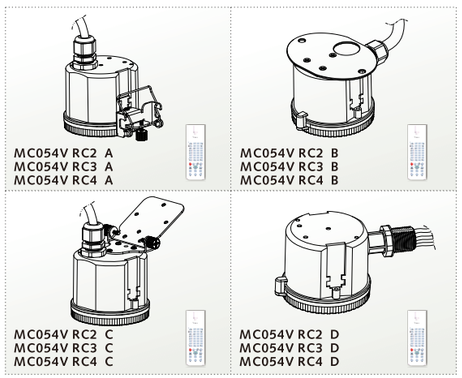
MC054V RC2/MC054V RC3/MC054V RC4

Lighting Control Switch USER'S MANUAL
Model No.: MC054V RC2/MC054V RC3/MC054V RC4



EN

Instruction
MI230609A4

FEATURE

- Sensor parameters can be conveniently set by a remote control.
- Mounting height up to 49.2 ft (15m)max. , suitable for warehouse use.
- Water proof sensor with IP65 rating.
- Automatic dimming when used in combination with 1-10V dimmable control gears.
- Built-in adjustable daylight sensor.
- 1-10V interface can match up with Merrytek stand-alone daylight sensor MS01 and achieve daylight harvesting.
- Optional mounting brackets for different application.

SPECIFICATIONS

Input voltage	220-240Vac, 50/60Hz(AUS/EURO) 120/277Vac,50/60Hz(USA)
Rated load (EURO/AUS)	800W-Inductive 1E4 1200W-Resistive 1E4
Rated load (USA)	120Vac 50/60Hz 4A E-ballast 277Vac 50/60Hz 3A E-ballast
Surge current of load	50A (50% Ipeak, twidth =500uS, 277Vac full load, cold start); 80A (50% Ipeak, twidth =200uS, 277Vac, full load, cold start)
Detection area	100%/75%/50%/25%
Hold time	5s/30s/1min/3min/5min/10min/20min/30min
Daylight sensor	5Lux/15Lux/30Lux/50Lux/100Lux/150Lux/Disable
Stand-by period	0s/10s/1min/3min/5min/10min/30min/+∞
Stand-by dimming level	10% / 20% / 30% / 50%
Sensor principle	Microwave motion detector
Microwave frequency	5.8GHz±75MHz, ISM wave band
Mounting height	49.2 ft (15m) Max.
Detection angle	150°(Wall installation), 360°(Ceiling installation)
Motion detection	1.6~3.3 ft/s(0.5~1 m/s)
Operating temperature	-35°C~55°C
IP rating	IP65 (INDOOR USE ONLY)
Factory Setting	Detection area:100%,Hold time:5s, Stand-by Period: 0s, Stand-by dim level:10%, Daylight Sensor: Disable

Overvoltage Category – 4000V
Control Type - Operating type 1.B
Software - Class A
Pollution Degree - 2

GENERAL GUIDELINES FOR INSTALLATION

1, The sensor should be installed by a qualified electrician. And ensure that the electricity supply is switched off before installing or servicing the product.
2, Installation inside a glass or plastic housing will result in a reduction of detection sensitivity. Expect a reduction of approximately 20% for every 3mm of thickness.
3, Detection area will be affected by speed of motion, height of installation and volume of moving object.
4, Daylight sensor was tested on sunny environment with no lampshade. ambient lux level could be different under different weather, climate, season or environment

