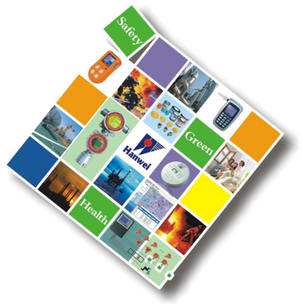

Hanwei

Henan Hanwei Electronics Co.,Ltd

Henan Hanwei Electronics Co.,Ltd
No.169, Xuesong Road, National Hi-Tech Zone,
Zhengzhou,China
TEL：+86-371-67169070/80 FAX:+86-371-67169090
http://www.hwsensor.com P.C.：450001
E-mail:sales@hwsensor.com

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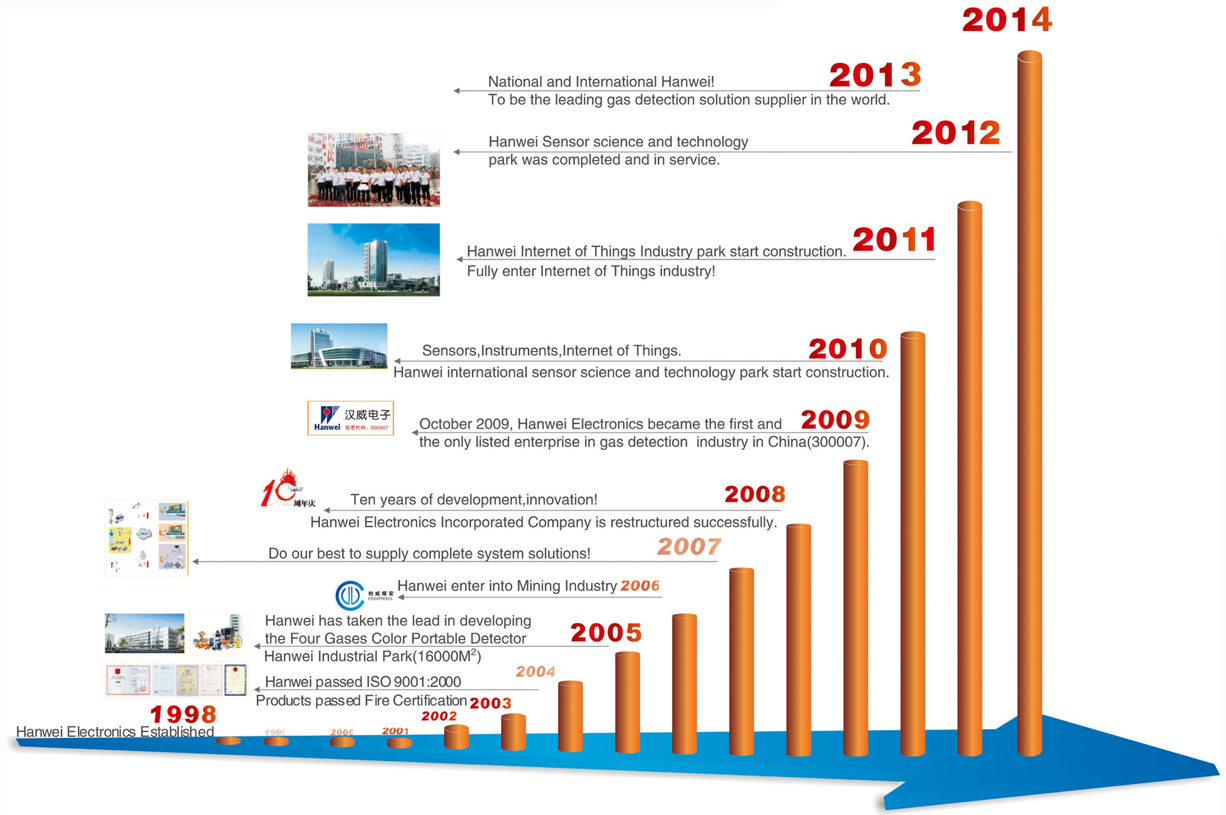
About Hanwei

Hanwei(ISO9001:2008) with approx 600 employees is a Hi-tech enterprise specialized in developing, manufacturing and selling of gas sensors and gas detecting instruments. Since 1998 founded, we owned a professional R & D team, with more than 100 engineers , served top ranking and completed solutions. Our products are widely used in home/commercial place, individual protection, industrial online detection, environmental analysis, mining safety, breath alcohol tester and engineering monitoring system. We are the leading professional manufacturer of gas detecting products in China.Hanwei is a listed company in 2009 (SZ300007).

