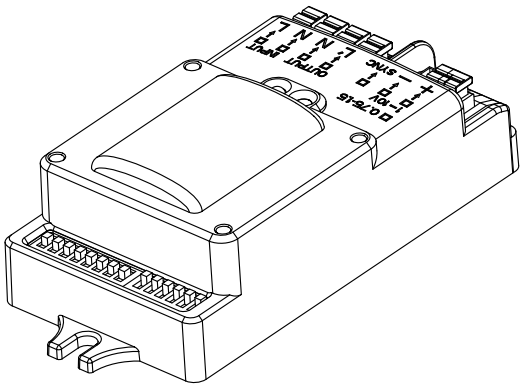
MC049V

merrytek®

MICROWAVE MOTION SENSOR USER'S MANUAL

Model No.: MC049V



EN

Instruction

MI230720A0

CE UKCA μ RED

FEATURE

- Automatic switching or dimming when used in combination with 1-10V dimmable LED drivers or ballasts.
- Built-in daylight sensor.
- 1-10V interface can match up with Merrytek stand-alone daylight sensor MS01 and achieve daylight harvesting.
- Compact size makes it suitable to fix within most luminaires.
- Detection area, time delay and daylight threshold can be precisely set via DIP switch.
- Support higher mounting height 6m Max.
- Optional surface mounting and base mounting

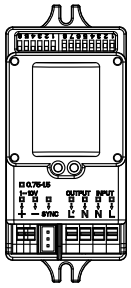
SPECIFICATIONS

Operating voltage	220~240Vac, 50Hz/60Hz
Rated capacitive load	800W-fluorescent 1E4 1200W-incandescent 1E4
HF system	5.8GHz±75MHz, ISM wave band
Transmitting power	<1mW
Power consumption	≤0.5W(standby), <1W(operation)
Detection sensitivity	10%/50%/75%/100%
Hold time	5s/30s/90s/3min/20min/+∞
Daylight sensor	2Lux/5Lux/10Lux/25Lux/50Lux/100Lux/ Disable
Stand-by period	0s/5s/5min/10min/30min/1h/+∞
Stand-by dimming level	10%/20%/30%/50%
Mounting height	3m (6m Max.)
Motion detection	0.3~1m/s
Operating temperature	-35°C~70°C
IP rating	IP20

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, The sensor should not be modified in any way. Any modifications made for this product will immediately invalidate any warranties issued.
3, The company does not accept responsibility for any consequences resulting from unauthorized modification of the product.
4, The sensor should be connected to a stable power supply of 220-240Vac 50Hz/60Hz.
5, Microwaves cannot pass through metal or brick walls if thicker than 20cm. They will pass through thinner walls but there will be some attenuation.
6, 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.

INSTALLATION & WIRING



Pic 1

The sensor has 7-position terminal block as Pic 1:

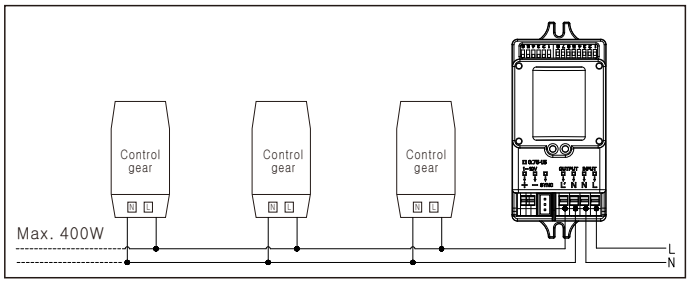
L(Phase) N(Neutral) L (Switched phase / control)

1-10V (Connected to 1-10V interface) Sync (synchronization)

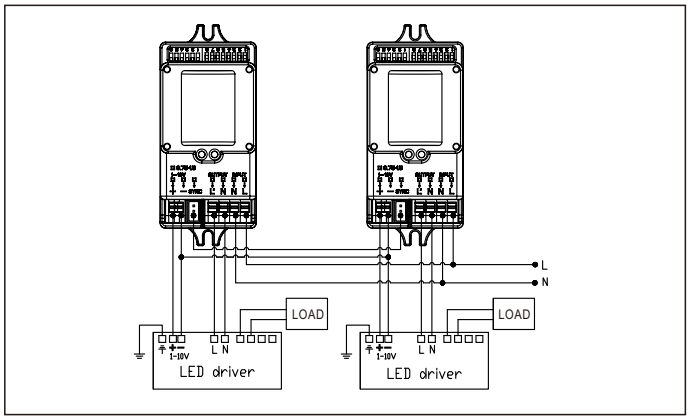
The sensor is designed for installation at 3-6m in height.

