

AirSense

Plug & Play Wi-Fi Aircon Control



Air Conditioner Control



Motion sensor

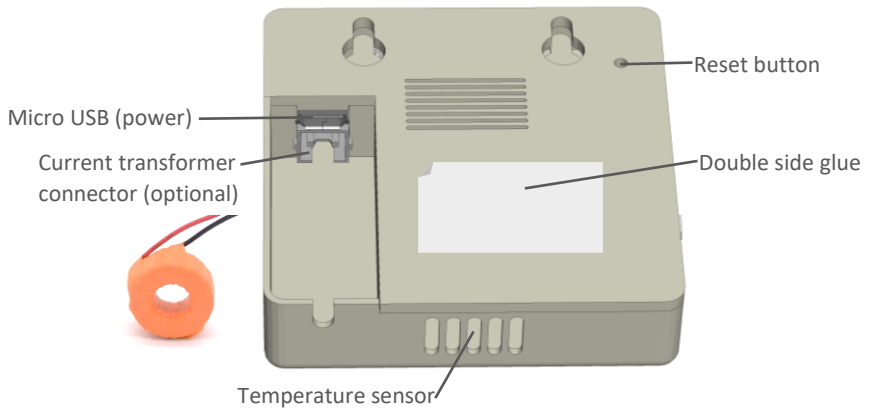
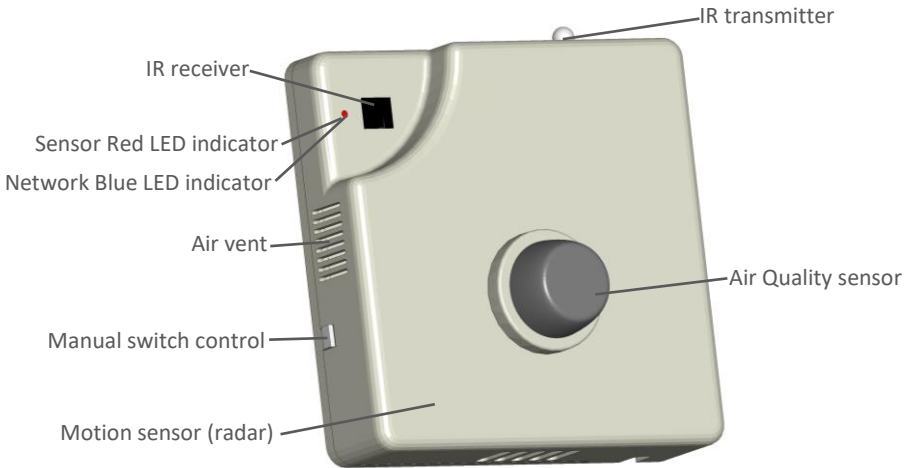


GAS sensor



Power meter

Specification



Features

- App for iOS and Android
- Control and monitor Aircan from anywhere via Wifi or 3G/4G
- Control Cold / Hot / Auto / Fan / Dry mode, Set Point and Fan 1, 2, 3, Auto
- 2-way communication - status feedback and sync with aircan's remote control
- Automatic aircan brand selection via aircan's remote control (setup with press of a button)
- Compatible with major aircan brand with remote control (other aircan brand can be updated online)
- Plug and Play – no need installation (just connect to power)
- Measure Room temperature via built-in temperature sensor NTC
- No need additional controller (standalone product)
- Size: 6 * 6 * 1.5 cm (2.2cm include sensor)
- Turn ON the air condition to its last status in memory
- Set Point Temperature Range: 16 ~ 32°C
- Room Temperature range: 0 ~ 60°C
- Radar Motion sensor – radius 7 meters range (14 meters diameter at 360 degrees)
- Motion sensor settings when enter the room:
 - a. Turn on air conditioner to last state
 - b. Turn on air conditioner to a pre-set setting (temperature, mode, fan)
- Motion sensor settings when leaving the room:
 - a. Turn off air conditioner
 - b. Conservation mode (pre-set the aircan to comfortable level for X time)
- Air quality sensor will send alerts to App in case of high PPM levels of CO₂, benzene, alcohol, sulphide, smoke and other harmful gases. Total 5 gas levels:
 - a. Good: 0-600ppm
 - b. Fairly good: 600-1100ppm
 - c. Average: 1100-2100ppm
 - d. Bad: 2100-3100ppm
 - e. Very bad: 3100ppm and more
- Power consumption optional add-on:
 - a. Current transformer – 5mA (50A). Size outer: φ24mm, width: 11mm
 - b. Power supply – 220VAC (2 wires) to 5VDC, 1A. (USB socket). Size: 44*32*24mm
- Power consumption: 5VDC, 220mA
- IR distance: Max. 6 meters at line of sight
- Wireless Wi-Fi frequency: 2.4GHz ISM free frequency range
- Wifi Communication distance: maximum 30 meters (at line of sight)
- Enclosure: ABS plastic casing. White color or custom (MOQ)
- Indoor use only
- CE, EMC, FCC, IC, LVD standard

