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GLTECH

BROCHURE of POWER PLANT PRODUCT



GLTECH PRODUCT BROCHURE

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ENVIRONMENTAL
MONITORING SERIES /02

AEMS10 Online Amonnia Escape
Monitoring System /03
OMS1000 NOx Emission Monitoring
Analyzer /09
AEMS90 SCR Evaluation and CEMS
System for DeNOx Process /11
LGA CO/O2 Flue Gas Analyzer /13

02

BOILER COMBUSTION OPTIMIZATION SERIES /16

UCMS10 Carbon in Ash Monitoring System /17 BGS High-Temperature Corrosive Atmosphere Monitoring System of Boiler Water Wall Tubes /21

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POWER PLANT SAFETY MONITORING SERIES /26

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AEMS10

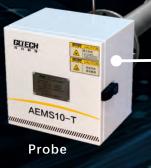
Online Ammonia Escape Monitoring System

Unlocking Optimal DeNOx Efficiency: Empowering Power Plants with Ammonia Spray Control.

SPECIFICATION

- Gas Name: NH3
- Measuring range: 0-20/50/100 ppm available
- Linear deviation: ≤ ±F.S.
- Resolution: 0.01 ppm
 System configuration: Host + Probe ("1+N" configuration available)
 Probe structure: Inserted in-situ probe with closed cavity
- Display: TFT true color LED displayDigital output: RS485
- •Power: 220 (1±10%) V AC







GLTECH

AEMS10

"Numerical Confidence" for Ammonia Emission Control in DeNOx

AEMS10

Online Ammonia Escape Monitoring System

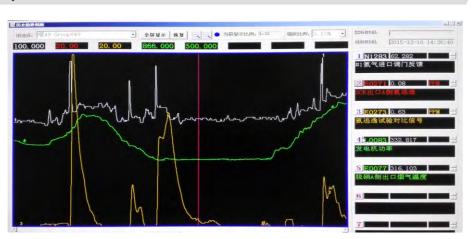
Great Tendency Projection

▼ Ammonia emission data is consistent with the opening of the ammonia injection valve

Ammonia injection valve opening curve

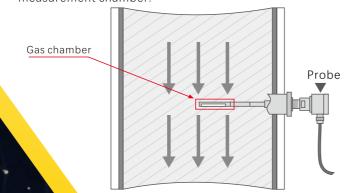
Ammonia emission monitoring curve

Generator output



Compact design/In-situ shielded gas measurement chamber

- Laser source and detector are integrated within a single measurement unit.
- Probe is directly inserted into the flue to achieve in-situ measurement
- Shielded particle filter avoids the entering of dust into the measurement chamber.





In-situ Measurement

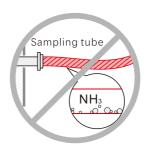
Avoids ammonia deposition in the bypass sampling tubes

Shielded gas measurement chamber

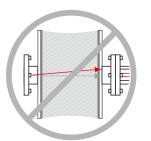
Allows remote calibration with direct gas feed

Integrated Structure

Avoids laser misalignment due to flue vibration or thermal expansion





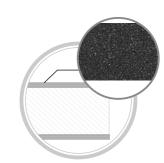


Accurate/Efficient/Robust

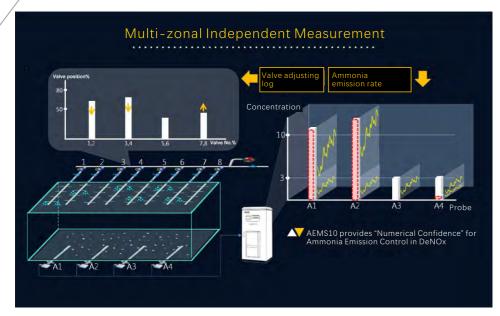
Micro-negative pressure gas sampling method effectively prevents sample tube blockage