Hanwei products and solutions have been exported to many countries and areas all over the world, and being widely used to monitor the concentration of the combustible gas, toxic gas, dangerous gas and special gas. The application field include oil, chemical, metallurgy, mining, electronics, electric power, pharmacy, food, medical treatment, agriculture, gas, city planning project, family safety and health, public areas, road safety management, sewage disposing, bioscience, etc. The gas detectors are widely used to protect the environment, to improve the living circumstance for the human beings.

Most of our products have ATEX/EN/UL/CE/TUV/RoHS or other approvals. We attend many famous professional exhibitions all over of the world every year, such as OTC, IFSEC, ESSEN, INTERSEC, Hongkong Electronics, Canton Fair, they are face to face chance to supply you our gas detection solutions. Hanwei will try his utmost to create value and success for the clients.

Development History



Words Of Management Team

We advocate due diligence! As the biggest gas detector manufacturer in China, we have the obligation to supply the best gas detection solution and service to our customers, to create safe, green and healthy condition to them.

We advocate innovation! Start with sensor's materials, device manufacturing, instrumentation technology and application software, we keep creating and getting lots of field and technical experience. Innovation is power for us to grown up!

We advocate people oriented! A united group with democratic management, scientific decision and joint cooperation would assure HANWEI to be a global leading gas detection solution supplier!
We hope create a better future together with you!

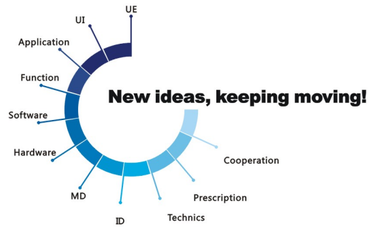
Abundant Industry Base

Quality, integrity, innovation, efficiency

Hanwei Electronics (ISO9001-certified) covers an area of 50 acres of Hanwei Industrial Park. There is 25000m2 area for development and production. It is the only list company of gas sensor and gas detector area in China. It has the scale manufacturing capacity of gas sensors and gas detection instruments. Well-trained professionals, rigorous working processes, advanced & professional production, and testing equipment to ensure that products and services which meet and also exceed your requirements.

Hanwei gas detection products have obtained fire type approvals, the calculator tool manufacturing license and explosion-protection certificate of conformity, dozens of products obtained CE, TUV and other international certification. Hanwei is in the leading position of domestic counterpart for the integrated technical level.

R&D And Creation



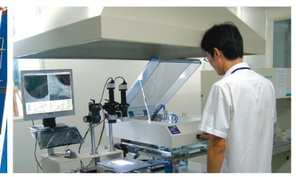
Hanwei advocates innovation and improvement. As the leader of the domestic gas detection fields, from the material science, apparatus technics , instrument technology, application software, rich experience in the industry are accumulated under the effort of more than 100 professional engineers which leads to achievements of number of invention patents, dozens of patented technology winning the provincial science and technology progress award and national key new product. The continuously introduced new technology and products meet the application requirements of many industries and many places, provide customers with the security and comfort from the latest technology.

Research fields in

New type of gas sensors: Electrochemical / Infrared / PID
Inflammable , Explosive and Toxic Gas Detectors
Conserving energy, Environmental protection Gas Detection System
Dangerous chemical warning and emergency disposal system.
Construction Project soft and special equipment development.

Academic exchanges and technical cooperation:

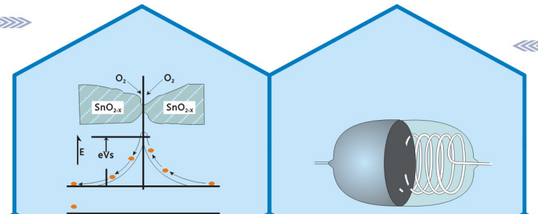
Qinghua University
Sian Jiaotong University
Beihang University
National University of Defence Technology
Changchun Institute of Applied Chemistry, Chinese Academy of Sciences
Shanghai Silicates Institute ,Chinese Academy of Sciences
Institute of physics of Zhengzhou University



R&D Gas Sensor Range

Core Techniques, Gas Sensor

Semiconductor Gas Sensor
MQ 92 Type



Catalytic Gas Sensor
MC 41 Type

Electrochemical Gas Sensor
ME 95 Type

NDIR Gas Sensor
MH 60 Type

Solid Electrode Gas Sensor
MG 22 Type

PID Gas Sensor
MD 05 Type

• • • • • •

Independent intellectual property rights and core technology

As one of the earliest gas sensor and sensor technology researching enterprise involved, the covering technology areas of Hanwei include many basic and application subjects such as Nano-catalytic technology, function material, electronic ceramic materials, electronic components, bio-engineering, organic polymer and we master the patent and non-patent technology like gas sensor materials, ingredients, production technology, pattern design etc. The gas sensors have a complete range of products; more than 130 different specifications of sensors can be used to detect dozens of combustible gas, toxic gas and other gases with lead integrated technology in China, even exclusive manufacture of some sensors in China.

