

## Photocell beam sensor User Manual P5111

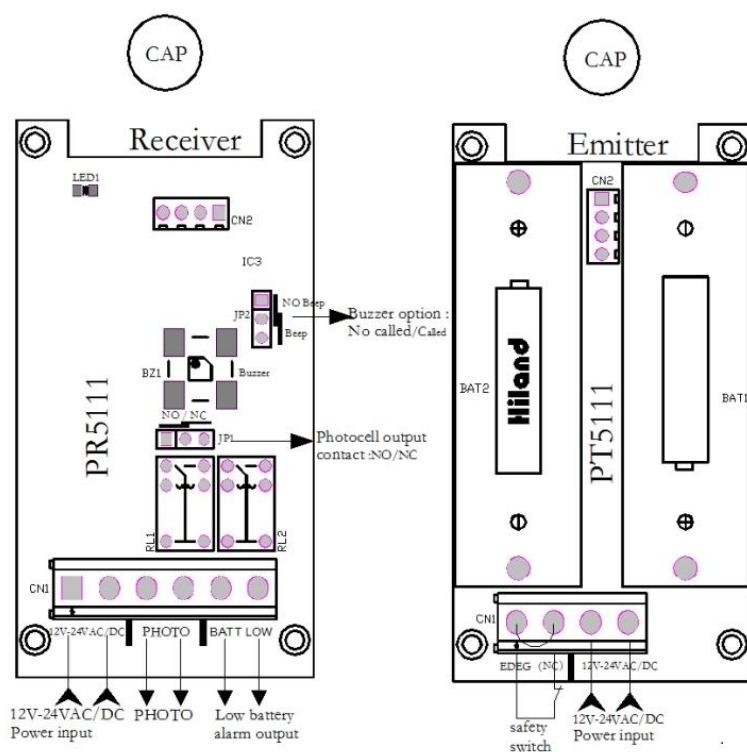
### I. Technical Specification

1. For security, please read the user manual carefully before initial operation;
2. This photocell is without any fuse, so Please make sure the power is off before installation;
3. This product is only used for the equipment which will not cause life or property hazards when a breakdown happens or its security risks have been already eliminated;
4. Please guarantee the products used in effective working range.

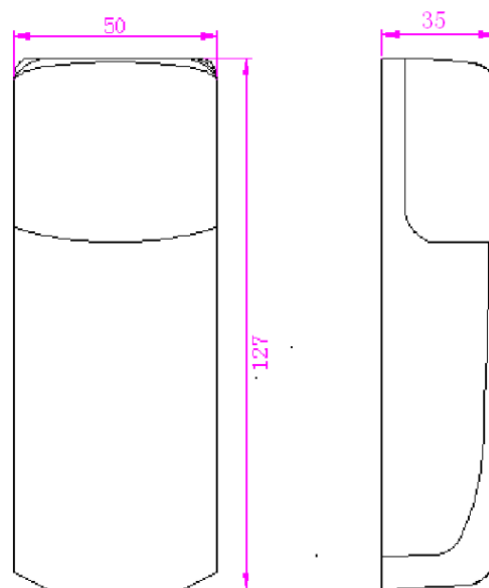
### II. Safety Instruction

1. Working voltage: 12~24VAC/DC or 2\*1.5V,LR6 AA battery
2. Working current(24VDC):emitter:  $\leq 8\text{mA}$  receiver:  $\leq 40\text{mA}$
3. Photocell wavelength: 940nm
4. Angle of opposite emission:  $\leq \pm 5^\circ$
5. Receiver range:  $\geq 12\text{m}$
6. **Internal Rotation system adjusted Angle: 0~180 °**
7. Working temperature:  $-20^\circ \sim +60^\circ\text{C}$
8. Relay contact loading capacity: 1A/30VDC
9. Waterproof grade: IP54
10. Size: 127\*50\*35mm
11. Weight: 155g