Metallic wear-resistant material ensures a longer lifespan

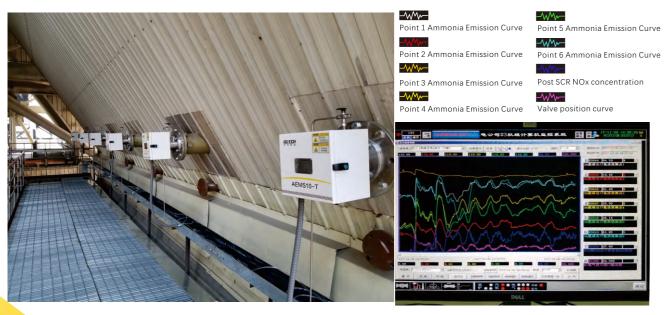


Optimization and Adjustment System of SCR Ammonia Spray



Capable of system integration with OMS1000 NOx Monitoring for accurate SCR ammonia spray control

▼ Field Application/Ammonia Emission Curve



Indicating uneven ammonia spray, avoiding the blockage in air preheater

Qualifications

CEC(China Electricity Council) Certified





Patent Certificates



Breaking Boundaries in NOx Monitoring Technology

OMS1000 NOx Emission Monitoring Analyzer

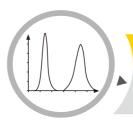
The OMS1000 Nitrogen Oxide Analyzer is a revolutionary product developed and manufactured by our company. It is an NOx online monitoring device that utilizes innovative sensing technology. This analyzer is designed for direct insertion into the flue gas duct, enabling real-time, in-situ me surem nts of NOx emissions. By deploying multiple units at various points, it also allows for the partifioning and independent measurement of NOx emissions within the duct. This makes it a groundbreaking solution for online NOx monitoring.



Technical Specification

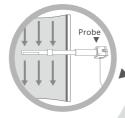
Gas Name	Total nitroxide (NO+NO ₂)		
	NO	O_2	
Measuring	0~100 mg/m ³	0~25 %	
Range	0~1000 mg/m ³	0~25 %	
Accuracy	≤±3% F.S	≤ ±2% F.S	
Resolution	0.01 mg/m^3 0.1%		
Display	OLED Display		

▼ Features



Real-Time Precision: Where Speed Meets Accuracy

Utilizing innovative technology for precise in-situ measurements and timely response



Crafted One-stop Integration

No laser misalignment or bypass sampling issue



Maintenance Made Effortless

In-situ measurement inside the flue without sampling pipelines, completely avoiding issues related to blockage caused by gas sampling and processing.



Zonal Monitoring with Unmatched Accuracy

Multi-probe zonal monitoring provides timely and effective data support for precise ammonia injection.

One-Stop Solution for SCR Process Monitoring

AEMS90

SCR Evaluation and CEMS System for DeNOx Process

This integrated online monitoring system for ammonia and nitrogen oxides utilizes TDLAS and semiconductor sensing technology. It is an in-situ monitoring system designed specifically for precise measurements of nitrogen oxides, oxygen, and ammonia emissions in hightemperature, high-flow, and high-dust environments in the outlet flue of Selective Catalytic Reduction (SCR) denitrification systems. The system utilizes an integrated in-situ measurement approach. Which enables synchronous, real-time online monitoring of nitrogen oxides, oxygen, and ammonia emissions within divided zones. The monitored data can be uploaded to the Distributed Control System (DCS), offering invaluable insights for precision ammonia injection adjustments.

System Configuration





Multi-Parameter Monitoring in Real-time

Simultaneously monitor parameters including ammonia emissions, nitrogen oxides, oxygen levels, temperature, and moisture of each divided zone in real-time, providing timely and effective data support for precise ammonia injection.

Integrated In-Situ Measurement Approach

Eliminating laser misalignment issues caused by deformation and vibrations on

Maintenance Made Effortless

In-situ measurement inside the flue without sampling pipelines, completely avoiding issues related to blockage caused by gas sampling and processing.