Sensor Type Selection

Using Application Demand

- Safety Detection(LEL)
- Toxic Detection(PEL)
- Leakage Detection
- Person Safety Detection
- Exposure Assessment(TWA)
- Environmental Air Quality Levels Monitoring

Levels Detection Alarm → **Monitors**

Detectors Types

- Toxic gases → Electrochemical; Solid Electrode
- Combustible gases → Catalytic; Solid Electrode; NDIR
- VOC → PID
- Arene → FID
- Other gases → Thermal conduction; colorimetric analyzer

Qualitative and Quantitative Analysis → **Analyzers**

Target gas: Analyzers types

- Single gas
  - Air quality control
    - O_3 → UV-light Analyzers
    - SO_2 → IR fluorescence Analyzers
    - NO_x → Chemiluminescence Analyzers
    - TCH# → Flame ion Detector
    - CO → NDIR sensor
  - Continuous discharge
    - CO_2
    - SO_2
    - O_3 → Paramagnetism Analyzers; Zirconia Analyzers; Electrochemical sensor
- Mixture of gases Laboratory
  - Mixture UV-light/ IR fluorescence absorbing gas → UV-light/ IR fluorescence Analyzers
  - Mixture IR fluorescence absorbing gas → Fourier sensor infrared gas analyzer
  - Mixture Gases → Mass spectrometer; Gas chromatography analyzer

Arene

Gas Detection And Monitoring Systems

With collections of professional and technical superiority many years, Hanwei has many product series, such as household & commercial gas detection, personal protective portable gas detection, industrial fixed gas detection, exhaled gas alcohol detection, gas measurement and engineering systems for industrial analysis. It is widely used in more than 20 industries and areas like petroleum, chemical industry, metallurgy, electronics, pharmaceutical, fuel gas, family safety and health, environmental protection, military counter-terrorism etc.

Commercial gas detection:
- ★Methane detection
- ★Car parking gas detection
- ★Gas inspection management system

Industrial online gas detection:
- ★Point-type gas detectors
- ★Alarm monitoring system
- ★Sound and light alarm
- ★Wireless transmission device

Engineering system:
- ★ GPS gas pipeline inspection management system
- ★ Major hazard safety management system
- ★ Methane safety inspection system

Personal protection:
- ★ Single gas detection
- ★ Multi gas detection
- ★ Air breather

GAS DETECTION EXPERT

Alcohol concentration detector:
- ★Police alcohol tester
- ★Commercial alcohol tester
- ★Gift alcohol tester
- ★Health meter

Household gas alarm:
- ★ Independent gas alarm
- ★ Network-based gas alarm
- ★ Gas shut-off valve

Analyzer:
- ★Toxic gas analyzer
- ★O_2 analyzer

Coal Mine Safety

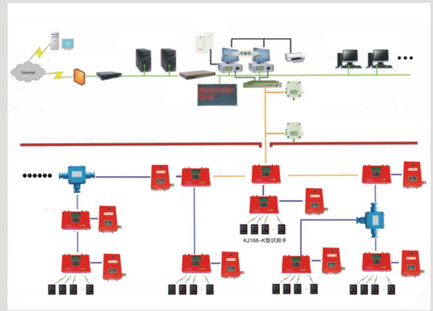
CREATWELL

Mining safety， From here!

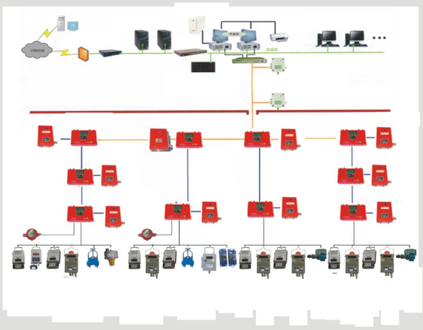
Hanwei professional colliery safety equipment covers a range of more than dozens of products as portable gas detection equipment, safety monitoring system, the personnel positioning management system and various colliery sensors, detection and calibration devices etc. All the products are in strict accordance with the national standard for design, and obtain explosion-proof, metering, MA and other related certification.

Safety for Coal Mine!

KJ168 Mine Person Management System



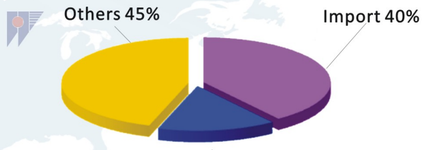
KJ169 Monitoring System for Coal Mine safety



Excellent Management Ability

Hanwei has a perfect management system. Our products and solutions have been applied in dozen of countries and regions all over the world. In China, we have dozens of branches and hundreds of service centers. Providing customers leading technology and satisfy with solution for personalized demand products. In the world, our products are wildly exported to Europe, the Middle East, America, and Southeast Asia etc, which gives us good reputation.

