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Tianjin Zwinsoft Technology Co., Ltd

# Air Quality Monitor

## **ZWIN-AQMS06**

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## Overview

ZWIN-AQMS06 Air Quality Monitor is an online monitoring product used to provide real-time and accurate detection data of outdoor ambient air pollutants. It adopts a pumping sampling method and can be equipped with a variety of high-precision gas sensors according to actual conditions. AQMS06 is capable of detecting PM<sub>2.5</sub>, PM<sub>10</sub>, CO, NO<sub>x</sub>, O<sub>3</sub>, SO<sub>2</sub>, TVOC and other air quality parameters and meteorological parameters including temperature, humidity, pressure, wind speed, wind direction with high precision and high accuracy. The gas sensor can be replaced according to specific needs.

## Method

### Detecting method:

using electrochemical gas sensor, light scattering particle sensors, meteorological sensors detecting particulate and various gas.

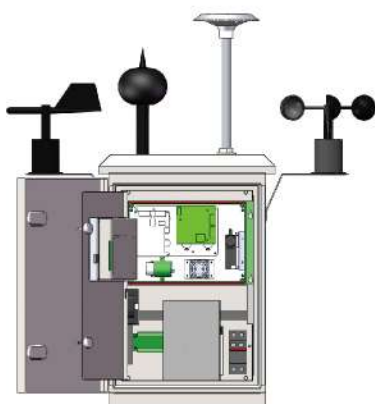
### Sampling method:

pumping sampling method.



## Features

1. Reasonable structure design, capable of monitoring gas parameters, PM, meteorological parameters, including PM<sub>2.5</sub>, PM<sub>10</sub>, NO<sub>2</sub>, SO<sub>2</sub>, O<sub>3</sub>, CO.
2. The gas and particulate matter are sampled in two channels, and the gas is pumped separately in separate channel to avoid mutual interference. In the gas sampling equipped with a miniature vacuum pump, the reaction time is 1.5 times faster than ordinary diffusion collection methods;
3. Imported high-sensitivity sensor, fast response, high resolution, good linearity, and the lowest limit of detection is up to ppb (part per billion) level, stable operation under high temperature conditions;
4. Used liquid crystal display, it can display various test data and instrument working status intuitively and dynamically, friendly man-machine interface is provided;
5. Realizes various parameter collection, automatic upload to the online platform, cellphone app. The real-time data can be viewed on online platform ;
6. Integrated GPRS wireless communication technology, real-time monitoring of atmospheric environment data, low cost, suitable for grid layout;
7. Optional GPS positioning to realize equipment tracking function;
8. Optional solar power supply to realize the complementary of solar energy and city power;
9. Stable performance, high accuracy, convenient operation, easy maintenance, and power failure protection function;
10. High precision and reliable performance, suitable for outdoor and industrial environments.



**Design**



**True**

## Specifications

|                                        |                                                                                                                                                                                           |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Enclosure</b>                       | Water-proof,dust-proof,rust-proof,lightning protection, heat dissipation;<br>GPRS transmission, Outdoor installation                                                                      |
| <b>Humidity&amp;Temperature module</b> | Temp:-40~120℃; resolution: 0.1℃; Accuracy:±0.3℃                                                                                                                                           |
|                                        | Humidity:0~100%RH; resolution:0.1%RH; Accuracy:±2%RH                                                                                                                                      |
| <b>Particle module</b>                 | Detection Method:Light scattering laser photometer; Resolution:0.1ug/m³;<br>Measured Mass Fraction: PM <sub>2.5</sub> ,PM <sub>10</sub> ,TSP<br>Concentration Range:0~1000ug/m³(optional) |
| <b>Gas module</b>                      | NO <sub>2</sub> : range: 0-500 nmol/mol; resolution:0.001ppm Sampling accuracy:±2%FS                                                                                                      |
|                                        | CO: range : 0- 10umol/ mol; resolution:0.01ppm Sampling accuracy:±2%FS                                                                                                                    |
|                                        | SO <sub>2</sub> : 0-500 nmol/mol; resolution:0.001ppm Sampling accuracy:±2%FS                                                                                                             |
|                                        | O <sub>3</sub> : range : 0-500 nmol/mol; resolution:0.001ppm Sampling accuracy:±2%FS                                                                                                      |
| <b>Wind module</b>                     | Wind Speed: 0~45m/s; resolution:0.1m/s accuracy:±0.3m/s; Start-up speed:≤0.5m/s                                                                                                           |
|                                        | Wind Direction: 0-360°; resolution:1° accuracy:±3°                                                                                                                                        |
| <b>Barometric pressure</b>             | Range:10~1100hPa, resolution:0.1hPa,Accuracy:±0.3hPa                                                                                                                                      |
| <b>Software system</b>                 | Basic functions (Real-time monitoring, query)                                                                                                                                             |



**Wind speed sensor**



**Wind direction sensor**



**Gas sensor**

## Online Platform

The environmental monitoring platform is based on cloud computing technology, allowing a large number of front-end smart devices to access at the same time, real-time data is transmitted wirelessly, uploaded and summarized to the cloud computing data storage analysis platform. Through big data analysis and processing, the cloud platform is used to analyze the analysis in multiple dimensions. The results are displayed. Users can view and analyzed data through mobile phones and computers.

The big data overview function combines geographic information, air data, and meteorological data to visualize the air quality monitoring data in the designated area, and vividly shows the real-time trend of air quality and the distribution of pollution.

## Functions

Blue sky : pollutant gas and relevant data

History data analysis : pollution source analysis,assessment analysis report

Statement analysis report: AQI real time report, AQI daily report

Alarm management: alarm setting ,alarm data

PT management : PT management ,PT category

Real map : location data

Ranking : ranking of all the gases in different places

Data search : air quality data, meteorological data

Data analysis : time,place ,gas analysis

