

Radial IP66 batten with CCT switchable Standard, Sensor and Emergency models

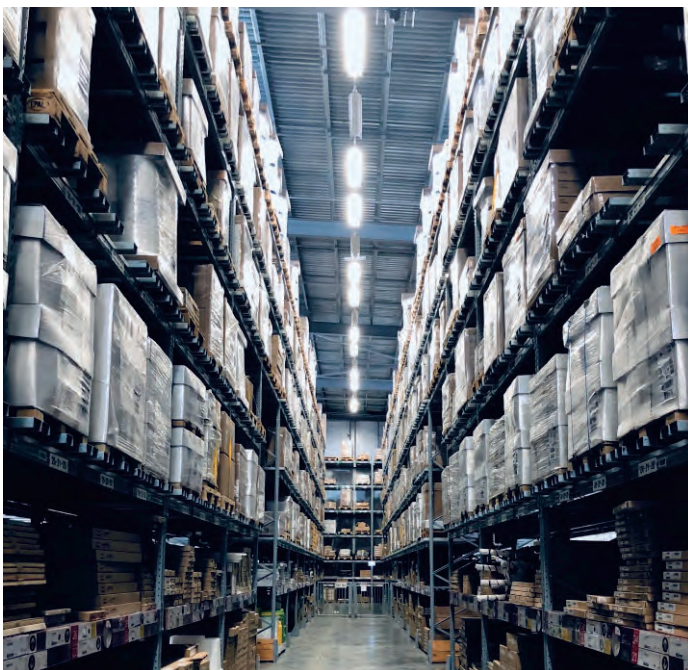


Tool free clips easy to remove and close



Advantages

- Batten with tool free easy remove and close clips
- 3000, 4000 and 5000K color temperature in the same body and adjusted by selector switch
- Adjustable power input for Lumen output with the same body
- Simple stock management through color temperature by selector switch and Lumen Output by Dip-switch of drivers
- MERRYTEK sensor system for Occupancy comfort and energy saving
- EFFORT models for 1.2 and 1.5m available
- 5x2.5mm² cable through for easy and quick installation



Features

- 3 sizes of 600, 1200 and 1500mm
- Max > 140Lm/W
- 3000 and 5000K LG or LumiLEDs 2835 chips to create 3000K, 4000K and 5000K in one body
- High Lumen Efficacy 140Lm/W
- IP66 and IK10 to give extra protection
- Auto-test inverter with LiFePO₄ batteries by EFFORT
- Basic sensor models with MERRYTEK



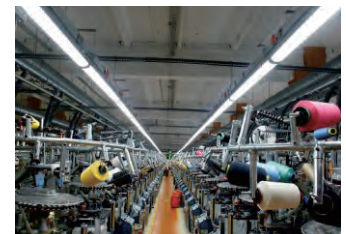
Garage



Car Park



Footbridge



Producton Line



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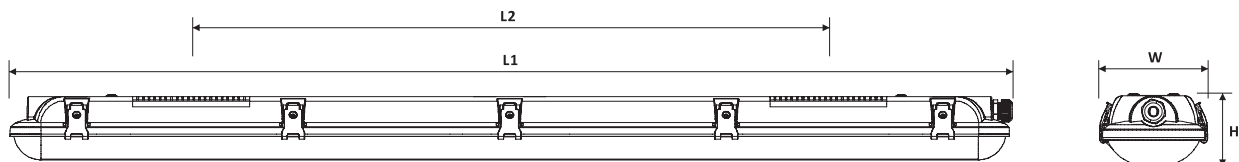
www.unibright.be



General specifications

Model	600mm	1200mm	1500mm
Structure for all models			
Body and Diffuser	Polycarbonate injection moulding in white		
Diffuser	Polycarbonate injection moulding in opal		
Gearplate	Cold Roll steel epoxy powder coated		
Accessories	Stainless steel mounting clips x 2, cable gland x 2, ceiling or wall mounted screws x 2 sets		
Stainless steel clips qty (Pcs)	6	10	12
Cable through	5x2.5mm ² cable through from one to the other end with 5 pole terminal block x 2, extra 3 pole terminal block for emergency models		
IP rating	66		
IK rating	10		
Dimension (mm)	607x116x80	1207x116x80	1507x116x80
Working conditions and warranty			
Ambient temperature (°C)	-25 to 35		
Working Humidity (%)	10 to 90		
Life time (Hours)	100,000		
Warranty	5years or 50,000 hours whichever come first		
Compliant	CE-LVD, CE-EMC, RoHS ,CE-RED for sensor models		

Dimension



Model	Length L1(mm)	Length L2(mm)	Width W(mm)	Height H(mm)
RD6018 RD6018E RD6018S	607	280	116	80
RD12033 RD12033E RD12033S RD12033SE	1207	765	116	80
RD15060 RD15060E RD15060S RD15060SE	1507	1065	116	80



Standard and Sensor models

Model	RD6018	RD6018S	RD12033	RD12033S	RD15060	RD15060S
MERRYTEK sensor	X	MC098S	X	MC098S	X	MC098S
Electrical data						
Driver model (Philips Xitanium)	929002831880			929002832080		
Driver description	Xitanium 41W 0.5-0.8A 51V DS 230V			Xitanium 72W 1.2/1.4A 51V DS 230V		
Input voltage (Vac)	220-240Vac, 50Hz					
Max Input current (mA)	260			370		
Max Input power (W)	14.5/17.5/20/ 23		23/28/33/38		50/58	
Power factor	>0.9					
Driver Efficiency (%)	88		88		89	
Output voltage (Vdc)	25		39		39	
Output current (mA)	500/600/700/800 (By dip-switch)			1200/1400 (By dip-switch)		
Output Current Ripple	≤ 4%					
TC Max (°C)	75			80		
Class	II					
Inrush current (A)	15.3			25.1		
THD	<20%					
Surge protection Diff/common mode (KV)	1/2					
Short circuit protection	Yes					
Overload protection	Yes					
Over power protection	Yes					
Max no protected by 16A Type B MCB (Pcs)	72			28		
Photometric data						
Ra	>80					
Color temperature (K)	3000, 4000, 5000K by selector switch					
Max Lumen Output at 3000K (Lm)	2500		4400		7900	
Max Lumen Output at 4000K (Lm)	2600		4600		8200	
Max Lumen Output at 5000K (Lm)	2700		4700		8300	
Color tolerance	≤ 5 SDCM					
LED chips	LG or LumiLEDs 2835 , 0.5W, 3Vdc or equivalent 3000 and 5000K					
No of chips	2 x 108		2 x 168		2 x 308	
Beam angle	110°					

