

# DA -310A Wired Infrared Detector

## User Manual

### Summary

- Passive infrared detecting.
- Advanced digitalized signal processing technology.
- SMD wiring, high capability of preventing radio frequency interference.
- Insensitive to the white light and the closed shell preventing the system damaged.
- Capability to save alarm information, and output the anti-tamper signal, with automatic temperature compensation and auto self-diagnosis function.
- Easy installation, stable and reliable performance.

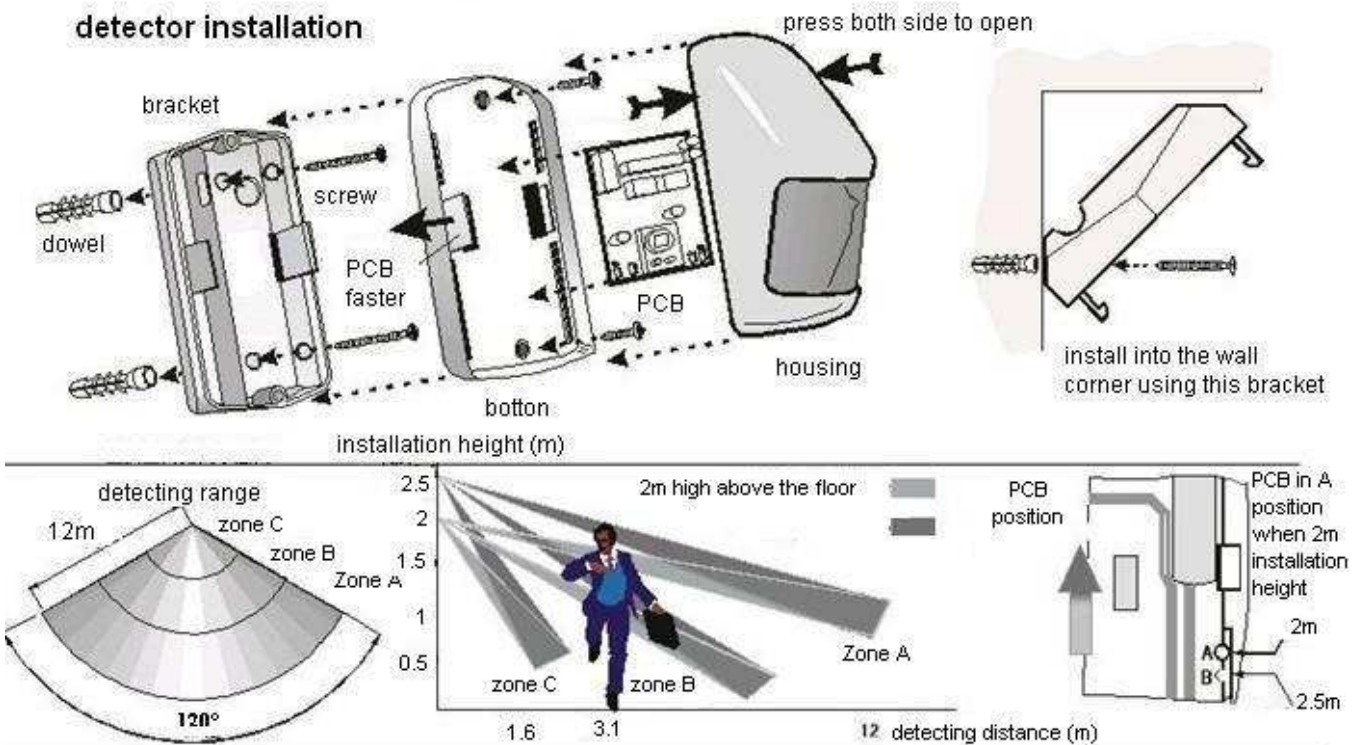
### Specifications

- Power supply: 9-15V DC
- Static current: 5mA (relay NO), 20mA (relay NC)
- Data processing: adopt digitalized processing, 3 speed/rate optional
- Detecting speed: 0.1m/s- 4m/s
- Detecting range: 12m/120 degree

- Relay for alarm: 60V/0.1A (NO/NC)
- Anti-tamper signal output end: 60V/0.1A
- Warm-up time: 90s maximum/slowest
- Operating temperature range: -10-55 °C
- Anti radio frequency ability: 1GHz 20V/m
- EN55022, 60801-2 (IEC801-2) IEC801-3, IEC801-4 standard

### Installation:

DA-310A should be installed on the flat wall at 2 to 2.5 meters high from the ground, and fix it with the two screws attached. A plastic bracket is necessary if installed in the wall corner, as shown in picture below. Adjust detecting range by adjusting the PCB position inside box (A, B, C 3 locations).



