

Atmospheric Environment Monitoring Instrument



TY-DM-12

Outdoor particle on-line monitoring system

Product Overview

Dust particulate online monitor is a micro-sized atmospheric dust online monitoring system based on the principle of light scattering, which can simultaneously monitor PM2.5, PM10 and TSP. It is suitable for road dust monitoring, urban particle monitoring, dust monitoring in storage yard and other areas with high particle concentration, realizing real-time monitoring of areas with high dust pollution, pollution source tracing, transmission channel judgment and other functions. It provides data support for air pollution monitoring, air quality improvement, scientific research and government decision-making.



Outdoor particle on-line monitoring system

Product Advantages

- 1. With dynamic heating function, to ensure the accuracy of all-weather measurement of particulate matter;
- 2. With automatic zero calibration and optical cavity purging self-cleaning function;
- 3. Data transmission support multi-mode, LAN, RS485, wireless, support multi-protocol;
- 4. Scalable noise, LED display and other functions;
- 5. Support remote monitoring equipment operating status, and actively push alarm;
- 6. The online detection system is equipped with professional outdoor cover, which perfectly solves the problems of dust, rain and moisture.
- 7. Can work 7x24 hours uninterrupted, with fault self-test and automatic restart functions;
- 8. Using laser sensor and advanced level of temperature control and temperature error compensation technology.

Technical Specification

Model No.	TY-DM-12
Measurement principle	laser scattering method
Measuring range	0.01~2000 ug/m3
Indication error	±10%
Repeatability	< 10%
Seasonal shift	±10%FS
Clock error	Test 6h under the normal working state of the monitor, clock error ±20s
Particle size response range	0.1-10μm
Flow range	0.1-0.5L/min
Average data store period	1s-1h
Data output interface	RS485、4G

Atmospheric Environment Monitoring Instrument



TY-AQMS-221 Outdoor multi-parameter micro air quality monitoring station

Product Overview

The micro-ambient air quality monitoring system is composed of sample gas collection unit, gaseous pollutant detection unit, particulate matter detection unit, meteorological five-parameter sensor, data transmission unit and power supply system. It mainly monitors SO₂, NO₂, CO, O₃, PM_{2.5}, PM₁₀, TVOC, temperature, humidity, atmospheric pressure, wind direction and speed. The multi-parameter, compact design can realize high-density grid layout, achieve high spatial and temporal resolution of air pollution monitoring, and realize pollution source tracking, early warning and forecasting functions combined with the application of information big data.



Outdoor multi-parameter micro
air quality monitoring station

Product Advantages

- 1. Monitoring factors can be freely expanded and combined according to customer needs;
- 2. PM₁₀ and PM_{2.5} concentration synchronous real-time acquisition;
- 3. Built-in wireless transmission module uploads data in real time.
- 4. Pumping sampling, gas replacement time is short, more timely reflection of air quality changes;
- 5. The gas measurement module supports automatic zero calibration, real-time correction of sensor drift, and has self-adaptability to the environment;
- 6. Small size without consumables, long maintenance cycle, low operation and maintenance cost;
- 7. The on-site installation is simple and convenient, no special requirements for the installation environment;
- 8. The sensor adopts plug-and-plug design, convenient for later maintenance and overhaul;

Technical Specification

Model No.	TY-AQMS -221
Particle monitoring module parameters	
Measuring range	0 ~ 1000 ug/m3
Measurement repeatability	≤10%
Resolution	0.01μg/m3
Parallelism	PM2.5: ≤20%; PM10: ≤15%
Flow range	≥25L/h
Air intake	pump type
Aerodynamic particle size cutting range	1.0-10μm use a whirlwind cutter
Average data storage period	1s-1h
Gas monitoring module parameters	
Carbon Monoxide (CO)	Detection range: 0-20ppm Indication error: ±10%F.S Response time: ≤120 seconds
Ozone (O3)	Detection range: 0-500ppb Indication error: ±10%F.S Response time: ≤120 seconds
Sulfur Dioxide (SO2)	Detection range: 0-500ppb Indication error: ±10%F.S Response time: ≤120 seconds
Nitrogen Dioxide (NO2)	Detection range: 0-500ppb Indication error: ±10%F.S Response time: ≤120 seconds
Total volatile organic compounds (TVOC)	Detection range: 0-10ppm Indication error: ±10%F.S Response time: ≤120s

Atmospheric Environment Monitoring Instrument



TY-DM-15

β-ray portable continuous particle monitoring system

Product Overview

The portable continuous particle monitor uses low energy C14 as a beta ray source, and calculates the mass concentration of atmospheric particles by detecting the emission changes of beta rays passing through the filter paper collecting particles. The overall design of the instrument is reasonable, beautiful, easy to use and easy to maintain. It is widely used in the monitoring of dust emission in construction sites, road traffic and other scenarios, as well as air quality monitoring networks, mobile monitoring stations, long-term background environmental research, scientific research institutes and other fields.