Emergency models with and without sensor

Model	RD6018E	RD12033E	RD12033SE	RD15060E	RD15060SE
MERRYTEK sensor	X	X	MC098S	X	MC098S
Emergency Power Supply	✓	✓	✓	✓	✓
Electrical data					
Driver model (Philips Xitanium)	929002831880			929002832080	
Driver description	Xitanium 41W 0.5-0.8A 51V DS 230V			Xitanium 72W 1.2/1.4A 51V DS 230V	
Input voltage (Vac)	220-240Vac, 50Hz				
Max Input current (mA)	260			370	
Input power (W)	14.5/17.5/20/ 23		23/28/33/38		50/58
Power factor	>0.9				
Driver Efficiency (%)	88	88		89	
Output voltage (Vdc)	25	39		39	
Output current (mA)	500/600/700/800 (By dip-switch)			1200/1400 (By dip-switch)	
Output Current Ripple	≤ 4%				
TC Max (°C)	75			80	
Class	II				
Inrush current (A)	15.3			25.1	
THD	<20%			<10%	
Surge protection (KV)	1/2			2/2	
Short circuit protection	Yes				
Overload protection	Yes				
Over power protection	Yes				
Max no protected by 16A Type B MCB (Pcs)	72			28	
Photometric data					
Ra	>80				
Color temperature (K)	3000, 4000, 5000K by selector switch				
Max Lumen Output at 3000K (Lm)	2500	4400		7900	
Max Lumen Output at 4000K (Lm)	2600	4600		8200	
Max Lumen Output at 5000K (Lm)	2700	4700		8300	
Color tolerance	≤ 5 SDCM				
LED chips	LG or LumiLEDs 2835 , 0.5W, 3Vdc or equivalent 3000 and 5000K				
No of chips	2 x 108	2 x 168		2 x 308	
Beam angle	110°				

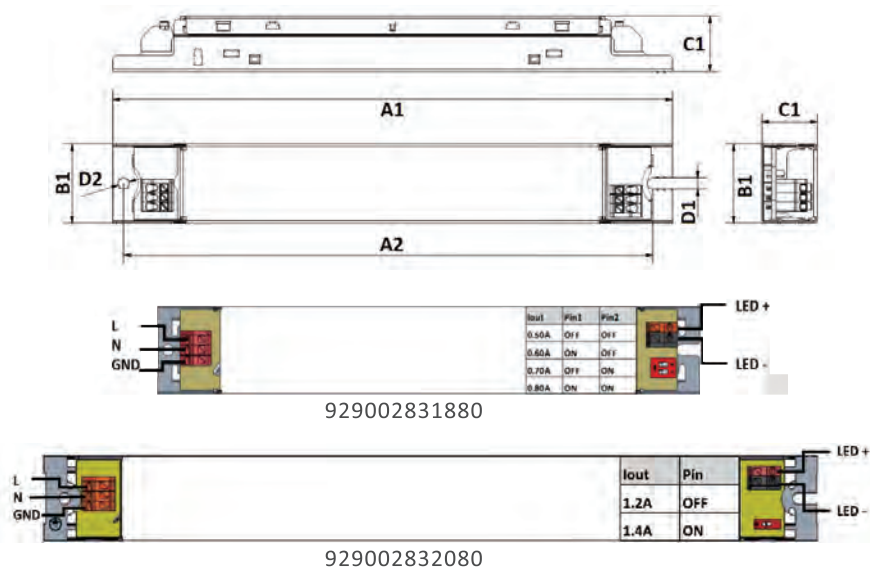
Specification of Auto-test Emergency Supply



Parameter	Description
Inverter Dimension (mm)	157.5 X 30.4 X 21mm
Input Voltage	220-240Vac, 50/60Hz
Output Voltage	20-60Vdc
Battery type	LiFePO ₄ 3000mAH 3.2Vdc
Charge time	<24 hours
Designed Life	>4 Years
Operating Temp. (°C)	0 - 55°C
Emergency Power Output	2.5W
Work Mode	Maintain
Indicator Light	To show the status of the inverter and battery
Protection	Over-Charge / Over-Discharge
Operating time for 2.5W	>3.0 hours

Driver specifications for Standard and Emergency model

Driver Model	A1(mm)	A2(mm)	B1(mm)	C1(mm)	D1(mm)	D2(mm)
929002831880	188	176.4	30.2	21	4.1	4.1
929002832080	279.5	265	30.2	21	4	4



Output Current and Input Power setting by Dip- switch for Standard and emergency models

Model: RD6018, RD6018E, RD6018S with Philips Xitanium 41W 0.5-0.8A 51V DS 230V

lout	Input power	Lumen Output at 4000K	PIN 1	PIN 2
500	14.5	2100	OFF	OFF
600	17.5	2450	ON	OFF
700	20	2800	OFF	ON
800	23	3000	ON	ON

Model: RD12033, RD12033E, RD12033S, RD12033SE with Philips Xitanium 41W 0.5-0.8A 51V DS 230V

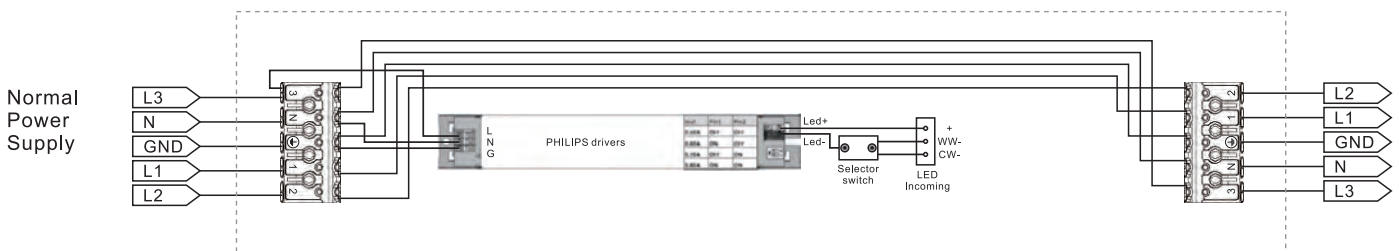
lout	Input power	Lumen Output at 4000K	PIN 1	PIN 2
500	23	3400	OFF	OFF
600	28	3900	ON	OFF
700	33	4600	OFF	ON
800	38	5200	ON	ON

Model: RD15060, RD15060E, RD15060S, RD15060SE with Philips Xitanium 72W 1.2/1.4A 51V DS 230V

lout	Input power	Lumen Output at 4000K	PIN
1200	50	7100	OFF
1400	58	8200	ON

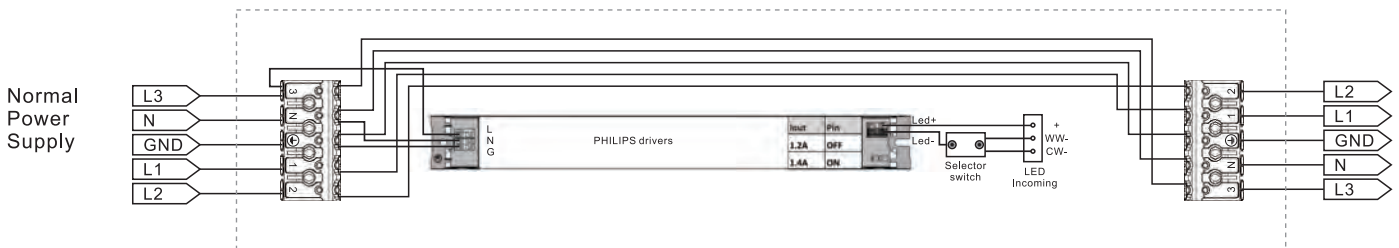
Wiring diagram for Standard and emergency models

