昶　艾
CHANG-AI

Product Brochure

Chang Ai technology
Products ‖ Solution customization ‖ Technical support

Brand story

Shanghai Chang Ai Technology Development Co., Ltd. is a high-tech enterprise in Shanghai, a member of the National Gas Standardization Technical Committee, a member of the Gas Sub-technical Committee of the National Semiconductor Equipment and Materials Standardization Technical Committee, a director unit of the Online Analysis Instrument Branch of China Instrument Industry Association, and a vice chairman unit of the Gas Analysis Technology and Instrument Equipment Professional Committee of China Industrial Gas Association.

Founded in October 2004, "Chang Ai" is mainly engaged in the research, development and production of sensor technology and its secondary instrumentation and system engineering with the world's leading level, and is a scientific and technological instrument manufacturer with scientific and technological personnel as the main body. Since its establishment, the company has gone through the research and development stage of high-tech new products in a high-investment, high-risk and rapid growth in just a few years, and has rapidly entered the industrialization stage of high-tech, high-output and high-efficiency, and strictly manages the quality assurance scale of design, development, production, installation and service in accordance with the ISO9001 international standard quality system.

The company has a number of invention patents, hundreds of utility model and appearance patent technologies, and has undertaken a number of national and Shanghai science and technology projects such as the National Innovation Fund, Key New Product Plan, Torch Plan, and Achievement Transformation.

The company is dedicated to advancing research and application of cutting-edge analysis and detection technologies. Our product portfolio comprises more than 200 varieties across six major technical fields, including the oxygen analyzer series, dew point analyzer series, thermal conductivity analyzer series, infrared analyzer series, laser (TDLAS) analyzer series, high temperature and humidity analyzer series, gas chromatograph series, thermal mass flowmeter, and process analysis system. These state-of-the-art products find extensive utilization in a wide range of industries, including environmental protection, metallurgy, petrochemical, chemical, energy, water treatment, brewing, aviation, and scientific research, among others. Our commitment to quality has resulted in our products being exported to over 20 countries and regions, including Germany, the United States, the United Kingdom, Korea, India, and many more.

Drawing on our extensive experience in industrial testing and automation accumulated over the years, we relentlessly explore ways to deliver high-value products and services to our users. Above all, our aim is to contribute to the modernization of China.

Enterprise culture

Enterprise mission

Deliver the finest analysis, measuring instruments, solutions, and services to industries such as air separation, chemical, and environmental protection. We strive to enhance safety and efficiency in the workplace, promote healthier living, and contribute to environmental preservation.

Enterprise vision

Become an expert of Chinese analytical instruments, be respected by the society and make the staff proud!

Enterprise spirit

The pursuit of excellence, beyond self.

Corporate purpose

Mutual benefit and win-win, promote and complement each other, create common prosperity.

Enterprise values

Integrity, harmony, win-win, sharing.

Core competitiveness

Excellent R & D And innovation Capability

The company has a set of professional design, production, marketing management as one of the excellent team, every year plans to launch a new product series of no less than 5.

Strict production quality system

The company has a complete set of precision instrument production system.
Fully implement the ISO9001:2015 International Quality Management System.

Perfect marketing service network

Provide 360-degree all-round quality service.
Perfect office and customer service terminal, for domestic customers to provide 4-hour response, 48-hour on-site services and advice. From technical consultation, Project Design, to tailor-made solutions for you and put into engineering implementation, to operator training, after-sales service. In the whole process, the company relies on the localization of geographical conditions, as well as in the field of analysis and application of technical advantages, through the provision of quality products and full range of services, submit a 360-degree overall solution that fits your needs.
In Germany, Japan, India, Thailand, Malaysia, Korea and other countries and regions have subsidiaries and agents, serving foreign markets.

Development history

2004

ChangAi was established ;
Chengdu Research and Development Center was established;
Ion flow sensor, ion flow high purity oxygen analyzer, ion flow high temperature humidity analyzer, zirconia nitrogen oxide compound analyzer were successfully developed;

2009

The commercial standard of ion flow oxygen analyzer was successfully filed;
Penetrate into the steel, metallurgy, coal based chemical industry and other fields;
"Multi-functions protection" electrochemical trace oxygen analyzer, zir co nia nitrogen oxide compound analyzer, 3D ion flow principle high purityoxygen sensor were successfully developed;

2013

Fuel cell trace oxygen sensor, constant current injection system for high temperature and humidity , proportional flow control device based on solenoid valve, highly efficicient and quality CO_2 recycling monitoring system, new aluminum oxide humidity sensor, infrared and ChangAi Gas Analyzer Your preferred supplier of quality gas analyzers specialty fuel cell principle sensor successfully developed;

CHANGAI
Gas Analyzers Specialist

Your preferred quality supplier

2016

Fix Instrument (Shenzhen) Co., Ltd was established;
TDLAS analyzer, new material polymer film humidity sensor, TDLAS innovative technology of optical folding path laser gas analyzer, thermal gas mass flow meter, nitrogen oxide sensor, new digitally proportional valve, "dual core" sensor successful research and development;
ChangAi Shanghai headquarter moved to a new location -- starting a new journey;
ChangAi Malaysia company was established;

Get to know us

Shanghai ChangAi Technology Development Co., Ltd. is a high-tech enterprise in Shanghai. The company has a number of invention patents, hundreds of utility model and appearance patents, has undertaken a number of national and Shanghai scientific research projects, such as National Innovation Fund, Main New Product Introduction, Torch Programme and Transfer of Technological Achievement programme. In 2014, on the 10th anniversary of our establishment, we became the lead drafting unit of national standard for determination on electrochemical trace oxygen in gases, subsequently positioning ChangAi as a leader in the analysis industry.

The company's products involve more than 200 varieties, in 6 major technical fields, which are widely used in environmental protection, metallurgy, chemical industry, new energy, pharmaceutical and many other industries.

2019

CI-PC6500 Laser Gas Analyzer won the Silver Award of E&E category in the annual selection of Made in China year 2020;
ChangAi Technology (Chengdu) Co., Ltd. was established and stationed in the R&D building of Tianfu New District;
Total hydrocarbon (THC) analyzer, trace nitrogen in chlorine analyzer, gas chromatograph on VOCs, trace moisture transmitter based on TDLAS technology, medical oxygen analyzer developed successfully;

2022

"In situ Laser Gas Analyzer" won the silver award of 2021 The Beauty of Made in China annual selection on the electrical and electronic category ;
The New Award of "China Gas Industry Innovation Award";
ChangAi participation in the book compilation of "The Modern Online Analytical Instrumentation Technology and Application" was published and sold;
"CI-PC66 In-Situ Laser Gas Analyzer" won The Beauty of Made in China 2022 (Grade) Award.

For more details, please visit the www.ci-ele.com website

One-stop Analytical Measurement Solution

A comprehensive offering that delivers advanced, professional, and reliable analytical measurement capabilities.

Electrochemical technology

Electrochemistry
Zirconia
Variable frequency ion flow
3D ion flow
Ion flow
Double-pool ion flow

Spectroscopic technology

DOAS
CRDS
TDLAS
NDIR

6 Core technology

Microelectronic technique

Crystal oscillation
Thin film resistance
Conduction
Capacitive

Separation technology

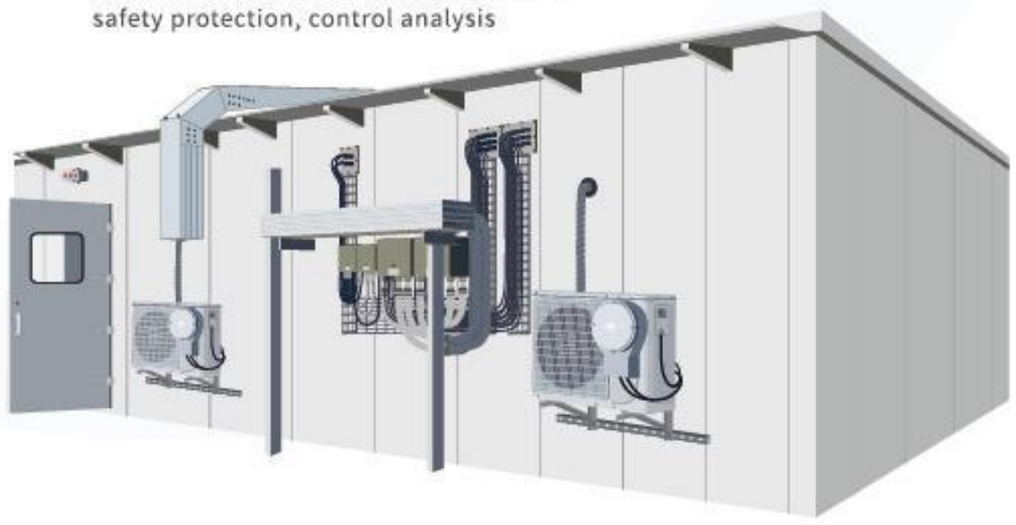
FID
PDHID
FPD
PED
TCD

Fluid technology

CORIOLIS
VORTEX
PTF
TMF

Sample pretreatment and analysis cabin

Desorption separation, sample transfer,
safety protection, control analysis



Product Catalogues

Online Trace Oxygen Analyzer

CI-PC90 Trace oxygen analyzer
CI-PC91 Trace oxygen analyzer 01
CI-PC96/PC961 Trace oxygen analyzer
CI-PC99 Trace oxygen analyzer 02
CI-PC16 Frequency conversion ion flow oxygen analyzer
GNL-6800 Wide area oxygen analyzer 03
GNL-6900 Wide area oxygen analyzer
CI-PC12 Frequency conversion ion flow oxygen analyzer 04
CI-PC121 Frequency conversion ion flow oxygen analyzer
CI-PC125 Frequency conversion ion flow oxygen analyzer 05
CI-PC126 Frequency conversion ion flow oxygen analyzer
CI-PC128/-1 Frequency conversion ion flow oxygen analyzer 06
CI-PC129 Trace oxygen analyzer
CI-PC129-6 Frequency conversion ion flow oxygen analyzer 07
CI-PC1201 Multi-channel oxygen analyzer
CI-PC1208 Multi-channel oxygen analyzer 08
CI-PC826 Trace oxygen analyzer
CI-PC95 Wall-mounted oxygen analyzer 09
CI-PC95-1 Explosion-proof trace oxygen analyzer
CI-PC95-2 Explosion-proof trace oxygen analyzer 10
P860 Series oxygen/nitrogen analyzer 11

Trace Oxygen Transmitter

GNL-120-1/-3 Oxygen transmitter 11
GNL-120-5 (M2) Oxygen analyzer
CI-PC85-2 Explosion-proof oxygen/nitrogen analyzer 12
CI-PC881 Oxygen/nitrogen transmitter
GNL-B5/CI-PC981 Trace oxygen transmitter 13
CI-PC98-1/2/3 Series oxygen transmitter
CI-PC986 Wide area oxygen transmitter 14

Portable Trace Oxygen Analyzer

GNL-B1A Portable trace oxygen analyzer
CI-PC93 Portable trace oxygen analyzer 15
CI-PC931/932 Portable trace oxygen analyzer
CI-PC13 Portable trace oxygen analyzer 16
GNL-2100 Series portable oxygen/nitrogen analyzer
CI-PC832 Series portable oxygen/nitrogen analyzer 17

Percent Oxygen Analyzer

CI-PC962 Electrochemical oxygen analyzer
CI-PC912 Electrochemical oxygen analyzer 18
CI-PC933 Portable oxygen analyzer
CI-PC162 Frequency conversion ion flow oxygen analyzer 19
CI-PC11 Frequency conversion ion flow oxygen analyzer
CI-PC951 Oxygen analyzer 20
CI-PC951-1 Explosion-proof oxygen analyzer
CI-PC951-2 Explosion-proof oxygen analyzer 21
CI-PC85 Oxygen/nitrogen analyzer
CI-PC85-1 Explosion-proof oxygen/nitrogen analyzer 22
CI-PC15-1 Explosion-proof oxygen analyzer
CI-PC15 Oxygen analyzer 23

Percent Oxygen Transmitter

CI-PC983 Oxygen transmitter
GNL-3100 Series oxygen/nitrogen transmitter 24
CI-PC882 Environmental oxygen transmitter
CI-PC888/-1 Oxygen transmitter 25
CI-PC181 Oxygen transmitter 26

High Content Oxygen Analyzer

CI-PC81 High content oxygen analyzer 26

High Content Oxygen Analyzer

CI-PC82 High content oxygen analyzer
SP-980L High content oxygen analyzer 27
CI-PC825 High content oxygen analyzer
CI-PC84 Online high content oxygen analyzer 28
CI-PC86 High content oxygen analyzer
CI-PC851 High content oxygen analyzer 29
CI-PC851-1 Explosion-proof high content oxygen analyzer
CI-PC851-2 Explosion-proof high content oxygen analyzer 30
GNL-2100L Portable high content oxygen analyzer
CI-PC832 Portable high content oxygen analyzer 31

High Content Oxygen Transmitter

CI-PC88 High content oxygen transmitter
CI-PC886 High content oxygen transmitter 32

Oxygen-enriched Environment

CI1300 Oxygen monitor
CI-PC89 Plateau dispersion oxygen monitor 33
CI-PC89M Plateau dispersion oxygen monitor
CI-PC896 Plateau dispersion oxygen monitor 34
CI-PC668 Plateau dispersion oxygen monitor
CI-PT6688 Plateau dispersion oxygen monitor 35
CI-PC836 Oxygen content/oxygen partial pressure analyzer 36

Flue Gas Oxygen Analyzer

CI-PC182 Flue gas oxygen analyzer 36
CI-PC191/-1 Series direct inserted flue oxygen analyzer
CI-PC192 Flue oxygen analysis system 37
CI-PC152 Explosion-proof flue oxygen analyzer
CI-PC168-O_2 Flue oxygen analyzer 38

Dew Point Meter

CI-PC30 Dew point analyzer
CI-PC31 Dew point analyzer 39
CI-PC35 Dew point analyzer
CI-PC35-1 Explosion-proof dew point analyzer 40
CI-PC35-2 Explosion-proof dew point analyzer
CI-PC36 Dew point analyzer 41
GEN-25 Portable intelligent dew point analyzer
GEN-26 Series portable intelligent dew point analyzer 42
CI-TM Series dew point transmitter
CI-BM Series dew point transmitter 43
CI-QM Series dew point transmitter
CI-BM05 Oil water and temperature transmitter 44
CI-BM145/147 Dew point and pressure transfer for compressed air
CI-DM191x Dew point instrument with integrated display and alarm function 45
CI-PC38 Dew point transmitter
CI-PC63-DP Portable laser dew point meter 46
CI-PC631 In-Situ laser microwater analyzer
CI-DM302 Series wall-mounted dew point meter 47

Moisture Meter (P_2O_5)

CI-PC382 Trace moisture transmitter
CI-PC329 Trace moisture analysis system 48
CI-PC312 H_2O Microwater analyzer 49

Thermal Conductivity Analyzer

CI-PC50 Online thermal conductivity analyzer 49
CI-PC53 Portable thermal conductivity analyzer
CI-PC55 Thermal conductivity analyzer 50
CI-PC55-1 Explosion-proof thermal conductivity analyzer 51

Product Catalogues

Thermal Conductivity Analyzer

CI-PC551-2 Explosion-proof thermal conductivity analyzer 51
CI-PC56 Thermal conductivity analyzer
CI-PC511 Thermal conductivity analyzer 52
CI-PC58 Thermal conductivity transmitter 53

Online Hydrogen Analyzer

CI-PC562 Trace hydrogen analyzer 53
CI-PC582 Trace hydrogen transmitter
CI-PC502 Selective hydrogen content analyzer 54
CI-PC512 Selective hydrogen content analyzer
CI-PC552-1 Explosion-proof selective hydrogen content analyzer 55

High Temperature & Humidity Instrument

CI-PC18 Series hygrometer
CI-PC196 High temperature humidity analysis system 56
CI-PC168 High temperature humidity analyzer
CI-PC368-1 Humidity analyzer 57
CI-PC156 Explosion-proof high temperature humidity analyzer
CI-PC39 High temperature humidity analysis system 58
CI-PC338 Humidity Detector 59

Nitrogen Oxide Analyzer

CI-PC791 Nitrogen oxide analyzer 59
CI-PC71 Nitrogen oxide analyzer
CI-XT682 Nitrogen oxide analysis system 60

Optical Gas Analyzer

CI-PC20 Infrared gas analyzer
CI-PC21 Infrared gas analyzer 61

Optical Gas Analyzer

CI-PC23 Portable infrared gas analyzer
CI-PC261 Infrared gas analyzer 62
CI-PC25 Explosion-proof infrared gas analyzer
CI-PC25-1 Explosion-proof infrared gas analyzer 63
CI-PC61 Laser gas analyzer
CI-PC68/-1 Explosion-proof laser gas analyzer 64
CI-PC66 Laser gas analyzer 65
CI-PC2001 Trace nitrogen & trace oxygen analyzer in argon 66
CI-PC2200 Series UV spectrometer
CI-PC28 Infrared gas transmitter 67
CI-PC6500 Laser gas analyzer 68

Multi-component Gas Analyzer

CI-PS10 Portable biogas analyzer 68
CI-PC251 Two-component analyzer
CI-PC166 Oxygen and water analyzer 69
CI-PC212 CO&CO_2 gas analyzer
CI-PC312 H_2O&O_2 gas analyzer 70
CI-PC683-B Multi-component online analyzer 71

Chromatographic Analyzer

CI-PC9200 Online gas chromatograph 72
CI-PC9300 Online gas chromatograph 73
CI-SP1000E Online explosion-proof gas chromatograph 74
CI-PC9260 Online gas chromatograph 75

Hydrogen Sulfide Analyzer

CI-PC952/-1 Hydrogen sulfide analyzer 76

Total Hydrocarbon Analyzer

CI-PC9001 Total hydrocarbon analyzer 76

Mass Flowmeter

CI-FT211x/212x Series thermal mass flowmeter
CI-FT211x-EX/FT212x-EX Explosion-proof thermal mass flowmeter 77
CI-SM80/81 Series thermal mass flow sensor
CI-FT201-x-W Series differential pressure flowmeter 78
CI-FV20x-V Dual vortex mass flowmeter
CI-FV20x-VS Vortex steam mass flowmeter 79

Industrial Processes

CI-XT100-B Coke oven gas analysis system 80
CI-XT300 Coke oven cycle monitoring system 81
CI-XT6400 Process analysis system for gas generator 82
CI-XT6003C Brazing furnace online oxygen analysis system 83
CI-XT800 CO_2 recycling online monitor system 84
CI-XT62B Heat treatment furnace-controllable atmosphere analysis system 85
CI-XT60EO-O_2X Online gas analysis system 86
CI-XT6700 Calorific value blast furnace gas analysis system 87
CI-XT60E3-O_2D Centrifuge oxygen analysis system 88
CI-XT683 Biogas analysis system 89
CI-XT5100 Stationary pollution source VOCs online monitoring system 90
CI-XT20-1 Desktop medical oxygen quality detection system 91
CI-XT20-2-Q Online medical oxygen quality detection system 92
CI-XT64B Series air separation process online analysis system 93

Industrial Safety

CI-EM01 Online single gas detection alarm
CI-EM02 Online single gas detection alarm 94

Industrial Safety

CI-EM03 Portable compound gas detection&alarm
CI-EM300 Gas detection controller and alarms 95
CI-EM506 Portable gas compound analyzer
CI-EM601 Portable diffused single gas detector 96
CI-EM604 Portable diffused 4-in-1 gas detector
CI-EM604-1 Portable 4-in-1 gas detector 97
CI-EM605 Portable 5-in-1 gas detector
CI-EM606 Portable 6-in-1 gas detector 98

Sample Pretreatment Series

Secondary display meter
CI-TD01 Secondary display
CI-DS304 Series wall-mounted multifunctional display 99
E1601 0002 Wall-mounted digital display meter
PT401 Pressure transmitter 100
Sampling probe
CI-XTTF10 Intelligent control purifying device
CI-XTTH23 High temperature sampling probe 101
CI-XTTE81 High temperature dew point sampling probe
CI-XTTS80 Steam heat tracing sampling probe 102
CI-XT-TT3 Flur gas sampling probe 103
Hydrogen zero all-in-1
CI-HOG01 Hydrogen zero all-in-1 103
Compressor condenser
CI-R300P/B Series condenser 104
Filter
CI-GF2600/2800 104
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AF1000 105
AF2000
AF4000 106

CI-PC90 Trace oxygen analyzer

Product Features

- Using long life 240×128 LCD screen, the display content is intuitive and rich;
- Stop or power off automatically cut off the sensor room on both sides of the gas path, to avoid sensor exposure to high oxygen concentration in the environment;
- Solenoid valve is placed in the air inlet and outlet of the sensor chamber, through the solenoid valve to control whether the sample gas flows through the sensor;
- With overpressure protection, when the pressure in the gas path exceeds the pressure protection range, automatically cut off the gas path on both sides of the sensor chamber.

Technical Index

Sensor:	Electrochemical oxygen sensor	
Measuring range:	0~10/100/1000ppm/1%/25% O_2	
Linear error:	0.01~9.99ppm	O_2:±5% FS
	10.0~99.9ppm	O_2:±3% FS
	100~1000ppm	O_2:±2% FS
Repeatability:	0.01~9.99ppm	O_2:±2.5% FS
	10.0~99.9ppm	O_2:±1.5% FS
	100~1000ppm	O_2:±1% FS
Stability:	0.01~9.99ppm	O_2:±2.5% FS/7d
	10.0~99.9ppm	O_2:±1.5% FS/7d
	100~1000ppm	O_2:±1% FS/7d
Response time:	T_{90}<60s(25°C)	
Power supply:	AC 100~240V, 50/60Hz	
Analog signal:	4-20mA (standard/0-20mA/0-5V/0-10V,special instructions required when ordering	
Switching signal:	2 alarm, relay contact capacity DC 24V, 0.2A	
Working TEMP.:	0~+45°C	

CE Electrochemistry

CI-PC91 Trace oxygen analyzer

Product Features

- With overpressure protection, when the pressure in the gas path exceeds the pressure protection range, automatically cut off the gas path on both sides of the sensor chamber;
- High precision temperature and pressure automatic compensation, reduce the impact of temperature and pressure on the measurement accuracy;
- With over-range protection, when the oxygen concentration is higher than the protection limit value, automatically cut off the gas path on both sides of the sensor chamber, to avoid the sensor long time in the nvironment with high oxygen concentration and affect its performance and life.

Technical Index

Sensor:	Electrochemical oxygen sensor	
Measuring range:	0~10/ 100/ 1000ppm/ 1%/ 25.00% O_2	
Linear error:	0.01~9.99ppm	O_2:±5% FS
	10.0~99.9ppm	O_2:±3% FS
	100~1000ppm	O_2:±2% FS
Repeatability:	0.01~9.99ppm	O_2:±2.5% FS
	10.0~99.9ppm	O_2:±1.5% FS
	100~1000ppm	O_2:±1% FS
Stability:	0.01~9.99ppm	O_2:±2.5% FS/7d
	10.0~99.9ppm	O_2:±1.5% FS/7d
	100~1000ppm	O_2:±1% FS/7d
Response time:	T_{90}<60s(25°C)	
Power supply:	AC 100~240V, 50/60Hz	
Analog signal:	2 groups, 4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V can be set mode freely	
Switching signal:	6 groups,relay contact capacity:DC 24V, 0.2A	
Communication:	RS485(standard)/RS232(optional)	
External control:	5 groups,control signal DC 9~28V	
Sample gas flow:	0.5~2L/min (recommended 1.5L/min)	

CE Electrochemistry

CI-PC96/PC961 Trace oxygen analyzer

Product Features

- Using digital sensors, not only convenient for users to replace on site, but also without calibration can be accurately measured;
- With over-range protection, when the oxygen concentration is higher than the protection limit value, automatically cut off the gas path on both sidesof the sensor chamber, to avoid the sensor long time in high oxygen concentration environment and affect its performance and life;
- High precision pressure automatic compensation, reduce the influence of small pressure on the measurement accuracy.

Technical Index

Sensor:	Electrochemical oxygen sensor	
Measuring range:	0~10/100/1000ppm/1%/25% O_2	
Linear error:	0.01~9.99ppm	O_2 :±5% FS
	10.0~99.9ppm	O_2 :±3% FS
	100~1000ppm	O_2 :±2% FS
Repeatability:	0.01~9.99ppm	O_2 :±2.5% FS
	10.0~99.9ppm	O_2 :±1.5% FS
	100~1000ppm	O_2 :±1% FS
Stability:	0.01~9.99ppm	O_2 :±2.5% FS/7d
	10.0~99.9ppm	O_2 :±1.5% FS/7d
	100~1000ppm	O_2 :±1% FS/7d
Response time:	T_{90}<60s(25°C)	
Power supply:	CI-PC96:AC 100~240V, 50/60Hz	
	CI-PC961:DC 24V,power consumption less than 20VA	
Communication:	RS485(standard)/RS232(optional)	
Ambient TEMP.:	0~+45°C Ambient humidity:<80%RH	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	

Electrochemistry

CI-PC99 Trace oxygen analyzer

Product Features

- High precision automatic temperature and pressure compensation, reduce the impact of temperature and pressure on the measurement accuracy;
- With overpressure protection, when the pressure in the gas path exceeds the pressure protection range, automatically cut off the gas path on both sides of the sensor chamber;
- Equipment has ai patent technology of activated carbon filter, filter diameter up to 5um.

Technical Index

Sensor:	Electrochemical oxygen sensor	
Measuring range:	0~10/100/1000ppm/1%/25% O_2	
Linear error:	0.01~9.99ppm	O_2 :±5% FS
	10.0~99.9ppm	O_2 :±3% FS
	100~1000ppm	O_2 :±2% FS
Repeatability:	0.01~9.99ppm	O_2 :±2.5% FS
	10.0~99.9ppm	O_2 :±1.5% FS
	100~1000ppm	O_2 :±1% FS
Stability:	0.01~9.99ppm	O_2 :±2.5% FS/7d
	10.0~99.9ppm	O_2 :±1.5% FS/7d
	100~1000ppm	O_2 :±1% FS/7d
Response time:	T_{90}<60s(25°C)	
Power supply:	AC 220V±10%, 50/60Hz	
Communication:	RS485(standard)/RS232(optional)	
Switching signal:	2 groups, relay contact capacity:DC24V, 0.2A	
Ambient TEMP.:	0~+45°C Ambient humidity:<80%RH	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	

Electrochemistry

CI-PC16 Frequency conversion ion flow oxygen analyzer

Product Features

- It has the characteristics of intelligence,good stability,high reliability and long calibration cycle;
- Oxygen concentration,various data and the working state of the instrument are displayed by 128*64 LCD window,the display is intuitive and the operation is simple;
- The surface of the window is covered with a piece of toughened glass to protect the LCD screen and keys;
- Menu lock switch:prevent misoperation from affecting analyzer.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00 %	± 3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00 %	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00 %	±1.5%/7d of measured value
Response time:	T_{90}<60s (after full preheating)	
Power supply:	AC 100~240V, 50/60Hz	
Communication:	RS232(standard)/RS485(optional)	
Ambient TEMP.:	-10~+50°C Ambient humidity:<80%RH	

Frequency conversion ion flow

GNL-6800 Wide area oxygen analyzer

Product Features

- Meet the measurement accuracy requirements in the range of 1ppm-25%;
- With overpressure protection, when the pressure in the gas path exceeds the pressure protection range, automatically cut off the gas path on both sides of the sensor chamber;
- High precision pressure automatic compensation, reduce the impact of pressure on the measurement accuracy; Data storage function: time record test data and can quickly query the stored data;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set arbitrarily in the full scale range.

Technical Index

Sensor:	Electrochemical oxygen sensor	
Linear error:	0.01~9.99ppm	±1ppm
	10.0~99.9ppm	±3%FS
	100~999.9ppm	±2%FS
	1000~9999ppm	±2%FS
	1.00%~25.00%	±2%FS
Repeatability:	0.01~9.99ppm	±0.5ppm
	10.0~99.9ppm	±1.5%FS
	100~999.9ppm	±1%FS
	1000~9999ppm	±1%FS
	1.00%~25.00%	±1%FS
Stability:	0.01~9.99ppm	±0.5ppm/7d
	10.0~99.9ppm	±1.5%FS/7d
	100~999.9ppm	±1%FS/7d
	1000~9999ppm	±1%FS/7d
	1.00%~25.00%	±1%FS/7d
Ambient TEMP.:	Operation:0~+45°C Storage:-10~+50°C	
Ambient humidity:	<80%RH	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	

Electrochemistry

GNL-6900 Wide area oxygen analyzer

Product Features

- The invention integrates the digital proportional valve with the patent of Changai, and has all functions and characteristics of the oxygen analyzer and the digital proportional valve;
- PID adjust the opening of the digital proportional valve, control the process of charging flow, in order to obtain and maintain the oxygen concentration range required by the measured environment;
- Data storage function: time record test data and can quickly query the stored data.

Technical Index

Sensor:	Electrochemical oxygen sensor	
Measuring range:	0~10/100/1000ppm/1%/25.00% O_2	
Linear error:	0.01~9.99ppm	±1ppm
	10.0~99.9ppm	±3%FS
	100~9999ppm	±2%FS
	1000~9999ppm	±2%FS
	1.00%~25.00%	±2%FS
Repeatability:	0.01~9.99ppm	±0.5ppm
	10.0~99.9ppm	±1.5%FS
	100~9999ppm	±1.0%FS
	1000~9999ppm	±1.0%FS
	1.00%~25.00%	±1.0%FS
Stability:	0.01~9.99ppm	±0.5ppm/7d
	10.0~99.9ppm	±1.5%FS/7d
	100~9999ppm	±1.0%FS/7d
	1000~9999ppm	±1.0%FS/7d
	1.00%~25.00%	±1.0%FS/7d
Working TEMP.:	0~+45°C humidity:<80%RH	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	

Electrochemistry

CI-PC12 Frequency conversion ion flow oxygen analyzer

Product Features

- With microprocessor as the core, it has the characteristics of good stability, high reliability, long calibration cycle and intelligence;
- Accurately measure oxygen concentration in 0-25% nitrogen (N_2) oxygen (O_2) gas mixture;
- An alarm will be issued when the oxygen concentration deviates from the alarm value, which can be set arbitrarily in the full scale range;
- Compact size, simple structure, easy to use and maintain.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measured value
Response time:	T_{90}<60s (after full preheating)	
Power supply:	AC 100~240V,50/60Hz	
Communication:	RS232(standard)/RS485(optional)	
Ambient TEMP.:	-10~+50°C Ambient humidity:<80%RH	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	

Frequency conversion ion flow

CI-PC121 Frequency conversion ion flow oxygen analyzer

Product Features

- Gas path pressure detection function: real-time detection analyzer gas path pressure, easy to judge whether the gas pathblocked;
- Window surface covered with a toughened glass, enhance the impact protection of the window;
- Capacitive touch key, key sensitive, reliable, simple operation;
- Three-way alarm switch output, compact size, simple structure, easy to carry and maintain.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measured value
Response time:	T_{90}<60s(after full preheating)	
Power supply:	AC 100~240V, 50/60Hz	
Communication:	RS232(standard)/RS485(optional)	
Ambient TEMP.:	-10~+50°C Ambient humidity:<80%RH	

Frequency conversion ion flow

CI-PC125 Frequency conversion ion flow oxygen analyzer

Product Features

- Electronic flowmeter, accurate flow detection, long service life;
- The analyzer has passed strict anti-electromagnetic interference and static tests before leaving the factory, reaching the military standards;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measured value
Response time:	T_{90}<60s(after full preheating)	
Power supply:	AC 100~240V, 50/60Hz	
Ambient TEMP.:	-10~+50°C Ambient humidity:<80%RH	
Sample gas flow:	0.5~2L/min (Recommended 1.5L/min)	

Frequency conversion ion flow

CI-PC126 Frequency conversion ion flow oxygen analyzer

Product Features

- Data storage function: real-time record test data and canquickly query the stored data;
- When the oxygen concentration deviates from the alarmvalue, the alarm value can be set arbitrarily in the full range;
- Gas path pressure detection function: real-time detection ofanalyzer gas path pressure, easy to judge whether the gaspath isblocked;
- RS485 two-way communication function: can communicate with the computer or other digital communications equipment directly.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measured value
Response time:	T_{90}<60s(after full preheating)	
Ambient TEMP.:	-10~+50°C Ambient humidity:<80%RH	
Sample gas flow:	400~600ml/min	
Analog signal:	4-20mA/0-20mA/0-1V/0-5V/0-10V	

Frequency conversion ion flow

CI-PC128/-1 Frequency conversion ion flow oxygen analyzer

CI-PC128

CI-PC128-1

Product Features

- It has the characteristics of intelligence, good stability, highreliability and long calibration cycle;
- Capacitive touch key, key sensitive, reliable, simple operation;
- Gas path pressure detection function: real-time detection analyzer gas path pressure, easy to determine whether the gas path is blocked;
- Menu lock switch: to prevent the impact of misoperation on theanalyzer;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measured value
Response time:	T_{90}<60s(after full preheating)	
Power supply:	AC 100~240V, 50/60Hz	
Communication:	RS232(standard)/RS485(optional)	
Ambient TEMP.:	-10~+50°C Ambient humidity:<80%RH	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	

Frequency conversion ion flow

CI-PC129 Trace oxygen analyzer

Product Features

- According to the test oxygen concentration and concentration control requirements, the analyzer adjusts the opening of the digital proportional valve, so as to control the process nitrogen charging flow, in order to obtain and maintain the oxygen concentration range required by the test condition. Its advantage is to use the minimum nitrogen consumption to maintain the maximum quality of the end product, reduce scrap and rework;
- High precision automatic temperature and pressure compensation, reduce the impact of temperature and pressure on the measurement accuracy.

