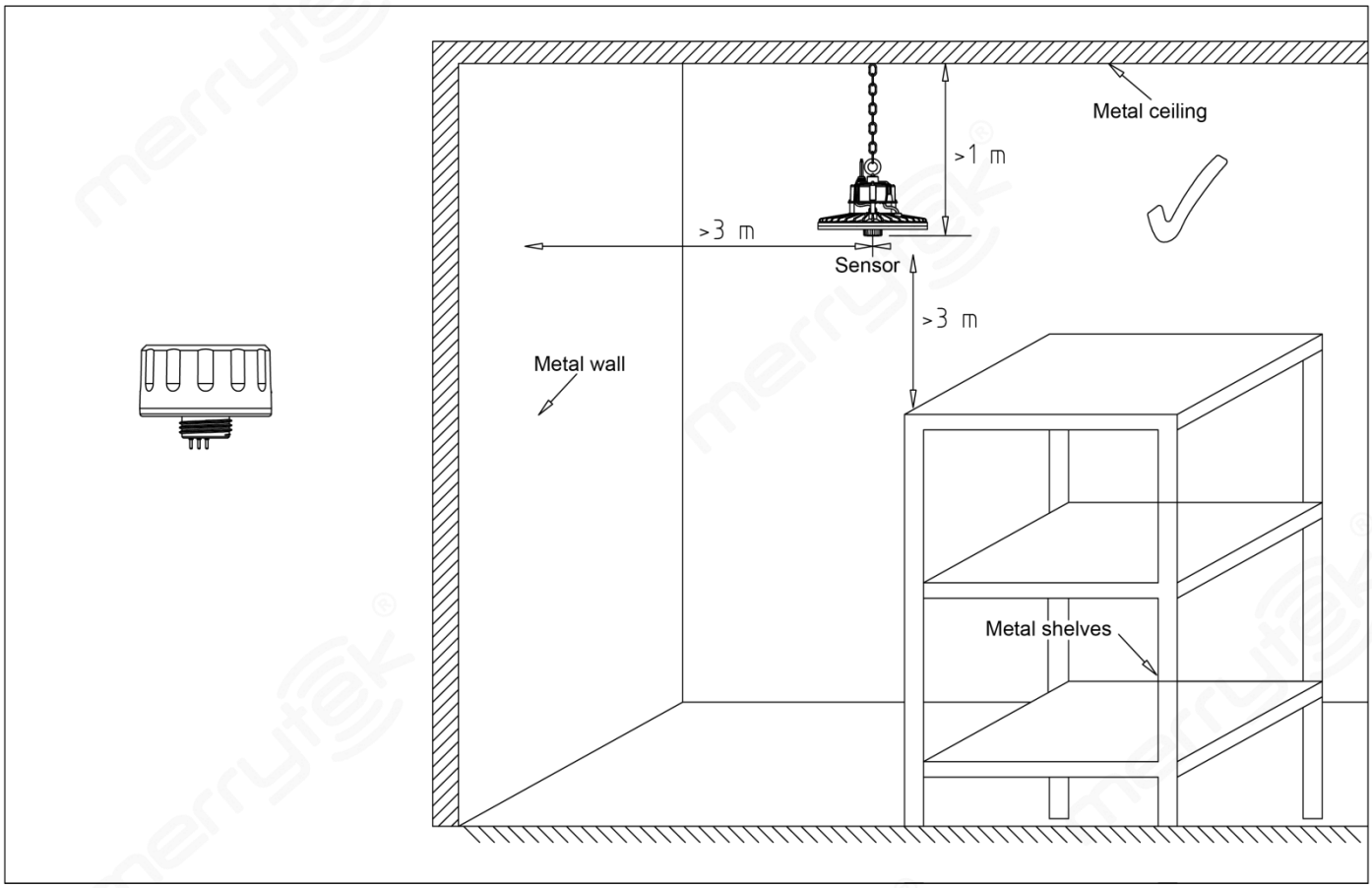




MC079D 99 A	MC079D 99 DI	MC079D 99 Z

【Installation Instruction】

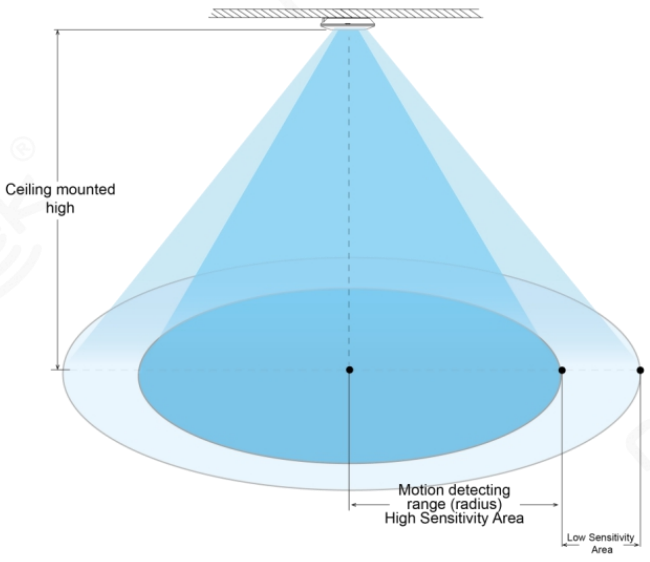
Installation environment



Note

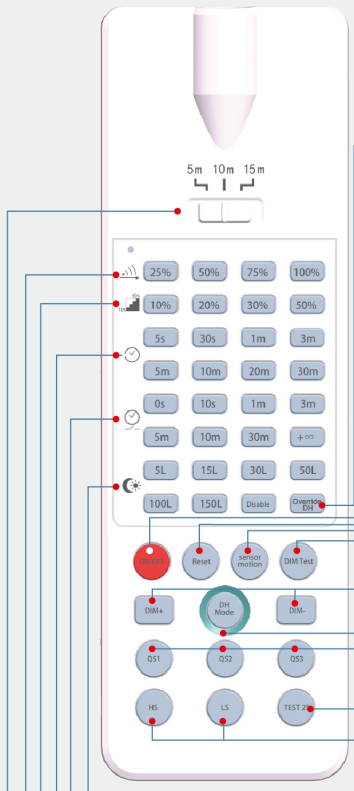
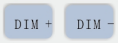
When installing, please pay attention to the distance between the microwave antenna and the metal frame.

【Detection Range】



【Remote】

MH10
Instruction

Remote Control Setting	Button	Remarks
		Press the "ON/OFF" button, the load light enters the normal on/off mode, and the sensing function is disabled. In the normal on/off mode, the "DIM+/DIM-" function can be used to maintain the load light brightness after powering on again. In the normal on mode, the load light enter ON after powering on again. If the load light is OFF, the load light enter ON after powering on again
		Press "Reset" button, all parameters are same as factory settings.
		Press "Sensor motion" button, the light quits from the normal on/off mode, and the sensor starts to work. (The latest setting stays in validity)
		N/A
		N/A
		Short press "DIM+/DIM-" button to set occupancy light level, the brightness of the load light adjusts at 5% per unit. Dimming range: 50%-100%. Note: In normal ON/Sensor motion mode, the maximum brightness can be set using this button.
		N/A
		Scence Options / Detection Area / Hold Time / Stand-by period / Stand-by dim level / Daylight Sensor / Induction way QS1: 100% / 5min / 10min / 10% / 30Lux / HS QS2: 100% / 10min / 30min / 10% / Disable / HS QS3: 100% / 20min / 30min / 10% / Disable / HS Note: The sensor parameters can be adjusted by pressing the corresponding button. When user press any