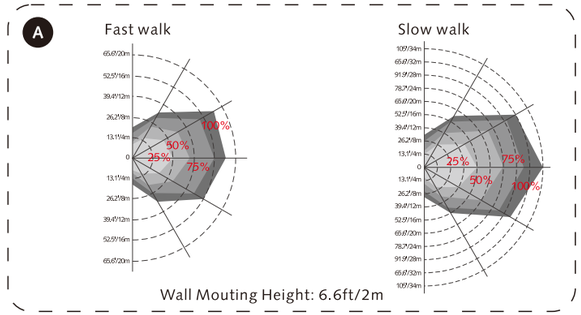
APPLICATION NOTICE

1, Sensors settings may need to be adjusted to match installation site, please follow below instructions or contact manufacturer.
2,The sensor is designed for indoor use only. Outdoor use for a long time may reduce the waterproof effects. The raining or wind blowing may trigger the microwave sensor even if without human motion when outdoor use.
3, The distance between any two sensors should be at least 3m to avoid interference with each other.
4, When the microwave sensor is installed in a metal lighting fixture or space with large reflector, for example a warehouse with metal roof, the microwave will be reflected and cause the lights permanently illuminated even if without motion signal. Please reduce the detection area (sensitivity) to solve the problems, or contact the microwave sensor manufacturer to provide technical support.
5, Make sure the sensor not close to or be blocked by high density material, such as metal, glass, concrete walls etc. The materials will reduce or block microwave and cause false trigger.
6, Make sure there are no fans or other vibrating objects in installation area. The movements will trigger sensor as well.

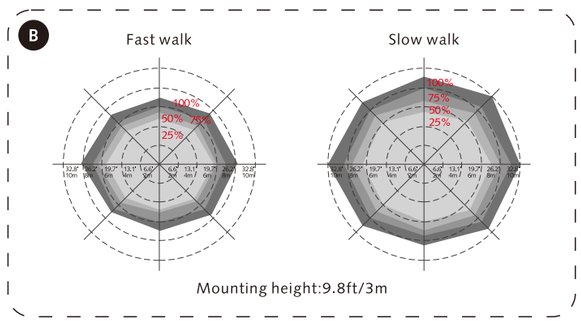
INITIALIZATION

1, ON/OFF function or 3-step dimming function:
After power on, the sensor automatically turns on light at 100% brightness.
After 10sec, it completely turns off light.
During the initialization, the sensor is not able to detect movement.
2, 2-step dimming function:
After power on, the sensor automatically turns on light at 100% brightness.
After 10sec, it dims the light to a low light level (set by stand-by dim level).
During the initialization, the sensor is not able to detect movement.

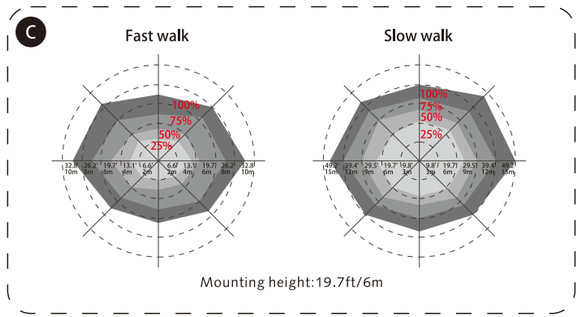
DETECTION PATTERN(FOR WALL MOUTING)

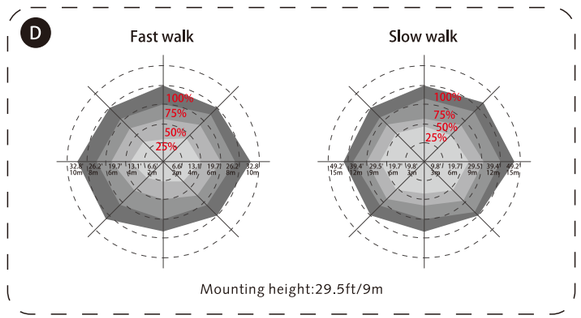


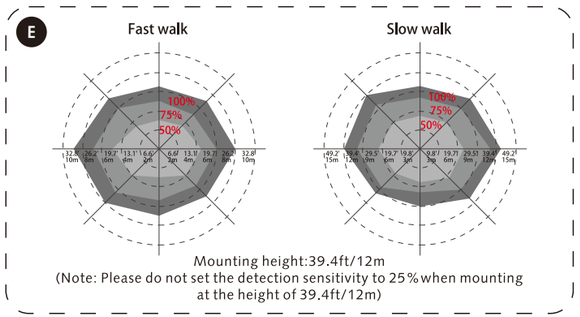
DETECTION PATTERN(FOR CEILING MOUNTING)

