

Specification

Product Name: AC Controller

Product Model: MC054V RC series

Versions	Release/ change Date	Reason	Publishing
V1.0	2023.05.05	Redesign layout	James Guo
V1.1	2023.06.14	Modify the voltage range of the Stand by DIM level	James Guo
V1.2	2023.10.10	Added European gauge wire	James Guo

【Product Feature】

- Operating voltage 120~277V AC
- Patented microwave antenna, mounting height is 15m Max, suitable to install in most of warehouses
- Supports high-sensitivity and low-sensitivity modes (for metal ceilings, metal reflector mounting environments)
- Work with 1-10V dimmable LED driver, easy to achieve 2-step or 3-step dimming function
- New patented remote control to adjust the launch angle ,avoid malfunction
- Dim+/Dim- function, daylight priority function (MC054V RC3), daylight harvesting function (MC054V RC4)
- 5 years warranty

【Model Selection】

Product Model	Daylight Sensor	Model Suffix	Structural Differences	Bracket
MC054V RC2	Normal Daylight	A Tpye	Bottom single hole	Side bracket
MC054V RC3	Daylight Priority	B Tpye	Side single hole	Bottom bracket
MC054V RC4	Daylight Harvesting	C Tpye	Bottom single hole	Side bracket
		D Tpye	M20 thread for side hole	NO bracket



MC054V RC series A



MC054V RC series B



MC054V RC series C



MC054V RC series D

【Parameter】

Input			
Rated Voltage	120/277VAC 50/60Hz		
Stand-by Power	≤1W		
Surge Test	1KV(L/N,EN61000-4-5)		
Output			
Output dimming Mode	1-10VDC Dimming Signal	ON/OFF Signal	
Load Capacity	@120VAC 4A Ballast	@277VAC 3A Ballast	
Max. Surge Capacity	80A (50% Ipeak, twidth =200us, 230Vac full load, cold start)		
Dim Interface			
1-10V Dimming	< 50mA (Non-constant source) 10%(1.3-1.7V) 20%(1.8-2.2V) 30%(2.7-3.3V) 50% (4.5-5.5V)		
Sensor Parameters			
Operating Frequency	5.8 GHz ±75MHz, ISM wave band.		
Transmitting power	3mW Max.		

Daylight priority (MC054V RC3)	Switch ON	5lux/15Lux/30Lux/50Lux	100Lux	150Lux
	Switch OFF	150Lux	200Lux	300Lux
Detecting Radius	1m/s ≥4m. @ 10m ceiling mounting, 1m/s ≥3m @ 12m ceiling mounting Test conditions : the product is set to 100% sensitivity, and there is no obvious occlusion in the room of 60 m², 165cm person.			
Mounting Height	10-15m (ceiling mounting)			
3db beam angle	80°@XZ plane			
	96°@YZ plane			
Environment				
Operating Temperature	-35~55℃			
Storage Temperature	-40℃~80℃, Humidity: ≤85%(Non-condensing)			
Certificate Standard				
Certificate	cULus、CE、SAA			
Environmental Requirement	Compliant to RoHS 2.0, Reach			
Safety Standards	IEC60669-2-1, IEC60669-1			
	AS/NZS 60669.1, AS/NZS 60669.2.1 UL60730-1			
EMC standards	EN55015, EN61000-3-2, EN61000-3-3, EN61547			
	AS/NZS CISPR 15, AS/NZS 4268 FCC Part 15C, Part 15B EN 60950-1, EN301489-1, EN 201489-3, EN300440			
IP Rating	IP65			
Protection Class	Class II			
Other				
Wiring (UL)	AWG18 UL1015: Black 105℃ 600V Exposed: 810mm±10mm Strip: 9mm Tinned AWG18 UL1015: Red 105℃ 600V Exposed: 810mm±10mm Strip: 9mm Tinned AWG18 UL1015: White 105℃ 600V Exposed: 810mm±10mm Strip: 9mm Tinned AWG22 UL1015: Pink 105℃ 600V Exposed: 810mm±10mm Strip: 9mm Tinned AWG22 UL1015: Purple 105℃ 600V Exposed: 810mm±10mm Strip: 9mm Tinned			
Wiring Colour (UL)	Lin: Black	N: White	Lout: Red	-: Pink +: Purple
Wiring (CE)	VDE (40026038) : Red H05RR-F0.75mm Exposed:900mm±10mm Strip: 9mm Tinned VDE (40026038) : Blue H05RR-F0.75mmExposed: 900mm±10mm Strip: 9mm Tinned VDE (40026038) : Brown H05RR-F0.75mm Exposed:900mm±10mm Strip: 9mm Tinned VDE (40026038) : Gray H05RR-F0.75mm Exposed:900mm±10mm Strip: 9mm Tinned VDE (40026038) : Purple H05RR-F0.75mm Exposed: 900mm±10mm Strip: 9mm Tinned			
Wiring Colour (CE)	Lin: Brown	N: Blue	Lout: Red	-: Gray +: Purple
Installation	Side-attached			
Package	Instruction+ White box+ White box tags+ Clapboard+ Carton(K=A)			
Net Weight	165±5g			
Lifetime	5 years warranty @Ta 230V			