button to change the sensor parameters, the last setting prevails. If the sensor doesn't have the function of the above parameters, that parameter is invalid. (Stand-by period and Stand-by DIM Level are not applicable to ON-OFF Sensor. Induction way is not applicable to low-mount sensor)
		Press the "TEST 2s" botton can enter the test mode anytime. At test mode, the sensor parameters as below: Detection Area is 100%, Hold Time is 2s, Stand-by Dim Level is 10%, Stand-by Period is 0s, Daylight sensor is disabled. This function only for testing. Quit the test mode by pressing "RESET" or any other function buttons. This mode has no memory function. After powering on again, the parameters are restored to the last setting. Note: If the sensor have the wireless networking function, the botton provides the functions is entering the distribution network mode.
		Press "HS" botton to set the detection area to high sensitivity. Press "LS" botton to set the detection area to low sensitivity. The Induction mode is adjusted at the setting detection area. Note: This button is invalid for low-mount sensor.
		Daylight Sensor Set up Daylight Sensor: 5Lux/15Lux/30Lux/50Lux/100Lux/150Lux/Disable
		Stand-by period Set up Stand-by period: 0s/10s/1min/3min/5min/10min/30min/+∞ Note: Stand-by period is not applicable to ON-OFF Sensor.
		Hold time Set up Hold time: 5s/30s/1min/3min/5min/10min/20min/30min
		Stand-by dim level Set up stand-by dim level: 10%/20%/30%/50% Note: Stand-by DIM Level is not applicable to ON-OFF Sensor.
		Detection Area Set up Detection Area: 25%/50%/75%/100%
		Remote Distance Toggle bottom can set the remote distance of remote control and sensor.