Standard model :0.6 and 1.2m

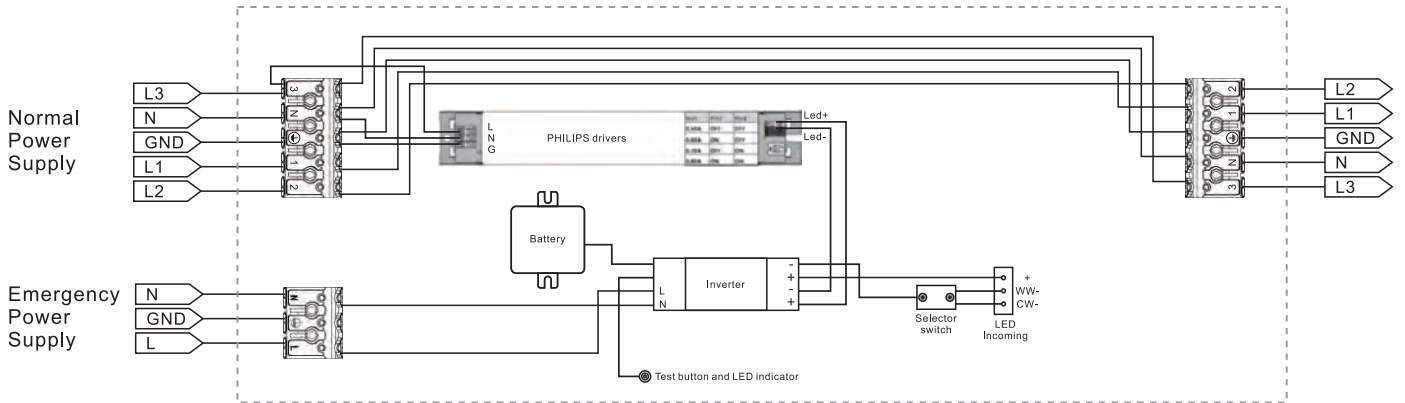


Live connected on incoming side for Easy switching to L1 or L2

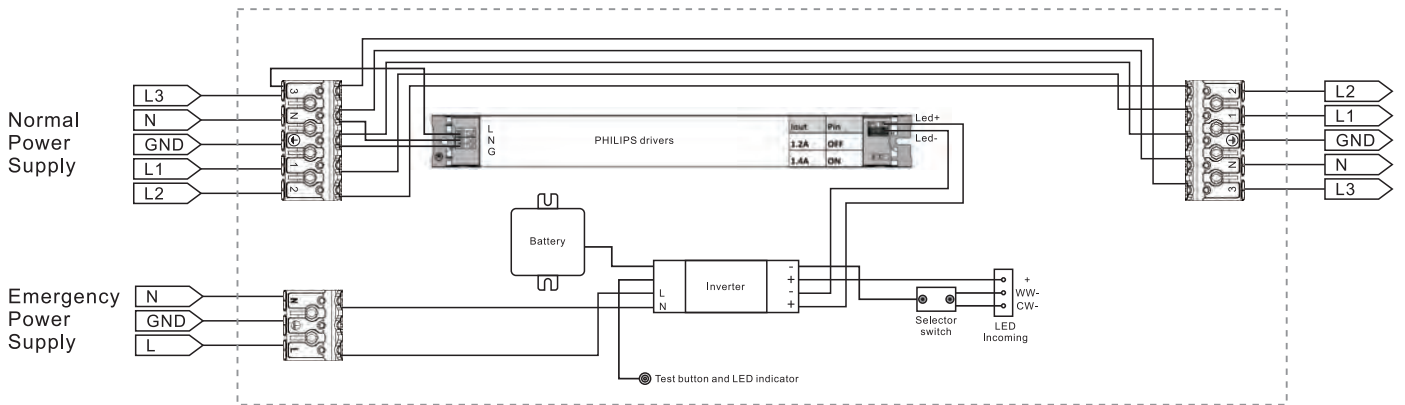
Standard model : 1.5m



Emergency model :0.6m, 1.2m

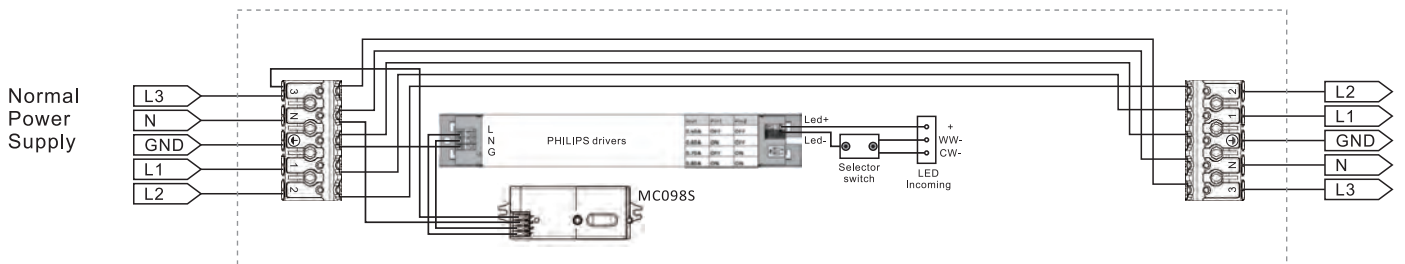


Emergency model : 1.5m



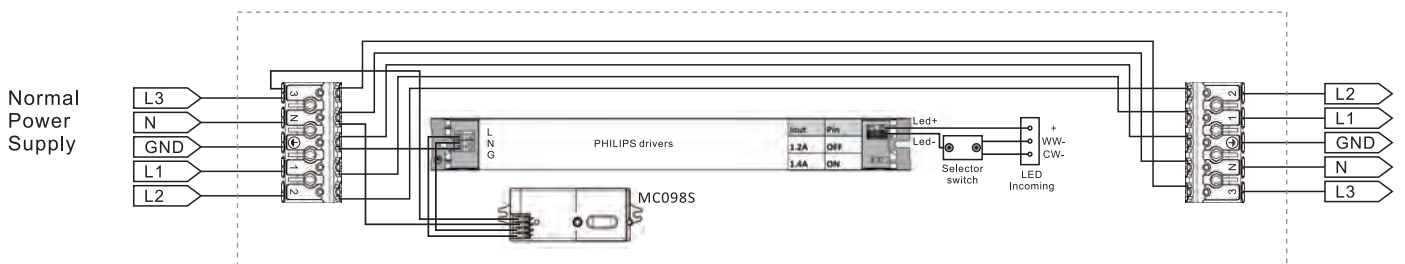
Wiring diagram of MC098S sensor models

Sensor model :0.6m, 1.2m



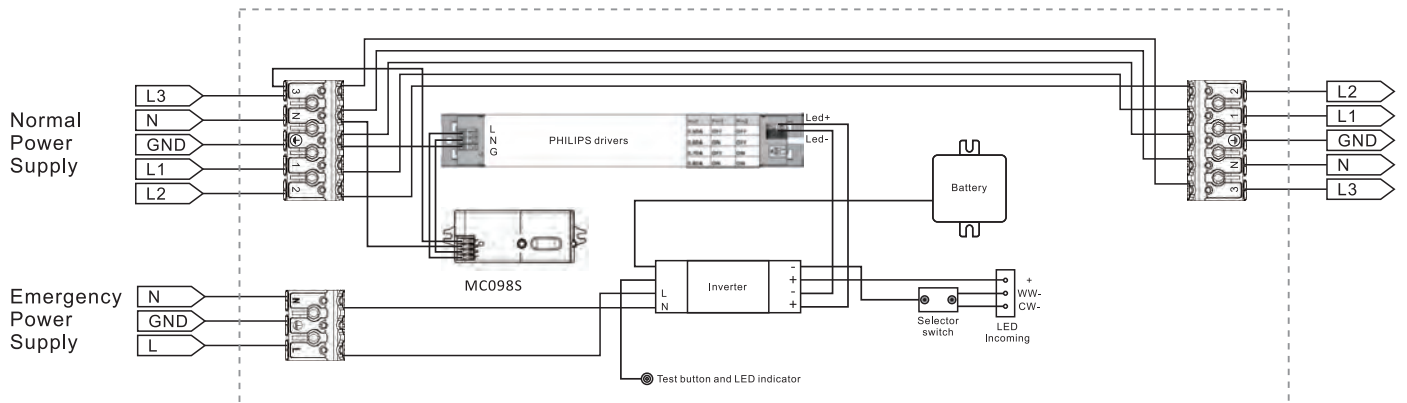
Live connected on incoming side for Easy switching to L1 or L2