### Accessories:

- DA-310A detector 1 pcs
- bracket 1 pcs
- Stud bolts:  $\phi 6\text{mm}$  2 pcs
- screw:  $\phi 3 \times 25\text{mm}$  2 pcs
- screw:  $\phi 2.9 \times 9.5\text{mm}$  2 pcs

### Wiring terminal: Reference to Picture 1

- ARM:** alarm memory function control signal input end
- TAMP:** tamper switch signal output end (N.C)
- +12V:** power supply +12V DC
- GND:** power supply -12V DC
- ALARM:** alarm relay output (N.O or N.C)

## Jumper: Reference to picture (2)

**J1-ANALYSIS:** change digital signal analysis rate

**1.2:** fast reactions, good immunity (normal environment)

**2.3:** slower speed, higher immunity (high RF interference environment)

**Open:** slowest reaction but excellent immunity, (for environment with very high RF interference, frequent temperature changes)

**J2-NC/N:** alarm relay signal output means

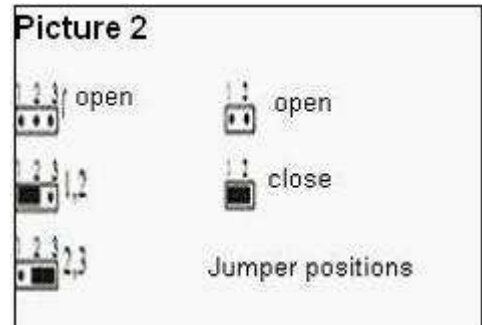
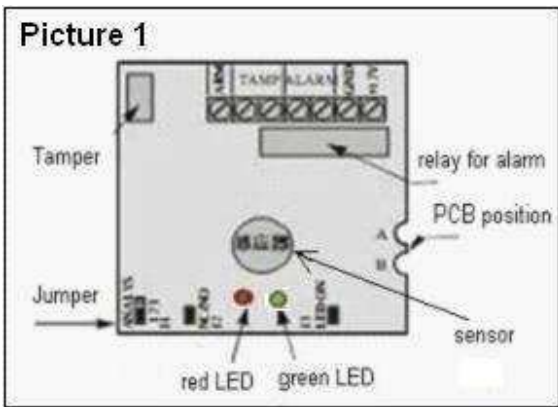
**Closed:** relay Normal Close output

**Open:** relay Normal Open output

**J3-LED ON:** LED function

**Closed:** LED normal work

**Open:** close green LED, red LED flashes while alarm memory and sensor trouble only)



## LED functions:

- **Green** - Flash if any motion is detected (signal analysis started if any movement). but If J3 jumper is open, this LED will be completely OFF.
- **Red** - periodically flashes (twice a second) means in the warming-up period after powered.
  - 3 seconds signal indicates ALARM relay output triggered. but If jumper J3 is open, this LED will be completely OFF.
  - Fast flashes indicate an alarm memory (will be reset after arm operation again to alarm system)
  - long light with short pauses indicates that function trouble. (Have no relation with J3 setting).

**Note: after powered, the detector needs about 90s for warming up and self-testing procedure.**

**The red LED will flash periodically during this period.**

## Function description:

**Digital signal analysis:** the built-in sensor detects any motion which with a temperature being close to the human body temperature. The signal from the sensor is converted to digital form and analyzed by software. This software checks if the signal is characteristics of human body movement. In this way, false alarms are almost eliminated. Digital analysis results depend on the analysis rate. This rate can be adjusted by jumper J1.

**Alarm signal output:** when a valid signal is analyzed, the ALARM relay is activated for 3s (N.C. or N.O. can be selected by J2 jumper). The red LED will flash to indicate ALARM signal output (in this case, J3 jumper must be closed).

**ARM terminal:** control alarm memory function. If need alarm memory (connected this terminal the ground), If the memory function is not necessary, do not connect this terminal. Voltage range for this terminal: 0V to +12V/DC.

**Alarm memory:** If the ARM terminal is wired to ground, and the alarm system is in armed state, the sensor red LED will continue flash rapidly until the alarm system is armed when alarm relay signal output.

**Notes: Make sure alarm system is not in working state, whenever you are open the detector housing.**

**Warning: Do not touch the sensor inside. If you must touch it, be sure to avoid using your fingers!**