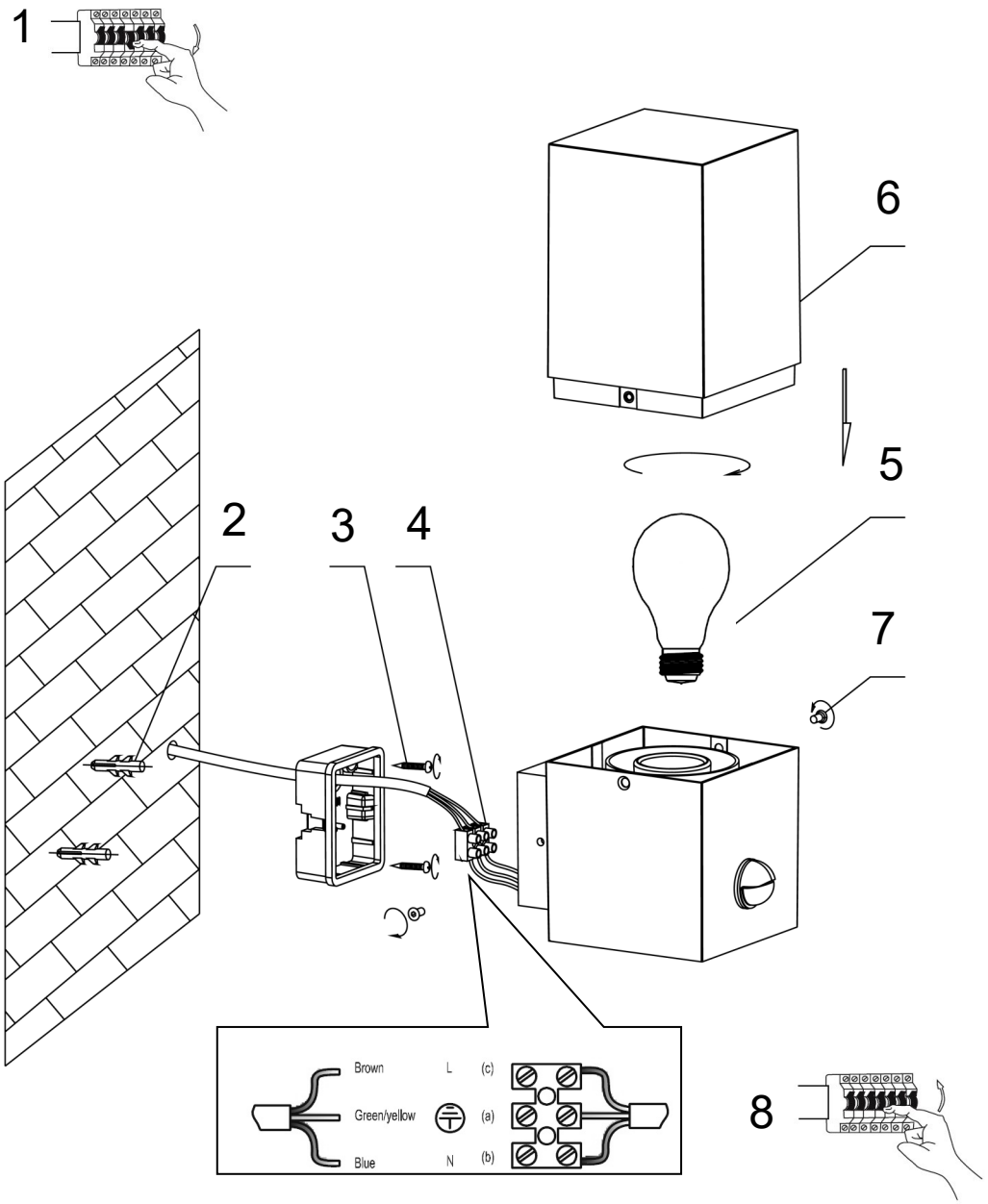
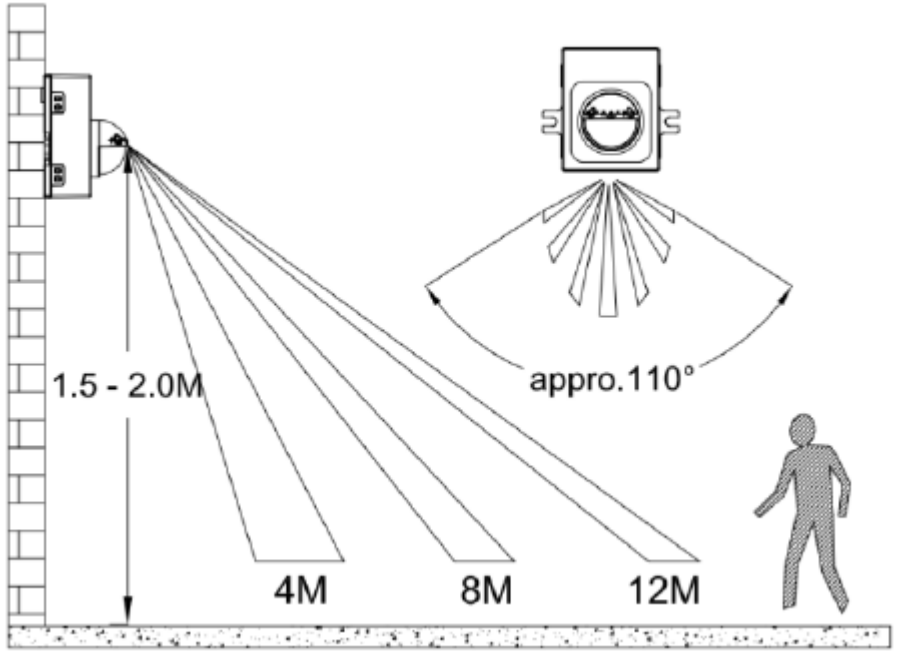
searchlight