Technical Index

Sensor:	Electrochemical oxygen sensor	
Measuring range:	0~10/100/1000ppm/1%/25.00% O_2	
Linear error:	0.01~9.99ppm	O_2: ±5% FS
	10.0~99.9ppm	O_2: ±3% FS
	100~1000ppm	O_2: ±2% FS
	0.01~9.99ppm	O_2: ±2.5%FS
Repeatability:	10.0~99.9ppm	O_2: ±1.5% FS
	100~1000ppm	O_2: ±1% FS
	0.01~9.99ppm	O_2: ±2.5% FS/7d
Stability:	10.0~99.9ppm	O_2: ±1.5% FS/7d
	100~1000ppm	O_2: ±1% FS/7d
Response time:	T_{90}<60s(25°C)	
Power supply:	AC 100~240V, 50/60Hz	
Communication:	RS485(standard)/RS232(optional)	
Ambient TEMP.:	0~+45°C Ambient humidity:<80%RH	
Switching signal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/ 0-10V/ 1-5V,can set the mode freely	
	load: <500Ω	

Electrochemistry

CI-PC129-6 Frequency conversion ion flow oxygen analyzer

Product Features

- It integrates the digital proportional valve of Changai patent, and has all the functions and characteristics of oxygen analyzer and digital proportional valve. It can meet the requirements of rapid response and high precision gas analysis in industrial process control, such as detection and control of oxygen concentration in wave soldering/reflow furnace, greatly reducing the cost of gas consumption;
- Pre-set ten groups of commonly used control concentration required PID parameters, and it has the function of PID self-tuning, reducing the use of digital proportional valve difficulty.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measured value
Ambient TEMP.:	Operation: -10~+50°C Storage: -20~+60°C	
Ambient humidity:	<80%RH	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	

Frequency conversion ion flow

CI-PC1201 Multi-channel oxygen analyzer

Product Features

- Adopt Modular design, add oxygen module freely, the sampling path can be chosen between 2-8;
- Up to 8 CI-DPR200 digital proportional valves can be connected to control the flow of nitrogen in the corresponding area of the oxygen module to reduce the cost of gas users;
- Measurements ranged from air (20.9%) to low oxygen concentrations (less than 10 ppm);
- With digital sensor, the user can replace the sensor on site, without calibration after replacement.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measuredvalue
Ambient TEMP.:	Operation: -10~+50°C Storage: -20~+60°C	
Ambient humidity:	<80%RH	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	

Frequency conversion ion flow

CI-PC1208 Multi-channel oxygen analyzer

Product Features

- With the core of micro-controller, it is stable and reliable, using the frequency conversion ion flow sensor as the measuring unit, with high precision and long calibration period;
- It adopts Modular design, oxygen module is added freely, and the number of sampling channels can be chosen between 2-12;
- Up to 12 CI-DPR200 digital proportional valves can be connected to control the flow of nitrogen in the corresponding area of the oxygen module to reduce the cost of gas users.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9 ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999 ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9 ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999 ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9 ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999 ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measured value
Response time:	T_{90}<60s(after full preheating)	
Background gas:	N_2, He, Ar and other inert gases, cannot contain It contains Si, Pb and hydrocarbons	

Frequency conversion ion flow

CI-PC826 Trace oxygen analyzer

Product Features

- It has the characteristics of intelligence, good stability, high reliability, long calibration cycle, etc.;
- By 128x640LED screen window display oxygen concentration, various data and instrument working state, intuitive display, rich content;
- Window surface covered with a toughened glass, not only beautiful, but also on the LCD screen, keys have a good protective effect;
- Using the latest touch key technology, easy to operate, keys long service life.

Technical Index

Sensor:	Zirconia concentration cell sensor	
Measuring range:	0~25.00%	O_2
Linear error:	0.01~99.9 ppm	±5ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00~25.00 %	±3% of measured value
Repeatability:	0.01~99.9 ppm	±2.5ppm
	100~999.9ppm	±1.5%FS
	1000~9999 ppm	±1.5%FS
	1.00~25.00 %	±1.5% of measured value
Stability:	0.01~99.9 ppm	±2.5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00~25.00 %	±1.5%/7d of measured value
Response time:	T_{90}<60s(after full preheating)	
Display:	128×64 OLED screen	
Power supply:	AC 100~240V, 50/60Hz	
Communication:	RS232(standard)/RS485(optional)	
Sensor life:	More than 2 years(normal use)	

Zirconia

CI-PC95 Wall-mounted trace oxygen analyzer

Product Features

- Microprocessor as the core, good long-term stability, high reliability;
- Using electrochemical sensor as measuring unit, high precision, long calibration cycle;
- High precision temperature and pressure automatic compensation, reduce the impact of temperature and pressure on the measurement accuracy;
- With overpressure protection, when the pressure in the gas path exceeds the pressure protection range, automatically cut off the gas path on both sides of the sensor chamber.

Technical Index

Sensor:	Electrochemical oxygen sensor	
Linear error:	0.01~9.99ppm	O_2: ±5% FS
	10.0~99.9ppm	O_2: ±3% FS
	100~1000ppm	O_2: ±2% FS
Repeatability:	0.01~9.99ppm	O_2: ±2.5% FS
	10.0~99.9ppm	O_2: ±1.5% FS
	100~1000ppm	O_2: ±1% FS
Stability:	0.01~9.99ppm	O_2: ±2.5% FS/7d
	10.0~99.9ppm	O_2: ±1.5% FS/7d
	100~1000ppm	O_2: ±1% FS/7d
Response time:	T_{90}<60s (25°C)	
Power supply:	DC 24V, 1A	
IP Grade:	IP64	
Communication:	RS485(standard)/RS232(optional)	
Ambient TEMP.:	-10~+45°C Ambient humidity:<90%RH	
Switching signal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V, can set the mode freelythe load: < 500 Ω	
Sample gas pressure:	Please refer to CI-PC951 on page 20	
Sample gas flow:	1.5~2L/min	

Electrochemistry

CI-PC95-1 Explosion-proof trace oxygen analyzer

Product Features

- Microprocessor as the core, good long-term stability, high reliability;
- Using electrochemical sensor as measuring unit, high precision, long calibration cycle;
- High precision temperature and pressure automatic compensation, reduce the impact of temperature and pressure on the measurement accuracy;
- With overpressure protection, when the pressure in the gas path exceeds the pressure protection range, automatically cut off the gas path on both sides of the sensor chamber.

Technical Index

Sensor:	Electrochemical oxygen sensor	
Measuring range:	0~10/100/1000ppm/1%/25% O_2	
Linear error:	0.01~9.99ppm	O_2: ±5% FS
	10.0~99.9ppm	O_2: ±3% FS
	100~1000ppm	O_2: ±2% FS
Repeatability:	0.01~9.99ppm	O_2: ±2.5% FS
	10.0~99.9ppm	O_2: ±1.5% FS
	100~1000ppm	O_2: ±1% FS
Stability:	0.01~9.99ppm	O_2: ±2.5% FS/7d
	10.0~99.9ppm	O_2: ±1.5% FS/7d
	100~1000ppm	O_2: ±1% FS/7d
Ex-mark:	Ex d IIB T6 Gb	
Response time:	T_{90}<60s (25°C)	
Power supply:	DC 24V, 1A	
Communication	RS485(standard)/RS232(optional)	
Ambient TEMP.:	-10~+45°C Ambient humidity:< 90%RH	
Sample gas flow:	1.5~2L/min	
Sensor life:	More than 2 years(normal use)	

Ex CE Electrochemistry

CI-PC95-2 Explosion-proof trace oxygen analyzer

Product Features

- The combination of microcontroller and digital processing technology, anti-cross interference, stable and reliable;
- The use of electrochemical oxygen sensor, high precision, good stability;
- With infrared remote control function, you can operate the analyzer through the remote control;
- Menu lock switch: prevent misoperation to change the analyzer parameters and affect its normal operation;

Technical Index

Sensor:	Electrochemical oxygen sensor	
Measuring range:	0~10/100/1000ppm/1%/25.00% O_2	
Linear error:	0.01~9.99ppm	O_2: ±5%FS
	10.0~99.9ppm	O_2: ±3%FS
	100~1000ppm	O_2: ±2%FS
Repeatability:	0.01~9.99ppm	O_2: ±2.5%FS
	10.0~99.9ppm	O_2: ±1.5%FS
	100~1000ppm	O_2: ±1%FS
Stability:	0.01~9.99ppm	O_2: ±2.5%FS/7d
	10.0~99.9ppm	O_2: ±1.5%FS/7d
	100~1000ppm	O_2: ±1%FS/7d
Response time:	T_{90}<60s (25°C)	
Ex-mark:	Ex d IIC T6 Gb	
IP Grade:	IP65	
Power supply:	DC 24V, 1A	
Ambient TEMP.:	-10~+45°C Ambient humidity:< 90%RH	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	
Sample gas flow:	1.5~2L/min	
Tracheal connector:	1/4 inch NPT internal thread with Φ6.5 hose fittings	

Ex CE Electrochemistry

P860 Series oxygen/nitrogen analyzer

Product Features

- New long life ion current sensor, high sensitivity, fast response speed;
- The nitrogen concentration can be calculated according to the oxygen concentration, and provide the corresponding display;
- Alarm function: when the oxygen/ nitrogen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary;
- Analog signal:isolated 4-20mA current signal output.

Technical Index

Sensor:	Ion flow oxygen sensor	
Measuring range:	P860-3O 1000ppm-21%	O_2
	P860-4O 100ppm-21%	O_2
	P860-5O 10ppm-21%	O_2
	P860-3N 79%-99.9%	N_2
	P860-4N 79%-99.99%	N_2
	P860-5N 79%-99.999%	N_2
Linear error:	10ppm~100ppm	O_2: ±5% FS
	10ppm~2%	O_2: ±2% FS
	10ppm~21%	O_2: ±1.5%FS
Stability:	±2%FS/7d	
Response time:	T_{90}≤20s	
Measurement:	Gas entry type	
Sample gas flow:	400-600ml/min	
Ambient TEMP.:	0~+45°C Ambient humidity:<80%RH	
Analog signal:	Programmable 4-20mA current output (external load < 500Ω)	
Power supply:	AC 220V±10%, 50/60Hz or DC 24V	

Ion flow

GNL-120-1/-3 Oxygen transmitter

Product Features

- Advanced digital processing technology, anti-cross interference, high measurement accuracy, good stability, long service life of the sensor;
- Wide range test from ppm level to % level;
- Communication function: support RS485 or RS232 communication;
- Isolated 4-20mA/ analog signal output.

Technical Index

Sensor:	3D ion flow sensor	
Measuring range:	GNL-120-1 0-25% O_2	
	GNL-120-3 0-10/100/1000ppm ,0-1%/25%O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measured value
Response time:	T_{90}<60s (after full preheating)	
Power supply:	DC 24V, 1A	
Transmitter power:	<20VA	
Ambient TEMP.:	-10~+50°C Ambient humidity:<80%RH	
Sample gas pressure:	Atmospheric conditions±10%	

3D ion flow

GNL-120-5 (M2) Oxygen analyzer

Product Features

- With microcontroller as the core, stable and reliable;
- Using frequency conversion ion flow sensor as the measuring unit, high precision, long calibration cycle;
- Split structure design, probe using high temperature resistant material;
- 128×640LED display window display gas concentration, menu, data and device working state, intuitive display, rich content;
- Using the latest touch button technology, button sensitive, reliable, simple operation, long service life.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25.00% O_2	±10ppm
Linear error:	0.01~99.9 ppm	±3%FS
	100~999.9ppm	±3%FS
	1000~9999 ppm	±3% of measured value
	1.00%~25.00%	±5ppm
Repeatability:	0.01~99.9 ppm	±1.5%FS
	100~999.9ppm	±1.5%FS
	1000~9999 ppm	±1.5% of measured value
	1.00%~25.00%	±5ppm/7d
Stability:	0.01~99.9 ppm	±1.5%FS/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999 ppm	±1.5%/7dof measured value
	1.00%~25.00%	
Response time:	T_{90}<60s (after full preheating)	

Frequency conversion ion flow

CI-PC85-2 Explosion-proof oxygen/nitrogen analyzer

Product Features

- The combination of microcontroller and digital processing technology, anti-cross-interference, stable and reliable;
- 3D ion flow sensor, high precision, good stability, long service life;
- With infrared remote control function, you can operate the analyzer through the remote control; Using flameproof design, flameproof grade Exd IIC T6 Gb;
- Alarm function: when the oxygen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary.

Technical Index

Sensor:	3D ion flow sensor		
Measuring range:	CI-PC85-2-3O	1000ppm-21%	O_2
	CI-PC85-2-4O	100ppm-21%	O_2
	CI-PC85-2-5O	10ppm-21%	O_2
	CI-PC85-2-3N	79%-99.9%	N_2
	CI-PC85-2-4N	79%-99.99%	N_2
	CI-PC85-2-5N	79%-99.999%	N_2
Linear error:	99.99%~99.999%	N_2:	±10%FS
	98%~99.999%	N_2:	±2%FS
	79%~99.999%	N_2:	±1.5%FS
Repeatability:	99.99%~99.999%	N_2:	±5%FS
	98%~99.999%	N_2:	±1%FS
	79%~99.999%	N_2:	±0.75%FS
Stability:	Please refer to CI-PC85-1 on page 22		
Ex-mark:	Ex d IIC T6 Gb		
IP Grade:	IP65		
Analog signal:	Number: 1 group		
	Output mode: can set the mode freely		
	4-20mA/0-20mA/0-1V/0-5V/0-10V/1-5V		
	Load:< 500Ω		
Sample gas flow:	400~600ml/min		

3D ion flow

CI-PC881 Oxygen/nitrogen transmitter

Product Features

- It has the characteristics of intelligence, good stability, high reliability, long calibration cycle, etc;
- The circuit adopts digital signal processing, isolation and amplification, frequency intercept design, strong antiinterference ability;
- Menu lock switch: prevent misoperation to change the parameters of the transmitter and affect its normal operation;
- RS485/RS232 communication can be optional;
- Simple structure, easy installation and maintenance.

Technical Index

Sensor:	Ion flow oxygen sensor		
Measuring range:	CI-PC881-3O	1000ppm-21%	O_2
	CI-PC881-4O	100ppm-21%	O_2
	CI-PC881-5O	10ppm-21%	O_2
	CI-PC881-3N	79%-99.9%	N_2
	CI-PC881-4N	79%-99.99%	N_2
	CI-PC881-5N	79%-99.999%	N_2
Linear error:	10ppm~100ppm	O_2	±5%FS
	10ppm~2%	O_2	±2%FS
	10ppm~21%	O_2	±1.5%FS
Repeatability:	10ppm~100ppm	O_2	±2.5%FS
	10ppm~2%	O_2	±1%FS
	10ppm~21%	O_2	±0.75%FS
Stability:	Please refer to GNL-3100 on page 24		
Response time:	T_{90}<60s (after full preheating)		
Weight:	About 0.5kg		
Power supply:	DC 24V, power consumption≤10VA		
Ambient TEMP.:	-10~+55°C Ambient Humidity: <80%RH		

Ion flow

GNL-B5/CI-PC981 Trace oxygen transmitter

Product Features

- Adopt the world’ s advanced level of fuel cell oxygen sensor;
- Intelligent microcontrol technology is used in circuit design;
- Analog output: high accuracy, good stability, low power consumption;
- Long service life, compact size, simple structure;
- Optional installation of KF40 and thread (M51×1.5);
- Easy to use and maintain.

Technical Index

Sensor:	Electrochemical oxygen sensor		
Measuring range:	0-10/100/1000 ppm O_2		
Linear error:	0.01~9.99ppm	O_2:	±5% FS
	10.0~99.9ppm	O_2:	±3% FS
	100~1000ppm	O_2:	±2% FS
Repeatability:	0.01~9.99ppm	O_2:	±2.5% FS
	10.0~99.9ppm	O_2:	±1.5% FS
	100~1000ppm	O_2:	±1% FS
Stability:	0.01~9.99ppm	O_2:	±2.5% FS/7d
	10.0~99.9ppm	O_2:	±1.5% FS/7d
	100~1000ppm	O_2:	±1% FS/7d
Response time:	T_{90}≤60s		
Consumption:	<10VA		
Analog signal:	4-20mA (load resistance T more than 500Ω)		
	GNL-B5 current signal output in 3-wire system		
	CI-PC981 current signal output is 2-wire system		
	Intrinsically safe (explosion-proof)		
Power supply:	DC 24V, 0.5 A		
Working TEMP.:	0~+45°C Ambient humidity: <90%RH		

Electrochemistry

CI-PC98-1/2/3 Series oxygen transmitter

Product Features

- Adopt long life 128×64LCD screen, the display content is intuitive and rich;
- The electrochemical oxygen sensor as the measuring unit, the use of advanced digital processing technology, anti-cross interference, high measurement accuracy, good stability;
- With digital temperature compensation, reduce the influence of temperature on the accuracy of oxygen measurement;
- Capacitive touch key, key sensitive, reliable, simple operation.

Technical Index

Sensor:	Electrochemical oxygen sensor	
Measuring range:	CI-PC98 0-1000ppm	O_2
	CI-PC98-1 10ppm-10000ppm	O_2
	CI-PC98-2 1000ppm-25%	O_2
	CI-PC98-3 0.1%-25%	O_2
Power supply:	DC 24V，0.5 A	
Consumption:	<10VA	
Working TEMP.:	0~+45°C Working humidity: <90%RH	
Analog signal:	4~20mA(load resistance T more than 500Ω)	
Sample gas TEMP.:	0~+45°C	
Sample gas flow:	800~1000ml/min	
Sensor life:	More than 2 years (normal use)	
Instrument life:	More than 5 years (normal use)	
Weight:	The net weight is 0.8-1.5 kg	

Electrochemistry

CI-PC986 Wide area oxygen transmitter

Product Features

- Meet the measurement accuracy requirements in the range of 1ppm~25%;
- The transmitter has the function of voltage regulation and automatic flow control, which is suitable for the positive pressure condition;
- Using digital sensor, the user can replace the sensor on the spot, no calibration after replacement;
- Overvoltage protection function: when the pressure in the test room exceeds the set range, it will automatically cut off the gas path to avoid the sensor damage due to too much or too little pressure.

Technical Index

Sensor:	Electrochemical oxygen sensor	
Measuring range:	0~10/ 100/ 1000ppm/ 1%/ 25.00% O_2	
Linear error:	0.01~9.99 ppm:	±1ppm
	10.0~99.9 ppm:	±3%FS
	100~999.9ppm:	±2%FS
	1000~9999 ppm:	±2%FS
	1.00%~25.00%:	±2%FS
Repeatability:	0.01~9.99 ppm:	±0.5ppm
	10.0~99.9 ppm:	±1.5%FS
	100~999.9ppm:	±1%FS
	1000~9999 ppm:	±1%FS
	1.00%~25.00%:	±1%FS
Stability:	0.01~9.99 ppm:	±0.5ppm/7d
	10.0~99.9 ppm:	±1.5%FS/7d
	100~999.9ppm:	±1%FS/7d
	1000~9999 ppm:	±1%FS/7d
	1.00%~25.00%:	±1%FS/7d
Communication:	RS485	
Analog signal:	4-20mA(standard)/0-20mA(optional)	

Electrochemistry

GNL-B1A Portable trace oxygen analyzer

Product Features

- With overpressure protection, when the pressure in the gas path exceeds the pressure protection range, automatically cut off the gas path on both sides of the sensor chamber;
- High precision temperature and pressure automatic compensation, reduce the impact of temperature and pressure on the measurement accuracy;
- Unique solenoid valve protection gas path: built-in solenoid valve protection gas path, open the number of unlimited, long service life.

Technical Index

Sensor:	Electrochemical oxygen sensor
Measuring range:	0~10/100/1000ppm/1%/25.00% O_2
Linear error:	0.01~9.99ppm O_2: ±5% FS
	10.0~99.9ppm O_2: ±3% FS
	100~1000ppm O_2: ±2% FS
Repeatability:	0.01~9.99ppm O_2: ±2.5% FS
	10.0~99.9ppm O_2: ±1.5% FS
	100~1000ppm O_2: ±1% FS
Stability:	0.01~9.99ppm O_2: ±2.5% FS/7d
	10.0~99.9ppm O_2: ±1.5% FS/7d
	100~1000ppm O_2: ±1% FS/7d
Response time:	T_{90}<60s (25°C)
Recovery time:	It takes 60 minutes to go from air (20.94%) to 10 ppm
Measuring medium:	Nitrogen, hydrogen, helium, argon, and hydrocarbon gases
Power supply:	AC 220V ± 10% , 50/60Hz when the transformer is configured

Electrochemistry

CI-PC93 Portable trace oxygen analyzer

Product Features

- With overpressure protection, when the pressure in the gas path exceeds the pressure protection range, automatically cut off the gas path on both sides of the sensor chamber;
- High precision pressure automatic compensation, reduce the impact of pressure on the measurement accuracy;
- With over range protection, when the oxygen concentration is higher than the protection limit value, automatically cut off the gas path on both sides of the sensor chamber, to avoid the sensor in the high oxygen concentration environment for a long time and affect its performance and life.

Technical Index

Sensor:	Electrochemical oxygen sensor
Measuring range:	0~10/100/1000ppm/1%/25% O_2
Linear error:	0.01~9.99ppm O_2: ±5% FS
	10.0~99.9ppm O_2: ±3% FS
	100~1000ppm O_2: ±2% FS
Repeatability:	0.01~9.99ppm O_2: ±2.5% FS
	10.0~99.9ppm O_2: ±1.5% FS
	100~1000ppm O_2: ±1% FS
Stability:	0.01~9.99ppm O_2: ±2.5% FS/7d
	10.0~99.9ppm O_2: ±1.5% FS/7d
	100~1000ppm O_2: ±1% FS/7d
Response time:	T_{90}<60s (25°C)
Power supply:	AC 100~240V, 50/60Hz
Communication:	RS485(standard)/RS232(optional)
Ambient TEMP.:	0~+45°C Ambient humidity:<80%RH
Sample gas flow:	1~1.5L/min（recommended1.2L/min）
Sample gas pressure:	Please refer to CI-PC951 on page 20
Analog signal:	1 group ,4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V,can be set mode freely

Electrochemistry

CI-PC931/932 Portable micro oxygen analyzer

Product Features

- High precision temperature and pressure automatic compensation, reduce the impact of temperature and pressure on the measurement accuracy;
- With overpressure protection, when the pressure in the gaspath exceeds the pressure protection range, automatically cut off the gas path on both sides of the sensor chamber;
- The use of digital sensors, not only convenient for users toreplace on site, but also without calibration can be accurately measured.

Technical Index

Sensor:	Electrochemical oxygen sensor
Measuring range:	0~10/100/1000ppm/1%/25% O_2
Linear error:	0.01~9.99ppm O_2: ±5% FS
	10.0~99.9ppm O_2: ±3% FS
	100~1000ppm O_2: ±2% FS
Repeatability:	0.01~9.99ppm O_2: ±2.5% FS
	10.0~99.9ppm O_2: ±1.5% FS
	100~1000ppm O_2: ±1% FS
Stability:	0.01~9.99ppm O_2: ±2.5% FS/7d
	10.0~99.9ppm O_2: ±1.5% FS/7d
	100~1000ppm O_2: ±1% FS/7d
Response time:	T_{90}<60s (25°C)
Power supply:	AC 220V±10%, 50/60Hz
Communication:	RS485(standard)/RS232(optional)
Analog signal:	1 group,4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V, can be set mode freely
Working TEMP.:	0~+45°C Working humidity:<80%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

Electrochemistry

CI-PC13 Portable oxygen analyzer

Product Features

- Microprocessor as the core, frequency conversion ion flow oxygen sensor as the measuring unit, with intelligence, good stability, high precision, long calibration cycle and so on;
- Pressure detection function: test the internal relative pressure of the gas path, determine whether the gas path is blocked, when the sample gas pressure exceeds the set fan chart, will issue an alarm;
- Menu lock switch: prevent misoperation to change the parameters of the analyzer affecting its normal operation.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measuredvalue
Response time:	T_{90}<60s (after full preheating)	
Power supply:	AC 100~240V,50/60Hz	
Communication:	RS232(standard)/RS485(optional)	
Ambient TEMP.:	-10~+45°C Ambient humidity:<80%RH	

Frequency conversion ion flow

GNL-2100 Series portable oxygen/nitrogen analyzer

Product Features

- With microprocessor as the core, it has the features of intelligence, good stability, high precision and long calibration cycle;
- Long standby time: built-in large capacity lithium battery, normal use, standby time is not less than 8 hours;
- Menu lock switch: prevent misoperation to change the analyzer parameters affecting its normal operation An alarm will be issued when oxygen/nitrogen deviates from the alarm value, which can be set arbitrarily in the full scale range.

Technical Index

Sensor:	Ion flow oxygen sensor		
Measuring range:	GNL-2100-3O	1000ppm-21%	O_2
	GNL-2100-4O	100ppm-21%	O_2
	GNL-2100-5O	10ppm-21%	O_2
	GNL-2100-3N	79%-99.9%	N_2
	GNL-2100-4N	79%-99.99%	N_2
	GNL-2100-5N	79%-99.999%	N_2
Linear error:	99.99%~99.999%	N_2:	±10%FS
	98%~99.999%	N_2:	±2%FS
	79%~99.999%	N_2:	±1.5%FS
Repeatability:	99.99%~99.999%	N_2:	±5%FS
	98%~99.999%	N_2:	±1%FS
	79%~99.999%	N_2:	±0.75%FS
Stability:	Please refer to CI-PC85-1 on page 22		
Response time:	T_{90}<20s (after full preheating)		
Power supply:	AC 100~240V, 50/60Hz		
Analog signal:	1 group,4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V, can be set mode freely		
Communication:	RS485(standard)/RS232(optional)		

Ion flow

CI-PC832 Series portable oxygen/nitrogen analyzer

Product Features

- With microprocessor as the core, 3D ion flow sensor as the measuring unit, with intelligence, good stability, high precision, long calibration cycle and so on;
- Window surface covered with a toughened glass, enhance the impact protection of Windows;
- Built-in large capacity lithium battery, normal use, standby time is more than 3.5 hours;
- High precision pressure automatic compensation, reduce the impact of pressure on the measurement accuracy convenient.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	±1% FS
Repeatability:	±0.5% FS
Stability:	±0.5% FS/7d
Response time:	T_{90}<20s (after full preheating)
Power supply:	AC 100~240V, 50/60Hz
Working TEMP.:	-10~+45°C， Working humidity:<80%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Sample gas flow:	2~5L/min

Model and measuring range:

Display mode	Model	Test scope	
Oxygen concentration values are shown	CI-PC832-3O	0.1%~21.0%	O_2
	CI-PC832-4O	100ppm~21.00%	O_2
	CI-PC832-5O	10ppm~21.000%	O_2
Nitrogen concentration values are shown	CI-PC832-3N	79.0%~99.9%	N_2
	CI-PC832-4N	79.00%~99.99%	N_2
	CI-PC832-5N	79.000%~99.999%	N_2

3D ion flow

CI-PC962 Electrochemical oxygen analyzer

Product Features

- The electrochemical sensor is used as the measuring unit, with high precision, long service life and stable signal output;
- The sensor does not need external power supply and heating;
- The sensor is not affected by CO_2, CO,H_2S, NOx,H_2;
- Menu lock switch: to prevent the impact of misoperation on the analyzer; When the oxygen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary.

Technical Index

Sensor:	Electrochemical oxygen sensor
Measuring range:	0~25.00% O_2
Linear error:	±2% FS
Repeatability:	±1% FS
Stability:	±1% FS/7d
Response time:	T_{90}<20s
Power supply:	AC 100~240V, 50/60Hz
Working TEMP.:	0~+45°C Working humidity:<90%RH
Sample flow:	500~1000ml/min
Storage TEMP.:	-20~+60°C
Communication:	RS485(standard)/RS232(optional)
Control signal:	Access to a group of DC 9-28V signal control pump (optional)
Analog signal:	Two groups of alarm switch output
Sensor life:	More than 2 years (normal use)
Instrument life:	More than 5 years (normal use)
Dimensions:	L×W×D=144mm×144mm×251mm

Electrochemistry

CI-PC912 Electrochemical oxygen analyzer

Product Features

- The electrochemical sensor is used as the measuring unit, with high precision, long service life and stable signal output;
- The sensor does not need external power supply and heating;
- The sensor is not affected by CO_2, CO.H_2S, NOx,H_2;
- Menu lock switch: to prevent the impact of misoperation on the analyzer; When the oxygen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary.

Technical Index

Sensor:	Electrochemical oxygen sensor
Measuring range:	0~25.00% O_2
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<20s
Power supply:	AC 100~240V,50/60Hz
consumption:	<20VA
Ambient TEMP.:	-10~+45°C Ambient humidity:<90%RH
Sample gas pressure:	Equipped with needle valve, in the 35-210 kpa, to ensure that can provide 1-1.5 l/min flow can be configured when the suction pump for negative pressure,micro-positive pressure (optional)
Sample gas flow:	500~1000ml/min
Analog signal:	1 group,4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V, can be set mode freely Load:<500 Ω

Electrochemistry

CI-PC933 Portable oxygen analyzer

Product Features

- With microprocessor as the core and electrochemical gas sensor as the measuring unit, it has the characteristics of intelligence, good stability, high precision and long calibration cycle;
- Built-in large capacity lithium battery, long standby-time;
- Convenient data storage function: the analyzer has the functionof timing automatic storage and manual storage of test data, and supports U disk and SD card, data storage capacity is large.

Technical Index

Sensor:	Electrochemical oxygen sensor
Measuring range:	0~25.00% O_2
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<20s
Display:	128×64 LCD screen
Power supply:	AC100~240V, 50/60Hz
Consumption:	<20VA
Communication:	RS485(standard)/RS232(optional)
Analog signal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V, can be set mode freely Load: <500Ω
External control:	Number: 1 group; Control signal: DC 9-28V
Ambient TEMP.:	-10~+45°C Ambient humidity: <80%RH
Sample gas flow:	500~1000ml/min
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Air Intakes:	1/4 inch NPT internal thread, stainless steel

Electrochemistry

CI-PC162 Frequency conversion ion flow oxygen analyzer

Product Features

- It has the characteristics of intelligence, good stability, high reliability, long calibration cycle, etc.;
- 128×64 LCD screen with long life, the display content is intuitive and rich;
- Windows surface covered with a toughened glass, enhance the impact protection of Windows;
- Menu lock switch: to prevent the impact of misoperation on the analyzer;
- Data storage function: time record test data and can quickly query stored data.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7dof measured value
Response time:	T_{90}<60s(after full preheating)	
Power supply:	AC 100~240V, 50/60Hz	
Ambient TEMP.:	-10~+50°C Ambient humidity: <80%RH	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	
Sample gas flow:	400~600ml/min	

Frequency conversion ion flow

CI-PC11 Frequency conversion ion flow oxygen analyzer

Product Features

- Microprocessor as the core, using frequency conversion ion current sensor as the measuring unit, with intelligence, good stability, high precision, long calibration cycle and so on;
- Menu lock switch: prevent misoperation to change the parameters of the analyzer affecting its normal operation;
- When the oxygen concentration deviates from the alarm value, an alarm will be issued, and the alarm value can be set arbitrarily in the full range.

Technical Index

Sensor:	Frequency conversion ion flow sensor	
Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measured value
Response time:	T_{90}<20s(after full preheating)	
Power supply:	AC 100~240V, 50/60Hz	
Ambient TEMP.:	-10~+45°C Ambient humidity: <90%RH	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	

Frequency conversion ion flow

CI-PC951 Oxygen analyzer

Product Features

- Microprocessor as the core, good long-term stability, high reliability;
- Using electrochemical gas sensor as measuring unit, high precision, long calibration cycle;
- Capacitive touch key, key sensitive, reliable, simple operation;
- Menu lock switch: prevent misoperation to change the analyzer parameters and affect its normal operation;
- An alarm will be issued when the oxygen concentration deviates from the alarm value, which can be set arbitrarily in the full scale range.

Technical Index

Sensor:	Electrochemical oxygen sensor
Measuring range:	0~25.00% O_2
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<20s
Measurement:	Online
Calibration period:	1 year (recommended)
Power supply:	DC 24V
Consumption:	<15VA
IP Grade:	IP64
Communication:	RS485(standard)/RS232(optional)
Ambient TEMP.:	-10~+45°C Ambient humidity:<90%RH
Analog signal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/1-5V, can set mode freely Load: <500Ω
Sample gas flow:	500~1000ml/min
Sample gas pressure:	Equipped with needle valve, in the 35-210 kpa, ensure to provide 1-1.5 l/min flow can be

Electrochemistry

CI-PC951-1 Explosion-proof oxygen analyzer

Product Features

- Microprocessor as the core, good long-term stability, high reliability;
- Using electrochemical gas sensor as measuring unit, high precision, long calibration cycle;
- It adopts capacitive touch button, which is sensitive, reliable and easy to operate;
- Menu lock switch: to prevent incorrect operation of the analyzer to change the parameters and affect its normal operation;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set arbitrarily within the full range.

Technical Index

Sensor:	Electrochemical oxygen sensor
Measuring range:	0~25.00% O_2
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<20s
IP Grade:	IP65
Ex-mark:	Ex d IIB T6 Gb
Measurement:	Online
Calibration period:	1 year (recommended)
Power supply:	DC24V
Consumption:	<15VA
Communication:	RS485(standard)/RS232(optional)
Ambient TEMP.:	-10~45°C Ambient humidity:<90%RH
Analog signal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V, set mode freely Load: <500Ω
Sample gas flow:	500~1000ml/min

Electrochemistry

CI-PC951-2 Explosion-proof oxygen analyzer

Product Features

- The combination of microcontroller and digital processing technology, anti-cross-interference, stability, reliability;
- It adopts capacitive touch button, which is sensitive, reliable and easy to operate;
- With the function of infrared remote control, the analyzer can be operated by remote control;
- Menu lock switch: to prevent incorrect operation change analyzer parameters and affect its normal, normal operation;
- Explosion-proof design, explosion-proof level up to Ex d IIC T6 Gb.

Technical Index

Sensor:	Electrochemical oxygen sensor
Measuring range:	0~25.00% O_2
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<20s
Ex-mark:	Ex d IIC T6 Gb
IP Grade:	IP65
Monitor:	128×64 OLED
Key:	3 touch buttons
Calibration period:	One year (recommended)
Power supply:	DC24V, 1A
Consumption:	<15VA
Communication:	RS485 or RS232 (optional)
Ambient TEMP.:	-10~+45°C Ambient humidity:<90%RH
Sample gas flow:	500~1000ml/min
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Sensor life:	More than 2 years (normal use)
Analyzer life:	More than 5 years (normal use)

Electrochemistry

CI-PC85 Oxygen/nitrogen analyzer

Product Features

- The analyzer adopts a new type of long-life ion current sensor, which has the characteristics of high precision and fast response;
- High precision temperature automatic compensation, reduce the impact of temperature on measurement accuracy;
- Menu lock switch: prevent misoperation to change the analyzer parameters and affect its normal operation.