β-ray portable continuous particle monitoring system

Product Advantages

- 1. LCD display, touch screen operation, menu driver software;
- 2. Gas flow intelligent PID control, constant current accuracy is high;
- 3. The sampling and measurement of the monitoring system are in the same channel, and the position of the filter membrane before and after sampling is unchanged, eliminating the return error;
- 4. Support a variety of ways of data remote transmission;
- 5. The use of high-performance embedded system for data acquisition and processing, to achieve high stability, reliability and real-time;
- 6. Internal fault automatic diagnosis and alarm prompt, support remote upgrade and maintenance;
- 7. Photoelectric coupling technology: high positioning accuracy, uniform and reliable paper;
- 8. The fastest up to the minute level of continuous counting: according to the curve can be graphically displayed, free extension and scaling;
- 9. Elastic paper press mechanism design: mechanical transmission is simple, reliable, reduce paper jam, broken paper and other mechanical failures.

Technical Specification

Model No.	TY-DM-15
Measurement principle	beta ray method
Range	(0~1000) ug/m3 or (0~10,000) ug/m3
Resolution	0.01ug /m3
Sampling flow rate	16.67 L/min
Indication error	±10%
Repeatability	< 5%
Detection lim	<4μg/m³
Clock error	Power: ≤20S; The power failure is less than or equal to 120S
Data output interface	RS485、4G

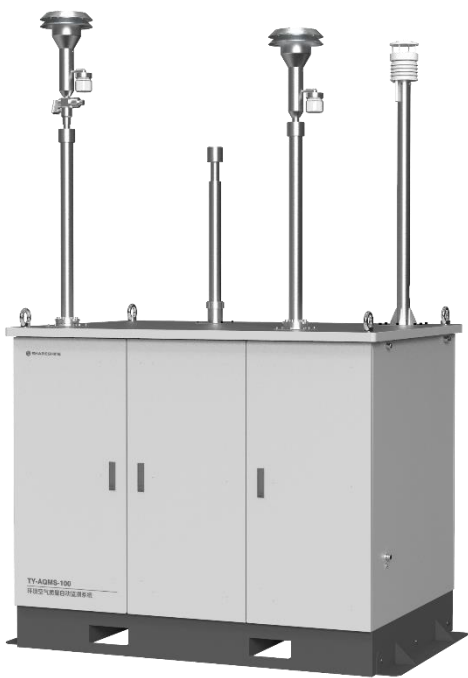
Atmospheric Environment Monitoring Instrument



TY-AQMS-100
Multi-parameter air quality
monitoring station

Product Overview

The TY-AQMS-100 (small) automatic ambient air quality monitoring system is designed with a thermostat cabinet structure to facilitate the movement and transfer of the system. The system integrates SO2, NOX, O3, CO, PM2.5, PM10 and other optical analysis instruments, and displays the concentration value of various monitoring parameters at the same time. The system can realize the remote control of the system, and the built-in large-capacity data storage unit can realize the storage of massive data. The monitoring data can be automatically sent to the central monitoring platform through wired or wireless transmission



Multi-parameter air quality monitoring station

Product Advantages

- 1. Touch color screen, display rich content, convenient shortcut menu query;
- 2. Automatic storage of calibration data, alarm information, convenient operation status check;
- 3. Support one-click query of historical data, run data curve personalized display;
- 4. Support remote software system upgrade, safe and convenient;
- 5. With startup self-test and running self-diagnosis function, convenient for users to quickly locate and judge faults;
- 6. Nitrogen oxide analyzer adopts the principle of chemiluminescence to monitor nitrogen oxides;
- 7. Ozone analyzer is an analyzer that adopts the principle of ultraviolet absorption method. It is a compact, lightweight and convenient analyzer that can measure ppb level.
- 8. Sulfur dioxide SO2 analyzer is based on ultraviolet fluorescence analyzer, can detect very low concentration of SO2 content;
- 9. Carbon monoxide analyzer adopts GFC and NDIR to detect CO concentration;

