Sensor Solutions-**Environmental Appliance**

Air Purifier, Air Disinfection Machine

Quick Response
High Accuracy

Meet Multiple Installation Needs
of Air Inlet & Outlet Orientations

Provides Multiple
Integration Solution

In recent years, more and more environmental appliances such as air purifiers have appeared in people's life. For environmental appliances, "health" and "intelligence" are the two major themes which are continuously deepened under the dual drives of technology progress and updated consumption demand. Resulting from consumers' concerns about indoor formaldehyde, particulate matter(PM), influenza viruses and other air pollutants, sensors to detect different pollutants are widely used in various environmental appliances. New consumer demand and market innovation also put forward higher requirements for sensors.

For this field, Winsen has a variety of products such as PM sensors, formaldehyde sensors, ozone sensors, air quality sensors, ambient temperature and humidity sensors, etc. It provides professional sensor solutions to support the expansion of the environmental appliances and the increase of market opportunities.

Ozone Sensor
ZE25-O3

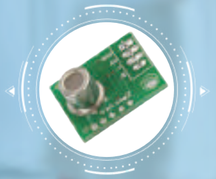
- High sensitivity & resolution
- UART / analog voltage output
- Excellent stability & linearity

MEMS Temp. & Humi. Module
ZS13

- High sensitivity
- Serial / PWM output
- Excellent stability

Particulate Matter Sensor
ZPH04

- High sensitivity
- Modular design
- Multiple output ways



10-Grade Air Quality Module
ZP07

- Ultra high sensitivity
- Calibrated, faulty auto-check
- Long life, cost effective

Electrochemical HCHO Module
ZE08K-CH2O

- Excellent anti-interference
- High sensitivity, high resolution
- Long lifespan, high stability

Sensor Solutions-**HVAC System**

Low Power Consumption
Long Lifespan, Cost Effective

Multiple Output ways
Easy to Use

High Sensitivity
Great Consistency

As people pay more and more attention to air quality and life experience, the demand for air purification equipment has gradually increased. Air purifiers and HVAC system have become daily-use equipment, and HVAC system has become one of the indispensable devices in many indoor places.

The use of various sensors has made the intelligent control of the HVAC system a mainstream developing trend. Air quality sensor, PM2.5 sensor, carbon dioxide sensor, formaldehyde sensor, temperature & humidity sensor, and ozone sensor have become standard configuration for HVAC systems. One way is to use sensors in the separate detector, which can display the data of various monitoring indicators in real time, and then realize the linkage control with HVAC system through wireless connection; another is to integrate sensors in the host of HVAC, and through setting various parameters, it can realize the automatic start and stop, change of air volume , etc.

Winsen has developed series of sensors widely used in HVAC system for real-time detection, like CO2 sensor, air quality sensor, etc.

MEMS Temp. & Humi. Module ZS13

- High sensitivity
- Serial / PWM output
- Excellent stability

VOC+ Temp. & Humi. Module ZPS20-VOC

- High sensitivity
- Excellent stability
- IIC output, easy to use

Particulate Matter Sensor ZH10

- Real time response
- Accurate data, anti-interference
- Compatible with VOC, T & H output

CO2 Gas Sensor MH-Z1911A

- High sensitivity and stability
- Temperature compensation
- Excellent linear output

Sensor Solutions-**Fresh Air Conditioner**

Accurate Data and Good Consistency

Professional Algorithm and Calibration Process

Strong Anti-interference High Stability

With the high development of science and technology, people's demand for intelligent air-conditioning products is increasing. Intelligent air-conditioning products not only bring comfort and convenience to our life, but also gradually redefine people's lifestyle. In recent years, household air conditioners have experienced waves of competition such as clean trend, comfort trend, and sterilization trend.

In different subdivisions, consumers' demands for healthy air conditioners are constantly upgraded to be more diversified and multi-level with the renewal of life concepts and life styles. Today, fresh air conditioners have become from concept to reality. With the overall increase in market share, competition in this field will continue to heat up.

As a professional sensor company, Winsen provides a variety of sensor solutions for intelligent air conditioners, including refrigerant leakage sensor, particulate matter sensor, carbon dioxide sensor, formaldehyde sensors, temperature humidity sensor, air quality sensor and multi-in-one integrated gas sensors solutions.