Ion flow

Technical Index

Sensor: Ion flow sensor

Measuring range:

Display mode	Models	Measuring range
Oxygen concentration values are shown	CI-PC85-3O	1000ppm～21.0% O_2
	CI-PC85-4O	100ppm～21.00% O_2
	CI-PC85-5O	10ppm～21.000% O_2
Nitrogen concentration values are shown	CI-PC85-3N	79.0%～99.9% N_2
	CI-PC85-4N	79.00%～99.99% N_2
	CI-PC85-5N	79.000%～99.999% N_2

Sample gas flow: 400~600ml/min

Linear error: Please refer to CI-PC85-1 on page 22

Response time: T_{90}<60s(after full preheating)

IP Grade: IP64

Power supply: DC 24V, 1A

Communication: RS485(standard)/RS232(optional)

Sensor type for the analyser:

CI-PC85-3O	OLZL04
CI-PC85-4O	OLZL03
CI-PC85-5O	OLZL02
CI-PC85-3N	OLZL04
CI-PC85-4N	OLZL03
CI-PC85-5N	OLZL02

CI-PC85-1 Explosion-proof oxygen/nitrogen analyzer

Product Features

- The analyzer adopts a new type of long-life ion flow oxygen sensor, which has the characteristics of high precision and fast response speed;
- High precision temperature automatic compensation, reduce the impact of ambient temperature on measurement accuracy;
- Menu lock switch: prevent misoperation to change the analyzer parameters and affect its normal operation;
- Convenient data storage function: support U disk and SD card data storage, data storage capacity is large and convenient for users to process and analyze data; The timing data storage inside the instrument is convenient for users to quickly view the test data.

Technical Index

Sensor: Ion flow sensor

Measuring range: Please refer to CI-PC85 on page 22

Linear error: 99.99%~99.999% N_2: ±10%FS

98%~99.999% N_2: ±2%FS

79%~99.999% N_2: ±1.5%FS

Response time: 99.99%~99.999% N_2: ±5%FS

98%~99.999% N_2: ±1%FS

79%~99.999% N_2: ±0.75%FS

Stability: 99.99%~99.999% N_2: ±5%FS/7d

98%~99.999% N_2: ±1%FS/7d

79%~99.999% N_2: ±0.75%FS/7d

Response time: T_{90}<30s

Ex-mark: Ex d IIB T6 Gb

Power supply: DC 24V, 1A

Communication: RS485(standard)/RS232(optional)

Ambient TEMP: -10~+45°C Ambient humidity:<80%RH

Sample gas flow: 400~600ml/min

Sample gas pressure: Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

Sensor model: Please refer to CI-PC85 on page 22

Ion flow

CI-PC15-1 Explosion-proof oxygen analyzer

Product Features

- Microprocessor as the core, oxidation concentration difference battery sensor as the measuring unit, with intelligence, good stability, high precision, long calibration cycle, etc.;
- Menu lock switch: to prevent misoperation change analyzer parameters affect its normal operation;
- Convenient data storage function: the analyzer supports U disk and SD card, the data storage is large and convenient for the user to analyze and process the data.

Technical Index

Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	Please refer to CI-PC15 on page 23	
Stability:	0.01~99.9ppm	±5ppm/7d
	100~999.9ppm	±1.5%FS/7d
	1000~9999ppm	±1.5%FS/7d
	1.00%~25.00%	±1.5%/7d of measured value
Power supply:	DC 24V consumption: <25VA	
Communication:	RS485 (standard)/RS232(optional)	
Response time:	T_{90}<60s(after full preheating)	
IP Grade:	IP65	
Ex-mark:	Ex d IIB T6 Gb	
Ambient TEMP.:	-10~+45°C Ambient humidity:<90%RH	
Sample gas flow:	400~600ml/min	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	

Zirconia

CI-PC15 Oxygen analyzer

Product Features

- With microprocessor as the core and ZRO_2 concentration cell sensor as the measuring unit, it has the characteristics of intelligence, good stability, high precision and long calibration period;
- Menu lock switch: to prevent misoperation change analyzer parameters affect its normal operation;
- Convenient data storage function: the analyzer supports U disk and SD card, the data storage is large and convenient for the user to analyze and process the data;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set arbitrarily within the full range.

Technical Index

Measuring range:	0~25.00% O_2	
Linear error:	0.01~99.9ppm	±10ppm
	100~999.9ppm	±3%FS
	1000~9999ppm	±3%FS
	1.00%~25.00%	±3% of measured value
Repeatability:	0.01~99.9ppm	±5ppm
	100~999.9ppm	±1.5%FS
	1000~9999ppm	±1.5%FS
	1.00%~25.00%	±1.5% of measured value
Stability:	Please refer to CI-PC15-1 on page 23	
Consumption:	<25VA	
Power supply:	DC 24V	
Communication:	RS485 (standard)/RS232(optional)	
IP Grade:	IP64	
Response time:	T_{90}<60s(after full preheating)	
Ambient TEMP.:	-10~+45°C Ambient humidity:<90%RH	
Sample gas flow:	400~600ml/min	
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	
Sensor life:	More than 2 years (normal use)	

Zirconia

CI-PC983 Oxygen transmitter

Product Features

- Using electrochemical sensor as measuring unit, high precision, long calibration period, stable signal output;
- The sensor does not need external power supply and heating, the whole machine power is extremely low;
- The sensor is not affected by CO_2, CO, H_2S, NOx, H_2;
- Communication function: use RS485(standard)/RS232 (optional) two-way communication, can communicate directly with computer or other digital communication equipment;
- Isolated analog signal output, support software switching 0-20mA/4-20mA analog output mode.

Technical Index

Sensor:	Electrochemical oxygen sensor
Measuring range:	0~25.00% O_2
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<20s
Power supply:	DC 24V, 0.5A
consumption:	<10VA
Communication:	RS485 (standard)/RS232 (optional)
Analog signal:	Number: 1 group Output mode: 4-20mA standard/0-20mA optional load: <500Ω
Ambient TEMP.:	-10~+45°C Ambient humidity:<90%RH
Sample gas flow:	0.3~1L/min
Sample gas pressure:	0.3-0.6 mpa, 0.5 MPA recommended (outlet shall be at atmospheric pressure)
Air Intakes:	1/4 PT thread, standard 6.5 quick screw
Installation:	“几” type bracket installation or “L” type bracket installation

Electrochemistry

GNL-3100 Series oxygen/ nitrogen transmitter

Product Features

- The analyzer uses a new type of long-life ion flow sensor, with high precision, fast response and so on;
- N_2, O_2 two kinds of display for users to choose;
- Automatic detection of the working state of the sensor, the unique protection switch mode, extend the life of the sensor;
- Alarm value can be set arbitrarily;
- High precision temperature automatic compensation, reduce the temperature on the measurement accuracy.

Technical Index

Sensor:	Ion flow oxygen sensor		
Measuring range:	Please refer to CI-PC85 on page 22		
Linear error:	10~99ppm	O_2:	±10%FS
	100~999ppm	O_2:	±3%FS
	1000~9999ppm	O_2:	±2%FS
	1%~21%	O_2:	±2%FS
Repeatability:	10~99ppm	O_2:	±5ppm
	100ppm~999ppm	O_2:	±1.5%FS
	1000~9999ppm	O_2:	±1%FS
	1%~21%	O_2:	±1%FS
Stability:	10~99ppm	O_2:	±5ppm
	100ppm~999ppm	O_2:	±1.5%FS
	1000 ~ 9999ppm	O_2:	±1%FS
	1%~21%	O_2:	±1%FS
Response time:	T_{90}<60s (after full preheating)		
Working TEMP.:	0~+50°C Ambient humidity:<80%RH		
Power supply:	AC 220V±10% 50/60Hz, or DC 24V		
consumption:	<10VA		
Analog signal:	4~20mA(Allow external load <500Ω)		
Sensor life:	More than 2 years (normal use)		

Ion flow

CI-PC882 Environmental oxygen transmitter

Product Features

- RS232/485 two-way communication function: choose the configuration of communication, with the computer or other digital communication equipment for direct communication;
- Isolated analog signal output, support software switching4 -20ma/0-20 Ma/0-1v/0-5v/0-10V/1-5V analog output mode;
- Optional sensor built-in/external: according to user needs, the sensor can be placed inside the instrument, or can be an independent part, connected with the instrument through the lead.

Technical Index

Sensor: Ion flow sensor
Measuring range: 0~40.00% O_2
Linear error: ±1%FS
Repeatability: ±0.5%FS
Stability: ±0.5% FS/7d
Response time: T_{90}<20s (after full preheating)
Power supply: DC 24V
Consumption: <10VA
Ambient TEMP.: -10~+55°C Ambient humidity:<80%RH
Sample gas pressure: Normal pressure
Installation mode: Bottom bracket mount
Circuit structure: Used in non-hazardous situations
Sensor life: More than 5 years (normal use)
Instrument life: More than 10 years (normal use)
Dimensions: L x W x H=120mm x 118mm x 62.5mm

Ion flow

CI-PC888/-1 Oxygen transmitter

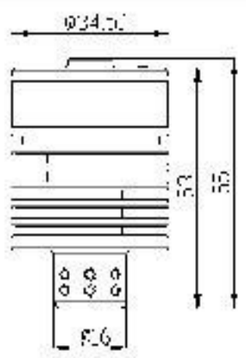
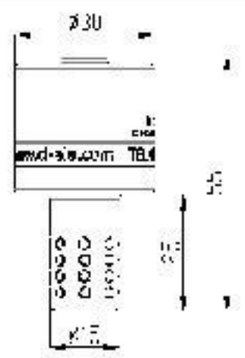
Product Features

- RS485 two-way communication function: can communicate with computer or other digital communication equipment directly;
- Good performance: 3D ion flow oxygen sensor, high precision, good stability, fast response;
- Small size, easy to install and use.

Cable identification	Color	Function
24V+	Blue	DC12-24V power supply positive
24V-	Black	DC12-24V power supply negative
485A	Brown	RS485 Communication Terminal A
485B	White	RS485 communication terminal B

Technical Index

Sensor: 3D ion flow oxygen sensor
Measuring range: 0~40.00% O_2
Linear error: ±2%FS
Repeatability: ±1%FS
Stability: ±1%FS/7d
Response time: T_{90}<30s
Power supply: DC 12~24V
Consumption: <5VA
Ambient TEMP.: 0~+45°C Ambient humidity:<85%RH
Sensor life: More than 5 years (normal use)

Project	CI-PC888	CI-PC888-1
Measuring range	0-40.00% O_2	0-25.00% O_2
Output mode	RS485	TTL/RS485
Dimensions of mounting holes	30mm （2×Φ3.5）	25mm （2×Φ3.5）
Dimensions		
Sensor	3DE01	3DE05

3D ion flow

CI-PC181 Oxygen transmitter

Product Features

- Can be used for oxygen concentration measurement in high temperature environment;
- Meet the measurement accuracy requirements in the range of 0~25.00%;
- The circuit adopts digital processing technology, isolation amplification, frequency intercept design, with strong anti-interference ability;
- RS485/232 two-way communication function.

Technical Index

Sensor:	Frequency conversion ion flow sensor
Measuring range:	0.01~25.00% O_2
Linear error:	0.01~0.99% O_2 ±3%FS
	1~25.00% O_2 ±3%of measured value
Repeatability:	0.01~0.99% O_2 ±1.5%FS
	1%~25.00% O_2 ±1.5% of measured value
Stability:	0.01~0.99% O_2 ±1.5%FS/7d
	1%~25.00% O_2 ±1.5% of measured value
Response time:	T_{90}<60s (after full preheating)
Power supply:	DC 24V, 1.5A
Ambient TEMP.:	Electrical module: -10~+50°C head: 0~+200°C (except the probe cable)
Ambient humidity:	<85%RH (transmitter ambient humidity)
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Sample gas flow:	2~6L/min
Communication:	RS485(standard)/RS232(optional)

Frequency conversion ion flow

CI-PC81 High content oxygen analyzer

Product Features

- Double pool thick film co-firing technology, long service life of the sensor;
- Automatic calibration function: the analyzer has automatic calibration function, according to the method specified by the manufacturer to connect the standard gas, can automatically complete the calibration of the analyzer;
- Pressure detection function: test the internal relative pressure of the gas path, determine whether the gas path is blocked, when the sample gas pressure exceeds the set range, it will send an alarm.

Technical Index

Sensor:	3D ion flow oxygen sensor
Measuring range:	10~97.00%/ 99.99%，97%~99.99% O_2
Linear error:	±1%FS
Repeatability:	±0.5%FS
Stability:	±0.5%/7d
Response time:	T_{90}<20s
Power supply:	AC 100~240V, 50/60Hz
Consumption:	<35VA
Data storage:	SD card (standard)/U disk (optional)
Communication:	RS485(standard)/RS232(optional)
Analog signal:	1group,4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V (You can set the mode freely) Load: <500Ω
External input:	5 groups of control signals DC 9-28V
Ambient TEMP.:	-10~+45°C Ambient humidity:<90%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Dimensions:	L×W×H=483mm×300mm×177mm

Ion flow

CI-PC82 High content oxygen analyzer

Product Features

- It has the characteristics of intelligence, good stability, high reliability, long calibration cycle, etc.;
- Window surface covered with a toughened glass,enhance the impact protection of Windows;
- The latest touch key technology,easy to operate,key long service life;
- Menu lock switch: to prevent the impact of misoperation on thenormal operation of the analyzer;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	10~97.00%/ 99.99%, 97%~99.99% O_2
Linear error:	±1%FS
Repeatability:	±0.5%FS
Stability:	±0.5%/7d
Response time:	T_{90}<60s(after full preheating)
Power supply:	AC 100~240V, 50/60Hz
Communication:	RS485(standard)/RS232(optional)
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V, can be set mode freely
Ambient TEMP.:	-10~+55°C
Ambient humidity:	<85%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Instrument life:	More than 5 years(normal use) More than 10 years(normal use)
Dimensions:	L×W×D=188.5mm×98.5mm×207.5mm

CE 3D ion flow

SP-980L High content oxygen analyzer

Product Features

- The 3D ion flow sensor has the characteristics of high test accuracy, long service life, no reference gas, small size, low power consumption;
- Alarm function: when the oxygen concentration deviates from the alarm value, alarm value can be set in the full range of arbitrary;
- It has the characteristics of small volume, good stability, and is very simple to us.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	10~97.00%/ 99.99%, 97%~99.99% O_2
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<60s(after full preheating)
Pipe connection D:	¼"NPT internal thread,standard¼-Φ6 quick twist connector
Connection method:	Terminal
Mounting method:	Dial mounting
Power supply:	AC 100~240V, 50/60Hz
Consumption:	<10VA
Ambient TEMP.:	Operating temperature: -10~+50°C Storage and transportation temperature: -20~+60°C
Ambient humidity:	<90%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Sample gas flow:	400~600ml/min
Analog singal:	4~20mA

3D ion flow

CI-PC825 High content oxygen analyzer

Product Features

- High precision pressure automatic compensation, reduce the impact of pressure on the measurement accuracy;
- Convenient data storage function: the analysis system has the function of timing automatic storage of test data, easy to understand the test situation;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary;
- Communication function: using RS485 (standard)/RS232 (optional) two-way communication.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	10~97.00%/ 99.99%, 97%~99.99% O_2
	97%~99.99% O_2
Linear error:	±2% FS
Repeatability:	±1% FS
Stability:	±1% FS/7d
Response time:	T_{90}<60s(after full preheating)
Pipe connection D:	standard ¼-Φ6.5 Quick screw connectors (replaceable)
Power supply:	AC 100~240V，50/60Hz
Consumption:	<25VA
Ambient TEMP.:	Working environment:-10~+50°C
	Storage and transportation environment: -20~+60°C
Ambient humidity:	<90%RH

CE 3D ion flow

CI-PC84 Online high purity oxygen analyzer

Product Features

- 3D ion flow sensor, high precision, good long-term stability,longer service life;
- Window surface covered with a toughened glass, enhance the impact protection of Windows;
- Capacitive touch key, key sensitive, reliable, simple operation;
- Menu lock switch: to prevent the impact of misoperation on the analyzer;
- Data storage function: time record test data and can quickly query the stored data;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	10~97.00%/ 99.99%, 97%~99.99% O_2
Linear error:	±1%FS
Repeatability:	±0.5%FS
Stability:	±0.5%FS/7d
Response time:	T_{90}<15s
Power supply:	AC 100~240V, 50/60Hz
Consumption:	<20VA
Ambient TEMP.:	-10~+55°C
Ambient humidity:	<85%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Sample gas flow:	400~600ml/min
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V, can be set mode freely
Communication:	RS485(standard)/RS232(optional)
Sensor life:	More than 5 years (normal use)
Instrument life:	More than 10 years (normal use)

CE 3D ion flow

CI-PC86 High content oxygen analyzer

Product Features

- Adopting capacitive touch buttons, the buttons are sensitive, reliable, and easy to operate;
- Built in one-way pump to prevent the analyzer from turning on in high oxygen environments and extend the service life of the sensor;
- Menu lock switch: to prevent the impact of misoperation on thenormal operation of the analyzer;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	10~97.00% / 99.99%, 97~99.99% O_2
Linear error:	±1%FS
Repeatability:	±0.5%FS
Stability:	±0.5%FS/7d
Response time:	T_{90}<15s
Power supply:	AC 100~240V, 50/60Hz
Consumption:	<20VA
Communication:	RS485(standard)/RS232(optional)
Ambient TEMP.:	-10~+55°C
Ambient humidity:	<85%RH
Measurement method:	Gas inlet type
Sample flow:	400~600ml/min
Flow control:	Built-in needle valve
Dimensions:	L×W×H=144mm×144mm×290mm
Installation:	Disk mounted

3D ion flow

CI-PC851High content oxygen analyzer

Product Features

- Microprocessor as the core, good long-term stability, high reliability;
- Menu lock switch: prevent misoperation to change the analyzer parameters and affect its normal operation;
- Data storage: support U disk and SD card data storage, data storage capacity big E facilitate users for data processing and analysis;
- Internal timing data storage and convenient user quickly see test data.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	10~97.00%/ 99.99%, 97%~99.99% O_2
Linear error:	±1%FS
Repeatability:	±0.5%FS
Stability:	±0.5%FS/7d
Response time:	T_{90}<60s(after full preheating)
Measurement method:	Gas inlet type
Calibration cycle:	1 year (recommended)
Power supply:	DC 24V
Consumption:	<25VA
Communication:	RS485(standard)/RS232(optional)
Ambient TEMP.:	0~+45°C
Ambient humidity:	<80%RH
Sample gas flow:	400~600ml/min
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/ 0-10V/1-5V, can be set mode freely Load: <500Ω
Dimensions:	L×W×H=300mm×200mm×175mm

3D ion flow

CI-PC851-1 Explosion-proof high content oxygen analyzer

Product Features

- Microprocessor as the core, good long-term stability, high reliability;
- Menu lock switch: prevent misoperation to change the analyzer parameters and affect its normal operation;
- Data storage: support U disk and SD card data storage, data storage capacity big E facilitate users for data processing and analysis;
- Internal timing data storage and convenient user quickly see test data.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	10~97.00%/ 99.99%, 97%~99.99% O_2
Linear error:	±1%FS
Repeatability:	±0.5%FS
Stability:	±0.5%FS/7d
Response time:	T_{90}<20s
IP Grade:	IP65
EX-mark:	Ex d IIB T6 Gb
Power supply:	DC 24V
Consumption:	<25VA
Communication:	RS485(standard)/RS232(optional)
Ambient TEMP.:	0~+45°C
Ambient humidity:	<80%RH
Sample gas flow:	400~600ml/min
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/ 0-10V/1-5V, can be set mode freely Load: <500Ω
Dimensions:	L×W×H=300mm×200mm×175mm

3D ion flow

CI-PC851-2 Explosion-proof high content oxygen analyzer

Product Features

- The combination of microcontroller and digital processing technology, anti-cross interference, stable and reliable;
- 3D ion flow sensor, high precision, good stability, long service life;
- The latest touch key technology, easy to operate, key long service life;
- With infrared remote control function, you can operate the analyzer through the remote control;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	10~97.00%/ 99.99%, 97%-99.99%
Linear error:	±1%FS
Repeatability:	±0.5%FS
Stability:	±0.5%FS/7d
Response time:	T_{90}<20s
Display resolution:	0.01%
Measurement method:	Online
IP Grade:	Ex d IIC T6 Gb
EX-mark:	IP65
Power supply:	DC 24V,1A
Consumption:	<20VA
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/ 0-10V/1-5V, can be set mode freely Load: <500Ω
Ambient TEMP.:	-10~+45°C
Ambient humidity:	<90%RH
Sample gas flow:	400~600ml/min
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

3D ion flow

GNL-2100L Portable high content oxygen analyzer

Product Features

- With microprocessor as the core, 3D ion flow sensor as the measuring unit, with intelligence, good stability, high precision, long calibration cycle and so on;
- 128×64 LCD screen with long life, the display content is intuitive and rich;
- Capacitive touch key, key sensitive, reliable, simple operation;
- Long standby time: built-in large capacity lithium battery, normal use, standby time is not less than 8 hours.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	10~97.00%/99.99%, 97%~99.99% O_2
Linear error:	±1% FS
Repeatability:	±0.5% FS
Stability:	±0.5% FS/7d
Response time:	T_{90}<20s(after full preheating)
Power supply:	AC 100~240V, 50/60Hz
Consumption:	<25VA
Ambient TEMP.:	-10~+45°C
Ambient humidity:	<80%RH
Intake pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions) Optional negative pressure or slightly positive pressure when operating the air pump
Intake flow:	400~600ml/min
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/ 0-10V/1-5V, can be set mode freely
Communication:	RS485(standard)/RS232(optional)

3D ion flow

CI-PC832 Portable high content oxygen analyzer

Product Features

- With microprocessor as the core, 3D ion flow sensor as the measuring unit, with intelligence, good stability, high precision, long calibration cycle and so on;
- Window surface covered with a toughened glass, enhance the impact protection of windows;
- Built-in large capacity lithium battery, normal use, standby time is more than 3.5 hours;
- High precision pressure automatic compensation, reduce the impact of pressure on the measurement accuracy;
- Convenient data storage function.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	10~97.00%/ 99.99%, 97%~99.99%
Linear error:	±1% FS
Repeatability:	±0.5% FS
Stability:	±0.5% FS/7d
Response time :	T_{90}<20s(after full preheating)
Measurement method:	Portable
Power supply:	AC 100~240V,50/60Hz
Consumption:	<25VA
Working TEMP.:	-10~+45°C Humidity:<80%RH
Intake pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions) Optional negative pressure or slightly positive pressure when operating the air pump.
Intake flow:	400~600ml/min
Air inlet:	Standard1/4-Φ6 quick coupling (replaceable)
Connection:	Φ6 stainless steel pipe

CE 3D ion flow

CI-PC88 High oxygen content transmitter

Product Features

- It has the characteristics of intelligence, good stability, high reliability, long calibration cycle, etc.;
- The circuit adopts digital signal processing, isolation and amplification,frequency intercept design, anti-interference ability is strong;
- Menu lock switch: prevent misoperation to change the analyzer parameters and affect its normal operation;
- Simple structure, easy installation and maintenance.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	10~97.00%/ 99.99%, 97%~99.99% O_2
Linear error:	±1%FS
Repeatability:	±0.5%FS
Stability:	±0.5%FS/7d
Response time:	T_{90}<60s(after full preheating)
Power supply:	DC 24V, power consumption≤10VA
Ambient TEMP.:	-10~+55°C
Ambient humidity:	<80%RH
Sample gas flow:	400~600ml/min
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/ 0-10V/1-5V, can be set mode freely
Communication:	RS232/RS485
Sensor life:	More than 2 years(normal use)
Instrument life:	More than 5 years(normal use)

3D ion flow

CI-PC886 High oxygen content transmitter

Product Features

- It has the characteristics of intelligence, good stability, high reliability, long calibration cycle, etc.;
- The circuit adopts digital signal processing, isolation and amplification,frequency intercept design, anti-interference ability is strong;
- Menu lock switch: prevent misoperation to change the analyzer parameters and affect its normal operation;
- Can be started by the external control signal calibration;
- Simple structure, easy installation and maintenance.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	0~40.00% O_2
Linear error:	±1%FS
Repeatability:	±0.5%FS
Stability:	±0.5%FS/7d
Response time:	T_{90}<60s(after full preheating)
Power supply:	DC 24V, power consumption≤10VA
Ambient TEMP.:	-10~+55°C
Ambient humidity:	<85%RH
Analog singal:	4-20mA/0-20mA, can be set mode freely
Communication:	RS485
External input:	A group of DC 9~28V external control signal
Sensor life:	More than 5 years(normal use)
Instrument life:	More than 10 years(normal use)

3D ion flow

CI1300 Oxygen monitor

Product Features

- 3D ion flow sensor, long life, high precision,fast response time;
- It can be used to measure oxygen concentration in nitrogen and oxygen mixture gas;
- Alarm value in the full range of arbitrary Settings, can choose single point control or range control;
- Full Chinese man-machine dialogue menu, intuitive and convenient operation;
- A variety of communication commands, can be very convenient through the upper computer to control the instrument or data exchange.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	0~40% O_2
Measurement method:	Gas diffusion
Linear error:	±1.5%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<30s
Power supply:	AC 220V±10%, 50/60Hz
Communication:	A group of RS485
Analog singal:	4-20mA/0-20 mA/0-10V output
Ambient TEMP.:	0~+45°C
Ambient humidity:	<80%RH
Gas composition:	Nitrogen oxygen mixtures
Installation:	Wall-mounted
Instrument weight:	About 1.4kg net, about 2.1kg packaged

3D ion flow

CI-PC89 Plateau dispersion oxygen monitor

Product Features

- 3D ion current sensor probe as the measuring unit, the use of advanced digital processing technology, anti-cross interference, high measurement accuracy, good stability, long service life;
- Set oxygen monitoring and control in one, in the measurement of environmental oxygen changes at the same time, the environmental oxygen concentration adjustment, to achieve the human body best adapt to the environment;
- With the function of releasing negative oxygen ions, improve alveolar air exchange function,enhance oxygen absorption rate.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	0~40.00% O_2
Absolute altitude:	0~6000m
Linear error:	±1%FS
Repeatability:	±0.5%FS
Stability:	±0.5%FS/7d
Response time:	T_{90}<20s
Oxygen concentration control:	The microcontroller controls the switch of the oxygen supply valve
Oxygen pressure:	0.2~0.6MPa
Oxygen inlet:	Φ6 quick plug joint
Oxygen outlet:	Diffused, noise reduction processing
Negative ion:	Built-in negative ion generator, can be switched by remote
Communication:	RS485 or wireless(optional)
Power supply:	AC 100~240V, 50/60Hz
Panel color:	● black (standard)、● gold
Ambient TEMP.:	-10~+50°C
Ambient humidity:	<80%RH, no condensate

3D ion flow

CI-PC89M Plateau dispersion oxygen monitor

Product Features

- Oxygen flow range: diffusion hole flow 20L/min adjustable,nasal suction nozzle flow 0~5L/min adjustable;
- Oxygen flow rate 20L/mint, noise JF40dBA;
- 3D ion flow sensor for the measuring unit, the design life of this sensor is 2 times of the ordinary ion flow sensor;
- Real-time online monitoring indoor air oxygen concentration, to ensure the safety of use;
- Provide oxygen concentration, equivalent altitude, absolute altitude, relative humidity, temperature,atmospheric pressure, oxygen supply state display.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	0~40.00% vol O_2
Linear error:	±1%FS
Repeatability:	±0.5%FS
Stability:	±0.5%FS/7d
Response time:	T_{90}<60s
Power supply:	AC 220V±10%, 50/60Hz
Communication:	RS485 (standard) WIFI(optional, supportive of APP viewing and control)
Control mode:	Touch keypad, infrared remote control, APP remote control
Ambient TEMP.:	-10~+50°C
Ambient humidity:	<80%RH, no condensate
Installation:	Wall-mounted
Sensor life:	More than 2 years (normal use)
Instrument life:	More than 5 years (normal use)

3D ion flow

CI-PC896 Plateau dispersion oxygen monitor

Product Features

- Oxygen flow range: 0.5~30L/min, adjustable;
- Oxygen supply flow 20L/mint, noise J\F40dBA;
- 3DE ion flow sensor is used as the measuring unit, the design life of 3D ion flow sensor is 2 times that of ordinary ion flow sensor;
- Real-time online monitoring indoor air oxygen concentration, to ensure the safety of use;
- Set oxygen monitoring and control in one, in the measurement of environmental oxygen changes at the same time, to achieve environmental oxygen concentration regulation;
- 7 inch color touch screen, easy to operate.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	0~40.00% O_2
Linear error:	±1% FS
Repeatability:	±0.5% FS
Stability:	±0.5% FS/7d
Response time:	T_{90}<20s
Power supply:	AC 100~240V, 50/60Hz
Input power:	≤20VA
Control mode:	Touch screen operation, infrared remote control, remote control (communication)
Ambient TEMP.:	-10~+50°C
Ambient humidity:	<80%RH, no condensate
Measuring medium:	Air or inert gas
Storage:	Temperature：-20~+60°C Humidity:<80%RH, no condensate When the TEMP is below 5°C, prior using the equipment, it should be placed in the normal operating temperature environment for 4 hours and above.

3D ion flow

CI-PC668 Plateau dispersion oxygen monitor

Product Features

- With microprocessor as the core, 3D ion flow sensor as the measuring unit, with intelligence, good stability, high precision, long calibration cycle and so on;
- 128×64 LCD screen with long life, the display content is intuitive and rich;
- Capacitive touch key, key sensitive, reliable, simple operation;
- Long standby time: built-in large capacity lithium battery, normal use, standby time is not less than 8 hours.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	0~40%
Linear error:	±1% FS
Repeatability:	±0.5% FS
Stability:	±0.5% FS/7d
Response time:	T_{90}<20s
Oxygen concentration:	0.01%
Oxygen partial pressure:	0.01kPa
Simulated altitude:	1m
Absolute altitude:	1m
Atmospheric pressure:	0.1kPa
Ambient TEMP.:	0.1°C
Relative humidity:	0.1%RH
Absolute humidity:	0.1%AH
Background gas:	N_2, He, Ar and other inert gases

3D ion flow

CI-PT6688 Plateau dispersion oxygen monitor

Product Features

- Control mode: touch operation, infrared remote control, remote control (communication) using 3D ion flow sensor as the measuring unit, 3D ion flow sensor set.Meter service life is 2 times of the ordinary ion current sensor;
- Real-time online monitoring of air oxygen concentration in the environment, to ensure the safety of use;
- 4"color display, display content is rich, intuitive, simple operation;
- 1 year (recommended) storage and transportation pressure, humidity, temperature and other parameters display.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	0~40.00% O_2
Linear error:	±1% FS
Repeatability:	±0.5% FS
Stability:	±0.5% FS/7d
Response time:	T_{90}<15s
Power supply:	AC 220V±10%, 50/60Hz
Consumption:	≤10VA
Control mode:	Touch screen operation, infrared remote control, remote control (communication)
Use environment:	Temperature: -10~+50°C Humidity: <80%RH, no condensate Working pressure: normal pressure
Storage:	Temperature:-20~+60°C; Humidity:<95%RH, no condensate When the TEMP is below 5°C, prior using the equipment, it should be placed in the normal operating temperature environment for 4 hours and above.

3D ion flow

CI-PC836 Oxygen content/ oxygen partial pressure analyzer

Product Features

- Using 4.3"color touch screen as the display window and input device for human-computer interaction, the display content is rich, intuitive, easy to operate;
- Windows surface covered with a toughened glass, enhance the impact protection of Windows;
- Built-in large capacity lithium battery, normal use, standby time is more than 3.5 hours;
- High precision pressure automatic compensation, reduce the impact of pressure on the measurement accuracy.

Technical Index

Sensor:	3D ion flow sensor
Measuring range:	1~40kPa O_2
Linear error:	±1% FS
Repeatability:	±0.5% FS
Stability:	±0.5% FS/7d
Response time:	T_{90}<15s
Power supply:	AC 220V±, 50/60Hz
Consumption:	<15VA
Sample gas TEMP.:	0~+50°C
Intake pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Intake flow:	400~600ml/min
Air inlet:	Standard1/4-Φ6 PTFE pipe joint (replaceable)
Communication:	RS485 or RS232
Alarm:	Alarm point:1 Relay contact capacity: DC 24V, 0.2A
Analog output:	1 group, 4-20mA/0-20mA/0-1V/0-5V/ 0-10V/1-5V, can be set mode freely Load:<500Ω

3D ion flow

CI-PC182 Flue oxygen analyzer

Product Features

- It has the characteristics of intelligence, good stability, high reliability, long calibration cycle, etc.;
- Wide range of use: the probe can be used safely in the temperature range of 0~500°C;
- In-line probe: the probe works in the environment under test, reflecting the oxygen content is real and reliable, fast response speed, low failure rate;
- Weatherproof structure design:the structure design of theanalyzer is all metal shell, and anti-corrosion treatment, the visible window is toughened glass, all the detection parts and electrical modules are in the metal shell, and the sealing is excellent.

Technical Index

Sensor:	Variable frequency ion current sensor
Measuring range:	0~25.00% O_2
Model:	CI-PC182 (all-in-1 tape display) CI-PC182-1 1 (split tape secondary instrument) CI-PC182-2 2 (explosion-proof split tape secondary instrument)
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<60s(after full preheating)
Consumption:	<20VA
Analog output:	4-20mA/0-20mA(configurable)
Probe insertion depth:	400mm、600mm(standard E)、1500mm (or other sizes customized)
Ambient TEMP.:	-10~+50°C
Ambient TEMP. measured:	0~+500°C
Ambient humidity:	<90%RH

Frequency conve-rsion ion flow

CI-PC191/-1 Series direct inserted flue oxygen analyzer

Product Features

- It has the characteristics of intelligence, good stability, high reliability, long calibration cycle, etc.;
- Menu lock function: prevent misoperation to modify the analyzer parameters and affect its normal operation;
- Temperature alarm and temperature protection function: when the internal temperature of the watch head exceeds 60°C, the temperature alarm will be issued. When it exceeds 70 °C, the heating voltage of the sensor will be reduced to protect the temperature of the analyzer;
- One way single knife single throw alarm function (optional).