Probe	Integrated In-situ probe with closed cavity				
	NH ₃	NO_x	O ₂	Temp.	R.H. %
Measuring Range	0~20/50/100 μmol/mol	0~10/1000 mg/m³	0~25%	0~500 °C	0~20%
Linear Deviation	≤1 % F.S	≤±2 % F.S	≤±2 % F.S	≤±5 % F.S	≤±2 % F.S
Probe Operating Temp.	250~450 ℃				
Display	TFT true color LED				
Data Signal	4~20 mA				
Alarm Signal	SPST				
Communication	RS485, CAN				
Power Rating	100~240 V AC, 50±2 Hz, ≤10 A				

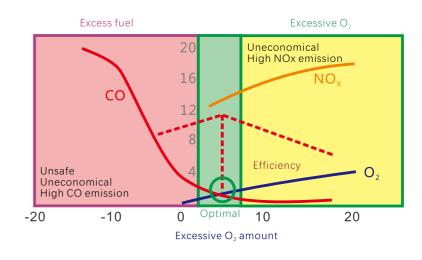
Unlock Energy Efficiency and Emission Reduction with Our Solution

LGA CO / O₂ Flue Gas Analyzer

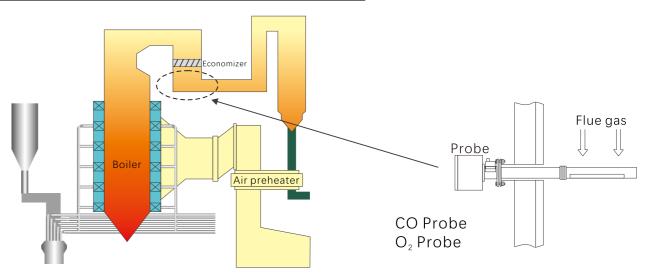
Installed in the flue duct after the economizer, it measures the carbon monoxide and oxygen content in real-time



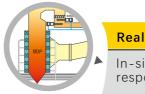
Probe	Integrated In-situ probe with closed cavity		
Measuring Range	СО		O ₂
	0~1000 μmol/mol	0~5000 μmol/mol	0~10.0 %
Resolution	0.01 μmol/mol		
Linear Deviation	≤ ±2 % F.S		
Display	OLED display		
Probe Operating Temp.	250~450℃		
Data Signal	4~20 mA		



- The low-nitrogen retrofit of coal-fired boilers, which aims to reduce nitrogen oxide (NOx) emissions, often involves a trade-off with combustion efficiency. Carbon monoxide (CO) is a direct indicator of combustion efficiency in this
- ▲ Balancing the reduction of NOx emissions while ensuring complete combustion requires precise control of oxygen levels (O₂) in the combustion

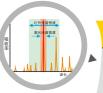


Features



Real-time

In-situ monitoring with swift responsiveness.



Laser detection technology, unaffected by interfering gases, temperature, and pressure.



Maintenance free

Patented gas pathway and dust-proof design, effectively preventing dust blockage.



Long lifespan

Over 5-year sensor lifespan and 1-year calibration period.

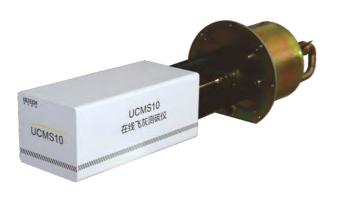


Leading the Way to Superior Boiler Efficiency

UCMS10 Carbon in Ash Monitoring System

Providing Clear Insights into Boiler Combustion for Informed Optimization



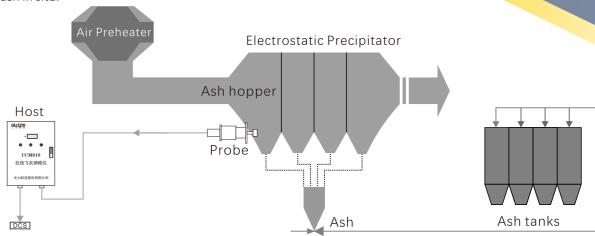


Technical Specification

Measuring Range	0.00~10.00 % Customizable
Accuracy	±0.50 % @ 0.00~5.00 %
	±1.00 % @ 5.00~10.00 %
Data signal	4~20 mA
Power rating	220 V
Analysis time	0.5~5 min
Gas source pressure	0.4~0.7 MPa