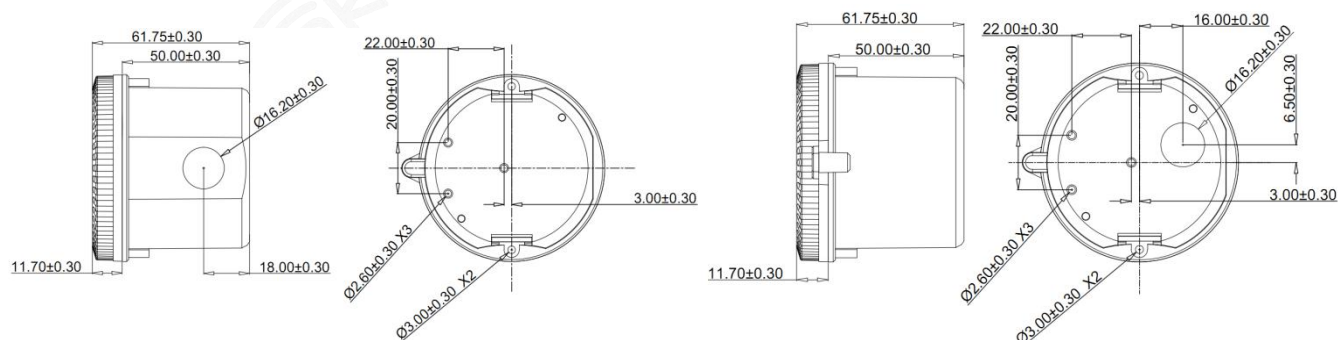
【Function】

- | | |
|------------------|--------------------------------|
| ☑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 harvesting	Remote Controller be set to “DH Mode”, and be set to daylight parameters by “DIM+/-”
✓Daylight priority	Remote Controller be set to “DH Mode”, Switch ON be set to “5Lux/15Lux/30Lux/50Lux/100Lux/150Lux” by Daylight Sensor

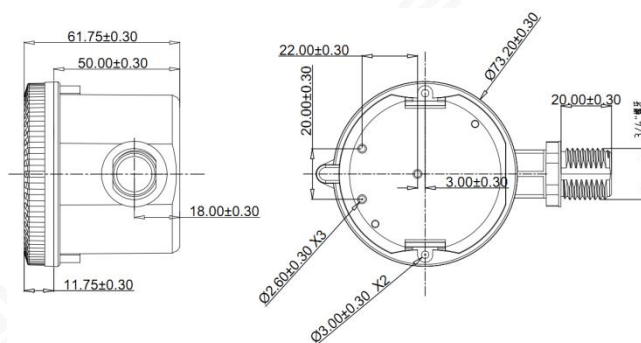
【Product Information】

- Dimension (Unit: mm)