Remote controland code setting conversion

1.DIP switch setting convert to remote control

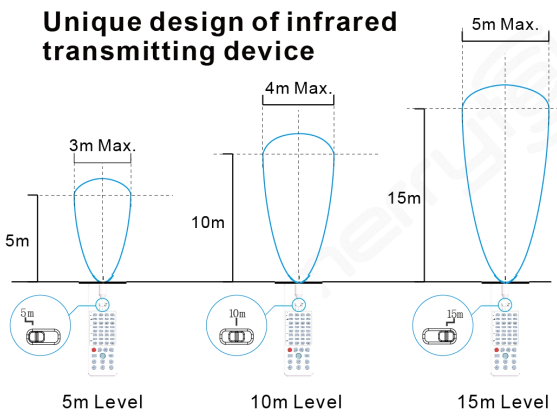
Press any bottom except "RESET" on the remote control, and the sensor settings convert to the function currently selected by the remote control. (No function button settings invalid)

2.remote control convert to DIP switch setting

a.Press the "RESET" button on the remote control, and all settings return to the DIP switch settings of the sensor.

b.Turn off the power, toggle any DIP switch, connect to the power, and all settings return to the DIP switch settings when supply power again.

Unique design of infrared transmitting device



【Initialization】

● On/Off function / 3-Step dimming function: the sensor turns on the light at 100% brightness, and will be turned off after 10 seconds. During initialization,the sensor is not able to detect movement.

● 2-Step dimming function: the sensor turns on the light at 100% brightness. After 10 seconds, it dims the light to low light level (the brightness set by stand-by dim level). During initialization, the sensor is not able to detect the movement.

【Default setting】

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

【Application Notice】

● Sensor should be installed by a professional electrician. Please turn off power before installing, wiring.

● The 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, it is 165cm/65kg people who walks in an open indoor environment

● The daylight threshold is in a sunny environment, no shadows, and ambient light diffuse reflection conditions. In different periods, climates, and environments, the daylight value detected by the light sensor may be different.

● Sensor parameters may need to be reconfigured in different installation environments, please refer to the following instructions or contact the manufacturer

● This sensor is only for indoor use, outdoor use may be false triggered by wind and rain, and surrounding moving objects.

● The installation height of the sensor product cannot exceed 15 meters, and the suitable height is 12 meters; the distance between the two sensors should be greater than 3 meters

● When the sensor is installed in a metal lamp, on a metal reflective surface, or in a narrow closed environment, the microwaves will be reflected multiple times and cause false triggering. Please reduce the sensor sensitivity or contact the manufacturer for technical support.

● Sensor is compatible with different 0-10V driver but dimming effect will be different.

● 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 50 mA

● For the new installation environment, it is recommended to test 5pcs samples before installation.