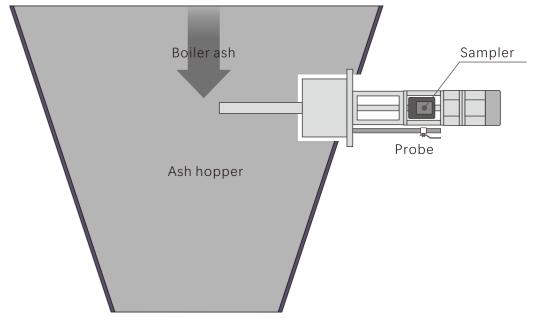
System Configuration:

- UCMS10 carbon in ash monitoring system consists of a probe for in-situ measurement and a host terminal for data uploading to DCS.
- The measuring unit is installed inside the electrostatic precipitator of the ash hopper to measure the unburned carbon content of boiler ash in situ.

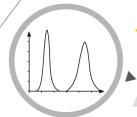


Features:

- Integrated structure/In-situ measure.
- Integrated sample and measure unit, sampling and measuring are done in-situ.
- Utilizing spectrum scanning technique, analyzing the carbon content in ash based on the spectral characteristics of unburned carbon within.

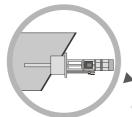


Features



Consistent Measurements Regardless of Coal Type

Revolutionary spectral scanning technology effectively eliminates the influence on measurements caused by different coal types.



Minimal Maintenance Required

In-situ measurement and sampling avoid ash blockage issues seen with extractive samplers, ensuring long-term stable operation.



Exceptional Sample Representativeness

Sampling from the electric field ash hopper ensures uniform mixing of fly ash, providing better representativeness compared to flue gas extractive sampling cabinets.

VQualifications





CEC(China Electricity Council) Certified

▼ Field Application/Operation Curve







• Ensuring ash carbon levels stay within optimal range.



Ensuring Boiler Safety Every Step of the Way

BGS

High-Temperature Corrosive Atmosphere Monitoring System of Boiler Water Wall Tubes

Real-time measurement of gas concentrations such as CO, O_2 , H_2S , etc., near the water wall tubes.



Features

Uncompromising Measurement Accuracy

Laser technology, suitable for high-temperature conditions, capable of achieving precise measurements.

Immediate and Timely Data Capture

In-situ measurement, with fast response time.

Maintenance-Free by Design

Patented gas pathway and dust-proof design, effectively preventing dust blockage.

Gas Name	CO	O ₂	H ₂ S
Measuring Range	0~10000ppm	0~25 %	0~500ppm
	14 @ 0 100 mm	±3 % FS	±3 @ 0~50 ppm
	±4 @ 0~100 ppm		±5 @ 50~100 ppm
Accuracy (Deviation)	±6 % (of actual value) @ 100~10000 ppm		±10 % (of actual value) @ 100~250 ppm
	(g 100 10000 pp.)		±5 % FS @ 250~500 ppm
Data signal	(4~20) mA		
Alarm Signal	SPST mode		
Display	4.3-inch true color display		
Power rating	(220±10%) V AC/50 HZ		

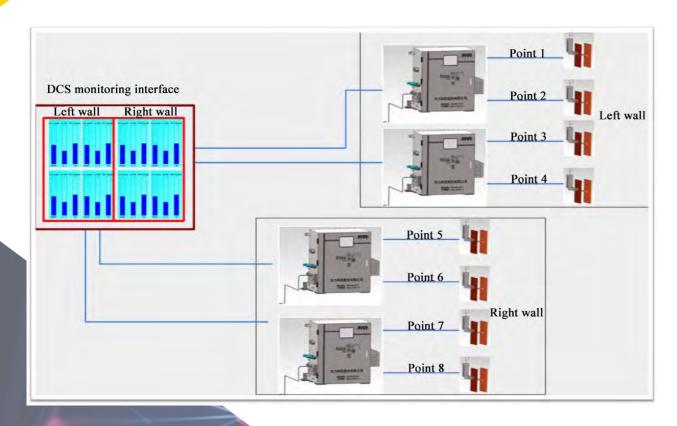


High-Temperature Corrosive Atmosphere Monitoring System of Boiler Water Wall Tubes and Early Warning System

As the upgrades of boiler units continue, high-temperature corrosion of boiler water wall tubes has become a common phenomenon in the combustion adjustment process, especially for units burning lean coal or poor-quality coal with practices like deep peak shaving and co-firing. This

corrosion directly affects the safety and efficiency of power plant operations. The main cause of high-temperature corrosion in the boiler water-wall tubes is the presence of certain gas components (such as H_2S , CO, and O_2). Monitoring of these gas components helps to take countermeasures to slow down or eliminate high-temperature sulfur corrosion.