Sensor model :1.5m

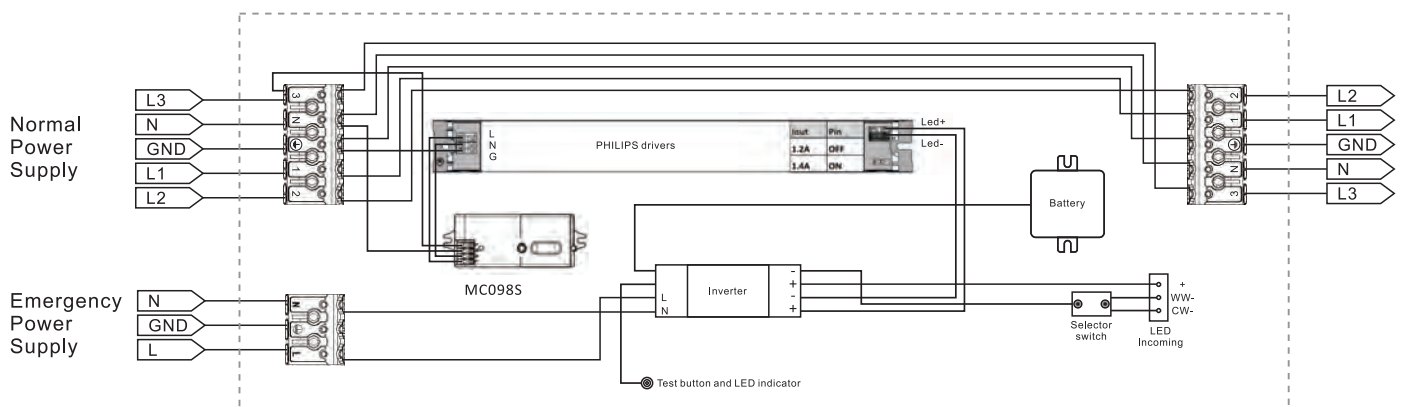


Wiring diagram of MC098S sensor models with Emergency supply

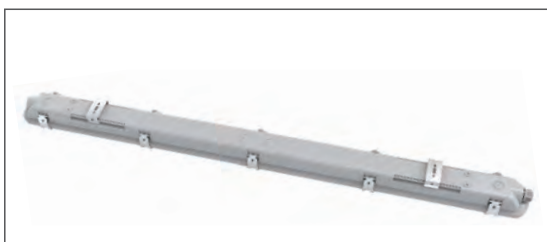
Sensor model + Emergency supply :1.2m



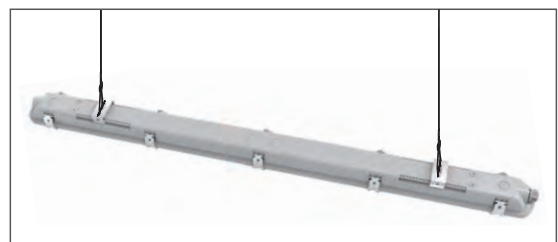
Sensor model + Emergency supply :1.5m



Installation Method



Ceiling or wall mounted
Good for most installation environment

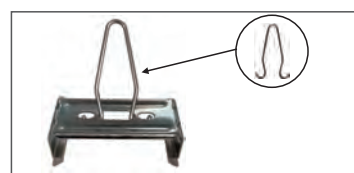


Pendant Mounted
This installation method is good for high ceiling taller than 3m.

Suspension accessories



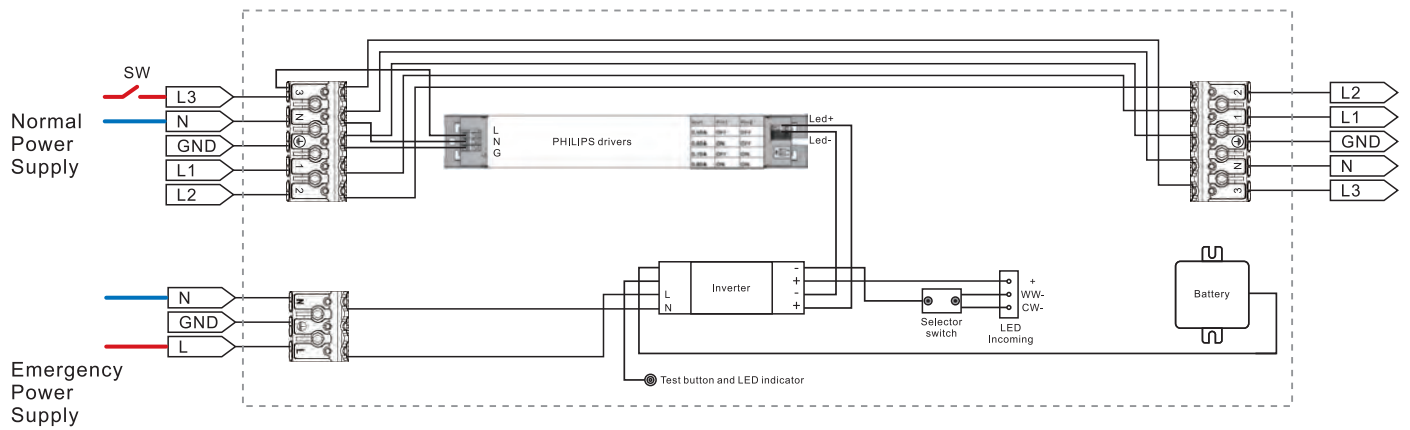
Suspension wire
Adjustable length of 3M max for pendant mounted