Technical Index

Model:	CI-PC191 (basic version) CI-PC191-1 (with heat model)
Range:	0~25.00% O_2
Linear error:	0.01%~0.1%: ±3%FS 0.01%~1%: ±3%FS 0.01%~25%: ±2%FS
Repeatability:	Please refer to CI-PC192 on page 37
Stability:	±1% FS/7d
Response time:	T_{90}<60s (after full preheating)
Power supply:	DC 24V, 7A
Communication:	RS232(standard)/RS485(optional)
Ambient TEMP.:	-10~+60°C
Probe ambient TEMP.:	CI-PC191 is 0~+450°C CI-PC191-1 is 0~+180°C
Probe insertion depth:	600mm、800mm、1000mm、1200mm、1500mm、1800mm (can be customized according to user needs)

Frequency conversion ion flow

CI-PC192 Flue oxygen analyzer system

Product Features

- It has the characteristics of intelligence, good stability, high reliability, long calibration cycle, etc.;
- Menu lock function: prevent misoperation to modify the analyzer parameters and affect its normal operation;
- Automatic calibration function: can automatically-complete the calibration of the instrument;
- Automatic backblowing function: according to the instrument settings to automatically complete the instrument purging;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set in the full range of arbitrary.

Technical Index

Sensor:	Variable frequency ion flow sensor
Range:	0.01%~25.00% O_2
Linear error:	0.01%~0.1%: ±2%FS 0.01%~1%: ±2%FS 0.01%~25%: ±2%FS
Repeatability:	0.01%~0.1%: ±1%FS 0.01%~1%: ±1%FS 0.01%~25%: ±1%FS
Stability:	±1% FS/7d
Response time:	T_{90}<60s (after full preheating)
Power supply:	AC 100~240V, 50/60Hz
Communication:	RS485(standard)/RS232(optional)
Ambient TEMP.:	-10~+50°C
Probe ambient TEMP.:	Conventional type: 0~+500°C High temperature resistant type: 0~+700°C Ultra-high temperature resistance type:0~+1200°C
Measurement method:	Catapult type

Frequency conversion ion flow

CI-PC152 Explosion-proof flue oxygen analyzer

Product Features

- The combination of microcontroller and digital processing technology, analyzer has complete self-diagnosis function,intelligent, stable and reliable;
- Data storage function: time record test data and can quickly query the stored data;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set arbitrarily in the full range;
- Communication function: using RS232/RS485 two-way communication, can communicate with computer or other digital communication equipment directly.

Technical Index

Sensor:	Frequency conversion ion current sensor
Measuring range:	0~25.00%vol O_2
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<60s
EX-mark:	Ex d IIC T6 Gb
IP Grade:	IP65
Installation:	DN50-65 flange
Sampling method:	Insert measurement
Power supply:	DC 24V, 1A
Consumption:	<20VA
Ambient TEMP.:	Measured working temperature: CI-PC152: +180~+450°C CI-PC152H: 0~+180°C The electrical module: -10~+50°C
Storage:	TEMP:-20~+60°C Humidity:<90%RH

Frequency conversion ion flow

CI-PC168-O_2 Flue oxygen analyzer

Product Features

- Microcontrollers and digital processing technology, the combination of the analyzer has the complete self-diagnosis function, intelligent, stable, and reliable;
- Using frequency ion flow sensor for measuring unit, high precision,calibration cycle is long;
- Integrated structure design, easy installation, zero maintenance;
- Data storage function: time record test data and can quickly query the stored data;
- Communication function: using RS232/RS485 two-way communication.

Technical Index

Sensor:	Frequency conversion ion current sensor
Measuring range:	0~25.00%vol O_2
Linear error:	±2%FS (Linear error only applies to communication output, mode Pseudo-signal may have additional error due to signal acquisition)
Repeatability:	±1%FS
Stability:	±1%FS/7d
Installation:	DN50-65 flange
Working method:	Online
Sampling method:	Insert measurement
Power supply:	Standard:AC 100~240V, 50/60Hz Optional:DC 24V, ⩾2.5A
Working TEMP.:	Measured working temperature:0~+300°C, no condensate Electrical module temperature:-10~+50°C
Storage:	TEMP: -20~+60°C Humidity: <90%RH
Sample gas pressure:	Atmospheric conditions±10%

Frequency conversion ion flow

CI-PC30 Dew point analyzer

Product Features

- With microprocessor as the core, ultra-thin alumina capacitive sensor as the measuring unit, with intelligence, good stability, high precision, long calibration cycle and so on;
- Dew point value and volume fraction display at the same time, to meet the different needs of users;
- Menu lock switch: prevent misoperation to change the analyzer parameters affect its normal operation;
- When the dew point deviates from the alarm value, an alarm will be issued. The alarm value can be set arbitrarily in the full scale range.

Technical Index

Sensor:	Ultra-thin alumina capacitive sensor
Measuring range:	-60°C~+20°C (basic)
	-80°C~+20°C (standard)
	-100°C~+20°C (extension)
Linear error:	±3°C(-80~-60°C)
	±2°C(-60~+20°C)
Repeatability:	±0.5°C
Zero drift:	±1%FS/7d
Range drift:	±1%FS/7d
Response time:	63%[90%] range at +20°C and 1bar pressure
	-60→-20°C Td 5s[10s]
	-20→-60°C Td 45s[10min]
Power supply:	AC 100~240V, 50/60Hz
Consumption:	<5VA
Communication:	RS485(standard)/RS232(optional)
Ambient TEMP.:	0~+45°C Ambient humidity:<80%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

CE Capacitive

CI-PC31 Dew point analyzer

Product Features

- With microprocessor as the core, ultra-thin alumina capacitive sensor as the measuring unit, with intelligence, good stability, high precision, long calibration cycle and so on;
- Menu lock switch: prevent misoperation to change the analyzer parameters affect its normal operation;
- When the oxygen concentration deviates from the alarm value, the alarm value can be set arbitrarily in the full scale range.

Technical Index

Sensor:	Ultra-thin alumina capacitive sensor
Measuring range:	-60°C~+20°C (basic)
	-80°C~+20°C (standard)
	-100°C~+20°C (extension)
Linear error:	±3°C(-80~-60°C)
	±2°C(-60~+20°C)
Repeatability:	±0.5°C
Zero drift:	±1%FS/7d
Range drift:	±1%FS/7d
Response time:	63%[90%] range at +20°C and 1bar pressure
	-60→-20°C Td 5s[10s]
	-20→-60°C Td 45s[10min]
Power supply:	AC 100~240V, 50/60Hz
Consumption:	<20VA
Communication:	RS485(standard)/RS232(optional)
Ambient TEMP.:	0~+45°C Ambient humidity:<80%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Sample gas flow:	2~3L/min

CE Capacitive

CI-PC35 Dew point analyzer

Product Features

- Microprocessor as the core, good long-term stability, high reliability;
- Using ultra-thin alumina capacitive sensor as measuring unit, high precision, long calibration cycle;
- Dew point value and volume fraction are displayed at the same time to meet the different needs of users;
- Menu lock switch: prevent misoperation to change the analyzer parameters affect its normal operation;
- An alarm will be issued when the dew point value deviates rom the alarm value, which can be set arbitrarily in the full scale range.

Technical Index

Sensor:	Ultra-thin alumina capacitive sensor
Measuring range:	-60°C~+20°C (basic)
	-80°C~+20°C (standard)
	-100°C~+20°C (extension)
Linear error:	±3°C(-80~-60°C)
	±2°C(-60~+20°C)
Repeatability:	±0.5°C
Zero drift:	±1%FS/7d
Range drift:	±1%FS/7d
Response time:	T_{90}<30s
Power supply:	DC 24V, 1A
Communication:	RS485(standard)/RS232(optional)
Ambient TEMP.:	0~+45°C Ambient humidity:<90%RH
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/
	0-10V/1-5V, can be set mode freely
	Load:<500Ω
Sample gas flow:	3~5L/min
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

CE Capacitive

CI-PC35-1 Explosion-proof dew point analyzer

Product Features

- Microprocessor as the core, good long-term stability, high reliability;
- Using ultra-thin alumina capacitive sensor as measuring unit, high precision, long calibration cycle;
- Dew point value and volume fraction are displayed at the same time to meet the different needs of users;
- Menu lock switch: prevent misoperation to change the analyzer parameters affect its normal operation;
- An alarm will be issued when the dew point value deviates rom the alarm value, which can be set arbitrarily in the full scale range.

Technical Index

Sensor:	Ultra-thin alumina capacitive sensor
Measuring range:	-60°C~+20°C (basic)
	-80°C~+20°C (standard)
	-100°C~+20°C (extension)
Linear error:	±3°C(-80~-60°C)
	±2°C(-60~+20°C)
Repeatability:	±0.5°C
Zero drift:	±1%FS/7d
Range drift:	±1%FS/7d
Response time:	T_{90}<30s
EX-mark:	Ex d IIB T6 Gb
Power supply:	DC 24V
Communication:	RS485(standard)/RS232(optional)
Ambient TEMP.:	0~+45°C Ambient humidity:<90%RH
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V
	/0-10V/1-5V, can be set mode freely
	Load:<500Ω
Sample gas flow:	3~5L/min
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

Ex Capacitive

CI-PC35-2 Explosion-proof dew point analyzer

Product Features

- The combination of microcontroller and digital processing technology, anti-cross interference, stable and reliable;
- Using ultra-thin alumina capacitive sensor as measuring unit, high precision, long calibration cycle;
- Synchronous display dew point value and volume ratio, to meet the different needs of users;
- With infrared remote control function, you can operate the analyzer through the remote control;
- Menu lock switch: prevent misoperation to change the analyzer parameters and affect its normal operation.

Technical Index

Sensor:	Ultra-thin alumina capacitive sensor
Measuring range:	-60°C~+20°C (basic)
	-80°C~+20°C (standard)
	-100°C~+20°C (extension)
Linear error:	±3°C(-80~-60°C)
	±2°C(-60~+20°C)
Repeatability:	±0.5°C
Zero drift:	±1%FS/7d
Range drift:	±1%FS/7d
Response time:	63%[90%] range at +20°C and 1bar pressure
	-60→-20°C Td 5s[10s]
	-20→-60°C Td 45s[10min]
EX-mark:	Ex d IIC T6 Gb
IP Grade:	IP65
Ambient TEMP.:	-10~+45°C Ambient humidity:<90%RH
Sample gas flow:	3~5L/min
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

Capacitive

CI-PC36 Dew point analyzer

Product Features

- With microprocessor as the core, it has the characteristics of intelligence, good stability and high reliability;
- With ultra-thin alumina capacitive sensor as the measuring unit, high precision, long calibration cycle;
- Menu lock switch: prevent misoperation to change the analyzer parameters and affect its normal operation;
- An alarm will be issued when the dew point value deviates from the alarm value, which can be set arbitrarily in the full scale range.

Technical Index

Measuring range:	-60°C~+20°C (basic)
	-80°C~+20°C (standard)
	-100°C~+20°C (extension)
Linear error:	±3°C(-80~-60°C)
	±2°C(-60~+20°C)
Repeatability:	±0.5°C
Zero drift:	±1%FS/7d
Range drift:	±1%FS/7d
Response time:	63%[90%] range at +20°C and 1bar pressure
	-60→-20°C Td 5s[10s]
	-20→-60°C Td 45s[10min]
Power supply:	AC 100~240V, 50/60Hz
Ambient TEMP.:	0~+45°C Ambient humidity:<90%RH
Sample gas TEMP.:	0~+50°C
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Communication:	RS485(standard)/RS232(optional)
Dimensions:	W x H x D=144mm x 144mm x 251mm

Capacitive

GEN-25 Portable intelligent dew point analyzer

Product Features

- Good long-term stability, high reliability, high precision, long calibration cycle;
- Dew point value and volume fraction display at the same time (ppm/V), to meet the different needs of users;
- Built-in large capacity lithium battery, standby time can reach more than 48 hours;
- Menu lock switch: prevent misoperation to change the analyzer parameters and affect its normal operation;
- When the dew point value deviates from the alarm value, an alarm will be issued, and the alarm value can be set arbitrarily in the full range.

Technical Index

Sensor:	Ultra-thin alumina capacitive sensor
Measuring range:	-60°C~+20°C (basic)
	-80°C~+20°C (standard)
	-100°C~+20°C (extension)
Linear error:	±3°C(-80~-60°C)
	±2°C(-60~+20°C)
Repeatability:	±0.5°C
Zero drift:	±1%FS/7d
Range drift:	±1%FS/7d
Response time:	63%[90%] range at +20°C and 1bar pressure
	-60→-20°C Td 5s[10s]
	-20→-60°C Td 45s[10min]
Power supply:	AC 100~240V, 50/60Hz
Consumption:	<20VA
Connection port:	DB-15 Female
Ambient TEMP.:	0~+45°C Ambient humidity:<80%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

CE Capacitive

GEN-26 Series portable intelligent dew point analyzer

Product Features

- Compatible with a variety of sensor technology polymer film, alumina, QCM crystal vibration sensor, can be applied to a variety of measurement range;
- Pressure sensor based on MEMS, can simultaneously monitor dew point and online pressure;
- Up to 10+dew-point check and multi-point temperature compensation provide accuracy measurements up to ±2 Ctd(see technical specifications);
- Built-in 96Wh large capacity lithium battery to avoid data recording interruption due to unexpected power failure;
- Ultra-fast response speed;
- Excellent long-term stability.

Technical Index

Measurement range:

Dew point:	-60...+60 °Ctd	GEN-26Ax
	-80...+20 °Ctd	GEN-26Bx
	-110...+20 °Ctd	GEN-26Cx
Temperature:	-40...+100 °C	
Pressure:	0...1.7 MPa(a) (optional)	

Measurement accuracy:

Dew point:	+60...-60 °Ctd	±2 °Ctd
	-60...-110 °Ctd	±3 °Ctd
Temperature:	0...+50 °C	± 0.3 °C(standard)
	40...0 °C & +50...+100 °C	± 0.5 °C(standard)
Dew point measurement:	63% [90%], 20 °C, 1bar(a), 4L/min	
	-50 →+20 °Ctd	20 sec [40 sec]
	+20 →-50 °Ctd	1 min [3 min]
Pressure measurement:	<1 sec	
Show:	7.0" Touch LCD screen	
Power supply:	AC 220V 10 W	

CI-TM Series dew point transmitter

Product Features

- The new polymer film sensor technology to improve signal and stability to the extreme ensures the full range of high precision measurement;
- Anti cold condensation, anti particulate pollution, oil vapor and most chemicals;
- Excellent temperature drift compensation ensures high precision measurement in a wide temperature range;
- Based on the powerful microprocessor and strong circuit design to provide ultra-high signal resolution and excellent antiinterference ability;
- IP65 protection grade, even bad environment can also provide good protection.

Technical Index

Polymer film sensor

-60°C...+20°Ctd	CI-TM01
-60°C...+60°Ctd	CI-TM01-1 (aluminum alloy)
-60°C...+20°Ctd	CI-TM02
-60°C...+60°Ctd	CI-TM02-1 (stainless steel)

Alumina capacitance sensor

-80°C...+20°Ctd	CI-TM07
-100°C...+20°Ctd	CI-TM07-1

Measuring range: -40...+100°C range customizable

Dew point range: TM01/02

+60...-20°C ±2°Ctd (standard)

±0.5°Ctd (customized)

-20...-60°C ±2°Ctd

TM07

+20...-60°C ±2°Ctd

-60...-100 °C ±3°Ctd

TEMP. accuracy: 0...+50°C ±0.3°C(standard)

-40...0°C and +50...+100 °C

±0.5°C(standard) , customize accuracy

Response time: 63% [90%], 20°C, 1bar(gauge), 4L/min

Capacitive

CI-BM Series dew point transmitter

Product Features

- New alumina silicon oxide and polymer thin film sensor technology;
- Automatic heating calibration function;
- Ultra fast response speed and excellent long-term stability;
- Anti condensation, anti particle pollution, oil vapor, and most chemicals;
- Provide comprehensive sensors through standard RS-485 interface and service software;
- IP65 protection grade, even bad environment can also provide good protection.

Technical Index

Polymer film sensor

-60°C...+20°Ctd	CI-BM02
-60°C...+60°Ctd	CI-BM02-1

Alumina capacitance sensor

-80°C...+20°Ctd	CI-BM07
-100°C…+20°Ctd	CI-BM07-2

Measuring range: -40...+100°C range customizable

Dew point range: BM02/-1

+60...-20°C ±2°Ctd (standard)

±0.5°Ctd (customized)

-20...-60°C ±2°Ctd

BM07/-2

+20...-60°C ±2°Ctd

-60...-100 °C ±3°Ctd

TEMP accuracy: -40...0°C and +50...+100 °C

±0.5°C(standard) , customize accuracy available

Response time: 63% [90%], 20°C, 1bar(gauge), 4L/min

Electromagnetic compatibility: Symbol IEC 61326-1

Capacitive

CI-QM Series dew point transmitter

Product Features

- The new QCM sensor technology measures humidity as low as -110°Ctd;
- Precision measurements up to ±3° ctd;
- Innovative online anti-pollution technology;
- Ultra-fast response speed and excellent long-term stability;
- Multi-point temperature compensation check before leaving the factory;
- Through the standard RS485 interface and powerful service software, to provide comprehensive sensor settings, data transmission, software upgrade and maintenance functions.

Technical Index

Dew point accuracy:	-110°C...0°Ctd	CI-QM02
	-120°C...0°Ctd	CI-QM03
	-20...-80°C	±2°Ctd
	-80...-120°C	±3°Ctd
Normal measurement:	16...30V/30 mA + 4-20mA current	
Working TEMP.:	-20...+70°C	
Storage TEMP.:	-30...+80°C	
Phase humidity:	0...95 %RH	
Sample gas flow:	>1 L/min	
Pressure:	0...16 bar	
Case:	Stainless steel	
IP Grade:	IP65	
Connection of mechanical parts:	ISO G 1/2"	
Stainless steel mesh filter:	Filtration grade 30-45um	
Electromagnetic compatibility:	Symbol IEC 61326-1	

Crystal oscillation

CI-BM05 Oil water and temperature transmitter

Product Features

- Continuous online measurement of moisture content in oil;
- Measuring water activity, can calculate the value of PPM (w) in oil;
- Measurement of transformer oil, hydraulic oil, lubricating oil, engine oil, diesel oil;
- Excellent temperature and pressure resistance and fast response speed;
- Innovative temperature compensation algorithm and multipoint temperature compensation check before the factory;
- Excellent anti-interference ability.

Technical Index

Water activity measurement range:	0...1aw	
Oil TEMP. measurement range:	-40...+100°C	
Water activity accuracy:	0...0.9	±0.02
	0.9...1.0	±0.03
	0...+50°C	±0.3°C(standard)
TEMP. accuracy:	-40...0°C & +50...+100°C	±0.5°C(standard)
	Temperature accuracy requirements can be customized	
Dry to wet (typical value) :	<1min	
Current output:	4...20mA (3-wire) (range can be changed)	
Resolution:	0.002mA	
Current output TEMP. drift:	0.01% of span /°C	
Load:	Maximum 500Ω	
Working TEMP.:	-20...+70°C	
Storage TEMP.:	-40...+80 °C	

CE Capacitive

CI-BM145/147 Dew point and pressure transfer for compressed air

Product Features

- New polymer film sensor technology and pressure sensor based on MEMS;
- Precision measurement up to±2Ctd;
- Innovative temperature compensation algorithm and multipoint temperature compensation check before delivery, greatly improve the temperature drift of the sensor, to ensure a wide range of high precision measurement;
- Anti-cold condensation dew, anti-particle pollution, oil steam and most chemicals.

Technical Index

Measurement range:

Dew point :	-60...+20 °Ctd	BM147
	-60...+60 °Ctd	BM147-1
	-60...+20°Ctd	BM145-1
Pressure:	absolute pressure 1...17 bar	
Temperature:	-40...+100°C range to order	

Measurement accuracy:

Dew point :	+60...-20°Ctd	±2°Ctd(standard)
		±0.5°Ctd(customized)
	-20...-60 °Ctd	±2°Ctd
Temperature:	0...+50°C ±0.3°C(standard)	
	-40...0°C & +50...+100 °C	
	±0.5°C(standard) accuracy can be customized	
Pressure:	23°C ±0.3 %FS pressure drifts with TEMP	
	±0.01 bar/10°C	
Relative humidity:	0...95 %RH	
Sample gas flow:	>1 L/min	
Pressure:	0...50 bar	
IP Grade:	IP65	

Capacitive

CI-DM191x Dew point instrument with integrated display and alarm function

Product Features

- Compatible with a variety of sensor technology: polymer film, alumina, QCM crystal vibration sensor, can be applied to a variety of measurement range;
- Mems-based pressure sensor, can simultaneously monitor dew point and online pressure (absolute pressure 1~1.7MPa);
- Up to 10 + dew-point check and multi-point temperature compensation provide accuracy measurement up to ±2 Ctd (see technical parameter sheet);
- Ultra-fast response speed.

Technical Index

Measurement range:

Dew point:	DM191A -60...+60 °Ctd(range reference selection table)	
	DM191B -80...+20 °Ctd	
Temperature:	DM191C -110...+20 °Ctd	
Pressure:	-40...+100 °C	
	0... 1.7 MPa(a) (optional)	

Measurement accuracy:

Dew point:	+20...-60 °Ctd	±2 °Ctd
	-60...-80 °Ctd	±3 °Ctd
Temperature:	-80...-110 °Ctd	±3 °Ctd
	0...+50 °C	±0.3 °C (standard)
	-40...0 °C & +50...+100 °C	±0.5 °C (standard)
Dew point measurement:	63% [90%], 20 °C, 1bar(a), 4L / min	
	-50 +20 °Ctd	20 sec [40 sec]
	+20 -50 °Ctd	1 min [3 min]
Pressure measurement:	< 1 sec	
Power supply:	DC 16...30V Max 150mA @DC 24V	
Storage TEMP.:	-40...+80 °C	

CI-PC38 Dew point transmitter

Product Features

- The combination of microcontroller and digital processing technology, anti-cross interference, stable and reliable;
- Using ultra-thin alumina capacitive sensor as measuring unit, high precision, long calibration cycle;
- RS485 communication mode;
- Isolated analog signal output, support software switching 0-20mA/4-20mA analog output mode.

Technical Index

Sensor:	Ultra-thin alumina capacitive sensor
Measuring range:	-60°C~+20°C (basic) -80°C~+20°C (standard) -100°C~+20°C (extension)
Linear error:	-80~-60°C ±3°C -60~+20°C ±2°C
Repeatability:	±0.5°C
Zero drift:	±1%FS/7d
Range drift:	±1%FS/7d
Response time:	63%[90%] range at temperature of 20°C and pressure of 1bar -60→-20°C Td 5s[10s] -20→-60°C Td 45s[10min]
Mounting method:	Equipped with mounting bracket
Air circuit D:	1/4 inch NPT thread, standardΦ6.5 hose connector
Ambient TMEP.:	-10~+45°C Ambient humidity: <90%RH
Sample gas flow:	1~3L/min
Sample gas pressure:	0.3~0.6Mpa，0.5Mpa recommended (air outlet should be atmospheric pressure)

Capacitive

CI-PC63-DP Portable laser dew point meter

Product Features

- Using laser principle, with the advantages of accurate measurement, fast response, high sensitivity, stability and reliability;
- Preventive maintenance diagnosis, low maintenance;
- 128×64OLED screen window display dew point value, menu, data and instrument working state, intuitive display, rich content;
- Dew point value and volume ratio display at the same time, to meet the different needs of users;
- Using touch key technology, easy to operate, key long service life;
- Using RS485 (standard) /RS232 (optional) two-way communication.

Technical Index

Principle:	Laser principle TDALS
Dew point range:	-60°C~+20°C(basic type) -80°C~+20°C(standard)
Linear error:	-80°C~+60°C ±1°C -60°C~+60°C ±0.5°C
Repeatability:	±0.5°C
Zero drift:	±1%FS/7d
Range point drift:	±1%FS/7d
Response time:	63%[90%] range at temperature of 20° C and pressure of 1bar -60→-20°C Td 5s[10s] -20→-60°C Td 45s[90s]
Display resolution:	0.1°C
Analog singal:	1 group
Analog singal mode:	4-20mA/0-20mA, software switching is supported
Ambient TEMP.:	-20°C~+50°C
Storage TEMP.:	-20°C~+60°C

TDLAS

CI-PC631 In-Situ laser microwater analyzer

Product Features

- It has hydrophobic characteristics to ensure accurate measurement while filtering out other impurities to ensure optical signal transmittance;
- Has a wide range of applications (gas and liquid), very low maintenance requirements, high reliability and long-term stability;
- Reliable measurement results can be guaranteed under harsh measuring conditions and when the gas is contaminated;
- The multi-reflection path is adopted, which provides a longer effective optical path than the single path.

Technical Index

Principle:	Laser principle TDALS
Measuring range:	0~200ppm /1000ppm H_2O
Linear error:	±1%FS
Repeatability:	±1%FS /7d
Zero drift:	±0.1% FS /7d
Response time:	T_{90}<30s
Resolution:	0.1ppm
Analog singal:	1 group
Communication:	RS485
Working TMEP.:	-10~+50°C
Storage TMEP.:	-20~+60°C
Ambient humidity:	<80%RH
Power supply:	DC 24V, 0.5A
Weight:	About 1.85kg (including the sealed cover of the test chamber)
Monitor:	2.8 inches (320*240) touch screen
Output mode:	4-20mA/0-20mA/0-1V/0-5V/0-10V/1-5V support for software switching

CI-DM302 Series wall-mounted dew point meter

Product Features

- Compatible with a variety of sensor technology: polymer film, alumina, QCM crystal vibration sensor, can be applied to a variety of measurement range;
- Pressure sensor based on MEMS, which can simultaneously monitor dew point and on-line pressure up to 10 + dew point check and multi-point temperature compensation provide accuracy measurement up to ±2Ctd (see technical parameter sheet);
- Excellent long-term stability;
- Ultra-fast response speed.

Technical Index

Measurement Range:

Dew point:	-60...+60 °Ctd	CI-DM302Ax
	-80...+20 °Ctd	CI-DM302Bx
	-110...+20 °Ctd	CI-DM302Cx
Tmperature:	-40...+100 °C	
Pressure:	0...1.7 MPa(a) (optional)	

Measurement Accurary:

Dew point:	+60...-60 °Ctd	±2 °Ctd
	-60... -110 °Ctd	±3 °Ctd
Temperature:	0...+50 °C	± 0.3 °C (standard)
	-40...0 °C & +50...+100 °C	± 0.5 °C (standard)
Dew point measurement:	63% [90%], 20 °C, 1bar(a), 4L/min	
	-50 →+20 °Ctd	20 sec [40 sec]
	+20→ -50 °Ctd	1 min [3 min]
Pressure measurement:	<1 sec	
Power supply:	AC 220V 10W	
Working TMEP.:	0~+50°C	

CI-PC382 Trace moisture transmitter

Product Features

- The combination of microcontroller and digital processing technology, anti-cross interference, stable and reliable;
- Using ultra-thin alumina capacitive sensor as measuring unit, high precision, long calibration cycle;
- RS485 communication mode;
- Isolated analog signal output, support software switching 0-20mA/4-20mA analog output mode.

Technical Index

Sensor:	Electrolysis sensor
Measuring range:	0~500ppmV H_2O(can be customized according to customer requirements)
Linear error:	0~10ppm ±3%FS 10~500ppm ±5%FS
Repeatability:	0~10ppm ±1.5%FS 10~500ppm ±2.5%FS
Stability:	0~10ppm ±1.5%FS/7d 10~500ppm ±2.5%FS/7d
Response time:	T_{63}<3min
Coating period:	6 months, depending on use, the higher the concentration measured, the shorter the coating period
Calibration period:	2 years (recommended)
Power supply:	DC 24V
Transmitter power:	<15VA
Ambient TEMP.:	-10~+50°C Ambient humidity: <90%RH
Flow rate:	20L/h(there must be flow rate when measuring)

P_2O_5

CI-PC329 Trace moisture analysis system

Product Features

- Windows surface covered with a toughened glass, enhanced impact protection for windows;
- Menu lock switch: prevent misoperation change analysis system parameters affect its positive analog output: 1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/1-5V, can be set mode freely;
- Data storage function: periodically record test data and can quickly query stored data;
- When humidity deviates from the alarm value, an alarm will be issued. The alarm value can be in the full range of air source pressure.

Technical Index

Sensor:	Electrolysis sensor
Measuring range:	0~500ppm H_2O
Linear error:	Soil 5% of the measured value,min0.4ppm
Reproducibility:	±2% (10.0ppmt)
Stability:	±1%FS/7d
Response time:	<1 second
Recovery time:	T_{50}<2min
Power supply:	AC 100~240V, 50/60Hz
Consumption:	<20VA
Communication:	RS485
Ambient TEMP.:	+5~+45°C Ambient humidity: <80%RH
Mpa:	0.2~0.5MPa
Sample gas pressure:	Max 0.1MPa when flowing through the sensor (after pressure adjustment first Pitch valve step-down)
Sample gas flow:	300~400ml/min

P_2O_5

CI-PC312 H_2O Microwater analyzer

Product Features

- Preventive maintenance diagnosis, low maintenance;
- Using 7-inch color touch screen as the human-computer interaction window, the display is beautiful, the content is rich, and the operation is simple;
- Standard 3U chassis design, can be used with pre-treatment system for various working conditions;
- The surface of the window is covered with a piece of toughened glass to enhance the impact protection of the window;
- When the gas concentration deviates from the alarm value, an alarm is issued, and the alarm value can be set within the full range.

Technical Index

Principle:	Electrolysis
Measuring range:	0~500ppm
Linear error:	0~10ppm ±3%FS
	10~500ppm ±5%FS
Response time:	H_2O: T_{63}<3min
Calibration period:	1 year (recommended)
Sensor life:	More than 3 years (normal use)
Instrument life:	More than 5 years (normal use)
Ambient TEMP.:	0~+40°C
Storage TEMP.:	-20~+60°C
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Sample gas flow:	H_2O: 300~400ml/min
Ambient humidity:	<80%RH
Communication:	RS485 (standard)/RS232 (optional)

P_2O_5

CI-PC50 Online thermal conductivity analyzer

Product Features

- Using advanced thermal conductivity sensor as the measurement unit, using advanced digital processing technology, anti-cross-interference, high stability, strong reliability, etc.;
- The front of the analyzer is covered with a tempered glass, which is not only beautiful, but also has a good protective effect;
- The analyzer has two groups of interfering gas compensation signal input ports, which can eliminate the influence of interfering gases on measurement accuracy.

Technical Index

Sensor:	Thermal conductivity sensor
Measuring range:	Please refer to page 50, CI-PC53
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<10s
Background gas:	N_2、Ar、CO_2、CH_4 etc. (must be specified when ordering)
Power supply:	AC 100~240V, 50/60Hz, analyzer power <25VA
Communication:	RS485 (standard)/RS232 (optional)
Ambient TEMP.:	-10~+45°C
Ambient humidity:	<90%RH
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/1-5V, can be set mode freely 6 groups, relay contact capacity: DC 24V, 0.2A
Interference compensation:	Input signal mode:4-20mA/0-20mA/0-1V/0-5V/0-10V/1-5V Purpose: Disturbing gas compensation

CE TCD

CI-PC53 Portable thermal conductivity analyzer

Product Features

- With microprocessor as the core and thermal conductivity sensor as the measurement unit, it has the characteristics of intelligence, good stability, high precision and long calibration cycle;
- Interfering gas compensation function: the analyzer has an interfering gas compensation function to eliminate the influence of interfering gases on measurement accuracy;
- Menu lock switch: prevent misoperation from changing analyzer parameters and affecting its normal operation.

Technical Index

Sensor: Thermal conductivity sensor
Linear error: ±2%FS
Repeatability: ±1%FS
Stability: ±1%FS/7d
Response time: T_{90}<30s
Power supply: AC 100~240V, 50/60Hz
External control: Quantity: 1 group
Control signal: DC 9~28V
Purpose: control air pump (optional)
Sample gas pressure: Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Negative pressure, slightly positive pressure (optional) when the air pump is configured

Heat transfer gas	The smallest possible range
H_2	0~100%
He	0~2%
Ar	0~10%
CO_2	0~20%
CH_4	0~15%
Blast furnace gas H_2	0~10%
In sour converter gas H_2	0~20%
In wood gasification H_2	0~30%

CI-PC55 Thermal conductivity analyzer

Product Features

- With a microprocessor as the core and a thermal conductivity sensor as the measurement unit, it has the characteristics of intelligence, good stability, high precision, and long calibration cycle;
- Interference gas compensation function: eliminate the influence of interference gas on measurement accuracy;
- Menu lock switch: prevent misoperation from changing analyzer parameters and affecting its normal operation;
- Data storage: support U disk and SD card data storage, large data storage capacity and convenient for users to process and analyze data.

Technical Index

Sensor: Thermal conductivity sensor
Measuring range: Please refer to page 50, CI-PC53
Linear error: ±2%FS
Repeatability: ±1%FS
Stability: ±1%FS/7d
Response time: T_{90}<30s
Power supply: DC 24V
Consumption: <15VA
Communication: RS485 (standard)/RS232 (optional)
Analog singal: 1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/1-5V, can be set mode freely
Load:<500Ω
Ambient TEMP.: -10~+45°C Ambient humidity:<90%RH
Sample gas flow: 200~400ml/min
Sample gas pressure: Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Negative pressure, slightly positive pressure (optional) when the air pump is configured

CI-PC55-1 Explosion-proof thermal conductivity analyzer

Product Features

- With a microprocessor as the core and a thermal conductivity sensor as the measurement unit, it has the characteristics of intelligence, good stability, high precision, and long calibration cycle;
- Interference gas compensation function: eliminate the influence of interference gas on measurement accuracy;
- Menu lock switch: prevent misoperation from changing analyzer parameters and affecting its normal operation;
- Data storage: support U disk and SD card data storage, large data storage capacity and convenient for users to process and analyze data.