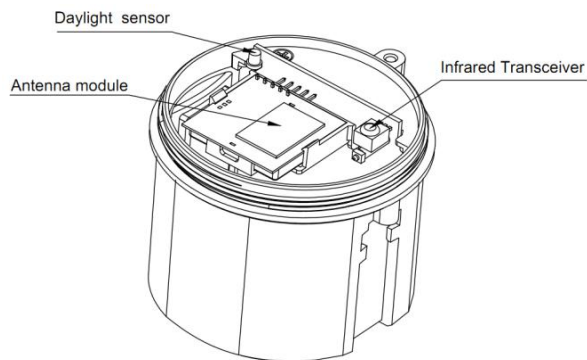
Opening holes on the side

Bottom single hole

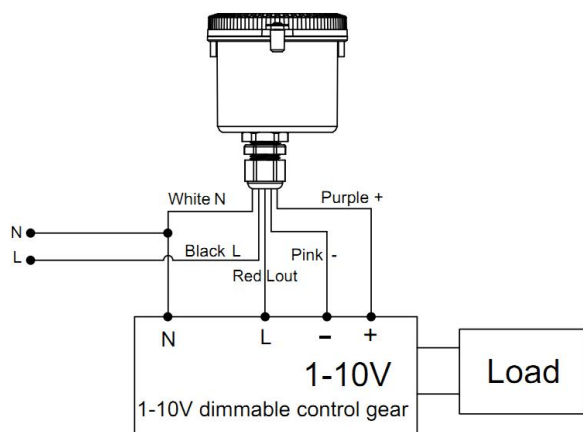


M20 thread for side hole

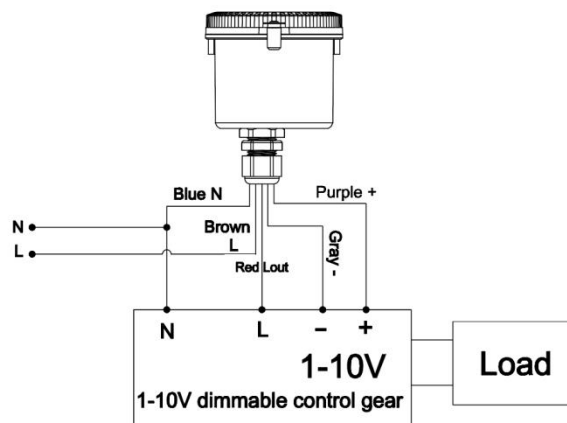
- Wiring



- Function

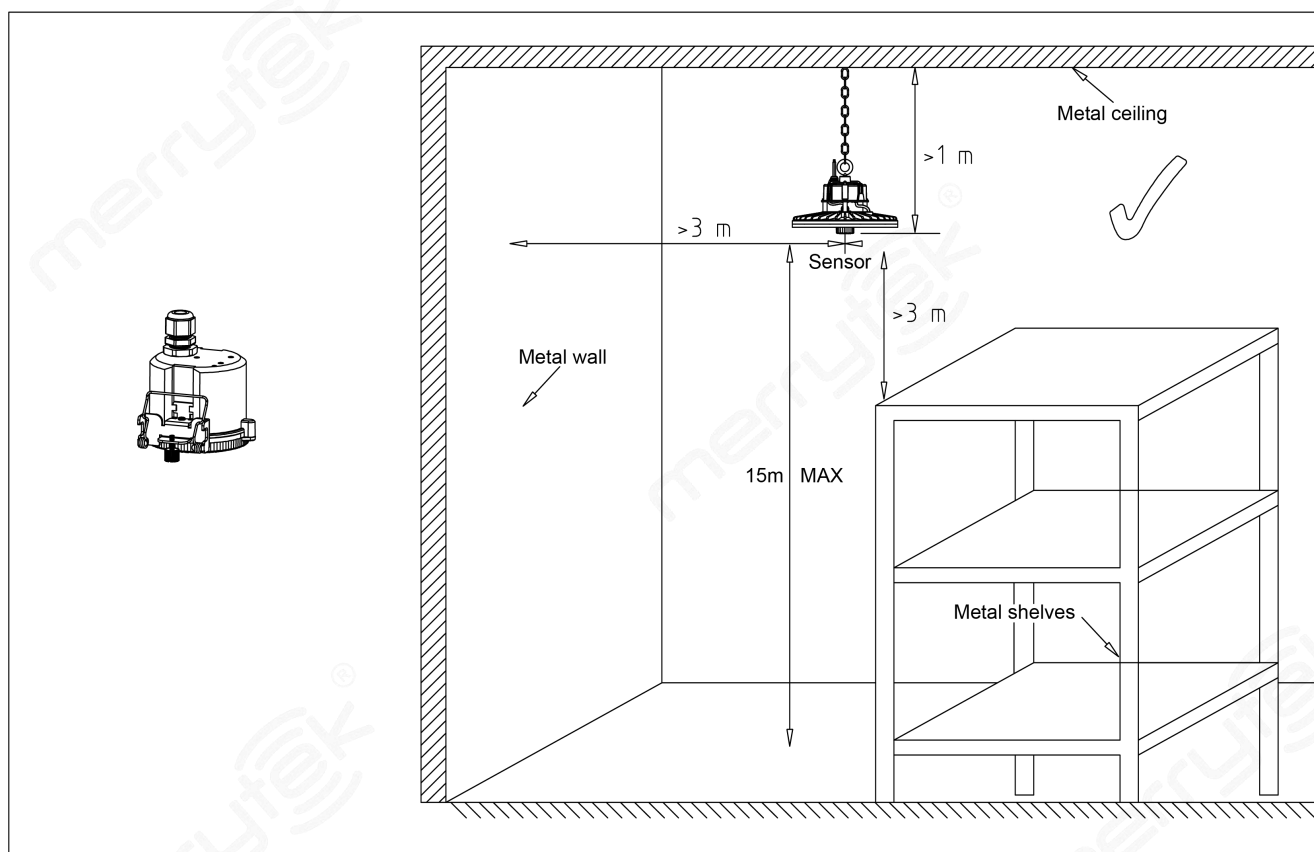


American Standard



European Standard