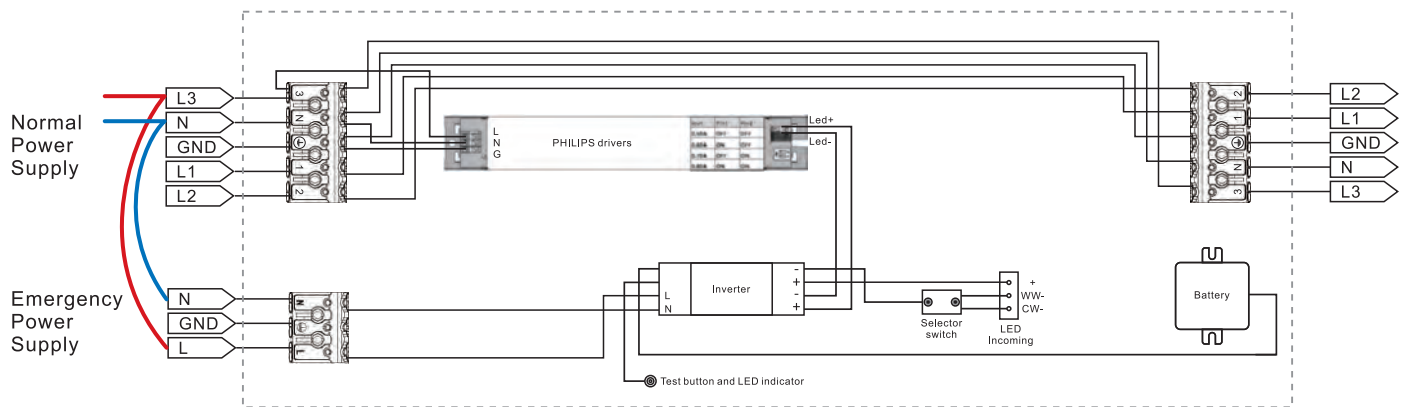
Hook for pendant mounted

Different Emergency mode wiring

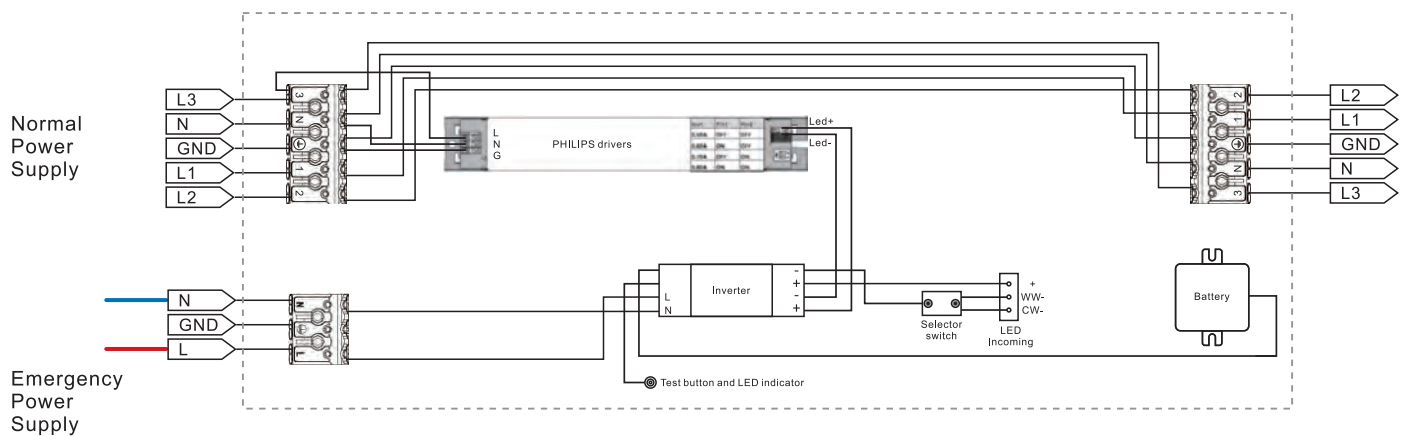
1. Switch ON/OFF and Emergency Power Supply wiring



2. Maintained type wiring

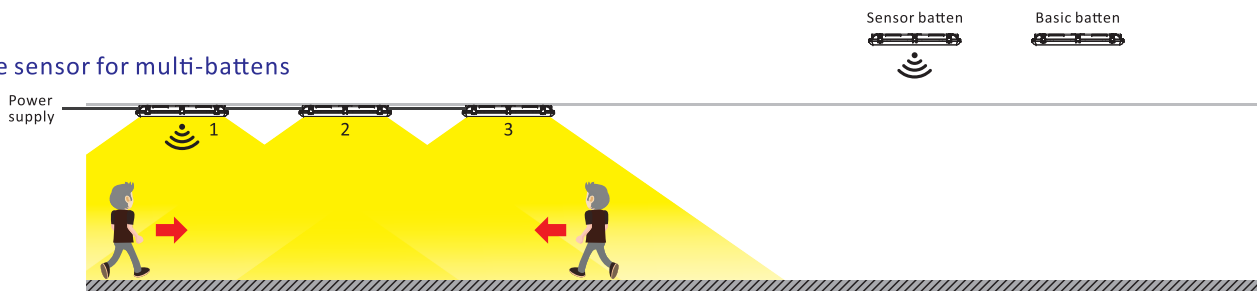


3. Non-maintained type wiring



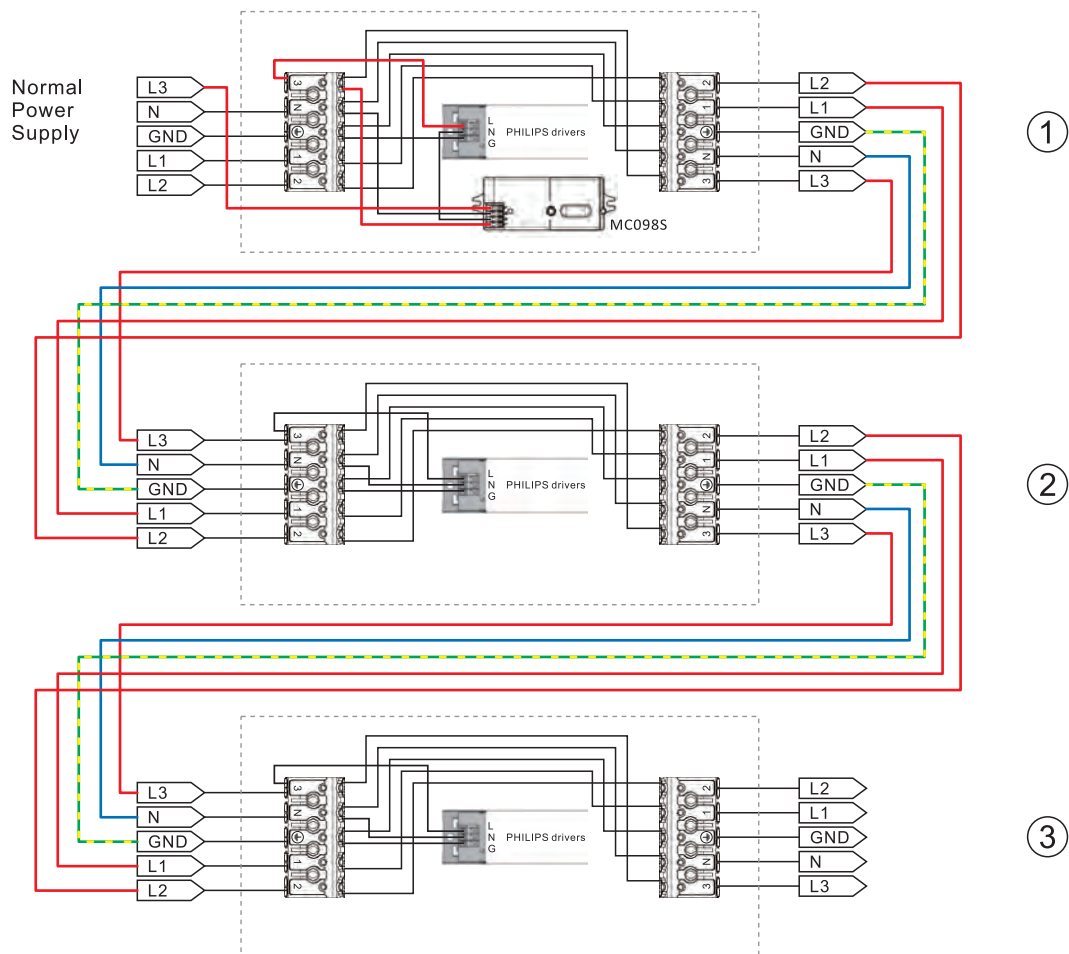
Radial batten one sensor to serve multi batters

