

# **Specification**

**Product Name:** 

**DC** controller

**Product Model:** 

MC131D A&B&C&D

Versions	Release/ change Date	Reason	Publishing
V1.0	2023.02.14		James.Guo
V1.1	2023.03.22	Modify remote control description	James.Guo
V1.2	2023.03.30	Update microwave antenna Installation Notice and Radiation Diagram	James.Guo
V1.3	2023.04.12	Modify remote control description	James.Guo
V1.4	2023.09.08	Add C and D, modify the layout	James.Guo
V1.5	2023.12.05	Product adapts ceiling light	James.Guo



## [Product Features]

- Patented Mini Coupling DiPole Antenna
- Long strip shell, miniature antenna design, no shading
- Ultra-low RF power output, harmless to human health
- Support remote control and DIP switch to adjust parameters
- Low side wave, high adaptability to metal environment
- Not affected by temperature, humidity, noise, airflow, dust, light and other environments

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## [Parameter]

Input						
Rated voltage	12 ± 1VDC	2				
Morting oursent	MC131D A	MC131D B	MC131D C	MC131D D		
working current	20±2mA	16±2mA	20±2mA	16±2mA		
Ripple voltage	< 100mVp-p		· ·			
Output						
	MC131D A	MC131D B	MC131D C	MC131D D		
Output signal	0 -10VDC dimming	PWM dimming	0 -10VDC dimming	PWM dimming		
	signal	signal	signal	signal		
Daylight Sensor						
Devilight concor	MC131D A	MC131D B	MC131D C	MC131D D		
Daylight sensor	Daylight 1	Daylight threshold Daylight priority				
Sensing Parameters						
Working frequency	5.8GHz ±75MHz, ISM	/I band	®			
Transmit power	1mW Max.		al.			
	Ceiling installation 3m high: r≥4m@0.3m/s, r≥2.5m@1m/s;					
Detection range (radius)	Horizontal installation 2m high: $r \ge 8m@0.3m/s$ , $r \ge 4m@1m/s$					
Delection range (radius)	Test conditions : the product is set to 100% sensitivity , and there is no obvious					
	occlusion in the room of 60 m <sup>2</sup>					
Installation height	3m ( 5m Max )					
Environment						
Working temperature	<b>Built-in: -25~60</b> ℃					
Storage temperature	-40℃…80℃, humidity ≤85% (non-condensing)					
<b>Certification Standard</b>	S					
Certified	CE, RED (Pending)			Pal		
Environmental requirements	Comply with RoHS 2	.0 , Reach requireme	ents	<i>(©)</i>		
IP Rating IP20		A	2.2			
Other	·					
Wiring	3pin 2.0mm terminal					
Installation requirements	built-in installation					
Packaging requirements	Bubble bag + partitio	n + outer box (K=A)				
Net weight	13.5±2g					
Lifetime	5 Years Warranty@Ta					



## [Model Selection]

Daylight th	nreshold	Daylight	priority
0 -10VDC dimming signal	PWM dimming signal	0 -10VDC dimming signal	PWM dimming signal
MC131D A	MC131D B	MC131D C	MC131D D

## [Function description]

MC131D A, MC131D B				
□ON/OFF function	N/A			
☑Two-step dimming function	Stand-by Period be set to "+∞"			
☑Three-step dimming function	Stand-by Period be set to "15min"			
□Daylight harvesting	N/A			
□Daylight priority	N/A			

MC131D C, MC131D D					
□ON/OFF function	N/A				
□Two-step dimming function	N/A				
☑Three-step dimming function	Stand-by Period be set to "5min/10min/30min"				
□Daylight harvesting	N/A				
☑Daylight priority	Stand-by Period be set to "+∞"				

## [Diagram] Recommended for use on ceiling lights

### • Dimension





Installation







#### Notice

When installing, please pay attention to the distance between the microwave antenna and the light board.