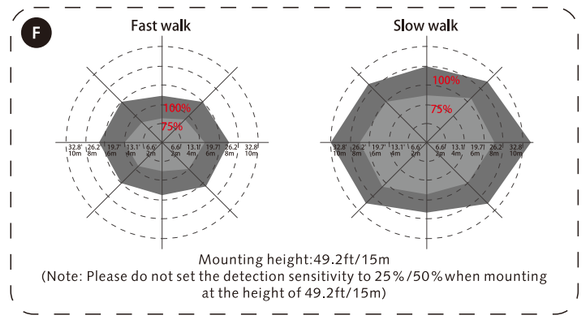


DETECTION PATTERN

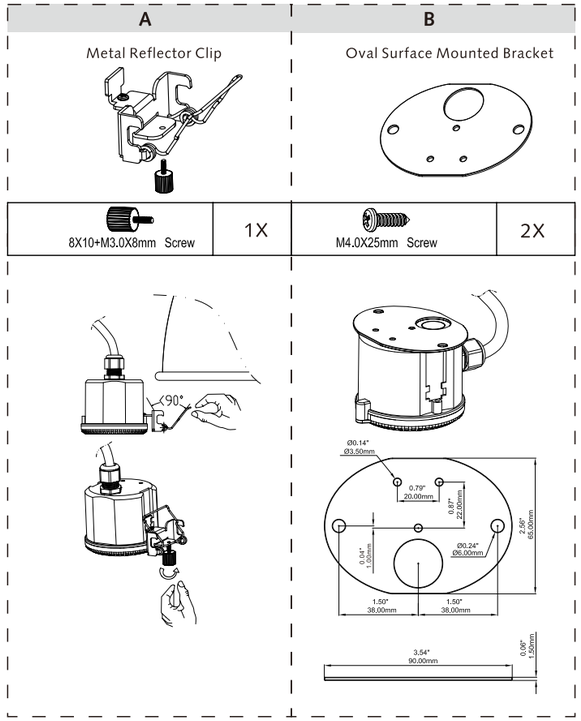


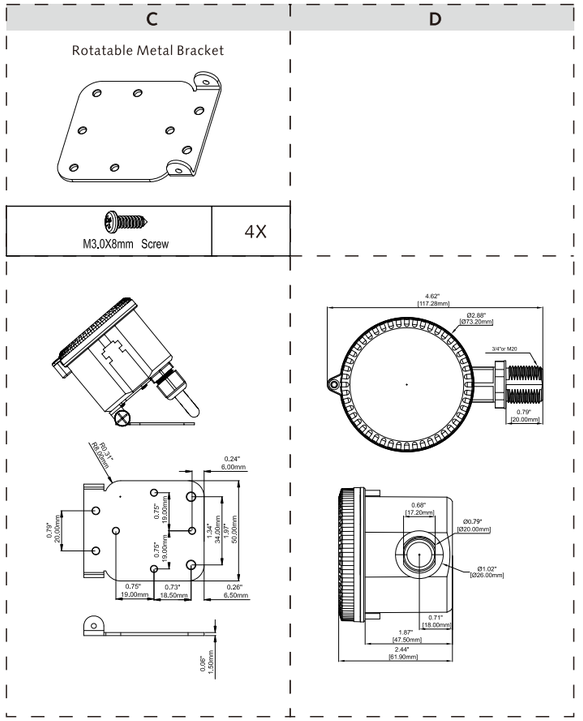




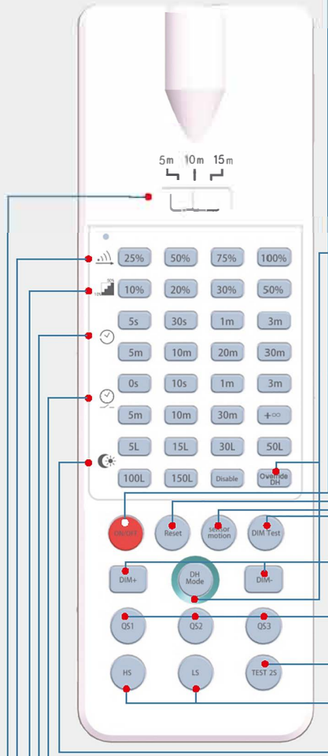


INSTALLATION





Remote Control Setting

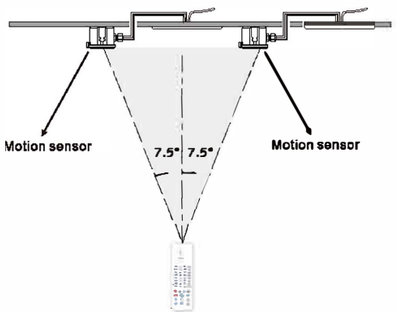


Button	Remarks
	Press the "ON/OFF" button, the light goes to constant on/off mode, sensor is disabled. Press any button to quit from this mode and the sensor starts to work.
Reset	Press "Reset" button, all parameters are same as setting of factory settings.
Sensor motion	Press "Sensor motion" button, the light quits from the constant on/ off mode, and the sensor starts to work (The latest setting stays in validity)
DIM Test	Press "DIM Test" button, the 1-10 V dimming works to test whether the 1-10Vdc dimming ports are connected properly. After 2s, it returns to the latest setting automatically.
Override DH / DH Mode	Override DH: Long press >3s,sensor will quite daylight priority(MC054V RC3)/ daylight harvesting(MC054V RC4) mode, daylight threshold start to work with previous daylight value NA(MC054V RC2) DH Mode: Long press >3s,sensor move to daylight priority mode, please be sure preset daylight threshold is not "Disable" (MC054V RC3) Long press >3s,sensor will take current light level as target lux level, dim up/ down load accroding to change of ambient light level(MC054V RC4),each time press DIM+,DIM-,target light leve change is 5% NA(MC054V RC2)
DIM+ / DIM-	Set occupancy light level in range of 50-100%,dimming level is 5% each time to press Dim+/Dim- button