Sales more than 5000,000 pcs of gas sensors in 2009
The No. I in China market



Sales 2008 **various kinds of** Gas Detection Instruments about 700,000 sets
Output is the first one in China

After market development for many years, our company has established the stable profession customer community with remarkable achievement, the indication customer included: CNPC, Sinopec, ENN, Town Gas, Handan steel and iron, Beijing public transportation, capital airport, Shuangye furniture, Xinfei, Coca Cola and so on.

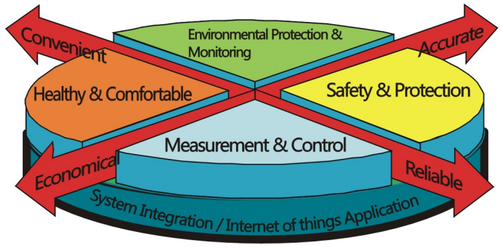
Our flag is flying on the Yellow River !

Our flag is flying all over the world !

International Cooperation

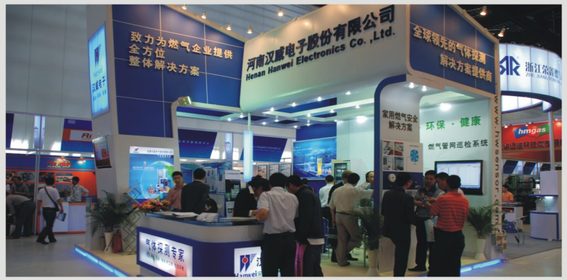
Development In Future

To be the global leading gas detection solution supplier



Corporation Culture

We are working to make every Hanwei staff be successful in the career and improve their living standards better continually. In this friendly family, everyone learns from each other, admires each other, trusts each other and works together for bright future.



Values

due diligence, innovation, joyful

Service idea

Creation value for customers

Development vision

Global leading provider of gas detection solution.

Hanwei mission

Creation of working & living conditions with security, protection and health.
Seeking value for customer, seeking wealth for employees,
seeking long-term business for enterprise, seeking recovery for the nation.

Gas Leak Alarm for Home or Commercial Use

Application: Home, apartment, hotel, office building, caravan, ship room etc.

Brief introduction: Gas leak alarm is designed to detect the concentration of combustible and toxic gas or vapors using high quality air-sensitive component and manufactured with advanced technology. When the gas concentration reaches the presetting alarm range, they will give audible and visual alarming, which reminds the user to take prompt favorable action. The user can also start up other link equipments, open windows or shut off gas supply, so as to avoid fire, explosion, suffocation, or other malignant accidents.

How to choose suitable gas leak alarm?

Class	Model	Detecting Gas	Type	Optional Output	Installation	Approval
Low class	GK401 / GD401 / GH401	Natural gas	Wired	Valve output Relay output	Wall-mounted	CE
	GK601 / GD601 / GH601	LPG				
	GK701 / GD701	CO				
	GD901	CO & natural gas				
	GE401	Natural gas	Plug in	NO	Wall-mounted	CE
	GE601	LPG				
	GE701	CO				
	GN	Natural gas	Wired	NO	Ceiling-hung	CE
		LPG				
High class	KAB	Natural gas	Wired	Valve output Relay output	Wall-mounted	CE, EN50194
		LPG				
	KAD	CO	Battery	NO	Wall-mounted, Ceiling-hung	CE, EN50291
	E2010	CO_2	Wired	4-20mA or RS485	Wall-mounted	Pending
	VAN300	Combustible gas, CO and Ether	Wired	Valve output Relay output	Wall-mounted	CE
Gas	DCF-80 / DCF-90	LPG and natural gas	Wired	Pulse valve	---	CE

Portable Gas Detectors

Application: Industrial application, like oil field, gas field, gas station, chemical factory, metallurgy, steel melting, painting room etc.

Brief introduction: Portable gas detectors can make continuous detection on combustible gas and toxic gases. Once the gas concentration reaches the preset alarm level, they will give audible, visual and vibration alarming, which remind the user to take prompt and favorable action. By adopting excellent-quality sensor, they have good sensitivity and reproducibility. With embedded MCU controller, they are quite easy to operate.

How to choose suitable portable gas detector?

How to choose suitable gas controller?