Technical Index

Sensor:	Thermal conductivity sensor
Measuring range:	Please refer to page 50, CI-PC53
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<30s
EX-Mark:	Ex d IIB T6 Gb
IP Grade:	IP64
Power supply:	DC 24V
Consumption:	<15VA
Communication:	RS485 (standard)/RS232 (optional)
Analog singal:	1group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V, can be set mode freely Load: <500Ω
Ambient TEMP.:	-10~+45°C Ambient humidity:<90%RH
Sample gas flow:	200~400ml/min
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions) Negative pressure, slightly positive pressure (optional) when the air pump is configured

CI-PC551-2 Explosion-proof thermal conductivity analyzer

Product Features

- Combining microcontroller with digital processing technology, anti-cross interference, stable and reliable;
- Using capacitive touch buttons, the buttons are sensitive, reliable and easy to operate;
- With infrared remote control function, the analyzer can be operated by remote control;
- Menu lock switch: prevent misoperation from changing analyzer parameters and affecting its normal operation;
- When the gas concentration deviates from the alarm value, an alarm will be issued, and the alarm value can be set arbitrarily within the full range.

Technical Index

Sensor:	Thermal conductivity sensor
Measuring range:	Please refer to page 50, CI-PC53
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<30s
Resolution:	0.01%
EX-Mark:	Ex d IIB T6 Gb
IP Grade:	IP65
Power supply:	DC 24V,1A
Consumption:	<20VA
Communication:	RS485 or RS232
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V, can be set mode freely Load: <500Ω
Ambient TEMP.:	-10~+45°C Ambient humidity:<90%RH
Sample gas flow:	200~400ml/min
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

CI-PC56 Thermal conductivity analyzer

Product Features

- Taking the microprocessor as the core, it has the characteristics of intelligence, good stability and high reliability;
- The thermal conductivity sensor is used as the measurement unit, with high precision and long calibration period;
- Automatically switch the analog output range according to the range of the gas concentration to improve the accuracy of the analog output;
- Data storage: support U disk and SD card data storage, large data storage capacity and convenient for users to process and analyze data.

Technical Index

Sensor:	Thermal conductivity sensor
Measuring range:	Please refer to page 50, CI-PC53
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<30s
Power supply:	AC 100~240V, 50/60Hz
Ambient TEMP.:	+5~+45°C Ambient humidity:<90%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
External control:	Control signal: DC 9~28V
Interference gas compensation signal:	Input 2 groups of 4-20mA interference gas compensation signals
Analog singal:	2 groups of 4-20mA analog output are standard configuration,4-20mA/0-20mA/ 0-1V/0-5V/0-10V output mode, can be set mode freely
Communication:	RS485 (standard)/RS232 (optional)

TCD

CI-PC511 Thermal conductivity analyzer

Product Features

- With the microprocessor as the core and the thermal conductivity gas sensor as the measurement unit, it has the characteristics of intelligence, good stability, high precision, and long calibration cycle;
- Automatic calibration function: The analyzer has an automatic calibration function. After connecting the standard gas according to the method specified by the manufacturer, the calibration of the analyzer can be completed automatically;
- Menu lock switch: prevent misoperation from changing analyzer parameters and affecting its normal operation.

Technical Index

Sensor:	Thermal conductivity sensor
Measuring range:	Please refer to page 50, CI-PC53
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<30s
Display:	AC 100~240V, 50/60Hz
Power supply:	240 x 128 LCD
Consumption:	<35VA
Communication:	RS485 (standard)/RS232 (optional)
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V, can be set mode freely Load:<500Ω
External input:	Interference compensation: 2 groups (analog signal) External control: 5 groups(DC 9~28V)
Ambient TEMP.:	-10~+45°C Ambient humidity:<80%RH
Sample gas flow:	200~400ml/min
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

TCD

CI-PC58 Thermal conductivity analyzer

Product Features

- Combining microcontroller with digital processing technology, anti-cross interference, stable and reliable;
- Micro-fluidic thermal conductivity sensor is used as the measurement unit, with high precision and long calibration period;
- Using RS485 communication mode;
- Isolated analog signal output, support software switching 0-20mA/4-20mA analog output mode.

Technical Index

Sensor:	Thermal conductivity sensor
Measuring range:	Please refer to page 50, CI-PC53
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<30s
Measuring method:	Online
Weight:	Transmitter: net approx. 1.6kg Hand Communicator: net approx.0.15kg
Installation:	Mounting bracket
Gas line connector:	1/4 inch NPT thread, standardΦ6.5hose connector
Power supply:	DC 24V, 1A
Analog singal:	1 group Output mode: 4-20mA/0-20mA Load: <500Ω
Ambient TEMP:	-10~+45°C Ambient humidity:<90%RH
Sample gas flow:	200~400ml/min
Sample gas pressure:	0.3~0.6MPa, 0.5MPa recommended (Outlet should be at atmospheric pressure)

TCD

CI-PC562 Trace hydrogen analyzer

Product Features

- When the hydrogen concentration is higher than the protection concentration, the air pump is automatically turned on to feed air into the sensor; the sensor must try to avoid working in an environment with a hydrogen concentration higher than 1% for a long time to prolong its service life;
- When the hydrogen concentration deviates from the alarm value, an alarm will be triggered, in which the value can be set arbitrarily within the full scale range.

Technical Index

Sensor:	Electrochemical hydrogen sensor
Measuring range:	0~10ppm/2000ppm/2.000% H_2
Linear error:	±2% FS
Repeatability:	±1% FS
Stability:	±1% FS/7d
Response time:	T_{90}<70s（0~1000ppm）
Power supply:	AC 100~240V, 50/60Hz
Ambient TEMP.:	-10~+50°C
Ambient humidity:	<80%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Sample gas flow:	400~600ml/min
Alarm output:	2 groups（COM and NO）
Communication:	RS485 (standard)/RS232 (optional)
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/1-5V, can be set mode freely
Sensor life:	More than 2 years (normal use)
Instrument life:	More than 5 years (normal use)

Electrochemistry hydrogen

CI-PC582 Trace hydrogen transmitter

Technical Index

Sensor: Electrochemical hydrogen sensor
Measuring range: 0~10000ppm H_2
Linear error: ±2%FS
Repeatability: Cv<1%FS
Stability: ±1%FS/7d
Response time: T_{90}<90s
Power supply: DC 24V, consumption<6VA
Ambient TEMP: 0~+45°C
Ambient humidity: <80%RH

Technical Index

Sample gas pressure: Atmospheric conditions±10%
Installation: KF50 vacuum flange
Analog singal: 4-20mA(standard)/0-20mA/0-1V/0-5V/ 0-10V/1-5V
Communication: RS485(connected to display)

Functional Description of Wiring Terminals

Terminal identification	Function	Color
24V+	Transmitter power supply DC 24V positive pole	Red
GND	Transmitter power supply DC 24V negative pole	Yellow
4-20mA+	Analog signal 4-20mA positive pole	Blue
485A	RS485 Terminal A	White
485B	RS485 Terminal B	Brown

Electrochemistry hydrogen

CI-PC502 Selective hydrogen content analyzer

Product Features

- The sensor is specific to hydrogen and has no cross-sensitivity to other gases;
- The surface of the window is covered with a piece of toughened glass to enhance the impact protection of the window;
- Using capacitive touch buttons, the buttons are sensitive, reliable and easy to operate;
- Menu lock switch: prevent misoperation from changing analyzer parameters and affecting its normal operation; Convenient data storage function, support U disk and SD card, large data storage capacity.

Technical Index

Measuring range: 0.01%~10% 15%~99.99% H_2(customizable)
Linear error: 0.3%
Repeatability: 0.2%
Stability: 0.2%/7d
Linearity: 0.2%
Background gas: N_2
Response time: 30s
Power supply: AC 85~264V, 50/60Hz
Consumption: <25VA
Ambient TEMP.: Gas: -20~+60°C
Operation: -10~+55°C
Storage: -20~+60°C
Ambient humidity:<90%RH
Sample gas pressure: Atmospheric conditions±10%(Gas outlet should be atmospheric conditions)
Sample gas flow: 0.1~10slpm (1.0slpm recommended)
Negative/Slightly positive pressure (optional) when the air pump is configured

Thin film resistance

CI-PC512 Selective hydrogen content analyzer

Product Features

- The sensor is specific to hydrogen and has no cross-sensitivity to other gases;
- The surface of the window is covered with a piece of toughened glass to enhance the impact protection of the window;
- Using capacitive touch buttons, the buttons are sensitive, reliable and easy to operate;
- Menu lock switch: prevent misoperation from changing analyzer parameters and affecting its normal operation;
- When the hydrogen concentration deviates from the alarm value, an alarm will be issued, and the alarm value can be set arbitrarily within the full scale range.

Technical Index

Measuring range:	0.01%~10% 15%~99.99% H_2(customizable)
Linear error:	0.3%
Repeatability:	0.2%
Stability:	0.2%/7d
Response time:	T_{90}<30s
Linearity:	0.2%
Power supply:	AC 100~240V, 50/60Hz
Consumption:	<30VA
Communication:	RS485 (standard)/RS232 (optional)
Analog singal:	1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/ 1-5V, can be set mode freely Load: <500Ω
Ambient TEMP.:	-10~+45°C Ambient humidity:<80%RH
Sample gas flow:	0.1~10slpm(1.0slpm recommended)
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions) Negative/Slightly positive pressure (optional) when the air pump is configured

CI-PC552-1 Explosion-proof selective hydrogen content analyzer

Product Features

- The sensor is specific to hydrogen and has no cross-sensitivity to other gases;
- Using capacitive touch buttons, the buttons are sensitive, reliable and easy to operate;
- Interference gas compensation function: eliminate the influence of interference gas on measurement accuracy;
- Data storage: support U disk and SD card data storage, large data storage capacity and convenient for users to process and analyze data, the timing data storage inside the instrument is convenient for users to quickly view test data.

Technical Index

Measuring range:	0.01%~2%/ 10% H_2
Linear error:	0.3%
Repeatability:	0.2%
Stability:	0.2%/7d
Linearity:	0.2%
Background Gas:	N_2、CO_2、He、Ar、Alkanes, Olefin, Alkyne, and other Noble Gases, should not contain CO and H_2S
Power supply:	DC 24V, consumption<25VA
Ambient TEMP.:	Gas: -20~+60°C Operation: -10~+55°C Storage: -20~+60°C
Ambient humidity:	<90%RH
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Sample gas flow:	0.1~10slpm(1.0slpm recommended)
Alarm output:	Alarm point: 1 Relay capacity: DC 24V, 0.2A
Communication:	RS485 (standard)/RS232 (optional)

CI-PC18 Series hygrometer

Product Features

- Simultaneously monitor the humidity and oxygen concentration in the sample gas;
- The split structure design is adopted, and the probes are all made of high-temperature-resistant materials, so that the probes can be used in high-temperature and high-humidity environments;
- User-specific communication codes, transmitters obtained from other sources cannot be docked;
- Use RS485/RS232 two-way communication;
- Simple structure, easy installation and maintenance.

Technical Index

Sensor:	Ion flow humidity sensor	
Measuring range:	0~40.00% H_2O	0~25.00% O_2
Linear error:	O_2	0~1%: ±0.2%
		>1%~25.00%: ±2%FS
	H_2O	±2%FS
Repeatability:	O_2	0~1%: ±0.1%
		>1%~25.00%: ±1%FS
	H_2O	±1%FS
Stability:	O_2	0~1%: ±0.1%/7d
		>1%~25.00%: ±1%FS/7d
	H_2O	±1%FS/7d
Response time:	T_{90}<60s(after full preheating)	
Ambient TEMP.:	Module: -10~+50°C	
	Probe:<180°C(probe cable can not be placed in high temperature environment)	
Storage TEMP.:	-20~+60°C	
Ambient humidity:	<90%RH	
Inlet TEMP.:	<120°C(TEMP entering the probe)	
Inlet pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)	

Ion flow

CI-PC196 High temperature humidity analysis system

Product Features

- The probe is directly inserted into the high-temperature flue gas to measure the humidity and oxygen concentration in situ;
- With automatic calibration function, it can automatically complete the calibration according to the cycle to improve the measurement accuracy;
- With automatic backflush function, keep the probe clean, reduce user maintenance workload, and prolong the service life of the probe;
- The probe has pressure monitoring to judge whether the sample gas collection is normal.

Technical Index

Sensor:	Double cell thick film zirconia sensor	
Measuring range:	H_2O	0~40.00% (configurable)
	O_2	0~25.00%
Linear error:	H_2O	±2%FS
	O_2	±2%FS
Repeatability:	H_2O	±1%FS
	O_2	±1%FS
Stability:	H_2O	±1%FS/7d
	O_2	±1%FS/7d
Response time:	T_{90}<60s(after full preheating)	
Power supply:	AC 100~240V, 50/60Hz	
Measured gas:	Please refer to page 37, CI-PC192	
Ambient humidity:	<80%RH	
Storage:	Temperature:-20~+60°C	
	Humidity:<90%RH	
	Ensure that there are minimal dust, no smoke, water vapor and corrosive gas	
Inlet pressure:	Atmospheric conditions±5%	
Sample gas flow:	1~2L/min (1.5L/min recommended)	

Double-pool ion flow

CI-PC168 High temperature humidity analyzer

Product Features

- Combined with microcontroller and digital processing technology, the analyzer has a complete self-diagnosis function, which is intelligent, stable and reliable;
- The ion current humidity sensor is used as the measurement unit, with high precision and long calibration period;
- Integrated structure design, easy installation, zero maintenance;
- Data storage function: regularly record test data and quickly query the stored data;
- Menu lock switch: to prevent misuse from affecting the normal operation of the analyzer.

Technical Index

Sensor:	Ion flow humidity sensor
Measuring range:	0~40.00%vol H_2O 0~25.00%vol O_2
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<60s(after full preheating)
Installation:	DN50-65 flange (compatible with DN50, DN65 flange)
Power supply:	Standard:AC 100~240V, 50/60Hz Optional:DC 24V, ⩾2.5A
Working TEMP.:	Measured point: 0~+300°C, no condensate Electrical module:-10~+50°C
Storage:	TEMP:-20~+60°C Humidity:<90%RH
Sample gas pressure:	Atmospheric conditions±10%
Sample gas flow:	1~1.5L/min(during ventilation only)
Analog singal:	Quantity: 2 groups (corresponds to humidity and oxygen level) Output: 4-20mA standard analog Load:<500Ω

Ion flow

CI-PC368-1 Humidity analyzer

Product Features

- Using capacitive humidity sensor as the measurement unit, adopting advanced digital processing technology, anti-cross interference, high measurement accuracy and good stability;
- The circuit adopts digital processing technology, isolation amplification, and cut-off frequency design, which has the characteristics of strong anti-interference ability;
- Using long-life 128X64OLED screen, the display content is intuitive and rich;
- Integrated structure design, easy installation, zero maintenance.

Technical Index

Sensor:	Resistance-capacitance sensor
Measuring range:	0~40.00% H_2O
Linear error:	H_2O⩽5%: Absolute error⩽±1.5% H_2O>5%: Relative error⩽±20%
Response time:	At 1L/min and 1bar, High to Low: : T_{90}<150s Low to High: T_{90}<10s
Installation:	DN50-65 flange
Power supply:	Standard: AC 100~240V, 50/60Hz
Working environment:	Optional: DC 24V, ⩾2.5A Measured point: 0~+180°C Electrical module:-10~+50°C
Storage:	TEMP:-20~+60°C Humidity:<90%RH
Sample gas pressure:	Atmospheric conditions±10%
Sample gas flow:	0.5~1.5L/min(during ventilation only)
Analog singal:	Quantity: 1 group Output: 4-20mA/0-20mA Load:<500Ω

Capacitive

CI-PC156 Explosion-proof high temperature humidity analyzer

Product Features

- Combined with microcontroller and digital processing technology, the analyzer has a complete self-diagnosis function, which is intelligent, stable and reliable;
- The ion current humidity sensor is used as the measurement unit, with high precision and long calibration period;
- Using capacitive touch buttons, the buttons are sensitive, reliable and easy to operate;
- Menu lock switch: to prevent misuse from affecting the normal operation of the analyzer;
- Integrated structure design, easy installation, zero maintenance.

Technical Index

Sensor:	Ion flow humidity sensor
Measuring range:	0~40.00%vol H_2O
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
EX-Mark:	Ex d IIC T6 Gb
IP Grade:	IP65
Consumption:	High temperature type: <20VA Low temperature type: <60VA
Ambient TEMP.:	Please refer to page 38, CI-PC152
Storage:	TEMP.:-20~+60°C Humidity:<90%RH
Sample gas pressure:	Atmospheric conditions±10%(during ventilation only)
Sample gas flow:	800~1000ml/min(during ventilation only)
Analog singal:	Quantity: 2 groups Output: 4-20mA/ 0-20mA/ 0-1V/ 0-5V/ 0-10V/ 1-5V, can be set mode freely Load: <500Ω

Ex CE Ion flow

CI-PC39 High temperature humidity analysis system

Product Features

- Humidity control function: According to the humidity and concentration control requirements of the test, the system outputs a control signal to adjust the opening of the proportional valve, thereby controlling the gas flow in the process to obtain and maintain the humidity range required by the tested environment. Its advantage is to maintain the maximum quality of the end product with the minimum gas consumption, reducing scrap and rework;
- Suitable for measuring water content in air or other gases: In many processes, process humidity needs to be monitored in order to ensure product quality, improve energy efficiency or achieve emission reduction targets.

Technical Index

Humidity measurement

Principle:	Constant jet method
Sensor:	Temperature sensor
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±1%FS/7d
Response time:	T_{90}<90s（10~190g/kg）

Measuring range

Dry TEMP.:	0~140°C
Wet TEMP.:	0~140°C
External TEMP.:	0~200°C
Absolute pressure:	500~1500hPa
Dewpoint TEMP.:	+20~+100°C
Volume ratio:	2~100%
Absolute humidity:	15~1000g/kg
Specific humidity:	15~1000g/kg
Enthalpy:	35~1000kJ/kg
Water pressure:	10~1000hPa
Saturation difference:	0~1000hPa

Platinum resistance

CI-PC338 Humidity detector

Product Features

- Using capacitive humidity sensor as the measurement unit, adopting advanced digital processing technology, anti-cross interference, high measurement accuracy and good stability;
- The circuit adopts digital processing technology, isolation amplification, and cut-off frequency design, which has the characteristics of strong anti-interference ability;
- Communication function: RS485 (standard) or RS232 (optional),can communicate directly with computer or other digital communication equipment.

Technical Index

Sensor:	Resistance-capacitance sensor
Humidity range:	0~40vol% H_2O
TEMP range:	0~190°C
Absolute error:	⩽±1.5%
Relative error:	⩽±20%
Response time:	At 1L/min and 1bar, High to low: T_{90}<150s Low to high: T_{90}<10s
Sensor life:	More than 2 years (normal use)
Instrumen Life:	More than 5 years (normal use)
Power supply:	DC 24V, 1.5A and above
Power:	<25VA
Calibration Cycle:	1 year(recommended)
Sample gas pressure:	Atmospheric conditions±10%
Sample gas flow:	0.5~1.5L/min
Analog singal:	1 group, 4-20mA(standard)/0-20mA/0-1V/ 0-5V/0-10V/1-5V, can be set mode freely

Capacitive

CI-PC791 Nitrogen oxide analyzer

Product Features

- Double-cell thick-film zirconium oxide ion sensor is used to detect nitrogen oxides and oxygen at the same measurement point;
- Detect and analyze the denitrification efficiency of the SCR device, and the analyzer mainly analyzes N. And NO_2, or the total NOx of both, is different from general analyzers that can only analyze NO, avoiding the conversion of NO into $N0_2$ due to ignoring N. The high analysis error problem caused by loss, saves the denitrification operation cost for thermal power enterprises.

Technical Index

Sensor:	Double-cell thick-film zirconium oxide ion flow sensor		
Measuring range:	0~25.00% O_2, 0~500ppm NOx		
Linear error:	NOx:	0~100ppm	±5ppm
		100~500ppm	±10ppm
	O_2:	0~25%	±2% FS
Repeatability:	NOx:	0~100ppm	±2.5ppm
		100~500ppm	±5ppm
	O_2:	0~25%	±1% FS
Stability:	±1% FS/7d		
Response time:	T_{90}⩽10s(after full preheating)		
Power supply:	DC 24V		
Consumption:	<20VA		
Communication:	RS485 (standard)/RS232 (optional)		
Analog singal:	2 groups, 4-20mA/0-20mA/0-1V/0-5V/ 0-10V/1-5V, can be set mode freely		
Ambient TEMP:	-10~+50°C Ambient humidity:<90%RH		
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)		

Double-pool ion flow

CI-PC71 Nitrogen oxide analyzer

Product Features

Double-cell thick-film zirconium oxide ion sensor is used as the measurement unit, which can quickly detect nitrogen oxides and oxygen at the same measurement point;

- Not affected by interfering gases such as CO_2, SO_2, H_2O (gaseous state);
- Detect and analyze the denitrification efficiency of the SCR device, mainly analyze NO and NO_2, or the total NOx of the two, so as to avoid the high analysis error caused by ignoring the loss of NO converted from NO to NO_2;
- Save denitrification operating costs for thermal power enterprises.

Technical Index

Sensor:	Double cell thick film zirconium oxide ion sensor		
Measuring range:	0~25.00% O_2, 0~500ppm NOx		
Linear error:	NOx:	0~99.9 ppm	±5ppm
		100~500ppm	±10ppm
	O_2:	0~25.00 %	±2%FS
Repeatability:	NOx:	0~99.9 ppm	±2.5ppm
		100~500ppm	±5ppm
	O_2:	0~25.00 %	±1%FS
Stability:	NOx:	0~99.9 ppm	±2.5ppm/7d
		100~500ppm	±5ppm/7d
	O_2:	0~25.00 %	±1%FS/7d
Response time:	T_{90}<60s(after full preheating)		
Power supply:	AC 100~240V, 50/60Hz		
Consumption:	<35VA		
Communication:	RS485 (standard)/RS232 (optional)		
Ambient TEMP.:	-10~+50°C Ambient humidity:<90%RH		
Sample gas flow:	200~400ml/min		
Sample gas pressure:	Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)		

Double-pool ion flow

CI-XT682 Nitrogen oxide analysis system

Product Features

- The probe is directly inserted into high temperature flue gas (0~500°C) to measure NOx and O_2;
- No complicated pretreatment unit is required, the maintenance is small and it is not affected by other interfering gases, and the unique sensor working principle can prevent the influence of CO_2, H_2O and SO_2 and other exhaust gases;
- With automatic calibration function, it can automatically complete the calibration according to the cycle to improve the measurement accuracy;
- The probe adopts a cast aluminum heater to control the temperature of the probe at 100~180°C.

Technical Index

Sensor:	Double cell thick film zirconium oxide ion sensor			
Measuring range:	NOx 0~50/100mg/m³ (configurable)			
	O_2 0~25.00%			
Linear error:	NOx	±2%FS	O_2	±2%FS
Repeatability:	NOx	⩽2%	O_2	±1%FS
Zero drift:	NOx	±3%FS/7d	O_2	±1%FS/7d
Range point drift:	NOx	±3%FS/7d	O_2	±1%FS/7d
Response time:	NOx	T_{90} <120s(after full preheating)		
	O_2	T_{90} <60s(after full preheating)		
Power supply:	AC 100~240V, 50/60Hz			
Consumption:	<200VA			
Working TEMP.:	Probe: conventional type:0~+500°C High temperature resistant type:0~+700°C Ultra-high temperature resistant type: 0~+1200°C system:-10~+50°C			
Working humidity:	<80%RH			
Storage:	TEMP:-20~+60°C Humidity:<90%RH Less dust, no smoke, no water vapor, and no corrosive gases			

Double-pool ion flow

CI-PC20 Infrared gas analyzer

Product Features

- Using NDIR (that is, non-dispersive infrared measurement), the sensor is not in contact with the measured gas, and the poisoning of the sensor will not occur;
- High stability infrared light source and filter with strong anti-interference ability make the analyzer have good long-term stability;
- With microprocessor as the core, it has the characteristics of intelligence, good stability, high precision and long calibration cycle.

Technical Index

Detection principle: NDIR non-dispersive infrared
Measuring range: Please refer to page 62, CI-PC261
Linear error: ±2%FS
Repeatability: ±1%FS
Zero drift: ±1%FS/7d
Range drift: ±1%FS/7d
Response time: T_{90}<15s (500ml/min)
Power supply: AC 100~240V, 50/60Hz
Consumption: <35VA
Communication: RS485 (standard)/RS232 (optional)
Analog singal: 1 group, 4-20mA/0-20mA/0-1V/0-5V/0-10V/1-5V, can be set mode freely
Load:<500Ω
Ambient TEMP.: -10~+50°C Ambient humidity:<80%RH
Sample gas pressure: Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Negative pressure, slightly positive pressure (optional) when the air pump is configured
Dimensions: W x H x D=275mm x 190mm x 300mm

CE NDIR

CI-PC21 Infrared gas analyzer

Product Features

- Specially designed air chamber absorber, narrow-band filter has strong anti-interference ability and high detection accuracy;
- High stability infrared light source, constant temperature control of the receiver, good stability of the instrument; the mirror surface of the measuring gas chamber is gold-plated, corrosion-resistant;
- Isolated analog signal output, support software switching 4-20mA/0-20mA/0-1V/0-5V/0-10V/1-5V analog output mode;
- Use RS485(standard)/RS232(optional).

Technical Index

Detection principle: NDIR non-dispersive infrared
Measurement components: NOx、SO_2、CO、CO_2、CH_4、H_2S
Any one or two of the listed components, O_2 can be added to each component

Components	Min range	Max range
NOx	0~1000ppm	0~20%
SO_2	0~500ppm	0~100%
CO	0~20ppm	0~100%
CO_2	0~5ppm	0~100%
CH_4	0~200ppm	0~100%
H_2S	0~1000ppm	0~30%
N_2O	0~20ppm	0~30%

Linear error: ±2%FS
Repeatability: ±1%FS
Response time: T_{90}≤60s(with 0.5L/min sample gas flow)
Power supply: AC 100~240V, 50/60Hz
Pressure: Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Negative pressure, slightly positive pressure (optional) when the air pump is configured

CE NDIR

CI-PC23 Portable infrared gas analyzer

Product Features

- Using NDIR (that is, non-dispersive infrared measurement), the sensor is not in contact with the measured gas, and the poisoning of the sensor will not occur;
- High stability infrared light source and filter with strong anti-interference ability make the analyzer have good long-term stability;
- With microprocessor as the core, it has the characteristics of intelligence, good stability, high precision and long calibration cycle.

Technical Index

Measuring components and ranges:

Components	Min range	Max range
CO_2	0~2000ppm	0~100%
CO	0~5000ppm	0~100%
CH_4	0~4.4%	0~100%

Ordering notice: The measuring components and range of the analyzer must be explained to the supplier when ordering.

Detection principle:NDIR non-dispersive infrared
Linear error: ±2%FS
Repeatability: ±1%FS
Response time: T_{90}<15s (500ml/min)
Power supply: AC 100~240V, 50/60Hz
Consumption: <20VA
Communication: RS485 (standard)/RS232 (optional)
Ambient TEMP.: -10~+50°C Ambient humidity:<80%RH
Sample gas pressure: Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

NDIR

CI-PC261 Infrared gas analyzer

Product Features

- Using NDIR (that is, non-dispersive infrared measurement), the sensor is not in contact with the measured gas, and the poisoning of the sensor will not occur;
- It has the characteristics of intelligence, good stability, high reliability, and long calibration cycle;
- Menu lock function: prevent misoperation from changing analyzer parameters and affecting its normal operation;
- Two-way single-pole single-throw alarm function, the alarm value can be set freely within the full range.

Technical Index

Detection principle:NDIR non-dispersive infrared
Measuring range: (select sensor according to the range)

Components	Min range	Max range
CO	0~2%	0~100%
CO_2	0~2000ppm	0~100%
CH_4	0~4.4%	0~100%
SF_6	0~50ppm	0~1000ppm

Linear error: ±2% FS
Repeatability: ±1% FS
Zero drift: ±1% FS/7d
Range drift: ±1% FS/7d
Response time: T_{90}<15s (500ml/min)
Power supply: AC 100~240V, 50/60Hz
Ambient TEMP.: 5~+45°C Ambient humidity:<90%RH
Sample gas pressure: Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)
Communication: RS485 (standard)/RS232 (optional)
Analog singal: 1 group, 4~20mA/0~20mA/0~10V, available via configuration.

CE NDIR

CI-PC25 Explosion-proof infrared gas analyzer

Product Features

- Using NDIR (that is, non-dispersive infrared measurement), the sensor is not in contact with the measured gas, and the poisoning of the sensor will not occur;
- High stability infrared light source and filter with strong anti-interference ability make the analyzer have good long-term stability;
- With microprocessor as the core, it has the characteristics of intelligence, good stability, high precision and long calibration cycle.

Technical Index

Detection principle: NDIR non-dispersive infrared

Component	Min range	Max range
CO_2	0~2000ppm	0~100%
CO	0~5000ppm	0~100%
CH_4	0~3%	0~100%

The measurement background gas must be ammonia, oxygen, hydrogen, etc. and the gas to be measured has no weight

Linear error: ±2% FS
Repeatability: ±1% FS
Zero drift: ±1% FS/7d
Range drift: ±1% FS/7d
Response time: T_{90}<15s (500ml/min)
Power supply: DC 24V, 1A
Consumption: <15VA
Communication: RS485 (standard)/RS232 (optional)
Ambient TEMP.: -10~+45°C Ambient humidity:<90%RH
Sample gas flow: 500~1000ml/min (best500ml/min)
Sample gas pressure: Atmospheric conditions±10% (Gas outlet should be atmospheric conditions)

CE NDIR

CI-PC25-1 Explosion-proof infrared gas analyzer

Product Features

- Using NDIR (that is, non-dispersive infrared measurement), the sensor is not in contact with the measured gas, and the poisoning of the sensor will not occur;
- High stability infrared light source and filter with strong anti-interference ability make the analyzer have good long-term stability;
- With microprocessor as the core, it has the characteristics of intelligence, good stability, high precision and long calibration cycle.

Technical Index

Detection principle: NDIR non-dispersive infrared

Component	Min range	Max range
CO_2	0~2000ppm	0~100%
CO	0~5000ppm	0~100%
CH_4	0~3%	0~100%

The measurement background gas must be ammonia, oxygen, hydrogen, etc. and the gas to be measured has no weight

Linear error: ±2% FS
Repeatability: ±1% FS
Zero drift: ±1% FS/7d
Range drift: ±1% FS/7d
Response time: T_{90}<15s (500ml/min)
Power supply: DC 24V, 1A
Consumption: <15VA
Communication: RS485 (standard)/RS232 (optional)
Ambient TEMP.: -10~+45°C Ambient humidity:<90%RH
Sample gas flow: 500~1000ml/min (best 500ml/min)
EX-Mark: Ex d IIB T6 Gb

Ex NDIR

CI-PC61 Laser gas analyzer

Product Features

- Using the TDLAS principle, it has the advantages of accurate measurement, fast response, high sensitivity, stability and reliability;
- Preventive maintenance diagnosis, low maintenance;
- The 128X64 OLED window displays the concentration value, menu, data and instrument working status, etc., which is intuitive and rich in content;
- Using touch button technology, easy to operate, long service life of the button.

Technical Index

Linear error: ±1% FS
Repeatability: ±1% FS
Stability: ±0.1% FS /7d
Response time: T_{90}<30s
Measuring components

Component	Range	Lower limit	Selection code
O_2	0~1.000%	20ppm	A
CO_2	0~8000ppm	10ppm	B
CO	0~2000ppm	0.1ppm	C
CH_4	0~200ppm	0.01ppm	E
C_2H_2	0~200ppm	0.1ppm	F
HF	0~1000ppm	0.1ppm	J
H_2O	0~1000ppm	0.1ppm	K
H_2S	0~1000ppm	0.1ppm	L
HCL	0~1000ppm	0.1ppm	M
NH_3	0-10ppm	0.01ppm	O

Power supply: AC 100~240V
Consumption: <10VA

TDLAS

CI-PC68/-1 Explosion-proof laser gas analyzer

Product Features

- Optional sampling chamber for high temperature processing, pressure rise, and extremely harsh mechanical environments direct contact probe or sampling chamber options;
- Resistant to corrosive chemical gases;
- Resistant to extreme humidity and even liquid water; Low maintenance;
- Preventive maintenance diagnostics;
- Heated optical surfaces prevent condensation;
- A stainless steel mesh filter unit and an optional porous PTFE filter keep the optical probe dust and dust-proof.

Technical Index

Accuracy: ±1 FS%
TEMP drift: ± 1% reading
Stability: ±1% reading/year
Zero drift: ±0.1% /year
Measuring components

Componen	Range	Selection code
O_2	0~99.9%Vol	A
CO_2	0~99.9%Vol	B
CO	0~99.9%Vol	C
CH_4	0~90.0%Vol	E
HF	0~1.000%Vol	J
HCL	0~1.00%Vol	M
NH_3	0~1.00%Vol 0~10.00%Vol	N

Note: 1. The above are part of the measured gas indicators, and other gases can be customized according to user needs;
2. The specific range can be set according to the needs of users.

SIL Ex TDLAS

CI-PC66 Laser gas analyzer

CI-PC66 is a high-end, professional and highly reliable gas analyzer designed to provide fast response speed for various gases in industrial processes. Tunable Diode Laser Laser (TDLAS) principle, the instrument measurement probe is inserted directly into the measurement environment, and the analyzer requires no sampling or pre-processing, helping to reduce downtime and increase process safety at a lower cost of ownership. Provides a range of uses.The analyzer has the advantages of accurate measurement, high real-time performance and stability.

Product Features

- Using the TDLAS principle, it has the advantages of accurate measurement, fast response, high sensitivity, stability and reliability;
- Silicon carbide filter: suitable for high temperature and high dust environment, to ensure optical signal transmittance;
- High-temperature heating of the mirror surface: prevent the adhesion of viscous substances and keep the mirror surface clean;
- Single-ended installation: reduce installation openings, facilitate installation and optical path adjustment;
- In-situ measurement: real-time rapid measurement without sampling and pre-processing devices;
- Integrated design of transmitter and receiver: reduce the difficulty of debugging and maintenance, increase the anti-vibration ability, and improve optical stability.