2581

IP44





MAINS SUPPLY **LIGHT FITTING**

LIVE - Possible colours : Red or Brown — LIVE

EARTH - Un sleeved copper or (Green / Yellow) — EARTH

NEUTRAL - Possible colours : Black or Blue — NEUTRAL

Q.C

APPROVED
13/5/2022
ISSUE 3

PIR SENSOR for lantern control
MODEL: AL311

■ INTRODUCTION

The **PIR (Passive Infra Red) SENSOR** has a sensing device which continuously scans a preset operating zone and immediately switches the **lamp** on when it detects movement in that area. This means that whenever movement is detected within the range of the sensor the **lamp** will switch on automatically to illuminate pathways, steps, patios, porches, or whatever area you have selected to light for reasons of safety, convenience or security.

While there is movement within range of the unit the **lamp** will remain on.

■ HOW TO FIT THE UNIT

To achieve best results, we suggest you take into account the following points:

- Ideally the PIR SENSOR should be mounted 1.5 to 2.0meters (5 to 7ft) above the area to be scanned (Refer to Fig.1A).
- To avoid damage to unit-do not aim the sensor towards the sun.
- To avoid nuisance triggering, the sensor should be directed away from heat sources such as barbecues, Air-conditioners, other outside lighting, moving cars and flue vents.
- To avoid nuisance triggering, keeping away from the area of strong electromagnetic disturbance.
- Do not aim towards reflective surfaces such as smooth white walls, swimming pools, etc.
- The PIR Sensor scanning specifications (the distance 12m and angle 110° it covers --- at 20℃ and dry weather) may vary slightly depending on the **mounting height and location**. The detection range of the unit may also alter with **temperature change**. Before selecting a place to install your lamp(s), you should note that **movement across**

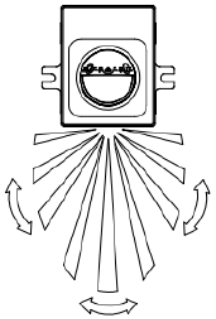


Fig. 1(B) GOOD

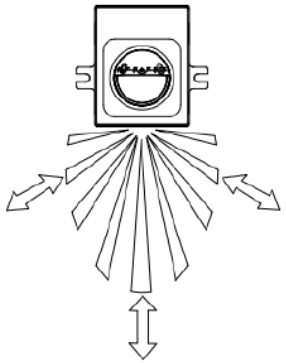


Fig. 1(C) NOT GOOD

the scan area is more effective than **movement directly toward or away from the sensor**. (Refer to Fig.1B). If movement is made walking directly towards or away from the sensor and not across, the apparent detection range will be substantially reduced. (refer Fig. 1C)

■ WIRING THE UNIT AND INSTALLATION

Before commencing any electrical work, ensure mains supply cables are isolated by switching off

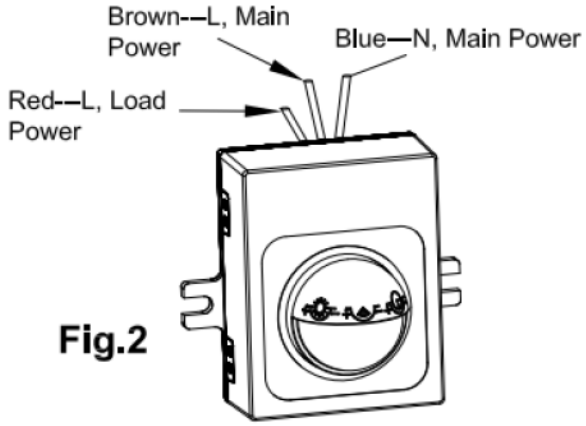


Fig.2

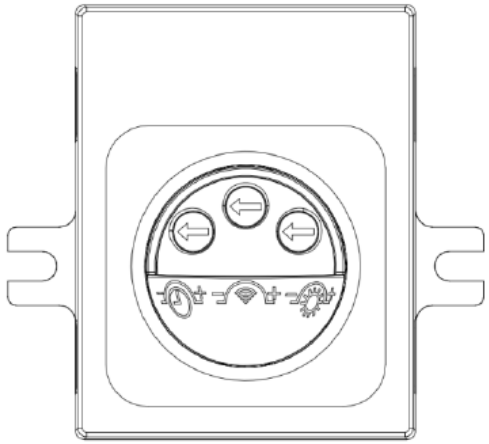
and removing the relevant fuse.