System Configuration



Example Application



Real-time data analysis and

The simultaneous presence of CO and H₂S is the most direct cause of high-temperature sulfur corrosion of the water-cooled wall.

Features

Implementing the corrosive atmosphere monitoring system to monitor the gas atmosphere (including H₂S, O₂, CO) near the water wall of the boiler under complex working conditions such as high temperature, dust, and easy-to-coke.



By using numerical-model analysis, the system provides monitoring and early warning of the corrosive atmosphere near the water-wall tubes.

Gas Name	H_2S	CO	O_2	
Measuring Range	0~1000 ppm	0~100000 ppm	0~25%	
Monitoring the corrosive atmosphere near the boiler water wall.				



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GLIECH

LH1500-NH3激光氨气在线检漏仪

光力科技股份有限公司

0.3

Turning the Ammonia Zone into the 'Safe' Zone

LH1500-NH3

Ammonia Leaking Detector System

Technical Specification

1.Measuring range: (0~100) ppm 2.Measuring accuracy: ≤2% F.S 3.Resolution: 0.1ppm

Sensor

1.Display: Industrial OLED (132x64 pxel) 2.Alarm: Audible and visual alarm

Host

1.Power rating: $110\sim240 \text{ V AC} @ \leq 0.25 \text{ A with } 50\pm2 \text{ Hz}$ 2.Display: 10.4-inch True-color display (1024x768 pxel) 3.Data Signal: 4~20 mA

4. Alarm Signal: SPST

Unloading area Compressor NH₃ tank spray area Buffer Evaporator

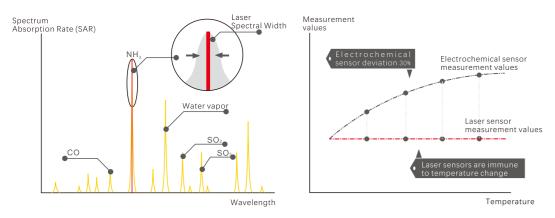
Utilizing cutting-edge laser detection technology to achieve real-time detection and alerting for ammonia leaks in power plants. Turning the Ammonia Zone into the 'Safe' Zone

LH1500-NH3 Ammonia Leakage Detection System

Real-time monitoring of ammonia leakage at every stage.

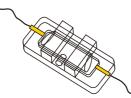
Unparalleled Accuracy with Laser Technology

- Immunity to interference: capable of accurately measure ammonia in environments containing water vapor, SO₂, SO₃, NOx, H₂S, CO, and etc.
- Avoids the drift and false alarms in electrochemical sensors caused by cross-gas interference.
- No measurement deviation due to temperature changes.



Peace of Mind Maintenance: Calibration-Free for Extended Periods

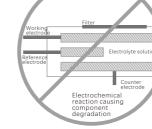
- The host unit is equipped with a self-calibration chamber, capable of automatically calibrating all connected transmitters.
- Solving the issues of short calibration cycles and high maintenance costs associated with electrochemical sensors.



Extended Sensor Lifespan





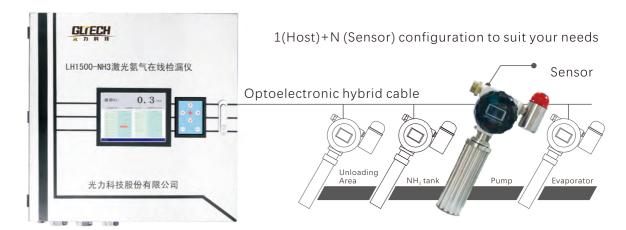


Sensor module lifespan greater than 10 years.