Model	Input signal	Detecting gas	Connecting detector	Connecting points	Approval
KB2100	4-20mA	Combustible & toxic gas	TC100N and BS03	1 channel to 1 detector	
KB2200	4-20mA	Combustible & toxic gas	TC100N and BS03	1 channel to 1 detector	
KB3100	RS485	Combustible & toxic gas	CP01, GN (RS485)	20pcs	
	4-20mA			8pcs	
KB6100	RS485	Combustible & toxic gas	CP01, GN (RS485)	30pcs	CE
	4-20mA			4pcs	
KB8100	RS485	Combustible & toxic gas	TC100N, BS03	32pcs	CE
	4-20mA			8pcs	

How to choose suitable fixed gas detector?

Model	Output signal	Detecting gas	Explosion-proof	Approval	Screwing size
TC100N	RS485 or 4-20mA	Combustible & toxic gas	Ex dⅡCT6	ATEX	G1/2
BS03	Rs485 or 4-20mA	Combustible & toxic gas	ExdⅡCT6	ATEX	G1/2
Cp01	RS485 or 4-20mA	CH_4, CO	-----	CE	G1/2

Portable Gas Detectors

Application: Industrial application, like oil field, gas field, gas station, chemical factory, metallurgy, steel melting, painting room etc.

Brief introduction: Portable gas detectors can make continuous detection on combustible gas and toxic gases. Once the gas concentration reaches the preset alarm level, they will give audible, visual and vibration alarming, which remind the user to take prompt and favorable action. By adopting excellent-quality sensor, they have good sensitivity and reproducibility. With embedded MCU controller, they are quite easy to operate.

How to choose suitable portable gas detector?

Application	Model	Type	Target gas	Alarmindication	Approval
Home gas leakage detecting	BX166	Single gas	LPG, Natural gas	LED lights and buzzer	CE
	BX169	Single gas			
Gas pipeline leakage detecting	JL269	Single gas	LPG, Natural gas	LED lights and buzzer	CE
	GPT100	Single gas		LCD screen and buzzer	
	JL368	Single gas		LCD screen and buzzer	
Industrial gas monitoring	BX171	Single gas	CO, H_2S, O_2	LCD screen and buzzer	
	BX170	Single gas	LEL, O_2, toxic gases		
	BX172	Single gas	LEL, O_2, toxic gases		
	BX258	2-gas	LEL, O_2, toxic gases		
	Bx616	4-gas	LEL, CO, H_2S and O_2		

Target Gas List

Gas	Range	Resolution	L-alarm	H-alarm	Portable gas detector					Fixed gas detector		
					BX171	BX170	BX172	BX258	BX616	TC100N	BS03	CP01
LEL	0-100%LEL	1%LEL	20%LEL	50%LEL	√	√	√	√	√	√	√	√
O_2	0-30%VOL	0.1%VOL	19.5%VOL	23.5%VOL	√	√	√	√	√	√	√	
CO	0-1000ppm	1ppm	35ppm	200ppm		√	√	√	√	√	√	√
H_2S	0-50/100ppm	1ppm	10ppm	15ppm	√	√	√	√	√	√	√	
H_2	0-1000ppm	1ppm	35ppm	250ppm		√				√	√	
VOC	0-100%LEL	1%LEL	20%LEL	50%LEL		Some		√				
CL_2	0-10/20ppm	1ppm	2-5ppm	5-10ppm		√	√	√			√	
NH_3	0-100/200ppm	1ppm	25-50ppm	50-100ppm		√		√			√	
SO_2	0-20/100/500ppm	1ppm	2-10ppm	5-50ppm		√		√			√	
CLO_2	0-10ppm	0.1ppm	0.5ppm	1.5ppm		√					√	
NO	0-1000ppm	1ppm	25ppm	50ppm		√		√			√	
NO_2	0-100ppm	1ppm	2ppm	5ppm		√					√	
HCN	0-100ppm	1ppm	5ppm	10ppm		√					√	
C_2H_4O	0-100ppm	1ppm	5ppm	10ppm		√					√	
C_3H_3N	0-100ppm	1ppm	5ppm	15ppm		√					√	
HF	0-10ppm	0.1ppm	0.5ppm	1.5ppm		√					√	
C_4H_8S	0-10ppm	1ppm	2ppm	5ppm		√					√	
CH_3I	0-1/25ppm	0.1/1ppm	0.2/10ppm	0.5/20ppm		√					√	
CH_3OH	0-100/200ppm	1ppm	20-50ppm	50-150ppm		√					√	
$C_6H_5OH_3$	0-100/200ppm	1ppm	20-50ppm	50-150ppm		√					√	
PH_3	0-10ppm	0.1ppm	0.3ppm	1ppm		√					√	

How to choose suitable Alcohol Tester?