One sensor for multi-batters



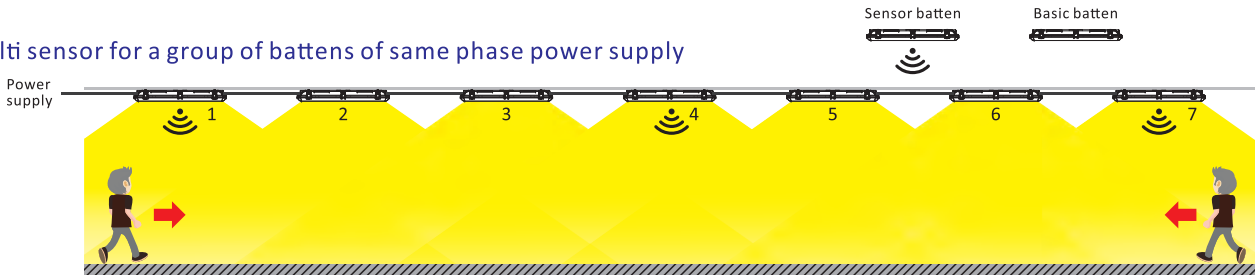
Remark :

1. Sensor max power : 400W
2. Sensor have max 8m so cannot go for distance longer than 8m
3. Multiple sensor wiring provided if necessary



Radial batten 3 sensors to serve multi battens with same phase power supply

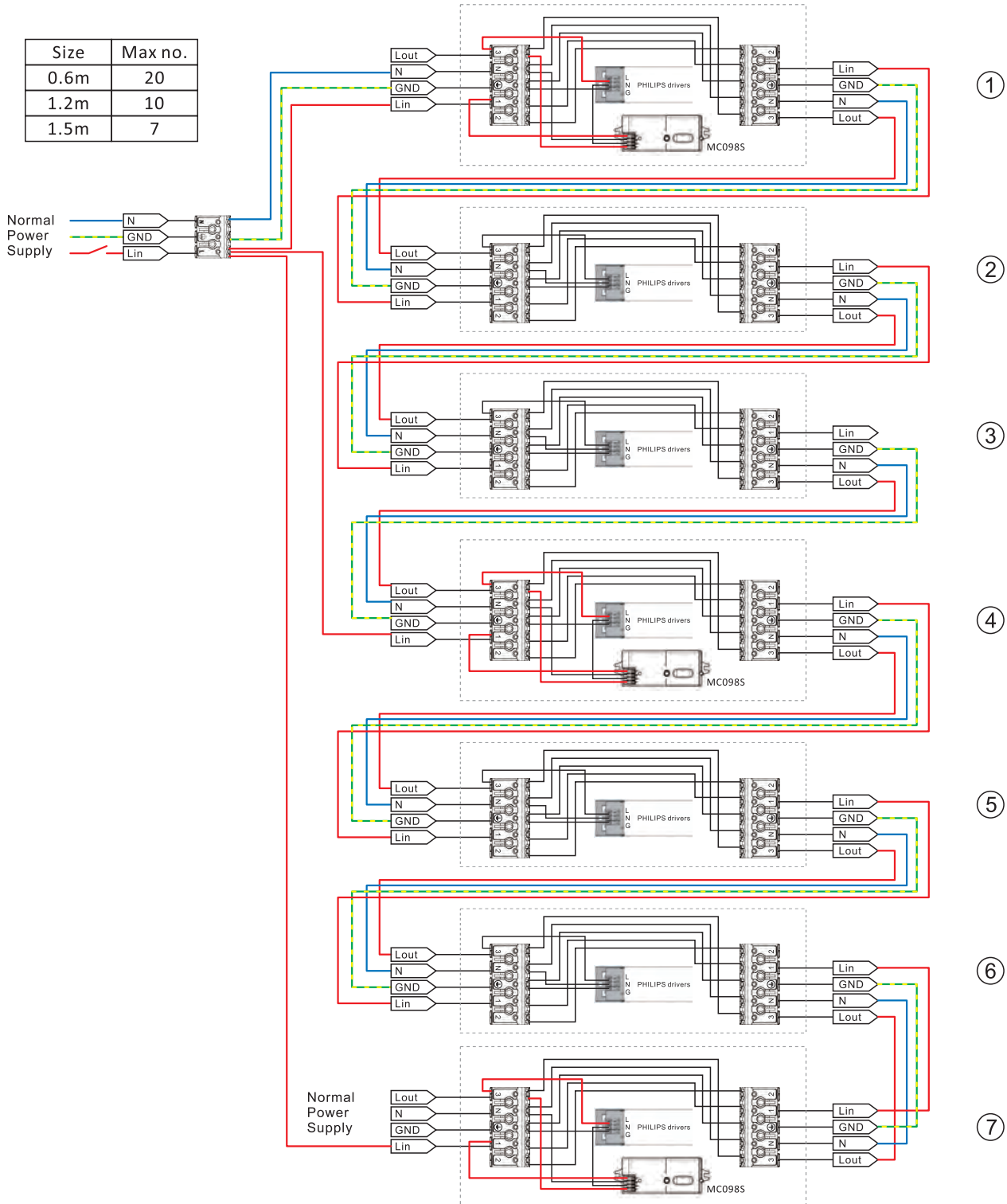
Multi sensor for a group of battens of same phase power supply



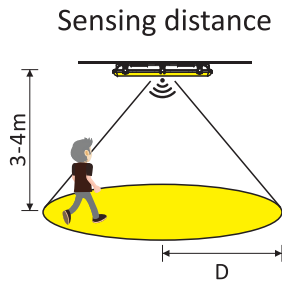
Remark :

1. Sensor max power : 400W
2. Sensor have max 8m so cannot go for distance longer than 8m
3. Multiple sensor wiring max no of battens

Size	Max no.
0.6m	20
1.2m	10
1.5m	7

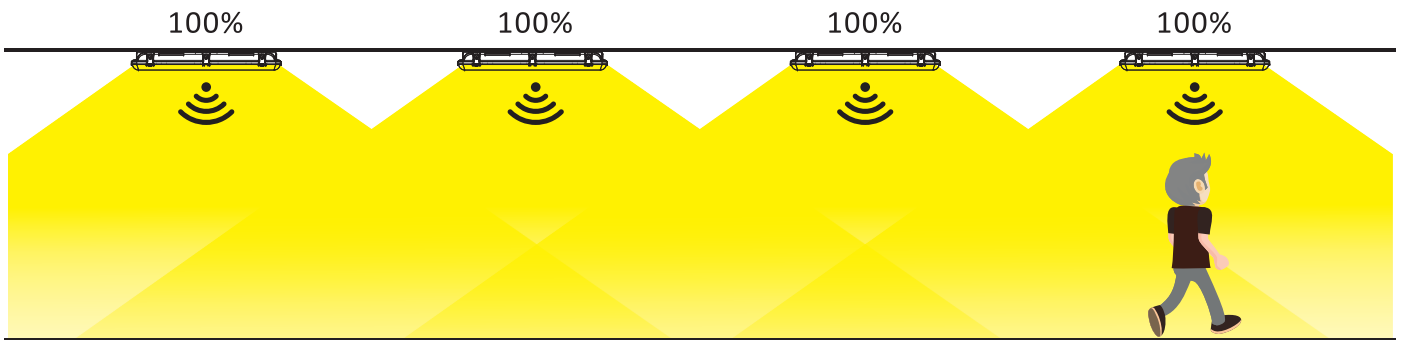
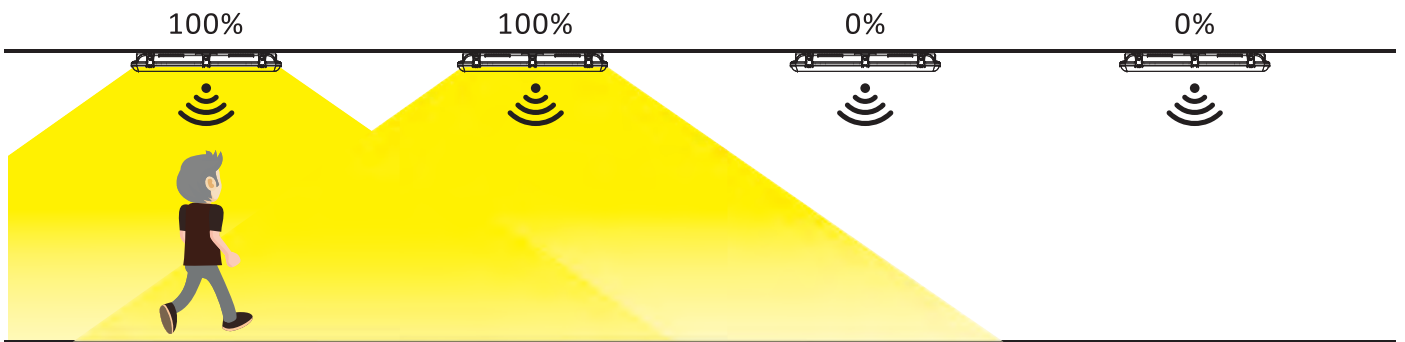