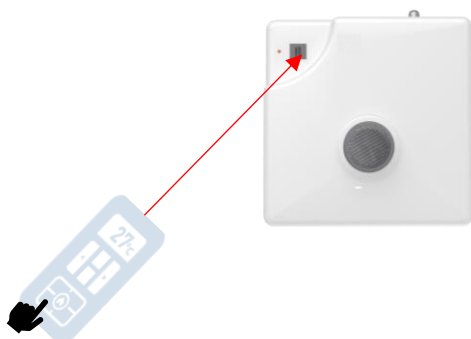
Compatible air conditioner brands (with most of their models)



Aircool, Airwell, AUX, BlueStar, Carrier, Cetnral Air, Changhong, Daikin, Elco, Electra, Electrolux, Fujitsu, General, Gree, Haier, Hitachi, Hisense, LG, Midea, Mitsibushi, National, Panasonic, Pioneer, Pearl, Samsung, Sanyo, Sharp, Skyworth, Star-Aire, Tadiran, TCL, Toshiba, Yair, York

Air conditioner brand setup

After power, within 10 seconds press any button of the air conditioner's remote control to learn the air conditioner brand. After setup, the AC brand is set in memory also after power failure.

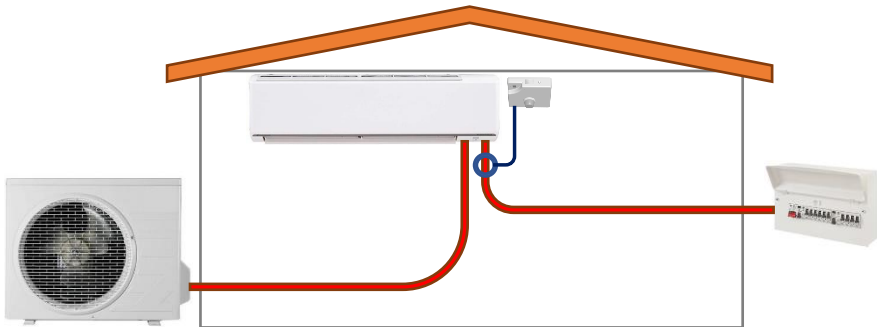


Installation

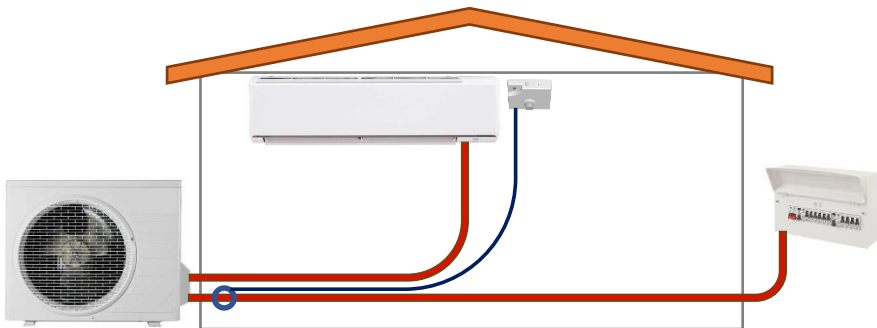
As default, AirSense comes with plug power supply and USB cable and include Air Conditioner controller, Gas sensor and Motion sensor (3 in 1). This product is plug & play - only connect to power and setup in App.