WIRING SCHEME

1) FOR ON/OFF FUNCTION :
Connect to normal control gears (normal LED drivers or ballasts), the wiring as following:

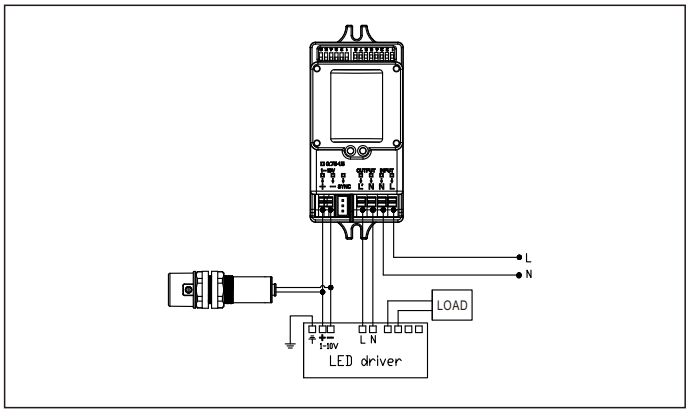


2) FOR DIMMING FUNCTION :
Connect to 1-10v dimmable control gears (1-10v LED drivers or ballasts), the wiring as following:

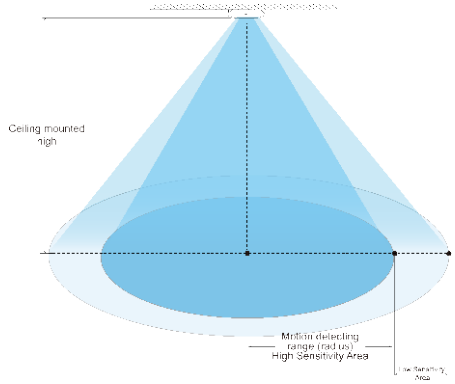


3) THE MOTION SENSOR CAN MATCH UP WITH MERRYTEK STAND-ALONE DAYLIGHT SENSORS TO ACHIEVE DAYLIGHT HARVESTING CONTROL .

Note: The daylight sensor level of the motion sensor should be set to Disable mode if connect to the daylight sensors.
The wiring is as following.



DETECTION PATTERN



SETTINGS

Detection area, hold time and daylight sensor can be set by using DIP switches on the sensor. Note that reducing the detection area will also reduce the sensitivity.

1, Detection area
I: up to 100%
II: up to 75%
III: up to 50%
IV: up to 10%

ON		1	2	
	I	ON	ON	100%
	II	ON	–	75%
	III	–	ON	50%
	IV	–	–	10%

2, Hold time
Refers to the time period the lamp remains at 100% illumination after no motion is detected.
I: 5s
II: 30s
III: 90s
IV: 3min
V: 20min
VI:+∞
When set to +∞,The sensor function will be inactive, the light will go back to normal one.

ON		3	4	5	
	I	ON	ON	ON	5S
	II	–	ON	ON	30S
	III	ON	–	ON	90S
	IV	–	–	ON	3min
	V	ON	ON	–	20min
	VI	–	–	–	+∞

3, Stand-by period
Refers to the time period the lamp remains at a pre-setting dimming level before it completely switches off in the long absence of people.

I: 0s
II: 5s
III: 5min
IV: 10min
V: 30min
VI: 1H
VII: +∞
* when set to 0s, the lamp will work as on/off function
* When set both daylight sensor and stand-by period to Disable. the lamp will work as 2-step dimming control (Motion detected, 100%lm, no motion, remains at pre-setting level lumens)

ON		6	7	8	
	I	ON	ON	ON	0S
	II	–	ON	ON	5S
	III	ON	–	ON	5min
	IV	–	–	ON	10min
	V	ON	ON	–	30min
	VI	–	ON	–	1h
	VII	–	–	–	+∞

4,Daylight sensor
The sensor can be set to only allow the lamp to illuminate below a defined ambient brightness threshold. The settings are as follows:

I: 2lux, darkness operation only
II: 5lux, darkness operation only
III: 10lux, twilight operation
IV: 25lux, twilight operation
V: 50lux, twilight operation
VI: 100lux,twilight operation
VII: Disable

ON		1	2	3	4	
	I	–	–	ON	ON	2Lux
	II	–	–	–	ON	5Lux
	III	–	ON	ON	–	10Lux
	IV	–	–	ON	–	25Lux
	V	–	ON	–	–	50Lux
	VI	ON	–	–	–	100Lux
	VII	–	–	–	–	Disable

*When set to Disable, the daylight sensor will switch on the lamp when motion is detected regardless of ambient light levels.
*It should be set to Disable mode if the motion sensor is connected to stand-alone daylight sensors.

5,Stand-by dimming level
This is the pre-setting dimming level you would like to have after the hold time in the long absence of people.
I: 50%
II: 30%
III: 20%
IV: 10%

ON		5	6	
	I	ON	ON	50%
	II	–	ON	30%
	III	ON	–	20%
	IV	–	–	10%

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.	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 30cm 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 0.3-1m/s or the detection radius is too small.	Check detection area setting.

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www.merrytek.com Email:sales@merrytek.com

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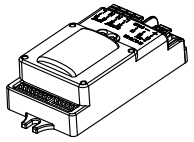
折页说明：不用折

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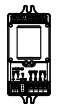
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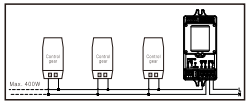
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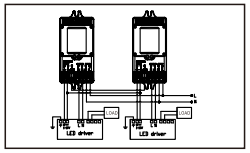
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备注：70G书写纸 210*297MM 黑白双面印

③				产品名称	感应器		物料名称	说明书			视角			
②				物料编码	MC049V		物料编号	1050020001404			版本	A0	单位	mm
①				设计	李静云	20240510	材料		数量	1	页次	1	比例	1:1
序号	变更内容	变更人	日期	审核			深圳迈睿智能科技有限公司 ShenZhenMerrytekTechnologyCO.,LTD							
路径	2-辅助设计\1-包装类\MC感应器\MC049V			批准										

±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