Technical Index

Linearity error: ±2% FS (only applicable to communication output, analog signal)
Repeatability: ±1% FS

Technical Index

Stability: ±0.1% FS /7d
Response time: T_{90}<120s
Analog signal: 2 groups (respectively corresponding to gas concentration and measured light transmittance)
Analog output mode: 4-20mA/0-20mA, support software switching
Load: <500Ω
Alarm point: 2 groups (one of concentration alarm, one of status alarm)
Relay contact capacity: DC 24V, 0.2A
Communications: RS485 (standard)/RS232 (optional))
Temperature: Meter: -30~+55°C
Probe: -20~+400°C
(Storage: -20~+60°C)
Humidity: <80%RH
Working pressure: 0.8~1.4bar
Dust concentration: ≤30g/m³
Display 128X64 OLED screen
Button: Four touch buttons
Power supply: AC 100~240V, 50/60Hz
Consumption: Transceiver unit + measuring probe: ≤100VA
Control unit:≤80VA

Measurements

Component	Range	Lower limit		Selection code
O_2	0-3%	0.1%	Vol%	A
	0-25%Vol%			
CO	0-5000ppm	1ppm		C
HF	0-2ppm	0.1ppm		J
	0-2000ppm	1ppm		
H_2O	0...5Vol%/ 0-40Vol%	0.01%	Vol%	K
HCL	0-10ppm	0.3ppm		M
	0-3000ppm	1ppm		
NH_3	0-10ppm	0.3ppm		N
	0-5000ppm	1ppm		
NH_3/ H_2O	0-10ppm / 0-5000ppm	0.3ppm	ppm,mg/ m³,Vol%	NK
	0...5Vol%/ 0-40Vol%	0.01%		

CI-PC2001 Trace nitrogen & trace oxygen analyzer in argon

CI-PC2001 is a new type of high-precision online trace nitrogen and trace oxygen analyzer newly developed by our company. The digital electrochemical oxygen sensor conducts real-time online analysis of trace oxygen, which has the advantages of high measurement accuracy and good stability. It adopts full digital and intelligent control technology to automatically control all parts of the instrument, so that the instrument has simple operation and very little maintenance etc.

Product Features

- Plasma emission spectroscopy technology, high sensitivity, accurate measurement, fast response time;
- The sensor is maintenance-free;
- Using a 5-inch color touch screen as the human-computer interaction window, the display is beautiful, the content is rich, and the operation is simple;
- The surface of the window is covered with a piece of toughened glass to enhance the impact protection of the window;
- Use EFC for flow monitoring, automatically adjust the flow, and reduce manual operations;
- Support RS232/RS485 communication, using MODBUS RTU protocol;
- Isolated analog signal output, support software switching 4-20mA/0-20mA analog output mode.

Technical Index

Response time: T_{90}<5s (at 75ml/min)

Trace Oxygen Performance Index

Sensor:	Electrochemical oxygen sensor	
Measuring range:	0~10/ 100/1000ppm O_2	
Linear error:	0.01~9.99ppm	±5%FS
	10.0~99.9ppm	±3%FS
	100-1000ppm	±2%FS
Repeatability:	0.01~9.99ppm	±2.5%FS
	10.0~99.9ppm	±1.5%FS
	100-100ppm ±1%FS	
Stability:	0.01~9.99ppm	±2.5%FS/7d
	10.0~99.9ppm	± 1.5%FS/7d
	100~100ppm	± 1%FS/7d
Response time:	T_{90}<60s	
Recovery time:	60 minutes from air (20.94%) to 10ppm	
Calibration cycle:	Once a year	

Working parameters

Operation mode:	Online
Sample mode:	Ventilation
Power supply:	AC 220V±10%, 50/60HZ
Consumption:	<30VA
Woking environment:	+10~+50°C
Storage:	-20~+60°C
Working humidity:	<80%RH
Working pressure:	Atmospheric pressure

Functional indicators

Communication:	RS485/RS232, support software switching, Modbus RTU protocol
	Network port: Modbus TCP/IP protocol
Contact material:	Quartz, 316L stainless steel
Calibration cycle:	Once a year

Technical Index

Constant nitrogen performance index

Detector:	Plasma detector
Measuring range:	Trace N_2 in 0-1/10/100ppm Ar、Ne、He
Linear error:	±2%FS
Repeatability:	±1%FS
Stability:	±0.5%FS/7d

Application field

CI-PC2001 can be widely used in air separation plants, ammonia purification plants, ammonia liquefaction plants, special gas laboratories, steel mills, leak detection, welding control, process control, refrigerant truck loading stations, gas management systems, glove boxes, semiconductor manufacturing and more.

CI-PC2200 Series UV spectrometer

Product Features

- Return gas chamber: use multiple returns to reach the optical path of L5 meters, which can detect a lower limit;
- The light source adopts the pulse lamp, and the service life is up to 1 times: calculated according to 3 times/second, the service life is up to 10 years; the pulse standard lamp is a cold light source, compared with the infrared light source, it has the advantages of long life, good stability, and no warm-up time;
- No optical moving parts: no optical moving parts such as optical slices and interferometers, high reliability, on-site vibration will not damage the instrument, and will not affect the measurement.

Technical Index

Measuring range: SO_2 0~100/500/2000ppm and above, can be customized (DOAS)
NO 0~100/500/2000ppm and above, can be customized (DOAS)
O_2 0-25% (Electrochemical principle)
Linear error: ±2%FS
Repeatability: ±1%FS
Response time: T_{90}<10s
Lower detection limit: SO_2/NO:1ppm，O_2:0.1%
Stability: Indicated value change within an hour does not exceed 2%
Ambient TEMP.: -10~50°C Ambient humidity:<95%RH
Sample gas pressure: Current ambient pressure±0.1Bar
Analog input: 4-20mA, 2 channels, flexible configuration
Analog signal: 4-20mA, 4 channels, the output content can be configured
Switch output: 14 channels, the output content can be configured

DOAS

CI-PC28 Infrared gas transmitter

Product Features

- Using NDIR (that is, non-dispersive infrared measurement), the sensor is not in contact with the measured gas, and the poisoning of the sensor will not occur;
- High stability infrared light source and filter with strong anti-interference ability make the transmitter have good long-term stability;
- With microprocessor as the core, it has the characteristics of intelligence, good stability, high precision and long calibration cycle;
- Communication function: RS485(standard)/RS232(optional) two-way communication is adopted, which can directly communicate with computers or other digital.

Technical Index

Detection principle: NDIR,non-dispersive infrared(dual beam) measurement
Dual components and volumes: Please refer to CI-PC261 on page 62
Linear error: ±2%FS
Repeatability: ±1%FS
Zero drift: ±1%FS/7d
Range drift: ±1%FS/7d
Response time: T_{90}<15s （500ml/min）
Power supply: DC 24V，0.5A
Consumption: <10VA
Ambient TEMP.: -10~+45°C
Ambient humidity: <90%RH
Sample gas flow: 0.3~1L/min
Sample gas pressure: 0.3~0.6Mpa, 0.5Mpa reccomended(The air outlet should for atmospheric pressure)

CE NDIR

CI-PC6500 Laser gas analyzer

Product Features

- Not subject to background gas cross-interference;
- Applicable to harsh working conditions such as electric coke capture;
- Modular design, all functional modules can be replaced on site;
- Integrated design, compact structure, high reliability;
- High degree of intelligence, easy operation and maintenance;
- Intelligent laser technology, SIL2 safety certification;
- Advanced EPC technology;
- Fully automatic optical path protection system.

Technical Index

Optical channel length: 0.5~4m

Measuring components and volumes: Please refer to CI-PC68/-1 on page 64

Response time: T_{90}<10s

Linear error: ≤1%FS

Repeatability: ≤1%

Range drift: ≤1% FS/half a year

Maintenance cycle: ≤2 times/year, optical windows to be cleaned

Ex-mark: Ex d IIC T6 Gb

Calibration cycle: ≤2 times/year

Analog signal: 2-way 4-20mA input (temperature, pressure compensation)

Digital output: RS485/RS232/GPRS

Relay output: 2 outputs (DC 24V, 0.2A)

Power supply: DC 24V,<20VA

Purge gas: 0.3MPa~0.8MPa industrial nitrogen, instrument purifying gas etc.

Ambient TEMP.: -20°C~+60°C

IP66 SIL

CI-PS10 Portable biogas analyzer

Product Features

- It has the characteristics of intelligence, good stability, high reliability, and long calibration cycle;
- Simultaneously detect the concentration of oxygen, methane, carbon dioxide and hydrogen sulfide in the mixed gas without interfering with each other;
- The analyzer is suitable for biogas environment;
- Built-in micro-printer, which can print the current test data at any time;
- Chassis protection level up to IP65;
- The analyzer has a built-in large-capacity lithium battery, so the analyzer can be used for online analysis or as a portable device.

Technical Index

Component	Range	Sensor
O_2	0~25.00%	Electrochemical Oxygen Sensor
CH_4	0-99.9%	NDIR (Non-Dispersive Infrared Spectroscopy)Sensor
CO_2	0-99.9%	NDIR (Non-Dispersive Infrared Spectroscopy)Sensor
H_2S	0~10000ppm	Electrochemical Hydrogen Sulfide Sensor

Power supply: AC 100~240V,50/60Hz

Standby time: >10 hours (in normal use)

Display device: 5 inch color touch screen

Data storage: SD card (standard)/U disk (optional)

Sensor life: More than 2 years (normal use)

System life: More than 5 years (normal use)

Measurement method: Gas through method

Sample gas flow: 300~600ml/min

Intake pressure: Atmospheric pressure ±10% (the air outlet must not be blocked)

CI-PC251 Two-component analyzer

Product Features

- Using NDIR(that is, non-dispersive infrared measurement), the sensor is not in contact with the measured gas, and the poisoning of the sensor will not occur;
- High stability infrared light source and filter with strong anti-interference ability, the long-term stability of the analyzer is good;
- With microprocessor as the core, it has the characteristics of intelligence, good stability, high precision and long calibration cycle;
- When the gas concentration deviates from the alarm value, an alarm will be issued, and the alarm value can be set arbitrarily within the full range.

Technical Index

Detection principle: NDIR, non-dispersive infrared (dual beam) measurement
Measuring range: 0~10.0% CO，0~30.0% CO_2
Linear error: ±2%FS
Repeatability: ±1%FS
Zero drift: ±1%FS/7d
Range drift: ±1%FS/7d
Response time: T_{90}<15s（500ml/min)
Power supply: AC 100~240V,50/60Hz
Consumption: <20VA
Analog signal: Quantity:2 groups (corresponding to CO and CO_2)
Output mode: 4-20mA
Load: <500Ω
Sample gas flow: 500~1000ml/min
Sample gas pressure: Normal pressure ± 10% (gas outlet should be atmospheric pressure)

NDIR

CI-PC166 Oxygen and water analyzer

Product Features

- With the microcontroller as the core, it is stable and reliable; the sensor used has high precision and long calibration cycle;
- Using digital sensors, the user can replace the oxygen sensor on site, without calibration after replacement;
- Using capacitive touch buttons, the buttons are sensitive, reliable and easy to operate;
- Using long-life 128X64 OLED screen, the display is intuitive and rich in content;
- Pressure detection function:test the relative pressure inside the gas circuit to detect whether the gas circuit is blocked.

Technical Index

Performance Index(Oxygen)

Sensor: 3D Ion flow sensor
Measuring range: 0~1000ppm/5.00% O_2
Linear error: ±1%FS
Repeatability: ±0.5%FS
Response time: T_{90}<15s
Background gas: Air and N_2

Performance Index(Tank Point)

Sensor: Polymer film capacitive sensor
Measuring range: CI-PC166A:-60~+10°C;
CI-PC166B:-20~+60°C
Linear error: CI-PC166A: ±2°C and ±1%FS (measured below 500ppm, satisfy ±1%FS);
CI-PC166B: ±2°C and ±1%FS (measured below 20000ppm, satisfy ±1%FS)
Repeatability: ±1°C
Response time: 63%[90%],temperature is +20°C,pressure 1bar -60 to -20°C, Td 15s[30s]
Background gas: Air and N_2

CI-PC212 CO&CO_2 gas analyzer

Product Features

- The high-performance infrared sensor is the measurement unit, which has the advantages of intelligence, high precision, good stability, and small zero drift;
- Preventive maintenance diagnosis, low maintenance;
- Using 7-inch color touch screen as the human-computer interaction window, the display is beautiful, the content is rich, and the operation is simple;
- The surface of the window is covered with a piece of toughened glass to enhance the impact protection of the window;
- CO and CO_2 concentration values are displayed at the same time to meet the different needs of users.

Technical Index

Principle:	Infrared NDIR principle	
Measuring range:	0~5/10ppm	CO
	0~500ppm	CO_2
Indication error:	±1% FS	CO
	±2% FS	CO_2
Lower detection limit:	0.1ppm	CO
	2ppm	CO_2
Preheat time:	≤60min	
Response time:	≤3min	
Analog signal:	2 groups (CO and CO_2)	
Analog signal mode:	4-20mA/0-20mA，support software switching	
Allowable load:	<500Ω	
Ambient TEMP.:	0~+40°C	
Intake pressure:	0.05~0.1MPa	
Sample gas flow:	0.8L/min±10%	
Ambient humidity:	<80%RH	

NDIR

CI-PC312 H_2O&O_2 gas analyzer

Product Features

- Mechanical dumbbell paramagnetic principle, high detection accuracy, short warm-up time, fast response, good linearity;
- Directly measure the paramagnetic properties of oxygen, with little background gas interference;
- Standard 3U chassis design, can be used with pretreatment system for various working conditions;
- Preventive maintenance diagnosis, low maintenance;
- Communication function: RS485/RS232 two-way communication is adopted, which can be switched by software selection, and can directly communicate with computers or other digital communication equipment.

Technical Index

Sensor: Electrolytic method (P_2O_5), magnetomechanical principle

Measuring range:	0~500ppm		H_2O
Linear error:	0~10ppm	±3%FS	
	10~500ppm	±5%FS	
Repeatability:	0~10ppm	±1.5%FS	
	10~500ppm	±2.5%FS	
Stability:	0~10ppm	±1.5%FS	
	10~500ppm	±2.5%FS	

Measuring range:	80~99.99%	O_2
Linear error:	±0.1%	
Zero drift:	±0.1%FS/1 day	
Range point drift:	±0.2%FS/1 month	
Temperature Coefficient:	TC to a range of 40°C: Zero:<±0.03%/°C Range point: <±0.05% (reading)/°C	

Response time: [0-100% O_2]: T_{10}→T_{90}<2.5 (200mL/min)
H_2O: T_{63}<3min

CI-PC683-B Multi-component online analyzer

CI-PC683-B analyzer is a multi-component gas concentration analyzer specially developed by our company for complex flue gas environments. It uses microcontroller technology as the core, and uses infrared sensors and solid-state hydrogen sensors as measurement units to simultaneously measure methane in the sample gas(CHD) and hydrogen (H_2) concentration. The analyzer uses a 7-inch color touch screen as the human-computer interaction window, which is intuitive and rich in content.

Product Features

- The infrared principle is used to detect the concentration of methane (CH_6), and the solid-state hydrogen sensor detects the concentration of hydrogen (H_2), with no cross-interference and high precision;
- No need for complicated preprocessing analysis process;
- The 7-inch color touch screen is used as the human-computer interaction window, which is beautiful and elegant, with rich display content and simple operation;
- The surface of the window is covered with a piece of toughened glass to enhance the impact protection of the window;
- Isolated analog signal output, the analog output mode is 4-20mA;
- Alarm function: When the gas concentration value deviates from the alarm value, an alarm will be issued, and the alarm value can be set arbitrarily within the full range.

Technical Index

Performance

Sensor: NDIR non-dispersive infrared (dual beam) measurement
Linear error: ±2%FS
Repeatability: ±1%FS

Stability:	±1%FS/7d	CO CO_2 CH_4 etc.
Response time:	T_{90}<15s	
Sensor:	NDIR non-dispersive infrared (dual beam) measurement	
Linear error:	±2%FS	
Repeatability:	±1%FS	

Calibration cycle: Once per year

Sensor:	Solid state hydrogen sensor	H_2
Linear error:	0.3%	
Repeatability:	0.2%	
Response time:	±2%FS	
Background gas:	Electricity, CO_2, He,Ar, Alkanes, Alkene, Alkyne, and other inert gases, must not contain CO	

Technical Parameters

Display: 7 inch color touch screen
Pipeline Connector: PT¼ internal thread, standard PT¼ quick connector
Wiring: Terminals
Sensor life: More than 2 years (normal use)
Instrument life: More than 5 years (normal use)

Measurement Component Range

NO_X,SO_2,CO,CO_2,CH_4,H_2S,N_2O,H_2 any of which can be measured, up to three combinations.

Order number	Components	Minimum range	Maximum range
A	NO_X	0-1000ppm	0-20%
B	SO_2	0-500ppm	0-100%
C	CO	0-10/500ppm	0-100%
D	CO_2	0-10/100ppm	0-100%
E	CH	0-200ppm	0-100%
F	H_2S	0-1000ppm	0-30%
G	N_2O	0-10ppm	0-1000ppm
H	H_2	0-5%	0-20%

CI-PC9200 Online gas chromatograph

CI-PC9200 series online gas chromatograph is equipped with high-sensitivity hydrogen flame ionization detector and ultra-long life sample cutting valve, through the action of carrier gas, the samples in methane, total hydrocarbons and benzene series quantitative tubes are sent to the corresponding columns for separation, and then enter the FID detector for analysis, and obtain quasi-definitive quantitative analysis of each single component. The instrument has a compact structure and firm installation, which is suitable for the online analysis and monitoring of volatile organic compounds in industrial exhaust gases under complex and harsh environmental conditions.

Product Features

- Uses EPC Technology for carrier gas pressure control, accurate and stable pressure control, pressure control accuracy is better than ±0.1kPa;
- Uses EFC Technology for hydrogen and air flow control, the flow control accuracy is better than 0.5%FS;
- It has automatic ignition when the flame is turned off, and the hydrogen gas is turned off when the ignition fails to ensure the safety of the system. The over-temperature automatic protection function prevents device damage;
- Oven control accuracy is better than ±0.1℃;
- The ultra-long life cutting valve is adopted, the cutting air flow is stable, the maintenance is low, and the reliable operation can be guaranteed for more than 10 years;
- Using a miniature FID detector, its extremely low detection limit (0.01ppm) has ultra-high sensitivity and excellent gravity for various organic waste gases such as total combustion, non-a hospital total combustion, ketones, olefins, alcohols, etc. Reality and high analytical efficiency.

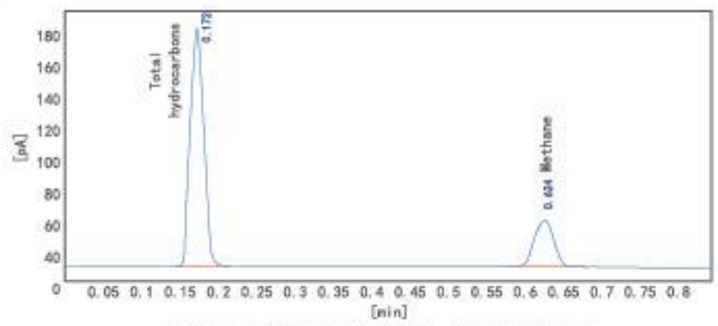
Technical Index

Measurement components:	Methane, Non-Methane Total Combustion, Total Combustion, Benzene, Toluene, Ethyl Benzene, m/p-Xylene, o-Xylene, etc.
Detector:	High sensitivity fid detector
Measuring range:	Non-methane total hydrocarbons: 0-200/1000mg/m³ (propane) Benzene series: 0~100mg/m³ (customizable)
FID Detection limit:	Non-methane THC 0.05mg/m³(propane), benzene series, 0.35mg/m³
Linear error:	⩽±2%FS
Chromatographic column:	Packed column Methane/non-methane THC:＜2min Benzene series:<5min
Sample gas TEMP.:	Room temperature~150°C
Sample gas flow	>0.5L/min
Gas source requirements:	Carrier gas: high-purity nitrogen or zero-grade air (>99.999%) Gas: high-purity hydrogen (>99.999%) Supporting gas: zero-grade air

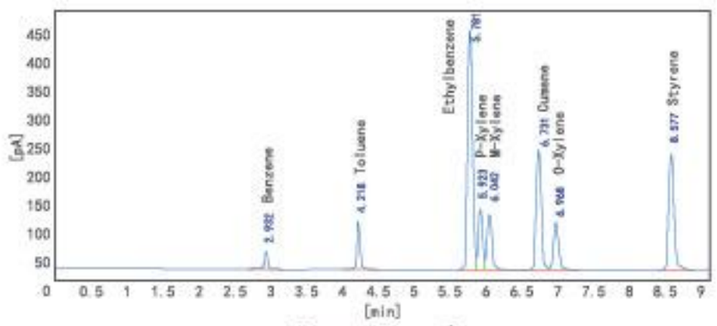
Application Field

Petroleum refining; biopharmaceuticals; electronics industry; packaging and printing; paint production; leather printing and dyeing; petrochemical.

Typical Spectra



Non-methane total hydrocarbons



Benzene series

CEP FID

CI-PC9300 Online gas chromatograph

CI-PC9300 sulfur hexafluoride helium ion comprehensive detector adopts the principle of helium ionization gas chromatography, equipped with 2 helium ionization detectors and 1 high-performance humidity analysis module, combined with Longxie dual-center cutting patent technology to H_2, O_2, N_2, CO, CF_4, CH_4, C_2F_6, C_3F_8, N_2O, CO_2, NF_3, COS, CS_2, H_2S, SO_2, SO_2F_2, SOF_2, full analysis of 18 decomposition products such as H_2O, enhanced version can be optionally equipped with semiconductor tunable laser (TDLAS) module to detect trace HF.

Product Features

- Using multi-channel parallel working mode, the full analysis of 18 decomposition products in SF6 can be quickly completed in one injection, and the enhanced version can be optionally equipped with a semiconductor tunable laser (TDLAS) module to detect trace amounts of HF;
- The Pulse Discharge Helium Ionization Detector (PDHID) is a highly sensitive general-purpose detector with a high linear response to almost all inorganic and organic compounds with detection limits as low as ng/g (ppb) level;
- Idle time solar term mode to achieve fast and stable start-up;
- The workstation adopts Ethernet communication mode, supports the simultaneous processing of multiple channel data of multiple detectors, and supports 500 detector access; It can read all the detection data in the SF6 decomposition product helium ion comprehensive detector at the same time; Database management with 18 decomposition product guidelines and GIS equipment; Data encryption measures to ensure data security.

Technical Index

Wide Range Nitrogen Ionization Detector(PDHID)

Discharge mode:	Pulse discharge
Baseline noise:	≤0.1mv
baseline drift:	≤0.5mv/30min
Detection limit:	≤1.0×10-11g/mL
Linear range:	10^6

High Performance Intrinsically Safe Humidity Analysis Module

Measuring range:	-110~+20°C
Response time:	40sec to T_{90}
Dew point accuracy:	±2°C Td
IP Grade:	IP65

Carrier Gas Purifier

Purified gases:	He、Ar、Ne、Kr、Xe、Rn
Residual concentration:	≤10ppb

Temperature Control Index

TEMP. control area:	8 way
TEMP. control range:	Above room temperature 4°C~450°C, increment:1°C, accuracy: ±0.1°C
Program heating steps:	20 steps
Progress rate:	0.1~60°C/min
Program boost:	8 stages

Other Parameters

Dimensions:	635×510×480 mm
Weight:	<45kg
Power supply:	220V±10%，50Hz
Consumption:	≤1500W

Applicable Standards

- GB/T12022-2014 "Industrial Sulfur Hexafluoride"
- Q/GDW1168-2013 "Test Regulations for Condition Maintenance of Power Transmission and Transformation Equipment"
- Q/GDW11096-2013"SF6Gas Chromatography Analysis Method of Gas Decomposition Products
- DL/T1205-2013 "Test method for decomposition products of sulfur hexafluoride electrical equipment"
- DL/T941-2005 "Quality Standard for Sulfur Hexafluoride for Transformers in Operation"

CI-SP1000E Online explosion-proof gas chromatograph

CI-SP1000E explosion-proof industrial gas chromatograph inherits the excellent design of ChangAi Instrument in industrial chromatographic analysis. It not only adopts a new industrial design, but also uses proven high-reliability components. In addition, the user's total cost of ownership is reduced through the unprecedented built-in automatic detection function, making it an industrial chromatograph that can meet the requirements for analytical reliability and accuracy.

Technical Index

Control method:	Built-in 10.4-inch industrial computer with color touch screen display
Detection channel:	Single channel, dual channel
Detector:	PDHID、TCD、FID
Column box :	Room temperature 4 °C ~ 135 °C, increment: 1 °C, accuracy: ± 0.1 °C
Lower range limit:	nL/L、μL/L、%
Drift/Repeatability:	±1%~±5%
Measuring range:	-110~+20°C
Sample gas flow:	30~100mL/min
Sample gas pressure:	0.05~0.3MPa
Carrier gas type:	He（or N_2、Ar、H_2）
Carrier gas flow:	30~150mL/min
Carrier gas pressure:	0.4 MPa
Instrument air:	Pressure: 350~900kPa, Flow:150~210L/min
Power supply:	AC 220V，50~60Hz
Consumption:	1.5kW~2kW
Weight:	100kg
Dimensions:	Wall-mounted cabinet 600mm (W) X950mm (H) X400mm (D)
Flow control:	EPC, Flow Meter, Electronic Monitoring (optional)
Flow path control:	Up to 60 channels (including calibration channels)
Analysis cycle:	Up to 21600.0 seconds (6 hours)
Ex-mark:	Ex d e px IIC T4 Gb

Product Features

- Each chromatographic column is equipped with a programmable temperature-raising column oven, and each chromatographic column has an independent column oven temperature control system;
- Built-in industrial computer with touch screen function, combined with powerful spectrogram software and Windows PC system, you can create methods, design custom reports, watch calibration curves, acquire and process data, create and run batch detection through the screen;
- Automatic gas cut-off protection function: When the carrier gas pressure is lower than the safety threshold, the system will automatically cut off the detector voltage to protect the detector from damage and ensure the safe operation of the instrument;
- Built-in aging program: In the daily use of the instrument, in order to ensure the good operation of the instrument, it is necessary to perform irregular aging on the instrument. The instrument will automatically run according to the required parameters, which is convenient for users to maintain the instrument daily.

Installation Environment

The CI-SP1000E explosion-proof industrial gas chromatograph should be operated at a temperature and relative humidity of 5~35°C and 0~85% respectively. But it is best to use it in an environment where people feel comfortable (proper constant temperature and humidity conditions). In this way, the instrument can play the best performance and the service life of the instrument is the longest.

CI-PC9260 Online gas chromatograph

CI-PC9260 new networked online gas chromatograph is the latest online gas chromatograph with programmed heating and cooling functions launched by "ChangAi" company. Using the automatic sampling system, the instrument can optionally be equipped with PDHID/PED detector, which is suitable for the online analysis of ppb-level trace impurities in high-purity gases; Equipped with a high-sensitivity TCD detector, it can realize the detection of impurities with ppm-% content in gas; Equipped with a highly sensitive FID detector, it is possible to detect organic substances such as hydrocarbons in ppm-% content in samples.

Product Features

- It is specially designed for 19-inch standard cabinet installation applications, adopts a standard 6U structure, and has the characteristics of compact structure and small size;
- Equipped with a built-in industrial-grade computer and a built-in touch LCD display, the display is intuitive and the operation is convenient;
- The instrument adopts a modular structure design, which is clear in design, easy to replace and upgrade, and can be equipped with a variety of high-performance detectors, such as PDHID, PED, FPD, FID, TCD, ZrO_2, etc..

Technical Index

Control mode: Embedded industrial computer

Detector Type

Pulse Discharge Ammonia Ionization Detector(PDHID)

Detection object: ppb level trace impurities in high purity gas
Detection limit: 5ppb
Carrier gas type: He
Carrier gas flow: 150ml/min

Technical Index

Thermal Conductivity Detector (TCD)

Detection object: Impurities in ppm-% content in gas
Detection limit: 10ppm
Carrier gas type: N_2/Ar/He
Carrier gas flow: 100ml/min

Hydrogen Flame Ionization Detector (FID)

Detection object: ppm-% content of hydrocarbons in gas
Detection limit: 0.03ppm
Carrier gas type: N_2/Ar
Carrier gas flow: 100ml/min

Plasma Detector (PED)

Detection object: purity gas ppb level trace impurities in high
Detection limit: 0.5ppb
Carrier gas type: He/Ar/N_2/CO_2
Carrier gas flow: 150ml/min

Gas Path Control

Sample gas flow: Positive pressure:50ml/min or negative pressure sampling
Sample gas pressure:-0.1Mpa 0.1MPa
Sample gas interface:1/4
Carrier gas pressure: 5 to 30 PSIG
Flow control: Electronic monitoring

Electrical Appliance

Power supply: AC 220V,50/60Hz
Consumption: 400W
Communication interface:RS-232/485,TCP
Protocol: Modbus-RTU,Modbus-TCP,4-20mA

Shape

Dimension: Standard 5U Rack-mount Chassis

Temperature Control Parameters

Temperature control area: 8 ways
Temperature control range: Above room temperature 4°C~450°C, Increment:1°C Accuracy:±0.01°C
Program heating steps: 20 steps

CI-PC952/-1 Hydrogen sulfide analyzer

CI-PC952-1

CI-PC952

Product Features

- With microprocessor as the core, it has good long-term stability and high reliability;
- The electrochemical gas sensor is used as the measurement unit, with high precision and long calibration period;
- Data storage: U disk and SD card data storage is supported, the data storage capacity is large and it is convenient for users to process and analyze data; the timing data storage inside the instrument is convenient for users to quickly view test data.

Technical Index

Measuring range:0~10000ppm H_2S
Resolution: 0.1ppm
Linear error: ±2%FS
Repeatability: ±1%FS
Stability: ±1%FS/7d
Response time: T_{90}<35s（0~20ppm）
Recovery time: <60s
Measurement method: Online
Calibration cycle: 1 year (recommended)
Detector weight: Net weight 5.0kg,after packing approx.15kg
Power supply: DC 24V
Consumption: <15VA
Communication: RS485(standard)/RS232(optional)
Alarm output: Alarm point: 1
Relay contact capacity:DC 24V, 0.2A
Analog signal: 1 Group,4-20mA/0-20mA/0-lV/0-5V/0-10V/1-5V, can be set mode freely

Electrochemistry

CI-PC9001 Total hydrocarbon Analyzer

Product Features

- Use EPC advanced technology for sample gas pressure control, accurate and stable pressure control, pressure control accuracy better than ±0.1kPa;
- Uses EFC Technology for hydrogen and air flow control, the flow control accuracy is better than 0.5%6FS;
- It has the function of automatic ignition when the flame is turned off, and shuts off the hydrogen gas if the ignition fails, so as to ensure the safety of the system and the over-temperature automatic protection function to avoid device damage;
- Built-in single-point or multi-point module, optional sampling pump according to needs.

Technical Index

Sensor: Hydrogen flame ionization detector(FID)
Measuring range:-1000/10000ppm or 0~100% THC
Linear error: ±2%FS
Repeatability: ±1%FS
Stability: ±1%FS/d
Response time: T_{90}<5s
Power supply: AC 100~240V, 50/60HZ
Consumption: <200VA
Intake pressure: 0.2~0.3MPa (hydrogen, air, sample gas)
communication: Serial port: RS485 (standard configuration) or RS232 (optional matching)
Modbus RTU protocol
Network port: Modbus TCP/IP protocol
Analog signal: 1 group 4-20mA
Load: <500
Weight: Net weight approx.6.4Kg

FID

CI-FT211x/212x Series thermal mass flowmeter

Product Features

- Full digital signal processing, higher precision and better stability;
- Based on thermal principle, not affected by temperature and pressure, integrated temperature measurement ultra-wide 1:2500 ratio, measuring range 0.1Nm/s to 250 Nm/s;
- Fully isolated electrical structure, completely filter out interference;
- With data recording function, 10,000,000 record points;
- With Bluetooth function, wireless sensor configuration and data transmission.

Technical Index

Measuring range:	0(0.1)~250 Nm/s
Accuracy:	±(1.5% RD + 0.3% FS) [1% RD accuracy optional]
Sampling rate:	>20 sample points per second
Medium:	Compressed air, nitrogen, oxygen, carbon dioxide and other non-condensable gases
Reference conditions:	20°C,1 bar(a) -ISO 1217 (editable)
Analog signal (standard):	4~20 mA (isolated) / pulse output (total)
Digital output (standard):	Modbus RTU (RS485)
Wireless output:	Bluetooth connection (standard), Lora (optional)
Connector:	2 × 5pin M12, female
Work pressure:	FT211: 0~6.3 MPa (>1.6 MPa need to be equipped with high pressure installation shelf)
Power:	DC 18~30V / 5W @ DC 24V

Hot

CI-FT211x-EX/FT212x-EX Explosion-proof thermal mass flowmeter

Product Features

- Full digital signal processing, higher precision and better stability;
- Based on the thermal principle, it is not affected by temperature and pressure, and integrates temperature measurement;
- Extra wide 1:2500 ratio, measuring range 0.1Nm/s to 250Nm/s;
- 20" IPS wide viewing LCD screen with capacitive touch;
- With Bluetooth function, wireless sensor configuration and data transmission;
- Standard Modbus RTU(RS485) interface and 4~20mA current/pulse output.

Technical Index

Measuring range:	0(0.1)~250 Nm/s
accuracy:	±(1.5% RD+0.3%FS)[1% RD accuracy optional]
Sampling rate:	>20 sample points per second
Background gas:	Compressed air, air, oxygen, carbon dioxide and other non-condensable gases
Reference conditions:	20°C,lbar(a)-ISO1217(editable)
4~20mA output (standard match):	Standard condition flow rate/standard condition flow rate/temperature (configurable)
Pulse output (standard):	Accumulated flow or alarm output under standard conditions
Digital output (standard):	Modbus RTU(RS485)
Wireless output:	Bluetooth connection (standard), Lora

Hot

CI-SM80/81 Series thermal mass flow sensor

Product Features

- Based on the thermal principle, it is not affected by temperature and pressure, and integrates temperature measurement;
- Ultra-wide turndown ratio, measuring range 0.1Nm/s to 80Nm/s;
- The fully isolated electrical structure completely filters out interference;
- 1.5" IPS ultra-wide viewing angle LCD screen with capacitive touch;
- Standard RS485 Modbus RTU interface and 4~20mA current/pulse output.