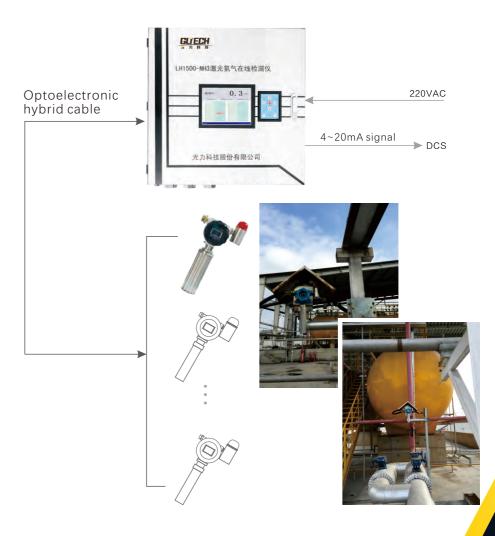
Physical principle of measurement without chemical degradation that causing drifting.

The physical principle of measurement, unlike electrochemical sensors with drifting caused by degradation.

Cost-effective Solution with Distributed Configuration



Application case



The Guardian of **Natural Gas Power Plants**

Ensuring Gas Safety in Natural Gas Power Plants

GJG10J Methane Leak Detector

Real-time detection of gas leaks in areas such as gas storage tanks, pressure regulating stations, pipeline valves, and more.



Features

Accurate Methane Leak Detection

• Unwavering accuracy with laser technology: resilient to water vapor, gas interference, temperature, and pressure variations.

Minimal Maintenance Required

- 12-month calibration cycleLong lifespan :10+ years of reliability

Measuring range	0.00~10.0%
Deviation	±0.06 @ 0.00~1.00%
Deviation	±6% of true value @ 1.00~10.0%
Resolution	0.01%
Response time (T90)	≤25s
	18 V DC (Rated)
Power rating	9~24 V DC
Output signal	4~20mA, RS485, CAN (optional)
Alarm setting	0.1~10.0% (configurable)
Explosion-proof mark	Exia I Ma

Exposing Any Hydrogen Leakage

LH1500 Hydrogen Leak Detection System

Monitoring Generator Hydrogen Leaks in a Comprehensive, Systematic Way

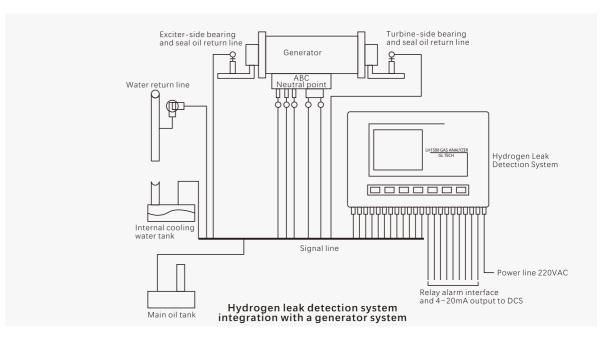


Features

Comprehensive evaluation solution of generator hydrogen cooling potential leakage

- Real-time monitoring of hydrogen leaks at locations such as generator busbars, oil return line, water return line, sampling valves, and the cooling water tank.
- Oil and waterproof design with sensitivity to hydrogen only, capable of immerging in oil and water for direct measurement.





Real-time Monitoring of Both Generator Environment and Operational Status

- Real-time monitoring of potential hydrogen accumulation positions.
- Simultaneous multiple zonal monitoring without blinding spot.
- Local display of monitoring data with audible and visual alarms for exceeding limits.

User-Friendly Installation and Operation

- •16-channel centralized monitoring supported.
- Expandable system with plug-and-play connectivity.
- Cutting-edge integrated circuit for optimal DCS system integration.

Measuring range	H ₂ 0.0~4.0% LEL 0~100%	Digital output	RS485, CAN
Deviation (H ₂)	±0.2% @ 0.0~2.0% ±0.3% @ 2.0~4.0%	Supported sensor count	1~16
Response T90	< 30s	Alarm signal	SPST
Analog output	4~20 mA w/th max load of 500Ω	Alarm output relay capacity	250 V AC @ 5A 30 V DC @ 5A
Power rating	110~240 V AC @ ≤ 0.25A 50±2HZ	Ex Mark	Host: Ex. la Ga II C
Display	HD true color LCD	Host size	Sensor : Ex ia II C T3 Ga 460x350x130 mm

Smaller Yet More Powerful: Flow and Purity, United in One

GD6102 Gas Flow Purity Analyzer

Simultaneous monitoring of hydrogen cooled generator unit: assessing hydrogen purity and flow within the cooling tank.