How Radial batten work with sensor



Setting the following by the dip-switch in the sensor

- Sensing distance** : 1-2m, 2-4m, 4-6m, 6-8m
- Hold time** : 5s, 30s, 90s, 5min, 20min, 30min
- Daylight threshold** : 2Lux, 10Lux, 30Lux, 50Lux, Disable
- Override sensor** : Quick switch ON/OFF 3 times within 2sec to override sensor function. Lights will switch on all the time. Power off and on again to recover sensor function.



MERRYTEK sensor specifications

1. Features



MC0985

- Ultra-slim design for Tri-proof LED light
- Patented antenna design makes reliable detecting, avoid missing triggered when sensor built-in backside of metal LED plate.
- Adjustable detecting sensitivity via DIP switches, suitable to variety of installation sites.
- Support 6m Max. Mounting height .
- 5 years warranty

2. Parameter

Input	Operating Voltage Range	198-264V AC, 50Hz/60Hz
	Rated Voltage	220-240V AC, 50Hz/60Hz
	Stand-by Power	≤0.5W
	Surge Test	L--N: 1kV
Output	Working Mode	ON/OFF function
	Type of Load	Inductive or Resistive
	Load Capacity	400W(Inductive) ; 800W(Resistive)
	Max. Surge Capacity	30A (50% Ipeak, twidth =500uS, 230Vac full load, cold start); 60A (50% Ipeak, twidth =200uS, 230Vac, full load, cold start)
Sensor Parameters	Operating Frequency	5.8 GHz ±75 MHz, ISM Band.
	Transmitting power	0.5mW Max.
	Hold time	5s//30s/90s/5min/20min/30min
	Detection Sensitivity	100%/75%/50%/25%
	Daylight Sensor	2Lux/10Lux/30Lux/50Lux/Disable
	Detecting Radius	3-10m (mounting height 3-4m), 2-8m(mounting height 6m)
	Mounting Height	6m Max.
Operating Environment	Operating Temperature	-25°C...+60°C
	Storage Temperature	-40°C...+80°C(Humidity: 10%-95% Non-condensing)
Certificate Standards	Safety standards	EN61058-1
	EMC standards	EN300440; EN301489-1; EN55015; EN61547; EN61000-3-2;EN61000-3-3; EN62479
	Environmental Requirement	Compliant to RoHS
	Certificate	CE, RED

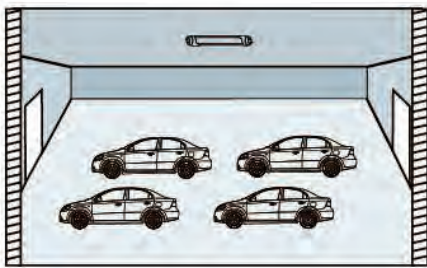
Others	Wiring	Press-in Type Terminals, wire diameter: 0.75-1.5mm ²
	IP Rating	IP20
	Protection Class	Class II
	Installation	Built-in
	Dimension	77.5*34.5*22mm
	Package	Bubble bag+Clapboard + Carton (K=A)
	Net Weight	58±2g
	Lifetime	5 years warranty @Ta 230V full load

Note

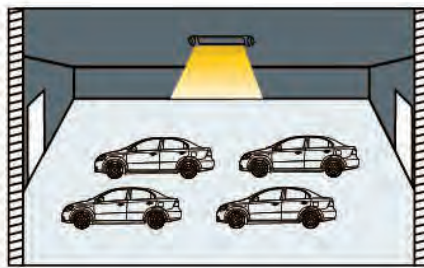
1. "N/A" means not available.
2. Detection area is effected on volume of motion object and motion speed. The detection area is tested by a 170cm height person and walking speed is 0.3m/s.

3. Function

On/OFF Function



- 1 With sufficient ambient light, the light will not be switched on even if with motion signal.

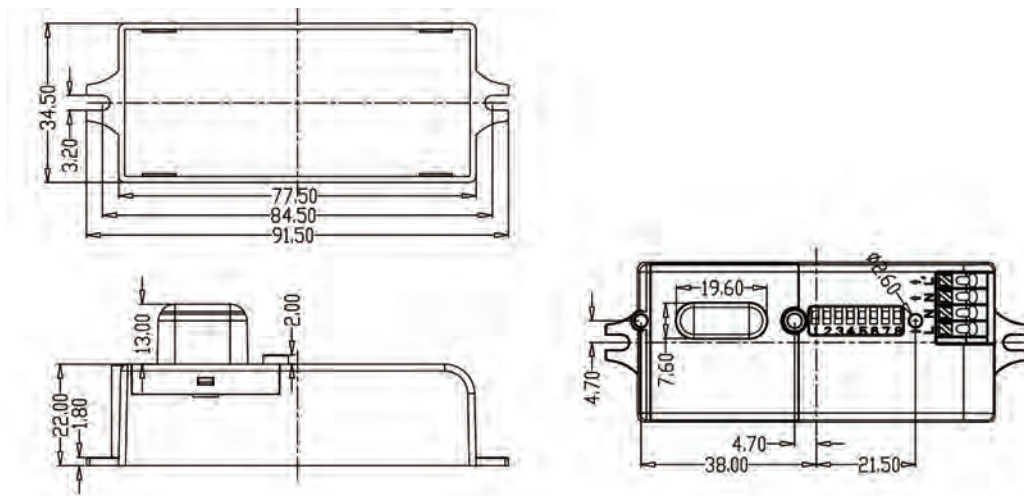


- 2 With insufficient ambient light, the sensor switches on the light when motion is detected.