Technical Index

Measuring range:	0 (0.1)~0 Nm/s
Accuracy:	±(2% of reading + 0.3% of full scale), option: 1% accuracy
Sampling rate:	>20 sample points per second
Medium:	Compressed Air, Nitrogen, Oxygen, Hydrogen, carbon dioxide, and other non-condensable gases.
Reference conditions:	20°C, 1 bar(a) - ISO 1217(editable)
Analog signal (standard):	4~20mA(Isolated) / Pulse output
Digital output (standard):	RS485, MODBUS RTU protocol
Connector:	2 x 5-pin M12，Female
Work pressure:	SM80/81:0~5.0MPa (>1.6 MPa need to be equipped with high pressure installer)
	18~30V / 5W
Process connection:	G1/2"（ISO 228-1）

Hot

CI-FT201-x-W Series differential pressure flowmeter

Product Features

- Suitable for dirty and wet air measurement, such as: air compressor outlet;
- Extremely high sensitivity, the lower limit of gas measurement can reach 5Nm/s;
- Two-way flow measurement;
- Integrated pressure and temperature sensors can monitor fluid pressure and temperature in real time;
- Fully isolated electrical structure, completely filtering out field interference;
- 2.8" IPS ultra-wide viewing angle LCD screen with capacitive touch;
- No moving parts, small pressure loss;

Technical Index

Flow Measurement

Measuring range:	5~300 Nm/s
Accuracy:	±(1.5% RD + 0.3% FS) [1% RD accuracy optional]
Medium:	Dry/humid air and non-corrosive gases
Reference conditions:	20°C,1 bar(a) - ISO 1217 (editable)

Pressure Measurement

Measuring range:	0~1.7 MPa(a)
Measurement accuracy:	±0.5% FS

Temperature Measurement

Measuring range:	-40~+150 °C
Accuracy:	±0.5 °C

Output

Analog output (standard):	4~20 mA (isolated) / pulse output (cumulative)
Digital output (standard):	Modbus RTU (RS485)

PTF

CI-FV20x-V Dual vortex mass flowmeter

Product Features

- Wide measurement range , the lower limit of gas flow rate can be as low as 1.5 m/s (working condition);
- Suitable for dirty and wet compressed air, various industrial gases such as oxygen and natural gas, and steam and other media;
- High-performance DSP, combined with DSA (Digital Spectrum Analysis) digital full-spectrum analysis technology, can accurately distinguish flow, vibration and electromagnetic interference signals, greatly improving the anti-vibration performance of the flowmeter;
- Integrated pressure and temperature sensors can monitor fluid pressure and temperature in real time.

Technical Index

Medium: Gas/steam/liquid

Flow Measurement

Measuring range: 1.5 m/s ~80 m/s (gas/steam working condition flow rate)
0.15 m/s~8 m/s (flow rate of liquid working condition)

Accuracy: Class 1.0

Repeatability: ±0.2% RD

Reference condition: 20°C, 1 bar (a) - ISO 1217(editable)

Pressure Measurement

Measuring range: 0~1.7MPa(a) (6.3 x "2 optional)

Accuracy: ±0.5% FS

Power Supply

Measurement: DC 18 ~30V, 10W @ DC 24V

Vortex

CI-FV20x-VS Vortex steam mass flowmeter

Product Features

- Wide measurement range, the lower limit of gas flow rate can be as low as L5m/s (working condition);
- Suitable for dirty and wet compressed air, various industrial gases such as oxygen and natural gas, and steam and other media;
- Ultra-high sensitivity dual vortex probe with wider range ratio;
- High-performance DSP, combined with DSA (Digital Spectrum Analysis) digital full-spectrum analysis technology, can accurately distinguish flow, vibration and electromagnetic interference signals, greatly improving the anti-vibration performance of the flowmeter.

Technical Index

medium: Gas/steam/liquid

Flow Measurement

Measuring range: 1.5m/s~80m/s (gas/steam service flow velocity)
0.15 m/s~8 m/s (flow rate of liquid working condition)

accuracy: Class 1.0

Repeatability: ±0.2% RD

Reference condition: 20°C, 1 bar(a) - ISO 1217(editable)

Pressure Measurement

Measuring range: 0~1.7MPa(a) (6.3MPa optional)

accuracy: ±0.5% FS

Power Supply

measurement: DC 18~30V 10W @ DC 24V

Vortex

CI-XT100-B Coke oven gas analysis system

CI-XT100-B integrates machine, electricity and instrumentation, combines advanced laser oxygen measurement technology with sampling pretreatment, and adopts international advanced technologies and The equipment fully purifies and treats tar, coal dust, water vapor, gas, hydrogen sulfide and other substances in the coke oven gas to ensure the long-term stable operation of the entire system; and then uses the laser oxygen analyzer CI-385 to test the oxygen content.

Product Features

- The measurement principle of the system analysis instrument is Tunable Semiconductor Laser Diode Absorption Spectroscopy (TDLAS), and a polymer filter is used outside the instrument analysis room, which can completely filter water and corrosive impurities, effectively improving the test performance of the analysis instrument. Accuracy and service life;
- The system sampling probe has a built-in high-precision filter, which has the characteristics of strong corrosion resistance, high filtration accuracy, long maintenance cycle and convenient maintenance;
- The dual-loop sampling tube is easy to install, has strong corrosion resistance, and has the effect of self-heating while sampling;
- The system pretreatment includes multiple water removal processes of water washing-water cooling-separation, water cooling-re-separation, and then the sample gas is provided to the analytical instrument for analysis, ensuring the use of the analytical instrument and prolonging the service life of the instrument;
- The internal components of the system are all explosion-proof and anti-corrosion designed, which can fully meet the user's requirements.

Technical Index

Measuring range:	0-25.0% O_2
Detection principle:	Tunable Semiconductor Laser Diode Absorption Spectroscopy (TDLAS)
System power:	DC 24V 10W
Alarm output:	1 channel alarm output (analyzer failure alarm)
Relay contact capacity:	DC 24V,0.2A
Analog signal:	1 group of 4-20mA outputs corresponds to O_2
Ambient TEMP.:	0~+45°C
Ambient humidity:	<80%RH
Intake pressure:	Ejector sampling with steam at negative and slight positive pressures
Sample gas flow:	4-6L/min
Air inlet and outlet interface:	Φ25 clamp locking method
System life:	More than 5 years (normal use)
Installationmethod:	The base is fixed with expansion screws
Circuit configuration:	Applied to low explosion-proof requirements or non-explosion-proof occasions
Analyzer calibration:	Once a year, zero and span to be calibrated using standard gas and high-purity nitrogen
System dimensions:	D×W×H=1530mm×420mm×2280mm
House dimensions:	D×W×H=3000mm×3000mm×3000mm
Installation dimensions:	D×W=1466mm×366mm(with expansion screws)
System weight:	About 300kg

Application Field

Coking plant - either the inlet or the outlet of the electric tar collector can be used.

TDLAS

CI-XT300 Coke oven cycle monitoring system

CI-XT300 CDQ coke oven circulation on-line monitoring system adopts explosion-proof treatment method, which meets the requirements for explosion-proof use of CDQ circulating gas. The sample gas is sampled by direct sampling or pump sampling (switchable), and then the corrosive components, dust and impurities in the sample gas are removed by the preprocessor and then sent to the instrument for analysis, and then the system is pre-set by PLC automatic control.

Product Features

- Sampling adopts high-temperature, high-dust plug-in filter sampling probe, and the filter device adopts high-precision filter, which is resistant to high temperature and corrosion, and the filtration accuracy is as high as 0.5um;
- The sampling tube adopts an integrated anti-corrosion heating pipeline, which has good heating effect and less maintenance;
- With a unique blowback control system, it has a higher blowback effect and can adapt to higher dust-concentrated gas samples;
- The condenser adopts eddy current refrigeration technology, which has the characteristics of stable performance, long service life and maintenance-free;
- All main components are imported, the sample gas pipeline is fully anti-corrosion, and the hardware configuration is high-grade;
- There is a professional service engineer team, reasonable selection of sampling points, installation technology of probes, and on-site operation technology. These rich professional experiences are the distinctive and inseparable technical characteristics of this device.

Technical Index

Measuring range:	CO: 0-10.0% CO CO_2: 0-20.0% CO_2 H_2: 0-10.0% H_2 O_2: 0-25.0% O_2
Detection principle:	CO-NDIR, Non-dispersive infrared (dual beam) measurement CO_2-NDIR, ,Non-dispersive infrared (dual beam) measurement H_2, Thermal conductivity sensor O_2, Electrochemical gas sensor
Power supply:	AC 220V±10% 50/60Hz
Consumption:	<2KW
Alarm output:	1 channel
Relay contact capacity:	DC 24V,0.2A
Analog signal:	4 groups of 4-20mA output corresponding to CO, CO_2, H_2, O_2
Ambient TEMP.:	0~+45°C
Ambient humidity:	<80%RH
Intake pressure:	Use an air pump for negative pressure and slight positive pressure
Sample gas flow:	4-6L/min
Intake and outlet ports:	G1/4 internal thread connection
System life:	More than 5 years (normal use)
Installation method:	The base is fixed with expansion screws
Circuit structure:	used in low-explosion-proof or non-explosion-proof occasions
Calibration period:	Once a year, zero and span to be calibrated using standard gas and high-purity nitrogen.
System dimensions:	D×W×H=1400mm×650mm×2100mm
House dimensions:	D×W×H=3000mm×3000mm×2500mm
Installation dimensions:	D×W=1300mm×550mm(expansion screws)
System weight:	Approx. 800Kg

Application Field

Coking Plant - On-line Analysis of CDQ Circulation Fan Inlet.

CI-XT6400 Process analysis system for gas generator

CI-XT6400 system adopts anti-corrosion and explosion-proof treatment methods, which meet the requirements of chemical explosion-proof production lines. The air extraction sampling method is adopted, and the sample gas is sampled, filtered, dewatered and dedusted, and then sent to the instrument for analysis, which ensures the service life of the instrument and greatly reduces the maintenance workload of the instrument.

Product Features

- The system sampling probe has a built-in high-precision filter, which has the characteristics of strong corrosion resistance, high filtration accuracy, long maintenance cycle, and convenient maintenance, and the use of the probe with a delay relay can automatically switch between sampling and testing;
- Self-constant temperature sampling tube has the characteristics of convenient installation, strong corrosion resistance and constant temperature;
- The devices inside the system are all explosion-proof and anti-corrosion designed, which can meet the requirements of users.

Technical Index

Measuring range: 0-25.0% O_2
Can be expanded according to user needs
Detection principle: Magnetomechanical technology

Technical Index

System power: AC 220V±10% 50/60Hz
Consumption: <50VA
Alarm output: 1 channel alarm output
Relay contact capacity: DC 24V,0.2A
Analog signal: 1 group of 4-20mA outputs corresponding to O_2
Ambient TEMP.: 0~+45°C
Ambient humidity: <80%RH
Intake pressure: Use an air pump for negative pressure and slight positive pressure
Sample gas flow: 4-6L/min
Tracheal interface: G1/4 internal thread connection
Instrument life: More than 5 years (normal use)
Installation method: The base is fixed with expansion screws
Circuit structure: Used in low-explosion-proof or non-explosion-proof occasions
Calibration period: Once a year, zero and span to be calibrated using standard gas and high-purity nitrogen
System dimensions: D×W×H=600mm×600mm×1750mm
House dimensions: D×W×H=2000mm×2000mm×2500mm
Packing box: wooden box packing
System weight: Approx. 100kg

Application Field

- Coking plant - oxygen measurement in coal gas branch;
- Can be widely used in air separation and liquefaction, chemical process;
- Protective gas for high temperature sintering furnaces such as magnetic materials;
- Protective gas in the electronics industry;
- Glass, building materials industry, etc..

Magnetomechanical

CI-XT6003C Brazing furnace online oxygen analysis system

The system adopts anti-corrosion and protective treatment methods, which meet the requirements of the brazing furnace production line. The system uses an air pump to sample the sample gas, and then removes the dust in the sample gas by filtration and then sends it to the instrument for analysis. The system can expand the sampling port according to the needs of the site.

Product Features

- The system sampling probe has a built-in high-precision filter, which has the characteristics of strong corrosion resistance, high filtration accuracy, long maintenance cycle and convenient maintenance;
- The PLC automatic control unit of the system enables the system to complete the functions of automatic pre-pumping, automatic switching of sampling ports, automatic testing, automatic backflushing, automatic sewage discharge, and fault alarm, effectively reducing labor costs for users.

Technical Index

Measuring range:	0-1000ppm O_2 Can be expanded or configured at will
Sensor:	Electrochemical gas sensor
Power supply:	AC 220V±10% 50/60Hz
Consumption:	<50VA

Technical Index

Alarm output:	1 channel
Relay contact capacity:	DC 24V,0.2A
Analog signal:	1 group of 4-20mA outputs corresponding to O_2
Ambient TEMP.:	0~+45°C
Ambient humidity:	<80%RH
Intake pressure:	Use an air pump for negative pressure and slight positive pressure
Sample gas flow:	4-6L/min
Inlet and outlet air interface:	G1/4 internal thread connection
System life:	More than 5 years (normal use)
Installation method:	The base is fixed with expansion screws
Circuit structure:	Used in non-explosion-proof occasions
Calibration interval:	Once a year, zero and span to be calibrated using standard gas and high-purity nitrogen.
System dimensions:	D×W×H=1200mm×650mm×1600mm
House dimensions:	D×W×H=2000mm×2000mm×2500mm
Packing box:	Wooden box packing
System weight:	About 120kg

Application Field

- Automobile manufacturing - brazing furnace;
- Can be widely used in brazing furnaces, air separation and liquefaction, such as the measurement and control of oxygen concentration in pressure swing adsorption (PSA) nitrogen production equipment;
- Chemical process;
- Protective gas for high temperature sintering furnaces such as magnetic materials;
- Protective gas in the electronics industry;
- Glass, building materials industry, etc..

Electrochemistry

CI-XT800 CO_2 recycling online monitor system

The gas analysis system (hereinafter referred to as the system) is a process analysis instrument (such as CO_2, O_2 analyzer) and sampling pretreatment device and its subsidiary application guarantee part (standard gas). Through on-the-spot investigation, detailed understanding of the on-site process and working conditions, and the correct matching and reasonable combination of the system design, the analytical instrument can well adapt to the special and complex process conditions of the sample gas to be tested.

Product Features

Reaction Speed

Analyzer lag time (T_{10}) and rise time (T_{10}~T_{90}.)

Lag time: T_{10}≤5s

Rise time: T_{10}~T_{90}≤2s

Lag time and rise time of the system

Lag time: T_{10}≤30s

Rise time: T_{10}~T_{90}≤2s

Technical Index

Main Technical Index

Zero drift: ≤±1% FS/7d

Range drift: ≤±1% FS/7d

Repeatability: ≤0.5%

Load: ≤500Ω

Analog signal: DC 4~20 mA

Applicable Working Conditions

Gas sample TEMP.: ≤60°C

Gas sample flow: ≤300L/h

Gas sample dust concentration: ≤ 2000g/m³

Corrosiveness: Gas sample should not contain strong corrosive components

Working Conditions

Ambient TEMP.: +5~+45°C

Relative humidity: ≤85%

Power supply: AC 220V±10% 50/60Hz

Consumption: ≤0.5KVA

Ambient air pressure: Altitude below 2500m

No direct sunlight radiation

No strong electromagnetic field interference

No mechanical vibration

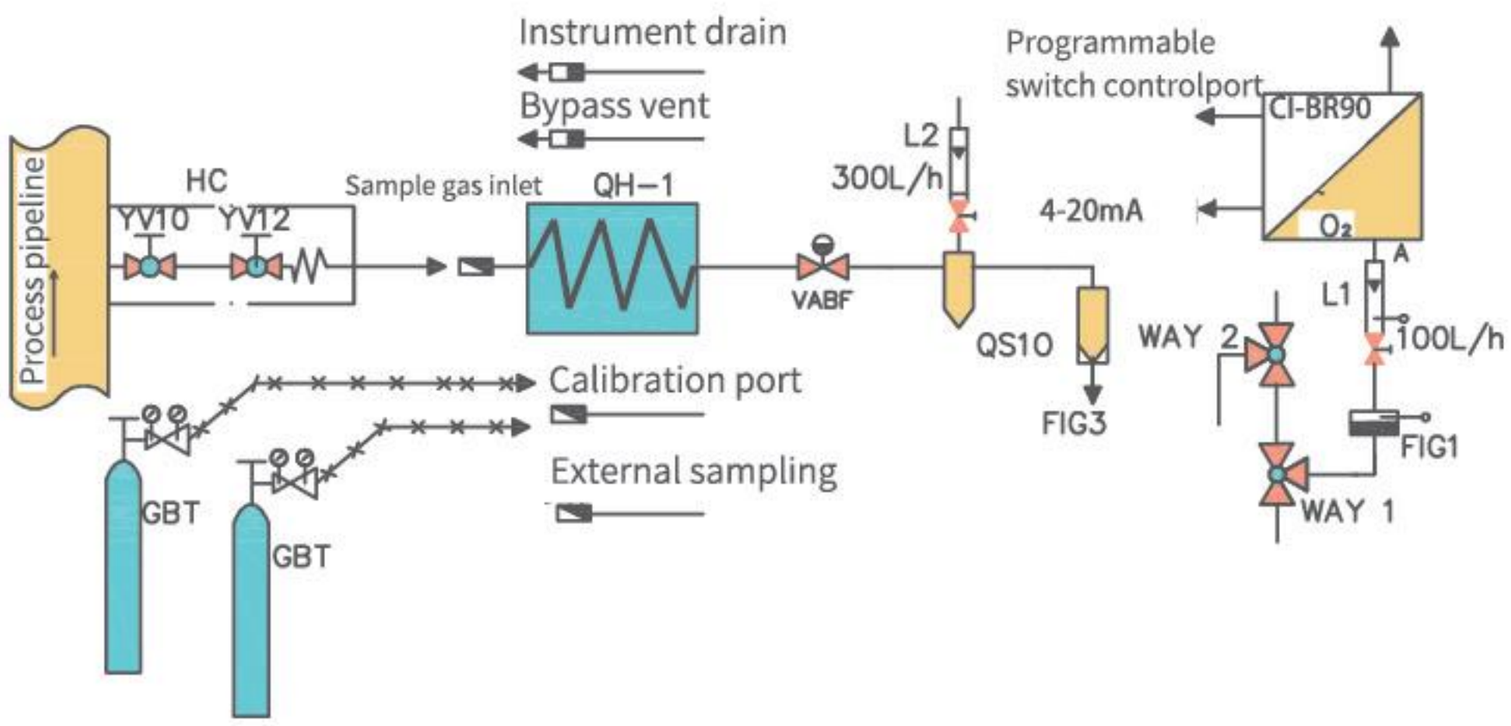
Air velocity: ≤0.5m/s

Working position: Horizontal

Quality System Certification: ISO9001: 2015 Standard

Technical Index

The temperature in the room must be controlled at 5-45 °C



No.	Code	Reference
1	A	CO2 Analyzer
2	QH-1	Ambient Vaporizer
3	YV10	Low Temperature Ball Valve
4	YV12	Low Temperature Needle Valve
5	FIG1	Membrane Filter
6	FIG3	Sample Gas Filter
7	VABF	Pressure Reducing Valve
8	L1	Alarm Flowmeter
9	L2	Bypass Flowmeter
10	WAY1, 2	Selective Valve
11	QS10	Gas-liquid Separator
12	HC	Sampling Probe
13	G8T	13Standard Gas

CI-XT62B Heat treatment furnace-controllable atmosphere analysis system

The CI-XT62B series gas analysis system is aimed at the characteristics of the process gas sample conditions (high temperature and high water content) of silicon steel sheet heat treatment furnace, and the analysis principle of its components is to use the measured water content data and the dry sample composition data of indirect measurement (after water removal), and convert the corresponding real-time measurement parameters through PLC real-time collection.

Product Features

- Sampling adopts high-temperature, high-humidity high-temperature sampling probe, and the filter device adopts high-precision alloy filter, which is resistant to high temperature and corrosion, and the filtration accuracy is as high as 0.3u;
- The sampling tube adopts an integrated anti-corrosion electric heating closed-loop temperature control pipeline, which has a good heating effect and prevents the loss of sample gas moisture;
- The water detector adopts polymer water permeable film type high temperature and high humidity sensor;
- Compressor refrigeration technology quickly removes moisture in the sample gas and prevents the loss of other components in the sample gas components;
- All main components are imported, and the hardware configuration is high-end;
- Distributed design technology is adopted, which is convenient for installation, maintenance and overhaul.

Technical Index

Power supply: AC 220V 50HZ
Analog signal: 4~20mA (RS485 communication optional)
Ambient TEMP.: 0~+45°C
Sample gas pressure: Slight-negative pressure or positive pressure (valve or suction pump to be utilized for different configurations)
Dimensions: D X W X H=600 X 600 X 1700 (including base)

Analyzer (can be selected according to working conditions)

Humidity Analyzer

Measuring range: -80~+60°C (optional)
Sensor manufacturer: ChangAi
Detector original volume: Polymer film capacitive

Trace Oxygen Analyzer

Measuring range: 0-10/100/1000PPm%O_2
Origin of sensor: USA
Detector source: Electrochemical

Hydrogen Analyzer

Measuring range: 0-60% H_2
Origin of sensor: USA
Detector source: Thermal conductivity

Application Field

- High-quality silicon steel heat treatment furnace;
- Protective gas testing for the electronics industry.

Ordering Instructions To Be Specified During Order

- This product is non-explosion-proof design, an explosion-proof variant can be customized;
- Please communicate with our technical personnel in detail regarding the working conditions before placing an order to achieve the best use effect of the product.

CI-XT60EO-O_2X Online gas analysis system

CI-XT60EO-O_2X chemical explosion-proof online oxygen analysis system is a pretreatment system independently developed by our company. The system adopts anti-corrosion and explosion-proof treatment methods, which meet the requirements of explosion-proof production lines. The pretreatment system of this set of analysis system is composed of vacuum generator, automatic liquid drainage device, filter, calibration valve, analyzer instrument, cabinet and other components.

Product Features

- It has the characteristics of high measurement accuracy, fast response, high stability, strong reliability, and long calibration cycle;
- Explosion-proof laser oxygen analyzer, one of the most advanced laser oxygen analyzers in the world;
- The principle of laser optical detector is used to detect the oxygen content in the atmosphere;
- Unique air circuit design, good air tightness, impermeability and water absorption resistance;
- It has the function of interfering gas compensation to eliminate the influence of interfering gas on the measurement accuracy;
- Analog output signal: 1 channel standard output 4-20mA.

Technical Index

Performance Parameters

Sensor:	Laser optical detection principle
Measuring range:	0~5% O_2
Linear error:	±0.2% O_2
Stability:	⩽±1% reading/year

Technical Index

Zero drift:	±0.1% O_2 /year
Response time:	Lag time:T_{10}⩽5s
	Rise time:T_{10}~T_{90}⩽2s
Work pressure:	0.8~1.4 bar
Analog signal:	4~20mA
Storage TEMP.:	+10~+50°C
Analyzer life:	More than 5 years (normal use)

Working Conditions

Power supply:	AC 220V 50Hz
Ambient TEMP.:	+15~+45°C
Relative humidity:	⩽85%RH
Sample gas TEMP.:	Normal temperature (⩽35°C)
Sample gas pressure:	30 KPa
Sample gas flow:	⩽3L/min
Dust concentration:	Zero
Pressure range:	0~0.2MPa
Nitrogen purging:	Requirements: no oil, no water, no dust
	Pressure: ⩾0.5Mpa
Compressed air:	0.3~0.5Mpa
Air flow:	⩽0.5m/s
Ambience:	The environment shall not contain explosive, corrosive and other gases, and have good ventilation conditions
Safety performance:	Insulation resistance not less than 5MΩ Under the test voltage of 1.25KV, breakdown and arcing will not appear in 1min

Configuration And Output

Reaction speed:	Lag time:T_{10}⩽30s
	Rise time:T_{10}~T_{90}⩽2s
Drift:	Zero drift: ⩽±1% FS/7d
	Range drift:⩽±1% FS/7d
Load:	⩽750Ω
Analog signal:	4-20mA
Sampling method:	Ejection extraction

System Cabinet Parameters

System cabinet:	Outdoor stainless steel rainproof cabinet
Specification:	L×W×H=500×400×1300（mm）
Ex-mark:	Ex dell CT6 Gb
Location of installation:	Outdoor

CI-XT6700 Calorific value blast furnace gas analysis system

The gas analysis system is a process analysis system, a sampling pretreatment device and its attached application guarantee part (standard gas). Through the correct matching and reasonable combination of the pretreatment system for the field application conditions and process conditions, the analysis instrument can It is well adapted to the complex process conditions of the sample gas to be measured.

Product Features

- Specially designed air chamber absorber, narrow band filter with strong anti-interference ability and high detection accuracy;
- High stability infrared light source, receiver constant temperature control, good instrument stability;
- Measuring the mirror gold plating of the gas chamber, corrosion resistance;
- Microcomputer intelligent modular design, touch button operation, LCD large screen blue screen display;
- Isolated output signal DC 0/4-20mA, optional communication interface;
- Alarm output (upper and lower limit extreme value alarm, self-test fault alarm).

Technical Index

Reaction Speed

Analyzer: Lag time:T_{10}≤5s

Measuring range (customizable): Rise time:T_{10}~T_{90}≤2s

0~99.9% CO

0~99.9% CO_2

0~99.9% H_2

Technical Index

System: Lag time:T_{10}≤60s

Rise time:T_{10}~T_{90}≤2s

Technical Indicators

Zero drift: ≤±1% FS/7d

Range drift: ≤±1% FS/7d

Repeatability: ≤0.5%

Load: ≤750Ω

Analog signal: DC 4~20 mA

Operating Conditions

Gas sample temperature: ≤100°C

Gas sample flow: ≤1000mL/min

Gas sample dust concentration: ≤ 20mg/m³

Corrosive: ≤ 500PPm

working Conditions

Ambient TEMP.: +5~+40°C

Relative humidity: ≤85%

Power supply: AC 220V 50 Hz

Consumption: ≤5KVA

Ambient atmosphere: Altitude below 2500m

No direct sunlight radiation

No strong electromagnetic field interference

No mechanical vibration

Ambient air pressure: ≤0.5m/s

Air velocity: Horizontal

Purging nitrogen requirements: No water, no dust

Pressure:0.4-0.65Mpa

Flow rate:about 100 L/ min

Gas consumption:about 0.3m³ /24 h

Safety performance of the system: Insulation resistance of the system:The insulation resistance of the system not smaller than 5MΩ

5.2 dielectric strength of the system: Under the test voltage of 1.25KV, breakdown and arcing will not appear in 1min

System manufacturing standard: Q/CI-2012

CI-XT60E3-O_2D Centrifuge oxygen analysis system

CI-XT60E3-O_2D is an oxygen analysis system developed for centrifuges. After the sample gas is sucked into the system by a pneumatic diaphragm pump, it is pretreated by water washing, condensation to remove water, gas-liquid separation, and filtration, which can effectively remove impurities and organic substances in the sample gas. Residues ensure that the sensor works in a good environment, which can effectively prolong the service life of the sensor.

Product Features

- Combining microcontroller with digital processing technology, anti-cross interference, stable and reliable;
- Perfect pretreatment system, small maintenance;
- With automatic blowback function, keep the sampling gas path clean and reduce the user's maintenance workload;
- It has the function of automatic backflushing to keep the sampling gas path clean and reduce the user's maintenance workload;
- Air supply valve can be selected, with automatic air supply function;
- Optional alarm light.

Technical Index

Performance:

Sensor: Electrochemical sensor
Measuring range: 0~25.00% O_2
Linear error: ±2%FS
Repeatability: ±1%FS
Stability: ±1%FS/7d
Response time: T_{90}<20s

Configuration

Display: 7 inch color touch screen
Installation method: Wall-mounted or using a chassis mount
Sensor life: More than 2 years
System life: More than 5 years
Sampling method: Ventilation or suction pump
Weight: The net weight is about 52.1kg
Tracheal interface: PT1/4 internal thread, standard PT 1/4 quick connector
Explosion-proof pipe interface: G1/2 thread (inner)

Working Conditions

Working TEMP.: 0~+45°C
Working humidity: <90%RH
Storage: Temperature: -20~+60°C
Humidity: <95%RH
Less dust, no smoke, no moisture and no corrosive gas
Flow: 300~400mL/min (required)
Compressed air: Pressure:0.5~1Mpa
Flow: 10~20L/min

Output

Communication: RS485 (standard) or RS232 (optional)
Modbus RTU Protocol
Analog signal: 1 group(corresponding to O2)
4-20mA/0-20mA/0-1V/0-5V/0-10V/1-5V, support software switching
load <500Ω
Switch signal: 1 group
Relay contact capacity: DC 24V, 0.2A

Application Field

Applications in centrifuges and chemical explosion-proof environments.

Electrochemistry

CI-XT683 Biogas analysis system

CI-XT683 biogas analysis system is a gas analysis system specially developed by our company for the biogas environment. It takes microcontroller technology as the core, uses infrared and electrochemical sensors as the measurement unit, and simultaneously measures the oxygen in the sample gas (O_2), methane (CH_4),carbon dioxide(CO_2), hydrogen sulfide (H_2S) concentration, the analysis system has the characteristics of intelligence, high precision, fast response and good stability.

Product Features

- It has the characteristics of intelligence, good stability, high reliability, and long calibration cycle;
- Simultaneously detect the concentration of oxygen, methane, carbon dioxide and hydrogen sulfide in the mixed gas without interfering with each other;
- The analysis system is suitable for biogas environment;
- Built-in condensation dehydration device can remove the moisture in the sample gas;
- The 7-inch color display screen is used as the display window of human-computer interaction, which is beautiful and elegant, and the 7R display is rich in content.

Technical Index

Oxygen (O_2) Detection

Sensor: Electrochemical sensor
Measuring range: 0~25.00% O_2

Technical Index

Accuracy: ±2%FS
Repeatability: ±1%FS
Stability: ±1%FS/7d
Response time: T_{90}<60s

Methane (CH_4) Detection

Sensor: NDIR non-dispersive infrared (dual beam) measurement
Measuring range:0~99.9% CH_4
Accuracy: ±2%FS
Repeatability: ±1%FS
stability: ±1%FS/7d
Response time: T_{90}<15s

Carbon Dioxide (CO_2) Detection

Sensor: NDIR non-dispersive infrared (dual beam) measurement
Measuring range: 0~99.9% CO_2
Accuracy: ±1%FS
Repeatability: ±2%FS
Stability: ±1%FS/7d
Response time: T_{90}<15s

Hydrogen Sulfide (H_2S) Detection

Sensor: Electrochemical hydrogen sulfide sensor
Measuring range:0~10000ppm H_2S
Accuracy: ±2%FS
Repeatability: ±1%FS
Stability: ±1%FS/7d
Response time: T_{90}<60s

Analysis System

Power supply: AC 100~240V，50/60Hz
Display: 7 inch color display

Application Field

CI-XT683 analysis system is not only suitable for biogas industry, but also in petrochemical, natural gas, metallurgy, power electronics, machinery manufacturing and other industries.

CI-XT5100 Stationary Pollution Source VOCs online monitoring system

The CI-XT5100 system uses the whole process high temperature extraction method to extract the sample gas, and adopts gas chromatography-hydrogen flame ionization detection technology(FID) conducts online monitoring of volatile organic compound emissions from stationary pollution sources.It can be widely used in the monitoring of total combustion, methane and non-methane total combustion in waste gas from pollution sources such as pharmaceuticals, petrochemicals, paints, and chemicals.

Product Features

- Using the internationally recognized VOCs detection standard method gas chromatography/hydrogen flame ion detector (GC-FID), it has the characteristics of high and high sensitivity, stable and reliable operation, simple maintenance, and online detection of organic volatiles in industrial exhaust gas suitable for complex and harsh environmental conditions;
- The pretreatment design meets the technical requirements and detection methods of the on-line monitoring system of VOCs of fixed pollution sources. The system adopts the whole heat tracing method, from the sampling probe to the online gas chromatograph, the whole process is high-temperature, without water removal, effectively avoiding the loss of sample components, and ensuring the accuracy and effectiveness of the detection data;
- The system can monitor: methane, total burning, non-methane total waste and other organic waste gases, which can meet different customer needs;
- The system uses corrosion-resistant and inert materials to reduce the loss of gas samples in the pipe wall.

Technical Index

Stationary Pollution Source VOCs

Detection object: THC,CH_4,NMHC,BETX,VOC characteristic factors

Detection range: Non-methane total hydrocarbons 0-50/100/200/1000/5000mg/m³(Configurable)
Benzene series0-50/100/200mg/m³(configurable)

Detection limit: <0.8mg/m³

Baseline noise: 2×10^{-14}A

Baseline drift: 2×10^{-13}A/30min

Linear error: ⩽±2%

24h drift: ⩽±3%

Qualitative repeatability: 1%

Quantitative repeatability: 3%

Analysis period: ⩽2min

Injection flow rate: Approx. 20mL/min

Instrument alarm: Fault/concentration(optional switch output)

Sampling line: Traced temperature 100~180°C(adjustable)

Data Acquisition And Processing

System software: 1 way LAN

Industrial computer:4-way USB interface
Windows7 operating system
AC: 220V±22V/ (50±1) Hz
<5KVA

Flue Gas Parameters

Measurement parameters	TEMP.	Pressure	Flow rate	Humidity	Oxygen
Measuring range	(0~400)°C	(-5000~5000)Pa	(0~40) m/s	(0~40) %V/V	(0~25) %

Application Field

- Geography:all regions, applicable to enterprises involved in VOCs emissions;
- Industry:petrochemical, printing, spraying, pharmaceuticals, electronic component production plants, furniture production plants, etc..

CEP FID

CI-XT20-1 Desktop medical oxygen quality detection system

CI-XT20-1 desktop medical oxygen quality detection system is Shanghai ChangAi Electronic Technology Co., Ltd., according to the "Chinese Pharmacopoeia" 2020 edition two XGB2021-061 (medical oxygen technical indicators: oxygen "99.5%, carbon monoxide <5ppm, carbon dioxide<300ppm,Moisture<67ppm)standards,a purpose-designed medical oxygen detection standard analysis system that can meet the GMP certification is applicable to the supervision and inspection of medical oxygen by food and drug regulatory authorities in various places.

Product Features

- The high-performance detection and analysis measurement unit has the advantages of intelligence, high precision and good stability;
- Combining microcontroller with digital processing technology, anti-cross interference, stable and reliable;
- Perfect pretreatment system, less maintenance;
- CO, CO_2, H_2O and O_2 concentration values are displayed at the same time to meet the different needs of users;
- When the gas concentration deviates from the alarm value, the alarm value can be set within the full range.