	Model	Sensor type	Accuracy	Price	Calibration	Approval	Mouthpiece
Commercial type (suitable for gift, or personal use)	AT128	Hot-wire	±10%	LOW	No	CE,RoHS	No
	AT126	Hot-wire	±10%	LOW	No	CE,RoHS	No
	AT198	Flat-surfaced	±10%	LOW	Yes	CE,RoHS	No
	AT199	Flat-surfaced	±10%	LOW	Yes	CE,RoHS	No
	AT6000	Flat-surfaced	±10%	LOW	Yes	CE,RoHS	Yes
	AT6100	Flat-surfaced	±10%	LOW	Yes	CE,RoHS	Yes
	AT6200	Flat-surfaced	±10%	LOW	Yes	CE,RoHS	Yes
Professional Type	At8050	Fuel cell	< 0.400 ±0.032 mg/L 0.400 - 1.000 ±8% 1.000 - 2.000 ±30%	middle	Yes	CE,RoHS	Yes
	AT8100	Fuel cell	< 0.400 ±0.032 mg/L 0.400 - 1.000 ±8% 1.000 - 2.000 ±30%	high	Yes	CE,RoHS	Yes
	AT8600	Fuel cell	< 0.200 ±0.025 mg/L 0.200–0.400 ±0.040 mg/L 0.400 - 2.500 ±20%	high	Yes	CE,RoHS	Yes
	AT8800	Fuel cell	< 0.400 ±0.020 mg/L 0.400≤C < 1.000 ±5% C≥1.000 ±20%	hign	Yes	CE,RoHS	Yes
	AT8900	Fuel cell	< 0.400 ±0.020 mg/L 0.400≤C < 1.000 ±5% C≥1.000 ±20%	hign	Yes	CE,RoHS	Yes
Coin Operated Type	AT309	Fuel cell	±10%	high	Module changeable	CE	Yes
Odor Breath Type	OT100	Semiconductor	---	low	no	CE,RoHS	no
Health Tester	HT6100	Semiconductor and pressure sensor	----	middle	Yes	CE,RoHS	Yes

Combustible Gas Sensor Series

Application: Domestic gas leakage detector, Industrial Combustible gas detector, Portable gas detector

Detection Gas: Flammable gases, LPG, CNG, natural gas, coal gas, smoke

Principle: Through the gas absorption on the metal oxide surface, gas concentration change is measured by electronics conduction change.

Technology	Product Name	Series	Target Gas	Heater Voltage	Expected Operating Life	Range
Semiconductor	MQ-2	MQ	Flammable-gas, smoke	5.0V±0.2V AC or DC	10 years	300-10000ppm
Semiconductor	MQ-4	MQ	Natural gas, Methane	5.0V±0.2V AC or DC	10 years	300-10000ppm
Flat-surfaced	MP-4	MP	Natural gas, Methane	5.0V±0.1V AC or DC	10 years	300-10000ppm
Semiconductor	MQ-5	MQ	LPG, Natural gas, Coal Gas	5.0V±0.2V AC or DC	10 years	300-10000ppm
Flat-surfaced	MP-5	MP	LPG, Natural gas, Coal Gas	5.0V±0.1V AC or DC	10 years	300-10000ppm
Semiconductor	MQ-6	MQ	LPG, iso-butane propane	5.0V±0.2V AC or DC	10 years	300-10000ppm
Flat-surfaced	MP-6	MP	LPG, iso-butane propane	5.0V±0.1V AC or DC	10 years	300-10000ppm
Semiconductor	MQ-8	MQ	Hydrogen, coal gas	5.0V±0.2V AC or DC	10 years	100-10000ppm
Semiconductor	MQ-306A	MQ	LPG, Natural gas, Coal Gas	0.90V ±0.10V AC or DC	10 years	300-5000ppm
Semiconductor	MQ-7	MQ	CO	5.0V±0.2V AC or DC	10 years	10-1000ppm 10-10000ppm
Semiconductor	MQ-9	MQ	CO, flammable-gas	5.0V±0.2V AC or DC	10 years	10-1000ppm CO 100-10000ppm combustible gas

Semiconductor Gas Sensors for Air Quality Control

Semiconductor	MQ-131	MQ	O_3,Ozone	5.0V±0.2V AC or DC	10 years	0.01-2ppm, 10-500ppm
Semiconductor	MQ-135	MQ	Ammonia, Benzene, Alcohol, Smoke	5.0V±0.2V AC or DC	10 years	10-300 NH3 10-1000ppm Benzene 10-600ppm Alcohol 1%/m-10%/m Smoke
Flat-surfaced	MP-135	MP	H_2, Alcohol, CO	5.0V±0.1V AC or DC	10 years	10-1000ppm H_2 10-1000ppm Alcohol 10-500ppm CO
Semiconductor	MQ-136	MQ	H_2S	5.0V±0.2V AC or DC	10 years	1-200ppm
Semiconductor	MQ-137	MQ	NH_3	5.0V±0.2V AC or DC	10 years	10-300ppm 5-500ppm
Semiconductor	MQ-138	MQ	Toluene, Acetone, Ethanol, H_2	5.0V±0.2V AC or DC	10 years	5-500ppm