### III. Picture Display



PIC 1

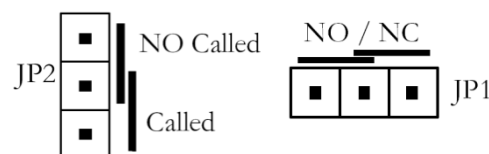


PIC 2

### IV. Installation instruction

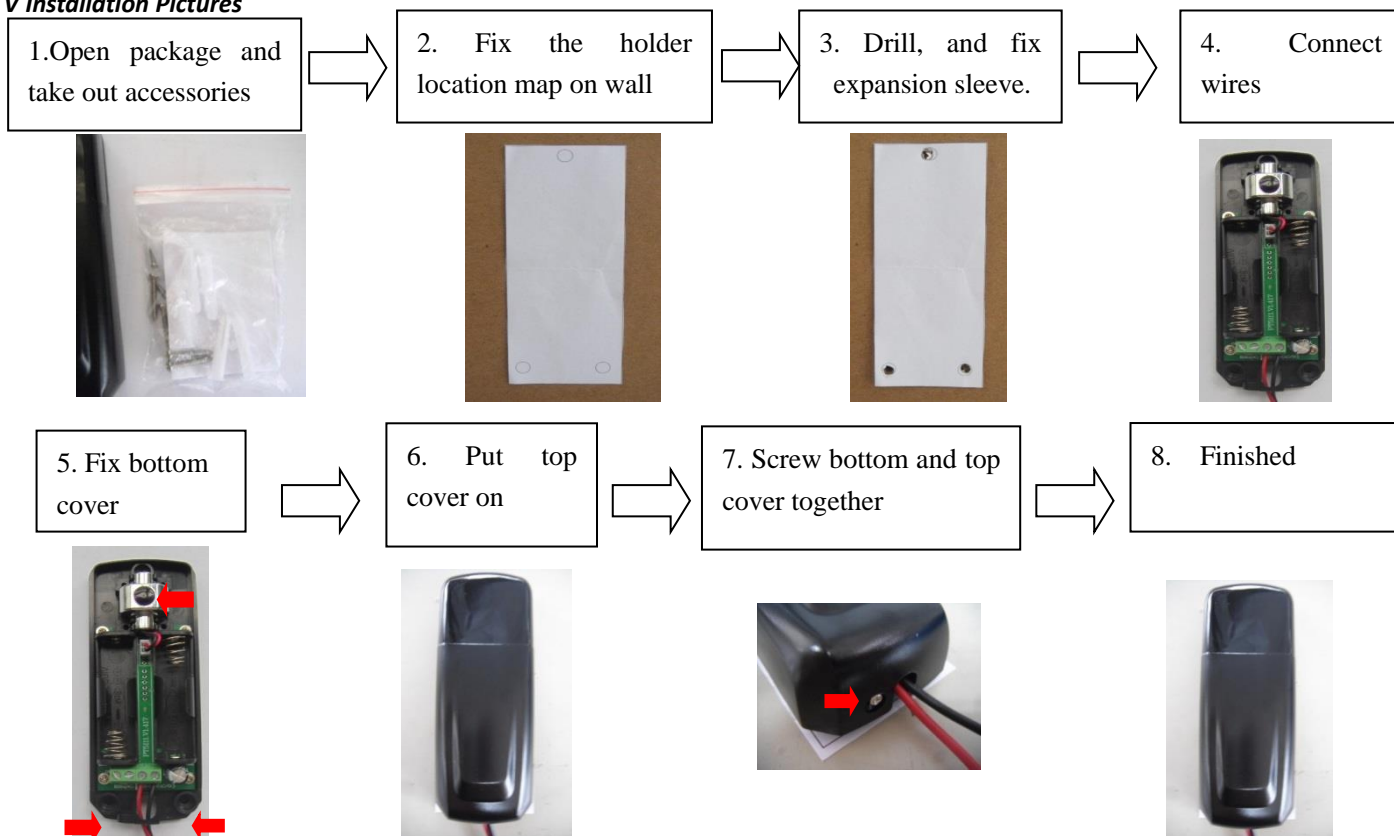
- 4.1 You can choose external power supply or Inside Battery supply.
  - 4.1.1 Ext. Power, Supply voltage:12-24V AC/DC
  - 4.1.2 BATTERY, Battery voltage:3V,as shown in pic

Noted:When used in cold areas, the performance of alkaline battery will be reduced , we recommend use lithium-iron battery.



- 4.2 You can set the buzzer working or not by switch JP2 in receive module
- 4.2.1 Buzzer works when short circuit cap on called
- 4.2.2 Buzzer not work when short circuit cap on No called
- 4.3 You can set the switch of photocell NO or NC by JP1 in receive module.
- 4.3.1 when the short circuit cap on NO, The photocell will be Normal Open
- 4.3.2 when the short circuit cap on NC, the photocell will be normal closed
- 4.4 Installation
- 4.4.1 The photocells should be installed more than 20cm above the ground (to avoid reflection), and the distance between emitter and receiver shall be more than 50cm.
- 4.4.2 End user should install the photocell on the back of the direct sunlight or other strong light source ( $\pm 5^\circ$ ) to keep photocell work well steadily.
- 4.4.3 Avoid installing other infrared photocell emitters within the effective distance of receiver
- 4.4.4 If the end user need to install other photocells in one same straight line , the receivers could be installed in the two ends and the emitters could be back-to-back installed
- 4.4.5 Stable installation could avoid the signal of emitter and receiver skewing due to lightly vibrate and the malfunction.
- 4.5 Wire connection
- 4.5.3 'EDEG' is safety switch (See transmit module in PIC 2). It should be short circuit If the safety switch is not used. '12-24VAC/DC' is outside power input port.
- 4.5.4 It is receive module in pic 1, '12-24VAC/DC' is power input port. 'PHOTO' is the switch contact and can select NO or NC(refer to 4.3).
- LOW.BAT is the low voltage alarm switch to buzzer when working voltage of emitter module is lower than  $1.9 \pm 0.1V$ . Also it can activate the external alarm.
- 4.5.5 Power on after correct connection. You will find LED will turn OFF when you make alignment at the emitter and receiver, or led will be ON. Photocell switch 'PHOTO' works in set-up status(NO or NC, see 4.3). If there's obstacle between the transmit and receive module
- ① Buzzer will beep (J3 at Called)
- ② 'PHOTO' switch OFF or ON. When JP1 is keep" NC", alignment the CAP in emitter and receiver module, LED will be OFF, 'photocell' switch is ON; if someone or something shelter the sensor, the Led will turn ON, photocell switch is OFF.

### V Installation Pictures



The interpretation and ownership of this manual belong to Hiland company. Any change of the product can be without prior notice.