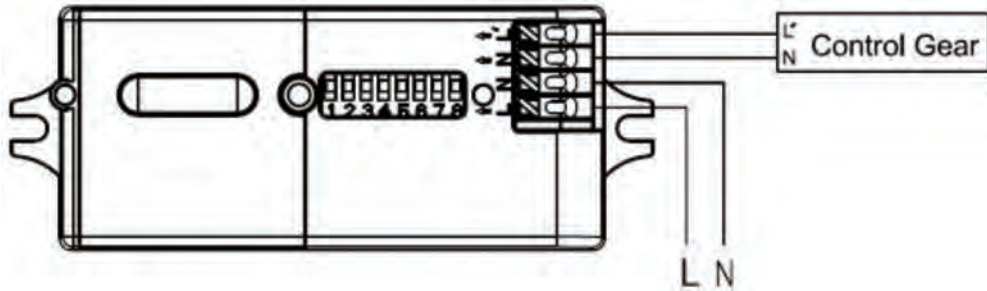


- 3 After elapse of hold time, the sensor switches off the light when no motion is detected.

4. Dimension (mm)

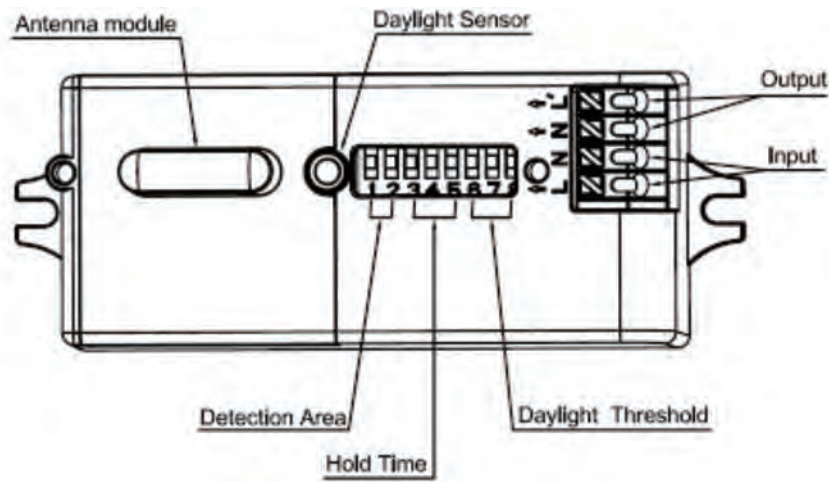


5. Wiring



*The sensor is designed for connect one load only. Connect more than one loads may damage the sensor.

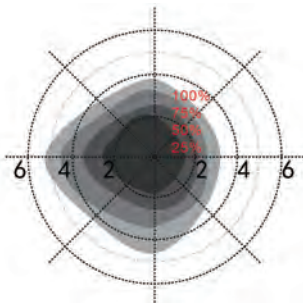
6. Structure



7. Radiation Pattern

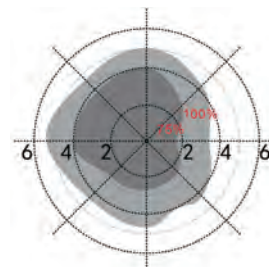
1) Ceiling mounting

Ceiling mounted height: 3m
Sensitivity: 100%/75%/50%/25%

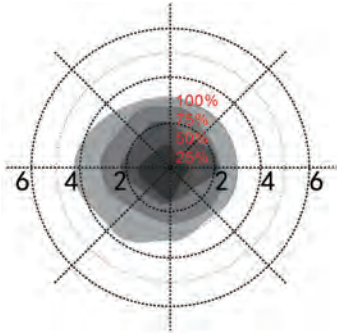


Normal moving (Speed:1m/s)

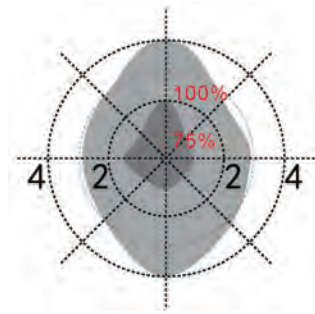
Ceiling mounted height: 6m(*)
Sensitivity:100%/75%



Normal moving (Speed:1m/s)



Slow moving (Speed: 0.3m/s)

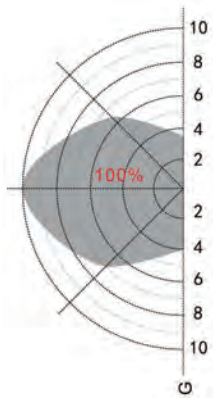


Slow moving (Speed: 0.3m/s)

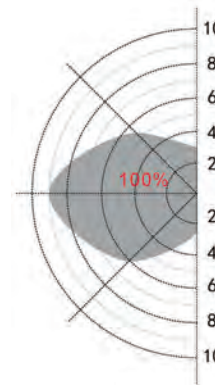
*Only 100%/75% detection sensitivity is workable when installed at 6m mounting height. 25%/50% sensitivity is not able to detect motion signal.

2) Wall mounting

Horizon mounted height: 2m
Sensitivity: 100%



Normal moving (Speed: 1m/s)



Slow moving (Speed 0.3m/s)

8. DIP Switch Setting

Detection Area (Sensitivity)

	1	2
100%	ON	ON
75%	-	ON
50%	ON	-
25%	-	-

Hold Time

	3	4	5	
I	ON	ON	ON	5S
II	-	ON	ON	30S
III	ON	-	ON	90S
IV	-	-	ON	5min
V	ON	ON	-	20min
VI	-	-	-	30min

Daylight Threshold

	6	7	8	
I	ON	ON	ON	2Lux
II	ON	ON	-	10Lux
III	-	ON	-	30Lux
IV	ON	-	-	50Lux
V	-	-	-	Disable*

*Disable” means the daylight sensor not work. it will turn on light once motion is detected regardless of ambient light .

9. Override Function

Quick switch ON/OFF 3 times within 2sec to override sensor function. Lights will switch on all the time. Power off and on again to recover sensor function.

10. Initialization

After power on, the sensor automatically turns on light at 100% brightness. After 10sec, it turns off the light. During the initialization, the sensor is not able to detect movement.

11. Factory Setting

Detection area: 100%, Hold Time: 5S, Daylight Sensor: Disable

12. Application Notice

- 1) The sensor should be installed by a professional electrician. Please turn off the power before installing, wiring, changing the setting of the DIP switch.
- 2) The sensor which installed in the plastic and glass lampshade will reduce the sensitivity. For every 3mm increase in thickness, the sensitivity will be reduced by 20%.
- 3) The light sensitivity threshold is in a sunny environment, no shadow and ambient light diffuse reflection. Ambient lux level will be different in different environment, weather, climate, time-of-day and season.
- 4) The parameters of the sensor may need to be reconfigured in different installation environments.
- 5) This sensor is for indoor use only. It will affect the waterproof effect for outdoor use. Wind, rain, and moving objects around will cause false triggering.
- 6) The distance between any inductive sensors should be greater than 3m.
- 7) Do not place the sensor close to high-density objects such as metal, glass, concrete walls, etc, false triggering could happen. When the sensor is installed in a metal lamp, metal reflective surface, or a narrow enclosed environment, the microwave will be reflected repeatedly and cause false triggering. Please reduce the sensitivity or contact the manufacturer for technical support.
- 8) Please ensure that there are no moving signals around the sensor, such as fan, DC motor, sewer pipe, air outlet, etc., the sensor may generate false trigger.
- 9) You are advised to test 5 samples before mass application of sensor in a new lighting project.
- 10) Due to continuous improvement, the contents of this instruction could be changed without prior notice.
- 11) If the sensor is built under metal board, make sure the sensor surface should to be seamless close to the metal plate without space.