Connect Power Cable and load Lamp wires to the terminal block as relative symbol as Fig.2

■ UNDERSTANDING THE CONTROL

THE DURATION TIME: The length of time that remains switched on after activation is adjustable from (10±5) seconds up to (5±1) minutes. **Note**: Once the lamp has been triggered by the PIR sensor any subsequent detection will start the timed period again from the beginning.

THE LUX CONTROL LEVEL: The Lux control module has a built-in sensing device (PHOTODIODE) that detects daylight and darkness. The LUX CONTROL LEVEL is adjustable from daylight to night; it is means that the lamp can be turned on after activation in daylight or in night according to you setting.

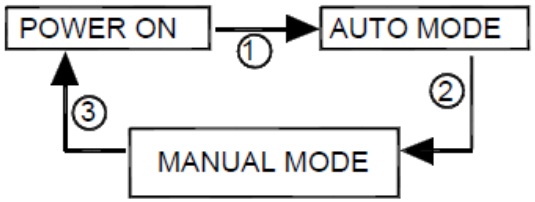


THE SENSTIVITY LEVEL: The sensitivity determines the max. detection rang that the sensor covers. For the model: AL311, you can adjust the knob of “sens” for this function. At the max. position, the sensor’s detection range will be max. 12 meter.

Note to user:

1) **The lamp will be turned on when power on, and then the PIR sensor will enter into the period of “Warm-up”.**
2) **The LUX CONTROL (PHOTODIODE input) is ignored when the lamp is on, and any subsequent detection will start the timed period again from the beginning.**
3) **If you want to decide the detection area of PIR SENSOR by Walking-Test, please adjust the LUX knob to daylight position.**

HOW TO CHANGE INTO MANUAL



CONTRL MODE

1. When power on, the PIR detector enters into the "WARM-UP" periods for about 1 minute, then automatically change into AUTO MODE.
2. During AUTO MODE, by switching the ON/OFF main switch for 2 times **within 3seconds** then switch on, the PIR detector will automatically change into MANUAL MODE from AUTO MODE. In MANUAL MODE, the Lamp(s) will remain ON , in MANUAL MODE the PIR detector not affected by duration time and Lux control level.
3. During MANUAL MODE or AUTO MODE, by switching off the ON/OFF main switch over 6 seconds and then on again, the PIR detector will reset to WARM-UP periods. Please note: the periods of "WARM-UP" maybe be shorter than 1 minute.

■ TECHNICAL DETAILS:

- **Voltage:** 220-240 V~ 50 Hz
- **Wattage:** Max. 100W incandescent and 30W fluorescent ， 15W LED
- **Detection range:** 110º and Max. 12meters
- **Duration time:** (10±5) seconds up to (5±1) min adjustable
- **LUX control:**10±10LUX—daylight adjustable
- **Weatherproof:** IP44
- **Detection circuitry:** Passive Infra-Red (PIR)
- Unit Dimension: 56.1(L)*51(W)*34.5(H)mm

Trouble shooting and user hints

PROBLEM	POSSIBLE CAUSE	SUGGESTED REMEDY
Light does not switch on when there is movement in the detection area.	1. No mains voltage	Check all connections, and Fuses/switches
	2. Bulb faulty or missing.	Check and replace if necessary
	3. Nearby lighting is too bright.	Redirect sensor or relocate the lamp
	4. Sensor positioned in wrong direction	Redirect sensor
Light switches on for no apparent reason (false trigger)	1. Heat sources such as air-con, Vents, heater flues, barbecues, other outside lighting, moving cars are activating sensor.	Redirect sensor away from these sources.
	2. Animals/birds e.g. possums or domestic animals.	Redirecting sensor may help.
	3. Interference from on/off switching of electric fans or lights on the same circuit as your lamp. (This problem does not always occur but a faulty switch or noisy fluorescent light may cause the sensor false active.)	Should the false triggering become troublesome, consider: (a) Replacing a faulty switch. (b) Replacing noisy fluorescent tubes and/or starters. (c) Connecting the light to a separate circuit (in most cases where one or more of the above suggestions have been carried out, false triggering has been reduced.)
	4. Reflection from swimming pool, or reflective surface.	Redirect sensor.
	5. Nearby the field of strong electromagnetic disturbance	Relocate the lamp
Light remains on.	1. Continuously false triggered, see above mentioned	Redirecting sensor may help
Light switches on during daylight hours.	1. Shadow the PIR sensor	Redirecting sensor may help
The detection distance becomes shorter	1. Dirty the LENS of PIR sensor	Cleaning the LENS use soft cloth soaked with water, and not scratch the LENS
	2. Warn and wet environment	

Note: all passive infra red detectors are more sensitive in cold and dry weather than warm and wet weather