Technical Specification

Model No.	PM10		PM2.5	
Measurement principle	Beta absorption method			
Range range	(0~1)mg/m3 or (0~10)mg/m3			
mode reproducibility	≤2%			
Parallelism	≤10%		≤15%	
Model No.	SO2	NO2	O3	CO
Measurement principle	Ultraviolet fluorescence	Chemiluminescence	Ultraviolet absorption	Infrared absorption
Range range	(0~500)ppb	(0~500)ppb	(0~500)ppb	(0~50)ppm
Zero noise	≤1.0ppb	≤1.0ppb	≤1.0ppb	≤0.1 ppm
Detection limit	≤2.0ppb	≤2.0ppb	≤2.0ppb	≤0.2ppm
Range noise	≤5.0ppb	≤5.0ppb	≤5.0ppb	≤1.0 ppm
Indication error	± 2%FS	± 2%FS	± 4%FS	± 2%FS
24h zero drift	± 5.0ppb	± 5.0ppb	± 5.0ppb	± 1ppm
24h 20% range drift	± 5.0ppb	± 5.0ppb	± 5.0ppb	± 1.0 ppm
24h 80% range drift	± 10.0ppb	± 10.0ppb	± 10.0ppb	± 1.0 ppm

Atmospheric Environment Monitoring Instrument



TY-ODOR-302

Emergency portable odor gas monitor

Product Overview

Portable odor gas monitor adopts high sensitivity metal oxide, electrochemical, PID sensor detection technology and GPS positioning module to realize portable odor emission traceability monitoring and regional navigation monitoring. The portable odor monitor can monitor the concentration OU value of ammonia, trimethylamine, hydrogen sulfide, methyl mercaptan, methyl sulfide, dimethyl disulfide, carbon disulfide, styrene gas and dimensionless odor in real time, collect, organize, save and analyze monitoring data in a unified manner, realize the exchange of monitoring data, on-site data collection, automatic determination of whether to exceed the standard, alarm and other functions.