To add power meter function, an optional add-on current transformer is required. There are 2 types of air conditioners wiring (depend on AC model), each required different installation:

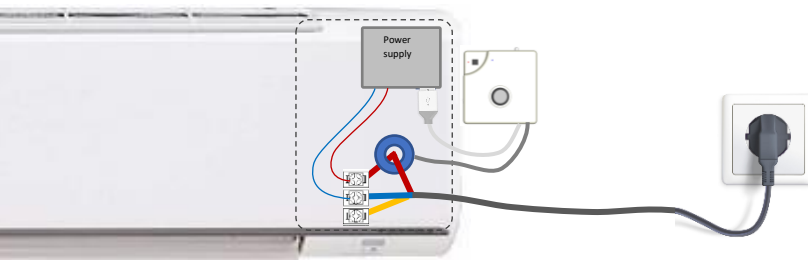
1. Wiring from circuit board to inner unit to outdoor unit (normally on small size AC)



2. Wiring from circuit board to outdoor unit to indoor unit (normally on big size AC)



In both cases need to ensure current transformer is connected to the feed from circuit breaker as follows (only to LIVE):



App



Note: when user change settings on the air conditioner’s remote control, the app update its feedback online and show its current status

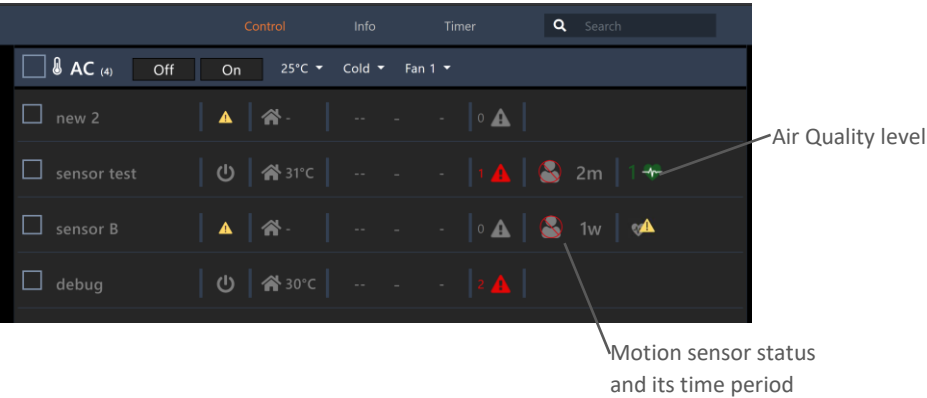
Ensure to select your country at system setup for power consumption cost

Desktop

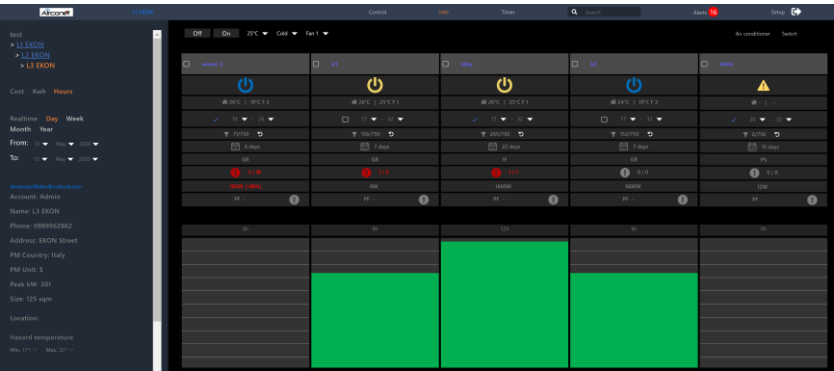
Control & Monitor from computer

Login: <https://activate-ac.com>

In CONTROL page monitor the air quality and motion sensor status



In INFO page monitor the power usage (working hours, kWh and Cost) in real time, per day / week / month / year