Alcohol Gas Sensor

Semiconductor	MQ-3	MQ	Alcohol	5.0V±0.2V AC or DC	10 years	0-1000ppm
Flat-surfaced	MP-3	MP	Alcohol	2.5V±0.1V AC or DC	10 years	0.04-4mg/l alcohol
semiconductor	MQ-303	MQ	Alcohol	0.9V±0.1V AC or DC	10 years	20-1000ppm Alcohol
Hot-wire	Mr513	MR	Alcohol	2.5V±0.1V AC or DC	10 years	0-1000ppm

Electrochemical Gas Sensor Series

Application: Widely used for home, industrial, coal for toxic gas detection
Detection gas: CO, O2, H2S, NH3, CL2, PH3, H2, SO2, NO2, O3
Principle: Electrolyzing gas at fixed voltage, the gas concentration would be measured by the electrolyzed current changes.

Technology	Product Name	Series	Target Gas	Resolution	Expected Operating Life	Range
Electrochemical	ME1-CO	ME	CO	1ppm	2 years	0-500ppm
Electrochemical	ME2-CO	ME	CO	0.5ppm	5 years	0-1000ppm
Electrochemical	ME3-CO	ME	CO	0.5ppm	2 years	0-1000ppm
Electrochemical	ME4-CO	ME	CO	0.5ppm	2 years	0-1000ppm
Electrochemical	ME3-H_2	ME	H_2	2ppm	2 years	0-1000ppm
Electrochemical	ME4-H_2	ME	H_2	2ppm	2 years	0-1000ppm
Electrochemical	ME3-H_2S	ME	H_2S	0.1ppm	2 years	0-100ppm
Electrochemical	ME4-H_2S	ME	H_2S	0.1ppm	2 years	0-100ppm
Electrochemical	ME3-Cl_2	ME	Cl_2	0.1ppm	12year	0-10ppm
Electrochemical	ME3-Cl_2	ME	Cl_2	0.1ppm	2 year	0-20ppm
Electrochemical	ME3-PH_3	ME	PH_3	0.05ppm	2year	0-20ppm,0-1000ppm
Electrochemical	ME3-NH_3	ME	NH_3	0.5ppm	2year	0-100ppm
Electrochemical	ME4-NH_3	ME	NH_3	0.5ppm	2year	0-100ppm
Electrochemical	ME2-O_2	ME	O_2	---	2 years	0-25% VOL
Electrochemical	ME3-O_2	ME	O_2	---	1 years	0-25% VOL
Electrochemical	ME3-SO_2	ME	SO_2	0.1ppm	2year	0-20ppm
Electrochemical	ME4-SO_2	ME	SO_2	0.1ppm	2year	0-20ppm
Electrochemical	ME3-ETO	ME	ETO	0.1ppm	2year	0-20ppm
Electrochemical	ME3-C_2H_5OH	ME	C_2H_5OH	0.5ppm	1 year	0-500ppm
Electrochemical	ME3-NO_2	ME	NO_2	0.1ppm	1 year	0-20ppm
Electrochemical	ME3-O_3	ME	O_3	0.02ppm	1 year	0-10ppm

CO2 and CH4 Gas Sensor

Application: Air Quality Control, Ferment Process Control, Room Temperature CO2 concentration Detection Oil, Chemical, HVAC and Environmental CO2 levels detection.
Principle: Solid electrode, Thermal conductor and NDIR

Technology	Product Name	Series	Target Gas	Workingvoltage	Expected Operating Life	Range
Solid Electrolyte	MG811	MG	CO_2	6.0V±0.2V AC or DC	5 years	0-10000ppm
Thermal Conductor	MD62	MD	CO_2	3.0V±0.1V AC or DC	5 years	0-100% VOL
NDIR	MH440	MH	CH_4	3.5-5.5VDC	5 years	0-5% VOL (0-100% VOL optional)
NDIR	MH410	MH	CO_2	3.5-5.5VDC	5 years	0-5% VOL (0-100% VOL optional)
NDIR	MH490W	MH	CH_4 and CO_2	3.5-5.5VDC	5 years	CH_4: 0-100%VOL CO_2: 0-50%VOL
NDIR	MH-740	MH	CH_4	4.5-5.5VDC	5 years	0-5% VOL (0-100% VOL optional)
NDIR	MH-710	MH	CO_2	4.5-5.5VDC	5 years	0~2000ppm (0-100% VOL optional)