Features

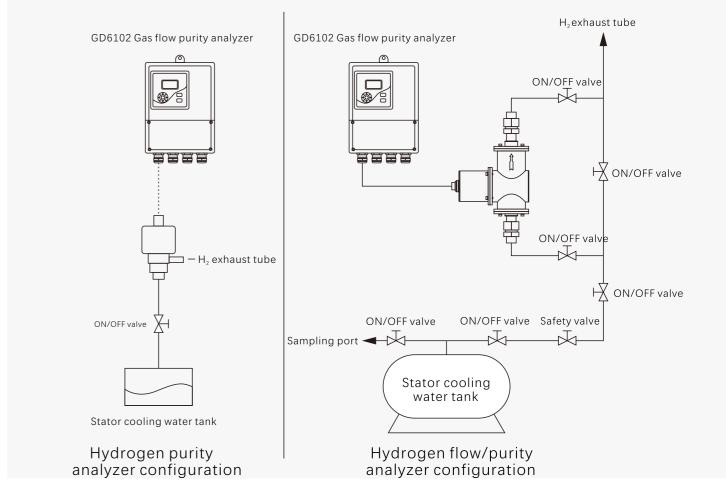
Dual-Parameter Integrated Monitoring with Centralized Data Upload

- 1. Capable of simultaneously monitoring hydrogen concentration and instantaneous flow rate while displaying the cumulative total hydrogen release.
- 2.Real-time synchronization of data to DCS.

Reliable Accuracy Over the Long Term

- 1.0~20% measurement range, resolving the issue of being unable to measure hydrogen concentrations beyond 4%.
- 2. Unique temperature control design to ensure stable zero-point and full-range measurements, unaffected by environmental temperature fluctuations.
- 3. Utilizing advanced water-resistant microflow meters, low-pressure loss, wide measuring range, and high reliability.

Customized configuration to fit different needs



Parameter	Purity	Flowrate
	runty	
Measuring range	0~20 %	60~1000 dm³/h
Accuracy	±2.0 % F.S. (Standard mode)	
Gas pressure	0~0.4 MPa	
Signal output	3 ports with 4~20 mA	
Relay signal	4xSPDT, 250 V AC 5A	
Pipeline size	DN15 (22x3)	
Ingress protection	IP65	
Ex. mark	Exd ia IIC T4 Ga	

Generator Hydrogen Supply, All in Your Control

CJZ70Gas Flow Meter

Real-time monitoring of hydrogen supply to the generator.



Technical Specification

Measuring range	0~10 m³/h
Accuracy	±1 % FS (Standard mode)
Repeatability	±0.2 %
Power rating	220~240 V AC, 24 V DC
Analog output	4~20 mA (Instantaneous flow rate)
Relay signal	2xSPDT, 250V AC 5A (Daily accumulated value)
Cable Connector Dimensions	6~10mm
Pipe material	316L SS
Ingress protection	IP65
Ex. mark	Exd ia IIC T4 Gb

Features

NO1

• Certified product for power plant with reliable quality you can trust.

NO2

- 24/7 monitoring for accurate generator hydrogen provision.
- Utilizing mature and performance-reliable thermal conductivity technology to accurately measure hydrogen flow.
- Real-time monitoring of instantaneous and cumulative flow rates, with a user-friendly interface.

INO3

• Explosion-proof design with excellent safety performance.

NO4

• Easy calibration and maintenance, ensuring long-term reliable equipment operation.



Sonic Nozzle



Bell-Prover Gas Flow Standard Device

000 000 000

Ging.