Emergency portable gas monitor

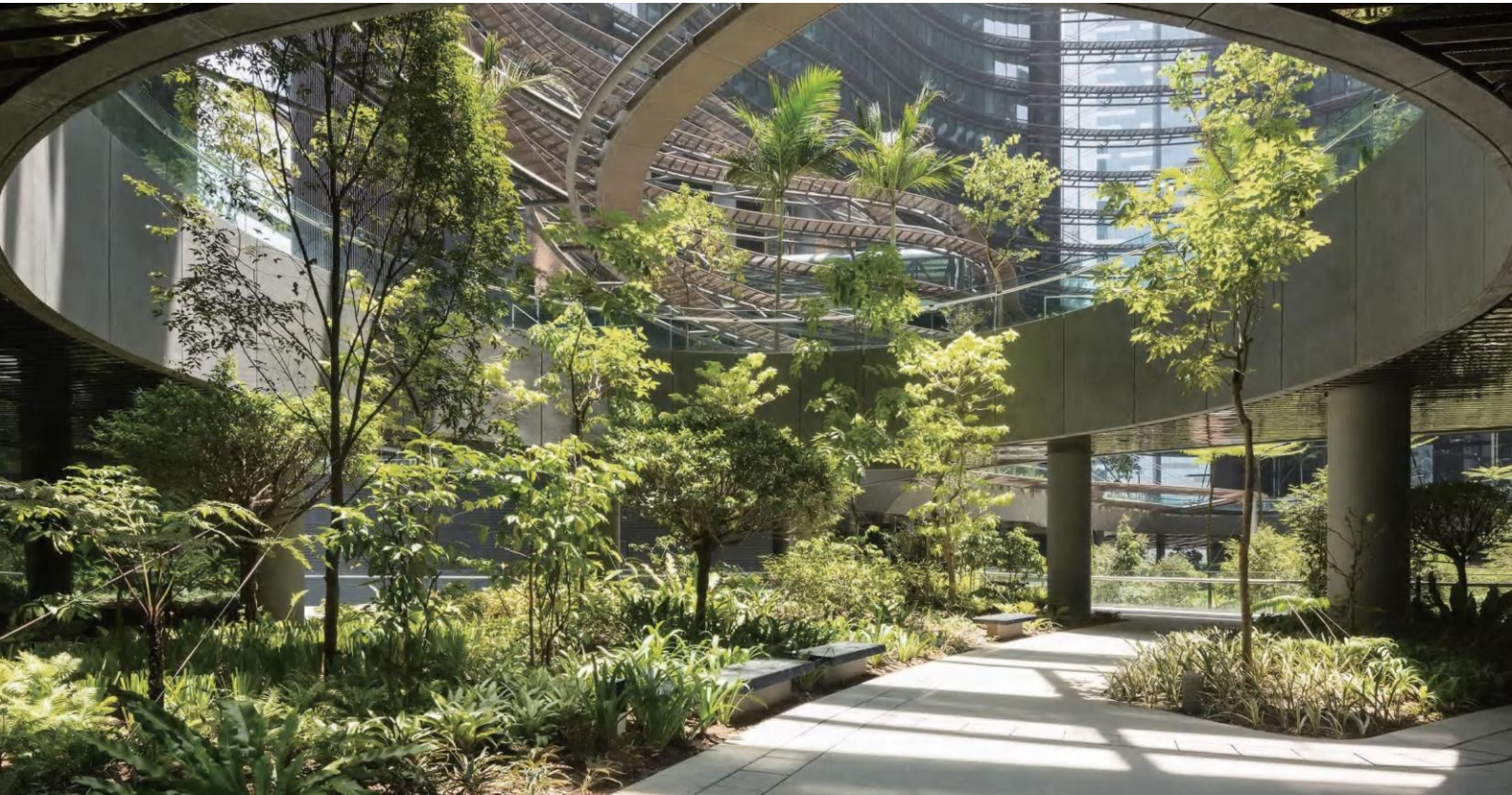
Product Advantages

- 1. real-time display of odor measurement results, can display nearly 30 seconds of real-time history curve, and can display nearly 30 days of historical data trend icon;
- 2. support real-time data and minute data switching display, feature pollutants support PPM and mg/m³ real-time data unit switching function, while setting excessive factors will change color display, easy to quickly respond to problems;
- 3. the gas path adopts negative pressure suction type, the sample gas does not go through the pump, no secondary pollution, the front end of the sampling system is set up dynamic heating module, to meet the sampling requirements of different regions, to avoid the generation of sampling condensation water;
- 4. the system standard navigation intake and exhaust sampling quick change joint, the joint is made of SUS316 material, can be replaced according to different modes of vehicle navigation and manual navigation;
- 5. the system is equipped with a 3-meter cigarette lighter plug power supply cable to meet the requirements of daily vehicle navigation mode;
- 6. the system built-in lithium battery, can meet 4 hours of power supply demand;
- 7. life cycle management system, the system automatically estimates the sensor life according to the performance and use of the sensor, and can set the life alarm value, notify the user before the problem occurs replacement and maintenance work, reduce the time of failure downtime;
- 8. alarm query and export function, the system can query the alarm log according to the user query time, export operation, convenient for the user to troubleshoot the fault later;
- 9. can automatically save 365 days of data, off the network, the data is not lost;
- 10. the instrument built-in high-precision GPS positioning module, which can realize the effective association of monitoring data and geographic information.

Technical Specification

Model No.	TY-ODOR-302
Sampling flow	1500±500ml/min
Working temperature and humidity	-20-55°C; 10%~95%RH (no condensation)
Measurement response time	≤60s
Power supply	220V AC, 50Hz, 60W; Car cigarette lighter; Built-in lithium battery
Measure preheating time	300s
Shell	made of high-strength engineering plastic, equipped with pull rod, mute caster and safety lock
Odor concentration	Range: 0-1000 (OU) Repeatability: ≤±3% Resolution: 1 (OU)