CO2 Gas Sensor MH-Z1911A

- High sensitivity and stability
- Temperature compensation
- Excellent linear output

Pressure Sensor for Air Conditioner

HCHO Sensor Module

- High resolution
- Provides UART output
- Built-in Temp. Sensor

VOC+ Temp. & Humi Module

- High sensitivity, great stability
- Provides IIC output, easy to use

MOS Refrigerant Module

- High sensitivity, quick response
- IEC & EN60335 certified

Human Induction Module

Infrared Refrigerant Module

- Anti-water vapor
- High stability, long life
- UL compliant

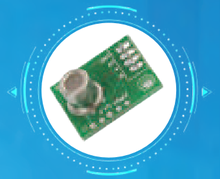
Sensor Solutions-**Air Quality Monitor**

Low Power Consumption

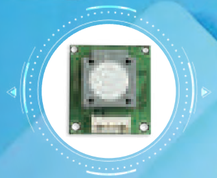
Design Solution for Complex Structure

With the improvement of our life, more and more people begin to pay attention to the air quality of their living environment. With more than 20 years of experience, Winsen has accumulated profound and extensive professional knowledge in the sensor market. In addition to a variety of air quality detection modules for parameters such as PM2.5, CO2, HCHO, VOC, temperature and humidity, Winsen is also able to provide highly competitive technical support by integrating sensor technology and systematic solution thinking in the overall design.

Multi-in-One Air Quality Module
ZPHS01C



4-Grade Air Quality Module
ZP07-MP503



HCHO Sensor Module
ZE08-HCHO

MEMS Temp. & Humi. Module
ZS13

CO2 Gas Sensor
MH-Z1911A

Laser Particulate Matter Sensor
ZH07

Sensor Solutions-**Range Hood, Stove, Integrated Stove**

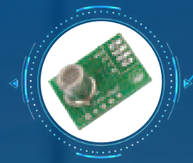
Fast Response

High Sensitivity
High Resolution

Multiple Output Methods
Easy to Use

In order to meet the ever-increasing demand and to better protect consumers' rights in healthy cooking, many mainstream companies have successively launched gas stoves with certain protection and intelligent functions, such as anti-dry cooking and automatic flameout, intelligent linkage with range hood, smart integrated stoves, etc. Intelligence, integration, and modular have become the main trend of the range hood industry.

From the perspective of safety, the sensor can realize gas leakage detection, non-contact temperature measurement and dry burnt protection. From the perspective of health, the soot particles produced by cooking not only affect the household air quality but also endanger family health. Kitchen particulate matter detection and air quality monitoring are the new requirements for improving consumer experience and product iterative upgrading.



10-Grade Air Quality Module ZP07

- Ultra high sensitivity
- Calibrated, faulty auto-check
- Long life, cost effective

Particulate Matter sensor ZH07

- Real time response
- Accurate output data
- Min. detection particle 0.3 μm

Non-contact Anti-Dry Burnt Probe

- Non-contact, high accuracy
- Strong corrosion resistance
- Long life, use for gas stove

Combustible Gas Leakage Module ZC13

- Quick response
- Serial port upload
- Long life, small size

Dry Burnt Protection Module MRT-313

- TO-39 package, specific view
- Fast response, great stability
- High NTC accuracy

Sensor Solutions-**Kitchen Cooling Fan**

Quick Response
High Accuracy

Meet Different Directions
of Inlet and Outlet

Provides Multiple
Integration Solutions

The most troublesome area in the home must be the kitchen which is hot, humid, and full of oil fume and easy to breed mosquitoes. In order to solve these problems, a corresponding product- Kitchen Cooling Fan has appeared on the market. In recent years, the cooling fan has gradually become the "standard equipment" in our kitchen.

The cooling fans on current market are all integrated with the function of lighting and many additional functions, which are good looking and take small space. For example, adding odor sensor can help to realize the functions of automatic ventilation, deodorization and sterilization.

Smoke Module
ZP13
- Ultra high sensitivity
- Excellent long-term stability
- Calibrated, 3MIN preheat judgement

Odor Sensor
MP503
- High sensitivity, long life
- Quick response and resume
- Simple detection circuit

Odor Module
ZP07
- Ultra high sensitivity
- Calibrated, faulty auto-check
- Long life, cost effective