60

GLIECH 光力科技

在线气体纯度分析仪

LIVING INNOVATION

Quality Enduring Through the Years XACT500

Real-time Gas Purity Analyzer

The Go-To Choice for Power Generator Facilities

- Efficient oil and moisture filtration system to ensure contamination resilience.
 - Full-range hydrogen purity monitoring during hydrogen exchange process for accurate and fast testing.
 - Safety and reliability guaranteed with our explosion-proof design

Technical Parameters:

	H₂ purtity	90~100%	
Measuring range	H ₂ in CO ₂	0~100%	
	Air in CO ₂	0~100%	
Accuracy	±0.5%FS		
Flowrate range	50-200 mL/min (Recommended 150mL/min)		
Included Cable	Standard configuration with a 3-meter four-core cable.		
Analog output	4~20 mA		
Display	OLED		
Operating	-10 °C ~ +55 °C (Standard)		
temperature	-10 ℃ ~ +65 ℃		
Ex. mark	Transmitter : Exd IIC T6 Gb		
Flowrate range Included Cable Analog output Display Operating temperature	$50-200 \text{mL/min}$ (Recommend Standard configuration with a $4{\sim}20 \text{mA}$ OLED $-10 ^{\circ}\!$	No. 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	

Crafting Classics through Customization

GLSD-2

Hydrogen Cooling System Control Instrument

Dual channel hydrogen purity monitoring equipment for generators

Dual Channel Monitoring

- Simultaneously detects gas purity at the top and bottom of the generator to ensure safe operation.
- Dual channel detection in synergy to promptly identify safety hazards.

Explosion-Proof Frame Structure

- All secondary meters and transmitters have obtained certification for explosion-proof compliance.
- In-frame structure to prevent gas accumulation hazards.

Enhanced Monitoring/Enhanced Safety /Enhanced Peace of Mind



DEWTRON250

Real-time Dew Point Analyzer

Features

• Effectively avoiding interference and erosion of oil molecular.

Using nanoscale oil-repellent filters to overcome the issue of oil and gas carryover affecting sensors in the hydrogen system.

● High corrosion resistance, sensor poison immunity Directly measure the humidity of gases such as H₂, SF₆, H₂S, CO, chlorine, acetic acid, bromine vapor, and other gases.

Measuring Range	Dewpoint-100°C~+20°C or -80°C~+60°C
Accuracy	Less than ±1.0°C within dewpoint-65°C~+20°C range
Resolution	Dewpoint 0.1°C or 1ppm
Unit	Dewpoint°C、°F、ppm、g/m³
Operating Temperature	≤70°C
Operating Pressure	≤1.5MPa
Power Rating	220VAC or 24VDC /4 W
Alarm Signal	SPDT Mode
Output Capacity	250V/5A
Signal Output	4-20mA
Ex. mark	Exd IIC T6 Gb

LGS-O2 Real-time Trace Oxygen Analyzer

Features

•Laser detection technology Cross-gas interference

immunity that avoids false alarm.

Calibration free

Overcoming the issues of short calibration periods and high maintenance costs associated with electrochemical sensors.

Long lifespan

Completely resolves the issues of short lifespan, non-pressure resistance, and susceptibility to oxygen poisoning at high concentrations that are associated with electrochemical sensors.



Technical Specification

Measuring Range	0~2%02
Linear Deviation	±1%FS
Resolution	1ppm
Response Time (T90)	<20\$
Operating Temperature	-10~50°C
Signal Output	4~20mA
Ingress Protection Rating	NEMA 4X, IP66
Ex. Mark	Exia II C T4

After-sales service

We are committed to providing our customers with warm, proactive, professional, and efficient service.

● Comprehensive CRM (customer relation management) system

Organizing and categorizing customer profiles, ensuring a 100% customer follow-up rate.

Responding within 24 hours of receiving an after-sales service request.

• Fast response, the first-come, first-served approach.

The company's after-sales service follows a first-come, first-served approach and ensures that issues are tracked and resolved.

• Customers enjoy lifelong technical support services.

Free technical consultation and system upgrade services. Free 400 service hotline and technical support hotline.

• Fault response and the prompt arrival time of maintenance personnel.

A response within 15 minutes of receiving the call to guide users in troubleshooting.

If the issue cannot be resolved over the phone, dispatch maintenance personnel promptly to address the problem on-site.