Q1 Q2 Q3	Note: Detection area / Hold time /Stand-by period /Stand-by dim level / Daylight sensor can be adjusted by pressing the corresponding button. The latest setting will stay valid.
TEST 2S	Press the "TEST 2S" botton can enter the test mode any time. At the mode, the sensor parameters as below: Detection Area is 100%, Hold Time is 5s, Stand-by Dim Level is 10%, Stand-by Period is 0s, daylight sensor disable. This function only for testing. Quit the mode by pressing "RESET" or any other function buttons.
HS LS	Press "HS" button to set the detection area to be high sensitive. Press "LS" button to set the detection area to be low sensitive. The adjustment bases on the "Detection Area" parameter you set.
	Daylight Sensor Set up daylight threshold: 5Lux/15Lux/30Lux/50Lux/100Lux/150Lux/ Disable。
	Stand-by period Set up stand-by time: 0s/10s/1 min/3min/5min/10min/30min/+∞
	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%
	Detection Area Set up detection area: 25%/50%/75%/100%
	Remote Distance Toggle button can set the remote distance of remote control and sensor.

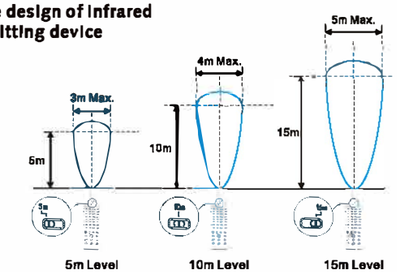
Scene Options	Detection Area	Hold Time	Stand-by period	Stand-by dim level	Daylight Sensor	Sensitivity model
QS1	100%	5min	10min	10%	30Lux	Hs
QS2	100%	10min	30min	10%	Disable	Hs
QS3	100%	20min	30min	10%	Disable	Hs

As the control angle of the Infrared Remote Control is fixed (15°), if sensors are installed too close to each other, settings of both sensors will be configured. Please refer to the below chart for the distance of the installation of the sensor:

Mounting height	Distance between sensors
49.2'/15m	16.4'/5m
39.4'/12m	13.1'/4m
29.5'/9m	13.1'/4m
19.7'/6m	11.5'/3.5m



Unique design of infrared transmitting device

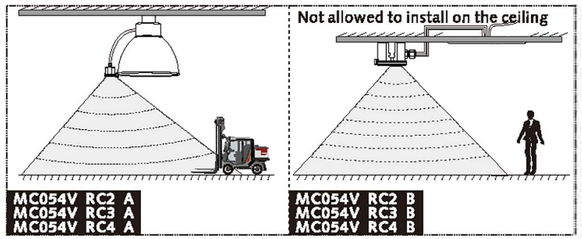


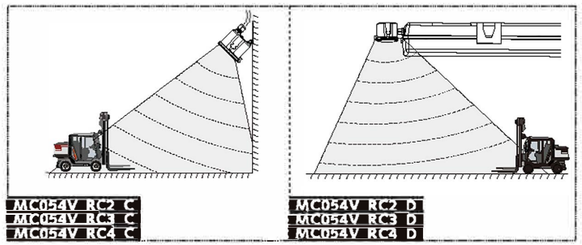
Note:

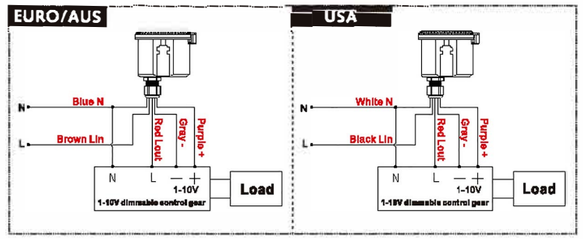
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following Measures:

-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

WIRING







NOTE:

1, Lord bushing of the torque is 2.5NM,Torgue of nut is 2.5NM.
2, The sensor is designed for connect one load only.
Connect more than one loads may damage the sensor.
3, Switch on and off power 3 times in 2sec to override sensor function,
Light can only be turned on and off manually;
Power off and on 1 time to recover sensor function.

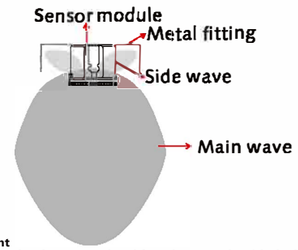
⚠ **CAUTION** - High Voltage -

Disconnect power supply before servicing.

FAQ

Question	Cause	Remedy
The load will not illuminate.	Incorrect daylight sensor setting selected.	Adjust setting.
	Load has failed.	Replace load.
	Power is switched off.	Switch on.
The load is permanently illuminated. (SEE NOTE1)	Continuous movement in the detection area.	Check detection area setting.
	The lamp (containing sensor) is installed in an area too close to reflective surfaces, i.e. metal, glass or concrete walls.	1, Make sure installation area suitable with at least 39.4 inches(100cm) space between lamp and surrounding reflective surfaces. 2, Reduce sensitivity (detection area).
The load will not illuminate despite movement.	Speed of moving object is not in the range of 1.6~3.3ft/s(0.5~1m/s) or the detection radius is too small.	Check detection area setting.
The remote control is not working.	The battery on the remote control is run out.	Change the battery.
	The remote control is not aligned with sensor.	Change the remote angle.

NOTE1



Microwave detection includes two parts called main wave and side wave. Main wave normally detects the motion signal. Side wave does not effect motion detection but might disturb main wave if the microwave motion sensor is built-in a sealed metal luminaire as microwave can not pass through metal.