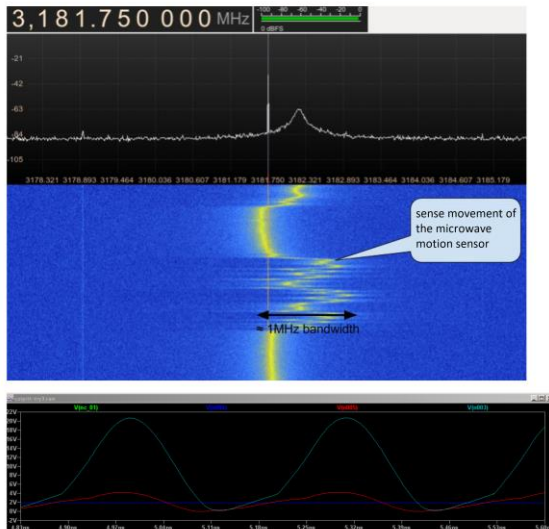
Motion sensor spec

Sensor type: Microwave sensor

Detecting range: 360°

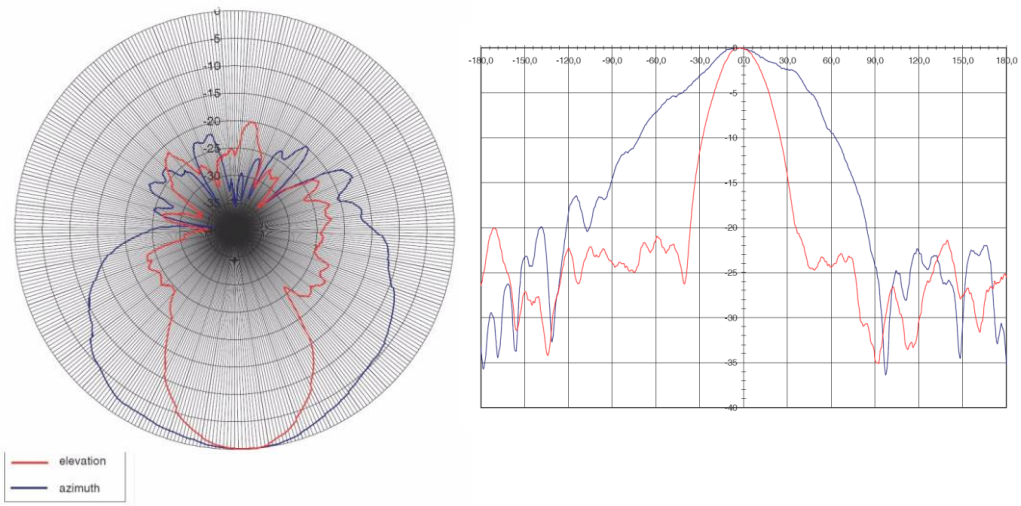
Detecting distance: 6m

Operating frequency: ~3.2GHZ



Unlike passive infrared motion alarm unit, which only registers objects at a temperature difference with respect to the background, the radar microwave motion sensor responds to all movements in the direction of the sensor. With this, the movement sensitivity is extremely high, even smallest movements nearly up to the stand still state are recognized. The radar motion sensor works through many materials, e.g. plastics, plaster wall, glass, etc.

Radiation pattern



The radar sensor comprises of a highly integrated microwave sensor with sending and receiving part as well as a push-pull mixer. Careful circuit layout and selection of suitable components lead to the fact that the module complies with the requirements of European ETSI standard and possesses a generally valid CE permission. Radar motion sensor work as per the Doppler principle: the electromagnetic waves in the microwave range are reflected from the object and superimposed over a sending signal by a mixer in the module. Therefore, the frequency of signal originating at the mixer output is proportional to the speed corresponding to a movement speed of approx. 1 km/h. The amplitude of the signal is an outcome of the size of the object and its distance to the sensor. A subsequent amplifier with defined bandwidth brings the signal to a useful level, which is then evaluated over a window comparator. While PIR sensors react very insensitively to movements in straight direction, the radar sensor shows its highest sensitivity here.