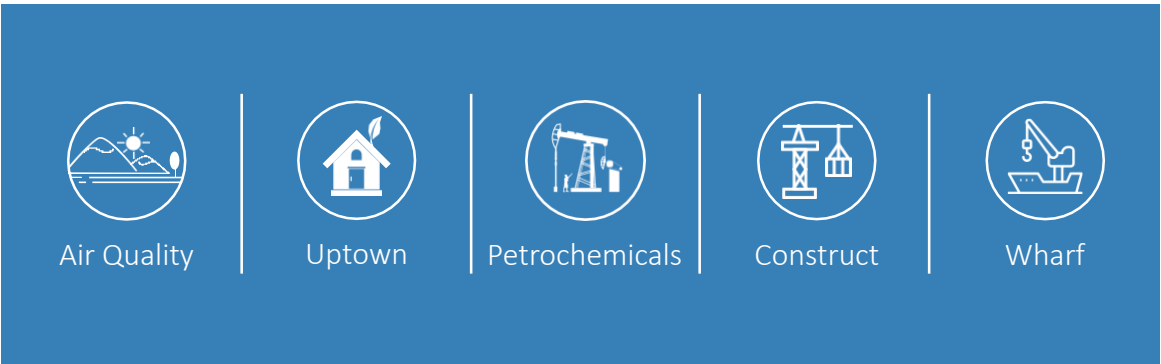
APPLICATION SCENARIOS



More Applications

Urban Ambient Air Quality Monitoring Grid-Based Deployment; Highways, Street Intersections, Etc.Agricultural Straw Burning, Forest Fire Alarms, Air Quality Monitoring In Tourist Scenic Spots; Residential Communities, Schools, Hospitals.

Industry-Related Monitoring: Petrochemicals, Power Plants, Waste Disposal Stations Or Dumps, Mining, Heavy Industry, Airports, Terminals, Railroads, Construction Sites.



Tourist Attraction



Construction Site



Mining Industry



Heavy Industry



Wastewater Treatment



Waste Treatment Plant

Construction Site



Online Dust Monitoring



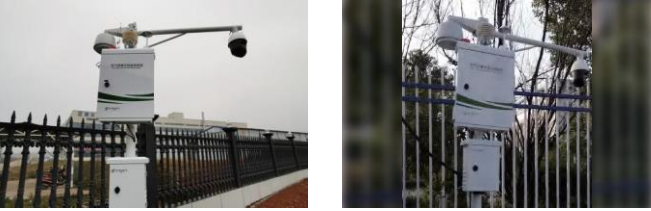
Large Construction Sites



Air Quality Grid Monitoring



Ambient Air Quality Gridded Deployment



Atmospheric Pollution Prevention And Control Grid Deployment



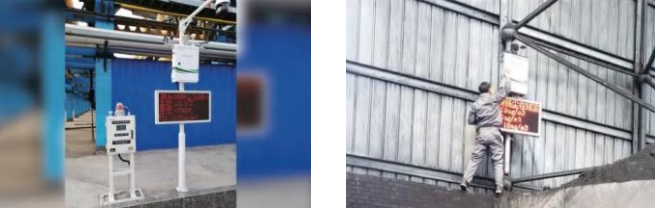
Resort Particulate Matier Monitoring



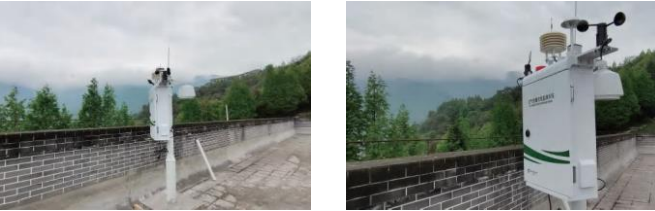
Particle Monitoring In Industrial Parks



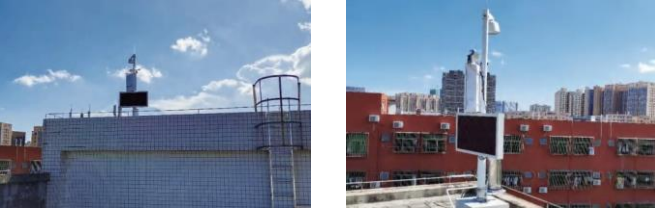
Coking Plant Particulate Matier Monitoring



Scenic Air Quality Monitoring



Substation Plant Environmental Monitoring



Park Air Quality Monitoring



COMMON GASES AND MEASURE RANGES

Optional configuration			
Gas Name	Detection Principle	Range	Resolution
SO2	Electrochemical	0-100ppm	5ppb
NO2	Electrochemical	0-20ppm	5ppb
O3	Electrochemical	0-20ppm	5ppb
CO	Electrochemical	0-1000ppm	0.01ppm
H2S	Electrochemical	0-100ppm	2ppm
CO2	Non-Dispersive Infrared Line	0-5000ppm	5ppm
NH3	Electrochemical	0-100ppm	1ppm
HCL	Electrochemical	0-200ppm	1ppm
O2	Electrochemical	0-30%VOL	-
VOC	PID	0-50ppm	2ppm
Particulate Matier Parameters			
Measurement Parameters	Range		Resolution
PM2.5	0-1000µg/m3		1/5µg/m3
PM10	0-1000µg/m3		1/5µg/m3
TSP	0-30 mg/m3		1/15µg/m3