When the microwave module is built into a metal lighting luminaire or installed in a sensor near a wall, the side wave will be reflected by the metal base or the wall. It can disturb the main wave. As the result of this, the microwave motion senor might not perform optimally. Reducing the detection sensitivity or the side wave will help to solve such problems.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

•Reorient or relocate the receiving antenna.
•Increase the separation between the equipment and receiver.
•Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
•Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modi cations to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Shenzhen Merrytek Technology Co..Ltd
No.17th Building, Dianda Guyuan Industrial Park, Mashantou, Matian, Guangming District, Shenzhen, China, 518106
www.merrytek.com Email:sales@merrytek.com

File NO	KF-BZD-1903-007

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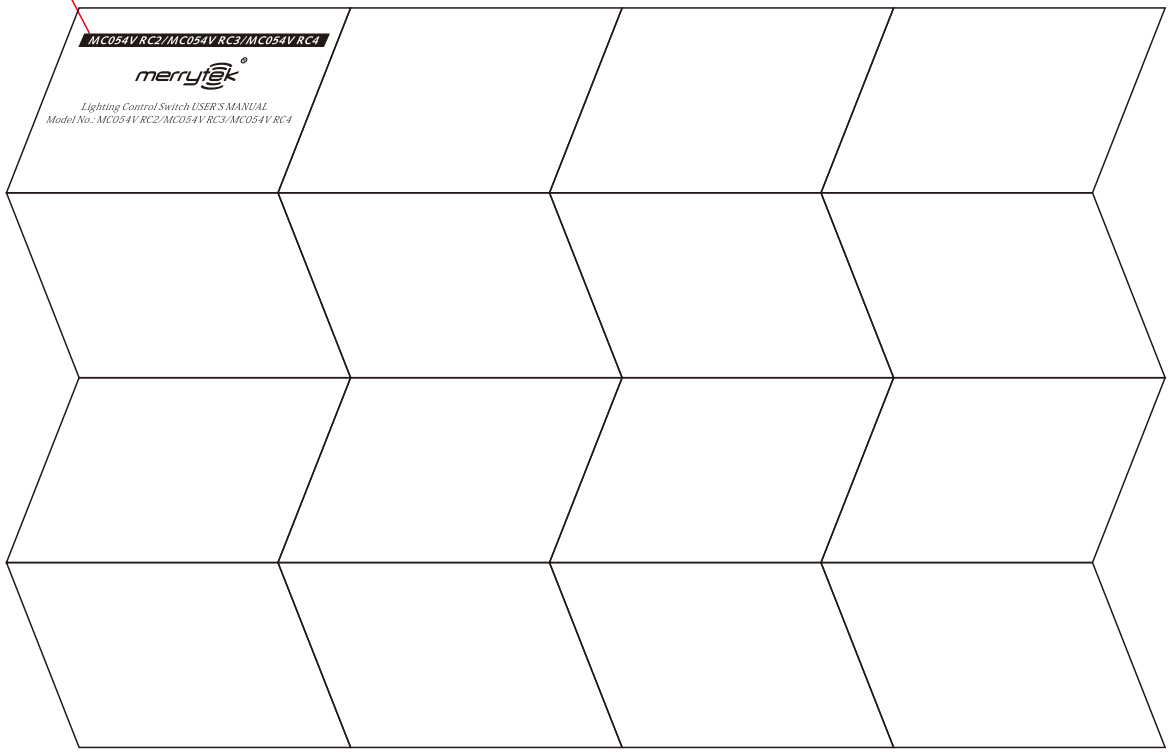

备注：80G书写纸 420x285mm 彩色双面印

成品尺寸：105x71.25mm

序号	变更内容	变更人	日期
3			
2			
1	出厂设置灵敏度变更为100%	陈阳	20230609

产品名称	感应器		物料名称	说明书		视角							
产品型号	MC054V RC2/3/4		物料编码	1050020001166		版本	A4	单位	mm				
设计	陈阳	20230609	材料		数量	1	页次	1	比例	1:1			
审核			深圳迈睿智能科技有限公司										
批准			ShenZhenMerrytekTechnologyCO.,LTD										

路径：2-辅助设计\1-包装类\MC感应器\MC054VRC2-3-4

±0.5°			没有指定角度可接受	
±0.4	±0.3	±0.2	±0.1	没有指定公差
600>L>300	300>L>100	100>L>20	20>L	线性长度

表格编号：MRT-KF-003 R:A/0