## [DIP Switch setting]



• radiation diagram





## [Remote Controller Optional]

• MC131D A, MC131D B: MH16

					Button	Function	Description
ON/C	OFF Stan Dim I	• Se nd-by Level	ensor	22	ON/OFF	Normal ON/OFF	Pressing the ON/OFF button, sensing function is canceled and the light will remain ON/OFF. Sensor has power-off memory function, that is: Power on again under the "ON" mode of the load lamp, the load lamp enters "ON" mode. Power on again under the "OFF" mode of the load lamp, the load lamp, the load lamp enter the normally "OFF" mode after on for 2s
Dim+	Dim-	10% Time	30%		Sensor	Recover sensing	Pressing this button to recover sensing function.
30s	1min Detectio	5min on Area <↔	10min ↔		Dim+	Increasing Brightness	Pressing this button continuously, the brightness will increase. When adjusting the brightness at full brightness. ON/OFF mode is still available.
Os	Stand-b 3min	y Period 10min	+*		Dim-	Reducing Brightness	Pressing this button continuously, the brightness will reduce. When adjusting the brightness at full brightness, ON/OFF mode is still available.
Test	Dayli	ight Thre	shold Disable		Stand-by Dim Level	Low Brightness	10%, 30%
					Hold Time	100% Brightness	30s, 1min, 5min, 10min
					Detection Area	Detection Area	100%
					Stand-by Period	Stand-by Time	0s, 3min, 10min, +∞
					Test	TEST Button	Pressing this button, the light will turn off after 2 seconds. Restore to last sensing setting after power off.
					Daylight Threshold	Threshold	15lux 🌔 , 50lux 🕰 , Disable

## • MC131D C, MC131D D: MH10, MH12, MH16

				D	Button	Function	Description
ON/C	DFF Star Dim	• So nd-by Level	ensor		ON/OFF	Normal ON/OFF	Pressing the ON/OFF button, sensing function is canceled and the ligh will remain ON/OFF. Sensor has power-off memory function, that is: Power on again under the "ON" mode of the load lamp, the loa lamp enters "ON" mode. Power on again under the "OFF" mode of the load lamp, the load lamp enter the normally "OFF" mode after on for 2
Dim+	Dim-	10%	0% 30% Sensor Recove		Recover sensing	Pressing this button to recover sensing function.	
30s	1min Detecti	5min ion Area	10min		Dim+	Increasing Brightness	Pressing this button continuously, the brightness will increase. When adjusting the brightness at full brightness. ON/OFF mode is still available.
Stand-by Period Os 3min 10min +∞		+00		Dim-	Reducing Brightness	Pressing this button continuously, the brightness will reduce. When adjusting the brightness at full brightness, ON/OFF mode is still available.	
Test	Dayl	ight Thre	Disable		Stand-by Dim Level	Low Brightness	10%, 30%
				(4	Hold Time	100% Brightness	30s, 1min, 5min, 10min
				0	Detection Area	Detection Area	100%
					Stand-by Period	Stand-by Time	0s, 3min, 10min, +∞
					Test	TEST Button	Pressing this button, the light will turn off after 2 seconds. Restore to last sensing setting after power off.
					Daylight Threshold	Threshold	15lux 🌔 , 50lux 🙇 , Disable

## [Initialization]

The sensor will turn on the light at 100% brightness for the first time, and turn it off after 10 seconds. During the initialization period, no external motion sensing signal will be detected.



## [Default setting]

• MC131D A, MC131D B

Sensitivity: 100% Hold time: 5s Daylight Sensor: Disable Stand-by period: +∞ Stand-by Dim Level: 0%

• MC131D C, MC131D D

Sensitivity: 100% Hold time: 5s Daylight Sensor: Disable Stand-by period: 15min Stand-by Dim Level: 0%

## [Application Notice]

• The sensor should be installed by a professional electrician. Please cut off the power before installing, wiring, changing the setting of the DIP switch, etc.

• 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

• 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. 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

• 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 wind and rain, and surrounding moving objects will cause false triggering

• 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

• 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.

• Please make sure that there are no moving signals such as fans, DC motors, sewer pipes, air outlets, etc. around the sensor, otherwise the sensor may cause false triggering.

• Microwaves cannot penetrate metal, avoid installing in closed or semi-closed metal lamps, and there should be no metal or glass blocking the product

• Sensor with different PWM / 0-10V driver, low light effect may be different

• A 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 25mA

• Product specifications and parameters may be optimized without prior notice