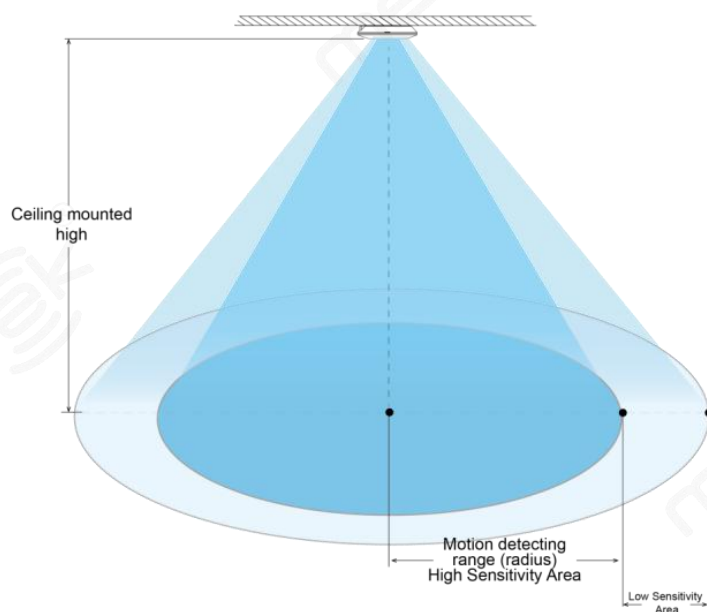
【Installation Instruction】

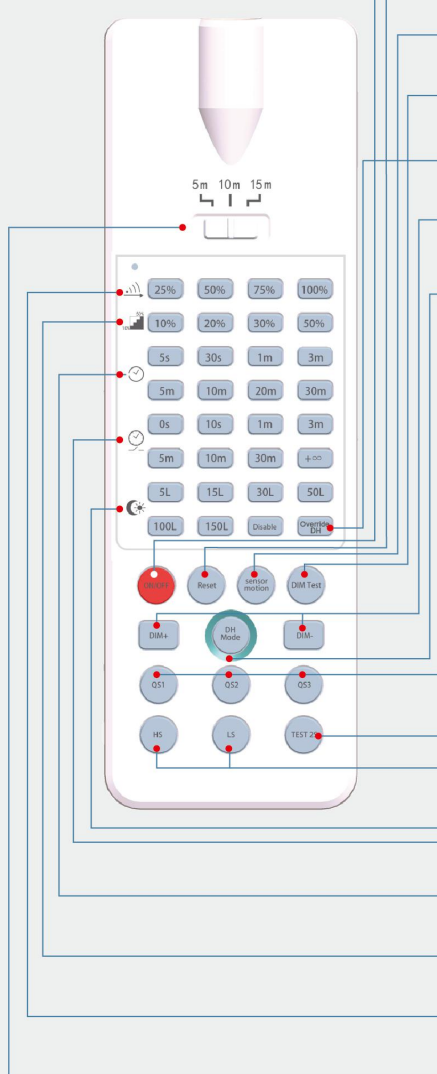


Note

The sensor is allowed to be connected to one load only. The sensor may be damaged if connecting more than one load. When installing, please pay attention to the distance between the microwave antenna and the metal frame.