Technical Index

Indication error:	±1% FS	CO
	±2% FS	CO_2
Minimum detection limit:	0.1ppm	CO
	2ppm	CO_2
Preheat time:	⩽60min	
Response time:	⩽3min	
Sensor life:	More than 2 years	
Instrument life:	More than 5 years	
Analog signal:	2 groups(CO and CO_2 each group)	
Output mode:	4-20mA/0-20mA, support software switching	
Allowable load:	<500Ω	
Alarm point:	2 (respectively corresponding to CO and CO_2 concentration report relay contact capacity warning)	

H_2O、O_2 Technical Parameters

Principle: Electrolysis (P_2O_5), magnetic mechanical

Measuring range:	0~500ppm		
Linear error:	0~10ppm	±3%FS	H_2O
	10~500ppm	±5%FS	
Repeatability:	0~10ppm	±1.5%FS	
	10~500ppm	±2.5%FS	
Stability:	0~10ppm	±1.5%FS	
	10~500ppm	±2.5%FS	
Measuring range:	80~100%		O_2
Linear error:	±0.1%		
Zero drift:	±0.1%/1 day		
Range point drift:	±0.2%/1 month		
Temperature coefficient:	0°C to 40°C range Zero point: <±0.03%/°C Range point: <±0.05% (reading)/°C		
Response time:	[0 ~ 100% O_2] : T_{10}→T_{90} < 2.5s (200mL/min) H_2O:T_{63}<3min		

Technical Index

CO, CO_2 Technical Parameters

Principle: Infrared NDIR principle

Measuring range:	0~5/10ppm	CO
	0~500ppm	CO_2

CI-XT20-2-Q Online medical oxygen quality detection system

The CI-XT20-2 online medical oxygen quality detection system is Shanghai ChangAi Electronic Technology Co., Ltd., according to the "Chinese Pharmacopoeia" 2020 Edition II XGB2021-061 standard stipulates that a targeted design can meet the GMP certification of medical oxygen testing standards, and is suitable for online quality monitoring of medical oxygen filling manufacturers.

Product Features

- The high-performance infrared sensor is the measurement unit, which has the advantages of intelligence, high precision, good stability, and small zero drift;
- Preventive maintenance diagnosis, low maintenance;
- Using a 5-inch color touch screen as the human-computer interaction window, the display is beautiful, the content is rich, and the operation is simple;
- The surface of the window is covered with a piece of toughened glass to enhance the impact protection of the window;
- Communication function: RS485(standard configuration)/RS232(optional) two-way communication is adopted, which can directly communicate with computers or other digital communication equipment.

Technical Index

Reaction Speed

System latency: T_{10}≤10s

System rise time: T_{10}~T_{90}≤15s

Technical Index

System Detection Parameters And Range

Carbon dioxide:	0~500PPm	CO_2
Carbon monoxide:	0~5/10ppm	CO (range optional)
Dew point:	0~500ppm	H_2O
Oxygen:	80~100%	O_2
Repeatability:	≤0.5%	
Load:	≤750Ω	
Analog signal:	DC 4~20 mA	
Dimensions:	600mm×600mm×1700mm	

Operating Conditions

Applicable medium:	Medical oxygen
Sample gas TEMP.:	Room temperature
Sample gas pressure range:	0.05~0.15MPa
Sample gas flow:	≤3L/min
Sample gas dust concentration:	≤0.2mg/m³

Working Conditions

Ambient temperature:	+15~+45°C
Relative humidity:	≤85%
Power supply:	AC 220V
Consumption:	≤60VA
Ambient air pressure:	Altitude below 2500m
Air velocity:	≤0.5m/s
Work location:	Horizontal

Special System Requirements

- System cabinet:width*depth*height=600*800*2100mm;
- Pipeline interface: upper part of the cabinet/lower part of the cabinet;
- System external interface: 1/4 in ferrule connector (Swagelok).

CI-XT64B Series air separation process online analysis system

CI-XT64B gas analysis system is for the deep cold air separation process gas sample conditions, the correct matching and reasonable combination, so that the analytical instruments and pretreatment devices can be well adapted to the process conditions. Sampling pretreatment plays a very important role in the whole system, and the sample gas should be dusted, oiled, watered, etc. before entering the analyzer sensor, and the composition of the gas to be measured must not be changed.

Product Features

- The core components of the high-pressure pressure reducing box (stainless steel pressure reducing valve, stainless steel switch valve) are all made of Swaelok international famous brand;
- The sample gas filtration device adopts high-precision, visual, composite filter, which has the characteristics of convenient maintenance and intuitiveness, and the filtration accuracy is high to 0.3u;
- High purity oxygen detector, using the world's most advanced 3D ion flow detector, with high precision, long life characteristics;
- Pretreatment pipelines, joints and valves are all domestic or international first-line brands;
- The main components are all imported, and the hardware configuration is high-end.

Technical Index

Reaction Speed

Analyzer latency: T_{10}≤5s

Analyzer rise time: T_{10}~T_{90}≤20s

Technical Index

System latency: T_{10}≤10s

System rise time: T_{10}~T_{90}≤30s

Technical Indicators

Zero drift:	≤±1% FS/7d
Range drift:	≤±1% FS/7d
Repeatability:	≤0.5%
Load:	≤750Ω
Analog signal:	DC 4~20 mA

Operating Conditions

Gas sample temperature:	Room temperature
Gas sample dewpoint TEMP.:	≤-30°C
Gas sample flow:	≤1000mL/min
Gas sample dust concentration:	≤10mg/m³
Corrosive:	≤10PPm

Working Conditions

Ambient TEMP.:	+5~+45°C
Relative humidity:	≤85%
Power supply:	AC 220V 50 Hz
Consumption:	≤0.2KVA
Ambient atmosphere:	the environment does not contain explosive,corrosive atmosphere, and has have good ventilation
Ambient air pressure:	altitude below 2500m
Air velocity:	≤0.5m/s

Principle Of Air Separation

Cryogenic air is the use of O_2, N_2, Ar in the air with different boiling points (O_2: -183 °C, N_2: -196 °C, Ar: -186 °C) for many times to carry out the partial condensation of the mixed vapor and the partial evaporation of the mixed liquid rectification process, and finally separate and purify it.

CI-EM01 Online single gas detection alarm

Product Features

- Anti-reverse connection design, any form of reverse connection will not damage the instrument;
- Two cable inlets, convenient for on-site installation;
- Independent air chamber structure, rapid response, excellent long-term stability;
- Multiple alarm methods Alarm mode settings:
- Call the Alarm: Display visual alarm, on-site sound and light alarm;
- Alarm types: concentration alarm, fault alarm;
- Alarm mode: low alarm, high alarm, interval alarm, weighted average alarm.

Technical Index

Detection principle:	Electrochemical, catalytic combustion, infrared, thermal conductivity, semiconductor, PID photoion, etc., depending on the range, site environment and user needs
Detection accuracy:	Typical accuracy: ⩽±3% FS (higher accuracy requirements are based on sensor performance)
Uncertainty:	⩽±2%
Linearity:	⩽±2%
Repeatability:	⩽±2%
Response time:	T_{90}⩽20s
Recovery time:	⩽30s
Alarm output:	1 way as default, optional 2 ways with passive contact (dry node) output, Alarm point can be set, with on-site sound and alarm lights
IP Grade:	IP65, waterproof and dustproof
Working TEMP.:	-40°C~+70°C
Relative humidity:	10-95%RH (conventional) non-condensing occasions

CI-EM02 Online single gas detection alarm

Product Features

- It can detect 1~6 kinds of factors (including gas concentration,temperature and humidity, particulate matter, etc.) at the same time, and the specific detection type depends on the internal sensor configuration of the instrument;
- The unit can be switched freely, and the unit is optional: ppm, mg/m³, ug/m³, VOL%, LEL%, pphm, ppb, mg/L;
- Anti-reverse connection design, two cable inlets, independent air chamber structure;
- Data recovery function: You can choose to restore part or all of it, so as to avoid the worries caused by misoperation.

Technical Index

Detection principle:	Electrochemical, catalytic combustion, infrared, thermal conductivity, semiconductor, PID Photoion, etc., depending on the range, site environment and user needs
Detection method:	On-line detection, diffusion measurement; optional pipeline type, flow-through type, external pump suction type, built-in pump suction type measurement
Detection accuracy:	Typical accuracy: ⩽±2%FS (higher accuracy requirements are based on sensor performance)
Uncertainty:	⩽±2%
Linearity:	⩽±2%
Repeatability:	⩽±2%
Response time:	T_{90}⩽20s
Recovery time:	⩽30s
Ex-mark:	Flameproof Ex d IIC T6 Gb
Dimensions:	Single chamber size: 240X230X90mm (LXHXW)

CI-EM03 Portable compound gas detection&alarm

Product Features

- Optional customized model with 5Ah/10Ah/30Ah/50Ah polymer lithium battery, standby time 3-30 days (reserve charging interface and switch button);
- The specific standby time is related to the quantity, type and wireless mode of gas, which is for reference only;
- The wireless transmission mode can choose 433M, LORAs WIFI, 4G/5G, NB-loT and other methods;
- It can realize alarm interconnection with portable gas detectors in the area;
- Optional on-site sound and light alarm, suction wall hanging, pump suction detection, camera, etc..

Technical Index

Detection principle:	Electrochemical, catalytic combustion, infrared, thermal conductivity,semiconductor,PID Photoion, etc., according to the range, site environment and user needs
Detection gas:	Toxic gas, oxygen, carbon dioxide, flammable and explosive gases, TVOC, etc.
Typical accuracy:	W±2%FS (higher precision can be customized)
Uncertainty:	⩽±1%
Linearity:	⩽±1%
Repeatability:	⩽±1%
Response time:	T_{90}⩽30s
Recovery time:	⩽30s
Ambient TEMP.:	-20°C~+55°C(typical value) -40°C~ +70°C (limit value)
Installation method:	Pipeline type, wall-mounted type

CI-EM300 Gas detection controller and alarms

Product Features

- High-speed, highly integrated microprocessor system, standard ARM architecture core, high performance, low power consumption;
- Using Linux, uC/OS real-time operating system, modular design, standard software architecture, high degree of integration, fast running speed and good stability;
- Powerful data statistical analysis, alarm, fault intelligent sorting, total accumulation;
- Large-capacity data record storage and query, the capacity can be increased without limit, and the data export is flexible;
- Channel shielding, alarm delay and other special functions, easy to apply.

Technical Index

Signal input:	1~32 way 4~20mA, RS485 input at the same time, can connect to 255 probes
Analog signal:	RS485(standard MODBUS protocol),4-20-mA(4, 8, 16 ways can be choosed) Option: ethernet, wireless 4G/3G/2G 433M LoRa Zigbee)etc.
Display range:	0~99999
Resolution:	1, 0.1, 0.01, 0.001 optional
Display accuracy:	±0.1%FS
Alarm mode:	Sound and light alarm, each circuit can be configured to either high or low alarm limit and be bounded to three relay linkage outputs
Output control:	8 sets of relay contact output (normally open/normally closed), contact point capacity AC 3A/250V, DC 3A/30V, a group of public Alarm output, contact capacity AC 10A/277V, AC 12A/125V
Automatic detection:	Short circuit detection, various states of detector, functions detection, etc.
Working TEMP.:	-20°C~+55°C, 10~85%RH

CI-EM506 Portable gas compound analyzer

Product Features

- Can simultaneously detect 1~18gas, the concentration unit is optional: ppm, umol/mol, mg/m³, %VOL, %LEL, pphm, ppb, etc.;
- Built-in pump suction measurement, integrated water vapor and dust filters, quick response;
- Three display modes can be switched: Simultaneous display of four gas concentrations, large font cycle display of single-channel gas concentration, real-time curve, automatic cycle or manual cycle between channels can be switched;
- You can set whether to display the maximum value, minimum value, and average value.

Technical Index

Detection principle:	Electrochemical, catalytic combustion, infrared, thermal conductivity, semiconductor body, zirconium oxide, PID photoion, ultraviolet absorption, laser TDLAS, etc., depending on gas type, range, site environment and user requirements
Typical accuracy:	⩽±2%FS (higher accuracy requirements are based on sensor performance)
Linearity:	⩽±2%
Repeatability:	⩽±2%
Uncertainty:	⩽±2%
Response time:	T_{90} ⩽ 30s
Ambient TEMP.:	-40°C~+70°C
environment humidity:	10-95%RH
Battery capacity:	10800mAH rechargeable polymer battery, with overcharge, overdischarge, overvoltage, short circuit, overheat protection functions

CI-EM601 Portable diffused single gas detector

Product Features

- Single gas detection, optional concentration unit:ppm, umol/mol,mg/³,%VOL,%LEL,pphm,ppb, etc.;
- Aterproof, dustproof, explosion-proof, anti-vibration, intrinsically safe circuit design, anti-static, anti-electromagnetic radiation interference;
- Small size, light weight, easy to carry;
- Display real-time concentration, alarm status, power and other information;
- 1680mAh non-rechargeable power battery or lithium battery, replaceable, 1 year standby time; optional 500mAh rechargeable lithium battery;
- Sound and light alarm, vibration alarm, visual alarm, undervoltage alarm, fault alarm, shutdown alarm.

Technical Index

Detection gas:	Single gas
Resolution:	CO(0.1ppm)、H_2S(0.01ppm)、O_2 (0.01%Vol)、Ex(0.1%LEL)、CO_2(1ppm)
Detection principle:	Electrochemical, low power infrared etc.
Detection method:	Diffusion measurement
Display method:	Wide viewing angle dot-matrix LCD display, two-button operation
Typical accuracy:	⩽±3% （FS）
Alarm method:	Sound and light alarm, vibration alarm, visual alarm, sound and light+vibration + visual alarm, close alarm optionally
Response time:	T_{90} ⩽30s
Recovery time:	⩽ 30s
Ambient TEMP.:	-20°C~ +60°C
Relative humidity:	⩽95%RH (non-condensing)
Data storage:	Standard 20,000 pieces of data capacity, storage time interval and mode can be set

Electrochemistry

CI-EM604 Portable diffused 4-in-1 gas detector

Product Features

- The corresponding sensor can be selected to detect 6 factors at the same time (1-4 gas concentrations + temperature and humidity), and the specific detection type depends on the internal sensor configuration of the instrument;
- Large-capacity data storage function, supporting multiple storage methods;
- Various communication interfaces;
- Three display modes can be switched: Simultaneous display of four gas concentrations, cyclic display of single-channel gas concentration, and real-time curve display.

Technical Index

Detection principle: Electrochemistry, catalytic combustion, infrared,thermal conductivity, semiconductor, PID photoion, etc., according to the gas type, range, depending on the site environment and user needs

Typical accuracy: ⩽±3%FS (higher accuracy requirements depend on sensor performance)

Response time: T_{90} ⩽ 30s

Ambient TEMP.: -40°C~+70°C

Ambient humidity: 10-95%RH

Detection method: Diffusion type, nominal flow rate 500ml/min

Display method: 2.31 inch 320*240 high-definition color screen display

IP Grade: IP65, waterproof and dustproof

CI-EM604-1 Portable 4-in-1 gas detector

Product Features

- It can detect 1~4 kinds of factors (including gas concentration, temperature and humidity, particulate matter, pressure difference, wind speed, etc.) at the same time, and the specific detection type depends on the internal sensor configuration of the instrument;
- The unit can be switched freely, the unit is optional: ppm, mg/m³, ug/m³,VOL%, LEL%, pphm, ppb, mg/L;
- Built-in pump suction measurement, the sampling distance is greater than 10 meters; supports real-time detection or timing detection (turn off the air pump when not detecting).

Technical Index

Detection principle: Electrochemical, Catalytic Combustion, Infrared, Thermal Conductivity, Semiconductor,Zirconium Oxide, PID Photoion, Ultraviolet Absorption,Laser TDLAS, etc., depending on the gas type, range, site environment and user needs

Sensor life: Electrochemical 2-3 years,
Catalytic combustion 2-3 years,
Infrared 5-10 years,
Thermal conductivity 2-5 years,
Semiconductor 2-3 years,
PID 2 years

Detection method: Built-in pump suction type, the sampling distance is higher than 10 meters, flow 500ML/min, key controlled air pump

Display mode: 2.31 inch 320*240 high-definition screen display

Typical accuracy: ⩽±3%FS (higher accuracy requirements depend on sensor performance)

CI-EM605 Portable 5-in-1 gas detector

Product Features

- It can detect 1~7 kinds of factors (including gas concentration, temperature and humidity, particulate matter, pressure difference, wind speed, etc.) at the same time, and the specific detection type depends on the sensor configuration inside the instrument;
- The unit can be switched freely, and the unit is optional: ppm, mg/m³, ug/m³, VOL%, LEL%, pphm, ppb, mg/L;
- Built-in pump suction measurement, the sampling distance is greater than 10 meters; supports real-time detection or timing detection (turn off the air pump when not detecting).

Technical Index

Detection factor: Various gases (Carbon Monoxide CO,Hydrogen Sulfide H_2S, Oxygen O_2,Combustible Gas Ex, Carbon Dioxide CO_2, etc.),
PS: It can detect any 1-5 kinds of gasconcentration and temperature and humidity, and the specific detection type depends on the internal sensor configuration of the instrument

Detection method: Built-in pump suction type, the sampling distance is higher than 10 meters, flow 500ML/min, separate switch key operation switch air pump

Display mode: 2.5 inch 320*240 high-definition screen display

Display content: Real-time concentration, alarm, time,temperature, humidity, storage, communication, power, charging status, concentration unit, gas molecular formula, etc.

Detection accuracy: Typical accuracy: ⩽±2% FS (the actual accuracy is determined by the performance of the selected sensor)

CI-EM606 Portable 6-in-1 gas detector

Product Features

- It can detect 1~8 kinds of factors at the same time, and the specific detection type depends on the internal sensor configuration of the instrument;
- The unit can be switched freely, and the unit is optional: ppm, mg/m³, ug/m³, VOL%, LEL%, pphm, ppb, mg/L;
- Built-in pump suction measurement, the sampling distance is greater than 10 meters; supports real-time detection or timing detection (turn off the air pump when not detecting);
- Rich human-machine interface: 2.5-inch high-definition color screen display, the menu interface uses high-definition simulation graphics to display the function names of each menu.

Technical Index

Detection range: 0~1, 10, 100, 1000, 5000, 50000ppm,100MG/L, 100%LEL, 20%, 50%, 100%Vol Optional, according to the site environment and user needs

Sensor life: Electrochemical 2-3 years, Catalytic Combustion 2-3 years, Infrared 5-10 years,Thermal 2-5 years, Semiconductor 2-3 years, PID 2 years

Detection method: Built-in pump suction, the sampling distance is greater than 10 meters, the flow is 500ML/min, key controlled air pump

Detection accuracy: Typical accuracy: ⩽±1%FS (the actual accuracy is determined by the performance of the selected sensor)

Uncertainty: ⩽±1%

Linearity: ⩽±1%

Repeatability: ⩽±1%

Response time: T_{90}⩽20s

Power supply: DC 3-5V(standard DC 3.7V)

Battery capacity: 6000mAH rechargeable polymer battery with overcharge,over-voltage, short-circuit, and over-heat protection functions

CI-TD01 Secondary display

Product Features

- Display the main parameters of the transmitter through the 128X64 LCD display;
- Adjust the transmitter parameters through buttons and display;
- A set of power output: 5V/12V/24V can be selected;
- A group of adjustable voltage output: 0~36V;
- Communication:RS232/RS485 two-way communication.

Technical Index

Power supply:	AC 100~240V, 50~60Hz
Consumption:	< 5VA
Display:	128×64 LCD
Button:	Touch button(4 keys)
Modulation power supply:	DC 24V/DC 36V
Analog signal:	1 group
Analog input:	4-20mA/0-20mA/0-1V/ 0-5V/0-10V/1-5V 4-20mA
Service life:	More than 10 years (normal use)
Weight:	Net weight approx. 1kg
Ambient TEMP.:	-10~+55°C
Ambient humidity:	<85%RH
Installation method:	Dial installation
Dimensions:	LXW=92mmX92mm (rectangular hole)

CI-DS304 Series wall-mounted multifunctional display

Product Features

- 4.3" touch screen multi-parameter display;
- IP65 protection;
- Built-in power isolation protection.

4.3" touch screen Multi parameter display

IP65 protect

Built-in power supply Isolation protection

Technical Index

Display:	4.3"TFT LCD
Resolution:	480×272 touch panel
Touch Panel	
Type:	4-wire resistive
Touch accuracy:	Action area length (X) ± 2%, width (Y) ± 2%
Processor & Memory	
Flash memory (Flash):	128 MB
Memory (RAM):	128 MB
Processor:	32 Bits RISC Cortex-A8300 MHz
Certification:	Meets CE certification standard
Power Supply	
Input power:	AC 100 ~ 240V
Power isolation:	Built-in
IP Grade:	NEMA4 / IP65 Compliant Front Panel
Storage TEMP.:	-20…+60°C(-4… 140°F)
Operating TEMP.:	0…+50°C(32 … 122°F)
Relative humidity:	10~90%RH(non-condensing) engineering plastic
Case material:	Engineering plastic
Dimensions:	160×265×97.5mm(L×W×H)

E1601 0002 Wall-mounted digital display meter

Product Features

- Reinforced PC case;
- Quick installation and easy disassembly;
- Dual-screen LED digital display;
- Two-way alarm function.

Two ways Alarm function

Enhanced PC Shell

Quick installation Easy disassembly

Dual screen LED Digital display

Ordering Information

Product Variant

E1601 0002:	Wall-mounted digital display,bring DC 24V power output, two alarm relay outputs
E1601 0002A:	Wall-mounted digital display meter,bring DC 24V power output, two alarm relay outputs with 4~20 mA output

PT401 Pressure transmitter

Product Features

- Using digital compensation and non-linear correction technology;
- Wide measuring range, can measure absolute pressure, gauge pressure and negative pressure;
- No moving parts, reliable performance;
- Advanced structure to ensure product reliability;
- Excellent field interchangeability;
- 4~20mA or Modbus RTU output is optional.

Ordering Information

Measuring range:	-100 ~ 0 kPa to 10kPa ~ 40MPa ~ 100MPa
Pressure type:	Gauge pressure, absolute pressure, negative pressure
Measurement accuracy:	0.5% (0.25% or 0.1% optional)
Hysteresis and repeatability:	±0.1% FS
Response time:	≤1ms (up to 90%FS)
Overload pressure:	2 times full scale
normal measurement:	DC 16 ... 30V
Analog signal:	4~20 mA (two-wire system)
Communication:	Modbus RTU (RS485)
Medium TEMP.:	-30 ... +85 °C
Process connection:	G1/2" (M20x1.5, G1/4” , 1/2"NPT 1/4" NPT optional)
Electrical connector:	Hessman DIN connector (direct outlet, aviation connector optional)

CI-XTTF10 Intelligent control purifiying device

Product Features

- The filter system uses high-performance vortex rods as refrigeration devices, and uses compressed air as the power source, which is environmentally friendly and safe;
- The interior adopts multi-layer filtration method, combined with spiral cooling tank, can realize good separation of gas;
- The probe is also equipped with an Ex d lie T6 Gb explosion-proof case, which contains electronic modules such as PLC, which can automatically control gas sampling.

Technical Index

Installation method: Flange connection

Measurement method: Pump suction /positive pressure

Service life: More than 5 years(filter replaced regularly)

Power supply: AC 220V±10%

Consumption: ⩽1000VA

Ambient TEMP.: -10~+50°C

Ambient humidity: <80%RH

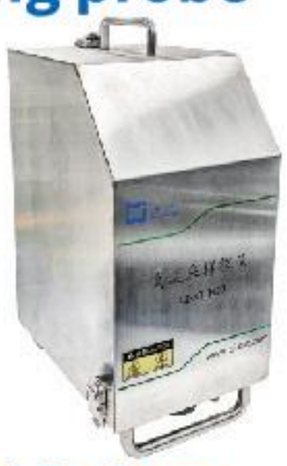
Sample gas pressure: ⩽1MPa

Storage Environment

Ambient TEMP.: -20~+60°C

Ambient humidity: <95%RH

CI-XTTH23 High temperature sampling probe



Product Features

- Sampling device suitable for explosion-proof occasions, with functions of blowback and heating;
- Equipped with stainless steel powder sintered filter, the filter can be easily replaced through the quick disassembly handle;
- The lower support frame can place the probe anywhere without worrying about damaging the ground, and it can also be used as a grip when moving the probe;
- When used in explosion-proof places, an explosion-proof junction box is required.

Technical Index

Installation method: Flange connection

Measurement method: Pump suction type / positive pressure through type

Service life: More than 5 years(filter replaced regularly)

Power supply: AC 220V±10%

Consumption: ⩽1000VA

Ambient TEMP.: -10~+50°C

Ambient humidity: <80%RH

Sample gas pressure: ⩽1MPa

Storage Environment

Ambient TEMP.: -20~+60°C

Ambient humidity: <95%RH

CI-XTTE81 High temperature dew point sampling probe

Product Features

- The probe is mainly used for collection of process gas. It is equipped with a heater and a humidity analysis probe, which can effectively ensure that the humidity data required by the process pipeline can be collected and measured immediately without delay. At the same time, the heating function can ensure that the collected gas is not liquefied;
- The probe adopts stainless steel sintered filter element, which can effectively remove gas impurities, and the filter element can be easily replaced through the handle.

Technical Index

Installation method: Flange connection
Measurement method: Pump suction/positive pressure
Service life: More than 5 years (replace filter regularly)
Power supply: AC 220V±10%
Consumption: ≤1000VA
Ambient TEMP.: -10~+50°C
Ambient humidity: <80%RH
Sample gas pressure: ≤1MPa

Storage Environment

Ambient TEMP.: -20~+60°C
Ambient humidity: <95%RH

CI-XTTS80 Steam heat tracing sampling probe

Product Features

- The structure is simple, the operation is convenient, and the sampling can be controlled through the built-in ball valve;
- The probe is mainly used for process gas collection, while keeping the gas water bath warm to prevent the sample gas from condensing and liquefying;
- The probe is equipped with a titanium alloy filter element, which can effectively remove gas impurities, and the filter element is easy to replace.

Technical Index

Installation method: Flange connection
Measurement method: Pump suction/positive pressure
Service life: More than 5 years (replace filter regularly)
Power supply: AC 220V±10%
Consumption: ≤1000VA
Ambient TEMP.: -10~+50°C
Ambient humidity: <80%RH
Sample gas pressure: ≤1MPa

Storage Environment

Ambient TEMP.: -20~+60°C
Ambient humidity: <95%RH

CI-XT-TT3 Flur gas sampling probe

Product use

The CI-XT-TT3 sampling probe is a new type of sampling probe developed based on the analysis and summary of the actual working conditions of combustion flue gas. The sampling probe is designed and produced in accordance with rainproof and protective measures. It not only has heating function (up to 200 °C left to right), but also has the function of blowing inside and outside the filter element. It is controlled by a large diameter solenoid valve to blow inside and outside the filter element, This design effectively ensures the dryness of the sample gas, resulting in better filter filtration, smaller air resistance, and longer maintenance cycles.

Technical Index

Shell material:	2mm thick cold rolled steel plate
Core material:	304 stainless steel and fluororubber sealing material
Dimensions:	L*W*H=285*220*300
Sample gas flow:	0-3L/min
Allowable sample gas:	-30~+10Kpa
Heating power supply:	AC 220V 50Hz 150W (need to be controlled)
Solenoid valve control power:	DC 12V
Sampling medium:	Combustion smoke
Filter dust:	<700g/N m^3
Equipment net weight:	About 15Kg

CI-HOGO1 Hydrogen zero all-in-1

Product Features

- The hydrogen production part uses a thin-film electrolytic cell, which uses pure water electrolysis to produce hydrogen, which is cleaner, cleaner and pollution-free than the lye electrolytic cell, and has almost zero maintenance during the whole life;
- Use the same high-pressure condensation method as the drying effect of color-changing silica gel to remove water, no maintenance is required during the entire life cycle, and no replacement parts are required;
- Small in size and light in weight, it can replace high-pressure hydrogen cylinders without the labor of handling.

Technical Index

Hydrogen purity:	≥99.999%
Output flow、pressure:	Hydrogen: 0~300mL/min ; 0~0.5MPa Zero gas: 0~1000mL/min;0~0.6MPa Driving gas (air): 0~0.8MPa
Hydrogen leakage alarm value:	≥300mL/min
Normal water replenishment time:	2~4 seconds
Cracking heating box TEMP.:	350~450°C (Factory default is 400°C)
Power supply:	AC 220V±10%，50Hz±5%
Monitor:	10 inch touch screen
Air inlet and outlet specifications:	3mm steel pipe with silicone seal head
External communications:	RS485(standard)/RS232(optional)
TEMP. and humidity:	5~40°C; less than 85%RH, without dust and corrosive gas

CI-R300P/B Series condenser

Product Features

- Double-channel dehydration, the sample gas is dehydrated after the primary cooling to ensure the dehydration of the sample gas;
- High efficiency, the sample gas is cooled and dehydrated again, and the dehydration efficiency is as high as 97%;
- Utilizes energy neutralization control theory, intelligent PID is used to adjust temperature of heat exchangert, so that the temperature is maintain at the set temperature, with a control accuracy of ±0.2°C.

Technical Index

Sample gas output dew point:	±4°C
Stable sample gas input:	≤80°C
Sample gas input dew point:	≤80°C
Sample gas flow range:	≤300L/H
Condenser material:	Glass
Working TEMP.:	-5°C~+45°C
Dehumidification channel:	2 way
Sample gas connection size:	Φ6
Drainage interface size:	Φ6
Installation method:	CI-R300B:wall-mounted CI-R300P:19 inch standard cabinet type
Dimensions:	CI-R300B:310X300X330mm CI-R300P:485X340X222mm
Weight:	14kg
Power supply:	220V±10%, 50Hz
Power:	350VA

CI-GF2600/2800

Product Features

- High efficiency: Remove dust and other particulate matter through the outer cylinder of the polymer polyethylene filter element, and then further remove impurities in the sample gas by activated carbon;
- Quick replacement: There is no dead angle inside the filter, and all parts are well connected, which can quickly replace the air inside;
- The surface of the window is covered with a piece of toughened glass to enhance the impact protection of the window;
- Easy to replace the filter element: The filter element is an independent structure, which is very convenient to replace.

Technical Index

Function:	Removal of water, rosin, organic matter, etc.
Filter material:	Imported high molecular polyethylene, activated carbon
Filter diameter:	10μm
Work pressure:	-1~1kPa
TEMP. range:	5~45°C
Gas intake:	1/4"NPT, can be configured according to the needs of the joint, the lower end is the inlet
Gas outlet:	1/4"NPT, the connector can be configured according to the needs, the upper end is the outlet

CI-GF2900

Product Features

- No dead zone, fast replacement;
- Superior sealing performance;
- Quick-change filter element;
- The plexiglass casing is convenient for observing the use of the filter element;
- Sintered activated carbon filter element, no deformation, no accumulation;
- Strong corrosion resistance;
- Changai has completely independent intellectual property rights.

Technical Index

Function:	Removal to water, rosin, organic matter, etc.
Filter material:	Imported high molecular polyethylene, activated carbon
Filter diameter:	10μm
Work pressure:	-1~+1kpa
TEMP. range:	5~45°C
Gas intake:	1/4"NPT,can be configured according to the needs of the joint, the lower end is the inlet
Gas outlet:	1/4"NPT, the connector can be configured according to the needs, the upper end is the outlet

AF1000

Technical Index

Filling:	Activated carbon
Gas intake:	Φ6 connector, the opposite end pointed by the arrow is the air inlet
Gas outlet:	Connector, the end pointed by the arrow is the air outlet

How To Use

Use a PTFE tube with a diameter of Φ6 to feed the sampling gas from the air inlet of AF1000, and then connect the gas pipe from the air outlet of AF1000 to send the filtered gas to the next connection point.

Technical Index

1. When there are water droplets in the filter, the activated carbon has been adsorbed and saturated, and the AF1000 must be replaced immediately;

2. When a large amount of rosin and other impurities are obviously attached to the activated carbon particles in the filter, the AF1000 must be replaced immediately;

3. If the flow rate of the air outlet of the filter is obviously reduced, it may be caused by the clogging of the filter. At this time, please check whether the filter is clogged.

Assembly Drawing

AF2000

Technical Index

Function: Filter out slight dust in the gas

Gas intake: 1/4"NPT, the connector can be configured according to the needs, the arrow points to opposite end is the air inlet

Gas outlet: 1/4"NPT, the connector can be configured according to the needs, the arrow points to one end of the air outlet

Cautions For Use

1. When water droplets are found in the AF2000 filter, the gas should be dried. This filter does not have the function of removing water;

2. If the flow rate of the air outlet of the filter is obviously reduced, it may be caused by the clogging of the filter. At this time, please check whether the filter is clogged.

Technical Index

Stop feeding in gas, remove the transparent circular glass cover of the filter counterclockwise, then pull out the filter element, purge the filter with clean gas, blow out the debris in the filter, and insert a new filter element , then pad the sealing ring and install the plexiglass cover on the small filter, and tighten it by rotating clockwise. Block the air outlet of the filter, and then introduce 0.3-0.5MPa gas from the air inlet of the filter, and apply soap foam around the filter to check for air leakage.

AF4000

Technical Index

Gas intake: 1/4"NPT (or Φ6 connector), can be configured as required connector, the opposite end pointed by the arrow is the air inlet

Gas outlet: 1/4"NPT (or Φ6 connector), can be configured as required connector, the end pointed by the arrow is the air outlet

How To Use

Use stainless steel tubes or PTFE tubes (please select the material and diameter of the tube according to the requirements of use and the joints), feed the sampling gas from the inlet of the AF4000, and then connect the tube from the outlet of the AF-4000 to send the filtered gas to the next in a row.

Precautions

1. When there are water droplets in the filter, the moisture-proof beads or activated carbon are saturated, and the AF4000 must be replaced immediately;

2. When a large amount of rosin and other impurities are obviously attached to the activated carbon particles in the filter, the AF4000 must be replaced immediately;

3. If the flow rate of the air outlet of the filter is obviously reduced, it may be caused by the blockage of the filter. At this time, please check whether the filter is blocked.

昌　艾
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