

UV Flue Gas Analyzer

GF360

Features

- Using ultraviolet absorption spectrum gas analysis technology, the measurement accuracy is completely unaffected by moisture and dust, with low detection limit and small temperature drift
- The gas chamber of the analyzer is made of stainless steel, and no mirror polishing or gold plating is required inside, so it is not affected by moisture and dust
- The spectrometer, light source and gas chamber are connected by optical fiber, which is easy to replace and has low maintenance cost
- No optical moving parts, anti-vibration, and high reliability of measurement results
- Pulse xenon lamp, 109 measurements, long life and high stability
- Modular design, good scalability and easy maintenance

Application

- Continuous monitoring of flue gas emissions in power plants CEMS (analysis of SO₂, NO, NO₂, O₂)
- Desulfurization process monitoring (analysis of SO₂, O₂)
- Denitrification process monitoring (analysis of NO, NO₂, NH₃, O₂)
- Continuous monitoring of flue gas emissions from garbage incineration (analysis of SO₂, NO, NO₂, O₂)
- Chlor-alkali plant PVC process and titanium dioxide production process trace Cl₂ analysis (analysis of Cl₂)
- Sulfur recovery process gas analysis (analysis of SO₂, H₂S)
- Natural gas purification process gas analysis (analysis of trace H₂S)
- Coal chemical methyl iodide analysis (analysis of CH₃I).
- Atmospheric online monitoring (analysis of SO₂, NO₂, O₃, etc.)

Description

GF360 UV flue gas analyzer is Optosky's latest online gas analysis equipment for environmental protection and industrial control at home and abroad.

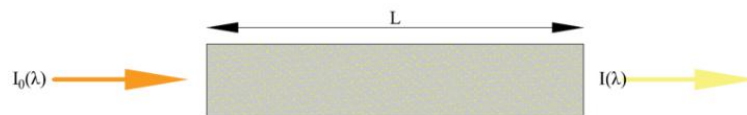
Using advanced UV absorption spectroscopy and differential absorption spectroscopy principles, Optosky's optical technology platform, it can analyze and measure online the concentrations of multiple gases including SO₂, NO, O₂, NO₂, CO, CO₂, etc. The standard model can simultaneously measure three gas components, SO₂, NO, and NO₂, and supports component expansion. A UV flue gas analyzer can measure up to five components simultaneously.

This product has the characteristics of high measurement accuracy, high reliability, fast response time, and a wide range of applications. It is widely used in online gas analysis of fixed pollution sources, petrochemical environmental gas analysis, industrial process gas analysis and other fields.



1. Principle

Based on the Lambert-Beer law, when UV light passes through a sample cell containing a specific gas, certain wavelengths of light are absorbed by the gas, while other wavelengths of light are not absorbed or scattered. By measuring the difference between the incident light and the outgoing light, the concentration of the specific gas in the sample can be calculated.



$$I(\lambda) = I_0(\lambda) * e^{-\sigma(\lambda)CL}$$

$I_0(\lambda)$ - The incident light intensity of the light with wavelength λ ;

$I(\lambda)$ -- The outgoing light intensity of the light with wavelength λ ;

$\sigma(\lambda)$ - The absorption cross section of the gas at wavelength λ ;

C ----- The concentration of the gas to be measured;

L ----- The interaction length between the gas and the light (effective length of the gas cell);

2. Parameter

Detection principle	SO ₂ 、NO、NO ₂ : DOAS O ₂ : Electrochemical Principle CO、CO ₂ : NDIR
Detection object	SO ₂ 、NO、NO ₂ 、O ₂ 、CO、CO ₂
Detection range	SO ₂ , NOX: 0-50ppm; 0-300ppm; 0-3000ppm; 3000ppm and above; O ₂ : 0-25%; CO: 0-200-5000-10000ppm; CO ₂ : 0-100%
Analog output signal	DC4-20mA, 4 channels, configurable
Analog input signal	DC4-20mA, 2 channels, configurable
Digital input	6 channels, configurable
Switch output	14 channels, configurable
Power supply	Rated voltage: 220V
Rated power	100W
Working environment	-10-50°C; below 90%RH, no condensation
Dimensions	19 inches*4U*360mm 19 inches*3U*360mm
Upper and lower limit alarms	Output alarm signals according to the preset alarm upper and lower limits. When the measured concentration value of each component exceeds the alarm upper limit or is lower than the alarm lower limit, the instrument will issue an alarm signal
Communication function	Two-way RS-232/RS-485
Repeatability	1%
Linearity	±2%F.S
Zero drift	±2%F.S/week
Range drift	±2%F.S/week
Response time	10S
Flow rate	0.5-1L/min
Standard gas	Zero gas: Dry N ₂ Span gas: Concentration of 60-100% relative to the range of each component being measured (recommended). Concentrations exceeding

	100% cannot be used.
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3. Accessories list

NO.	Items	Quantity	Optional/Standard
1	Ultraviolet flue gas analyzer	1	Standard
2	Power adapter	1	Standard
3	Instruction manual	1	Standard