【Detection Range】



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 is ON for 2 seconds and then enter OFF after powering on again.																												
		Press "Reset" button, all parameters are same as setting of DIP switch or factory settings. Note: Only the product has DIP switch, it will revert to the current DIP setting.																												
		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)																												
		Press "DIM Test" button, the 0-10V dimming works to test whether the 1-10Vdc dimming ports are connected properly. After 2s, it returns to the latest setting automatically.																												
		Long Press 3s "Override DH" button to exit the Daylight priority mode or Daylight harvesting mode, and then enter the Daylight Sensor mode. (The latest setting stays in validity)																												
	 	Short press "DIM+/DIM-" button to transmit dimming signal, the brightness of the load light adjusts at 5% per unit. Long press "DIM+/DIM-" button to transmit dimming signal, the brightness of the load light adjusts at 5% per unit. Dimming range: 50%-100%. (apply for normal on mode and sensor with daylight harvesting function, DIM+/- is not applicable to ON-OFF Sensor.)																												
		Long Press 3s to enter the Daylight priority function (MC054V RC3) or Daylight harvesting function (MC054V RC4). Note: Short press "Disable" button will exit the Daylight priority mode (MC054V RC3) and the Daylight Sensor enter the normal induction mode.																												
	  	<table><tr><th>Scene Options</th><th>Detection Area</th><th>Hold Time</th><th>Stand-by period</th><th>Stand-by dim level</th><th>Daylight Sensor</th><th>Induction model</th></tr><tr><td>QS1</td><td>100%</td><td>5min</td><td>10min</td><td>10%</td><td>30Lux</td><td>HS</td></tr><tr><td>QS2</td><td>100%</td><td>10min</td><td>30min</td><td>10%</td><td>Disable</td><td>HS</td></tr><tr><td>QS3</td><td>100%</td><td>20min</td><td>30min</td><td>10%</td><td>Disable</td><td>HS</td></tr></table>	Scene Options	Detection Area	Hold Time	Stand-by period	Stand-by dim level	Daylight Sensor	Induction model	QS1	100%	5min	10min	10%	30Lux	HS	QS2	100%	10min	30min	10%	Disable	HS	QS3	100%	20min	30min	10%	Disable	HS
	Scene Options	Detection Area	Hold Time	Stand-by period	Stand-by dim level	Daylight Sensor	Induction model																							
	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 model is not applicable to low-mount sensor)																												
	 	Press the "TEST 2s" button 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 button provides the functions is entering the distribution network mode.																												
		Press "HS" button to set the detection area to high sensitivity. Press "LS" button 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

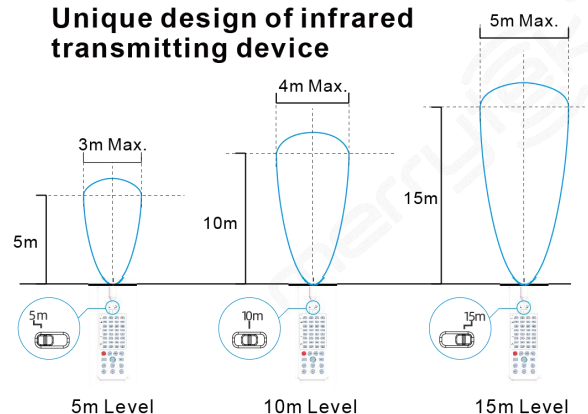
1.DIP switch setting convert to remote control

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

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

- Switch function/3-step dimming function: the light will be turned on 100% brightness by the initial energizing sensor, and will be turned off after 10 seconds. During initialization, no external motion sensing signal will be detected.
- 2-step dimming function: the light will turn on 100% brightness in the initial energizing sensor, and turn to low brightness 10 seconds later (the brightness set by stand-by dim level). During initialization, no external motion sensing signal will be detected.

【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 changing the setting of DIP switch.
- 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.
- For the new installation environment, it is recommended to test 5pcs samples before installation.