CO2 Gas Sensor Module

Technology	Product Name	Series	Target Gas	Workingvoltage	Expected Operating Life	Range	Dimension
NDIR	MH-Z12	MH	CO_2	4-6V	5 years	0-5000ppm(optional)	
NDIR	MH-Z14	MH	CO_2	4-6V	5 years	0-10000ppm(optional)	
NDIR	MH-Z92	MH	CO_2 and CH_4	3.5-5.5VDC	5 years	0-100% VOL CH_4, 0-50% VOL CO_2	

Catalytic Gas Sensor Series For Combustible Gas Detection

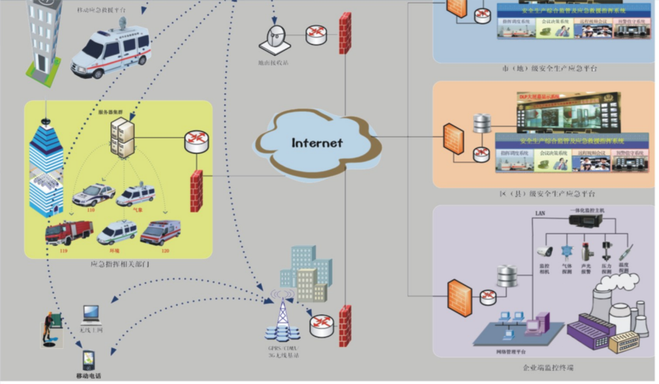
Application: Industrial and commercial fields for combustible gas detection
Detection gas: Natural gas, LPG, coal gas, alkane , gasoline ,Alcohol, ketone, benzene,organic solvent
Principle: Though the gas catalytic burning on the catalyzer surface result in white coil temperature changes,the gas concentration changes will be measured by the coil resistor changes.

Technology	Product Name	Series	Target Gas	Workingvoltage	Expected Operating Life	Range
Catalytic	MC101	MC	Methane, LPG, Propane	3.0±0.1V	3years	0-100% LEL
Catalytic	MC105	MC	Methane, LPG, Propane	3.0±0.1V	3 years	0-100% LEL
Anti-explosion catalytic	MC112	MC	Methane, LPG, Propane	3.0±0.1V	3years	0-100% LEL
Anti-explosion catalytic	MC201	MC	Methane, LPG, Propane	2.0±0.1V	3years	0-100% LEL
Catalytic	MC115	MC	Methane, LPG, Propane	3.0±0.1V	3years	0-100% LEL
Catalytic	MC116	MC	Methane, LPG, Propane	2.5±0.1V	5 years	0-100% LEL
Catalytic	MC203	MC	Methane, LPG, Propane	3.0±0.1V	5 years	0-100% LEL
Thermal Conductor	Md61	MD	Natural gas, LPG, coal gas, gasoline, pure, ketone, benzene, CCl_4	3.0±0.1V	5 years	0-100% VOL

Module Gas Sensor Series

Application:

Technology	Product Name	Series	Gas Type	Power	Resolution	Range
Module	M001	Catalytic	Alkyl, mellow, alkene , ketone , gasoline and other combustible gas	DC24V±25%	1%LEL	0-100%LEL
Module	M002	Electrochemical	CO	DC24V±25%	1ppm	0-1000ppm
Module	M003	Electrochemical	O_2, CO, H_2S combustible gases	DC24V±25%	< 0.1%VOL O_2 < 5ppm CO < 0.5ppm H_2S 1%LEL Combustible	0-25%VOL O_2 0-500ppm CO 0-50ppm H_2S 0-100%LEL Combustible
Module	M004	Electrochemical	NH_3 combustible gases	DC24V±25%	< 0.1%VOL O2 < 5ppm CO < 0.5ppm H2S 1%LEL Combustible	0-100 ppm 0-100%LEL Combustible
Module	M101	Catalytic	Methane	3.0-5.0V	±0.1% (0.5-1%CH_4)	0-4%CH_4
Module	M201	Semiconductor	Hydrogen	2.8-5V	±15%(80ppm)	20-150ppm
Module	M402	Flat surfaced	Natural gas, LPG, Coal gas	9.0 ±2V	±5%LEL	1-25% LEL
Module	M403	Flat surfaced	Natural gas, LPG, Coal gas	9.0 ±2V	±5%LEL	1-25% LEL
Module	M404	Catalytic	Combustible gas	2.8-5V	±5%LEL	0-100%LEL
Module	M405	Electrochemical	CO	5-12V	0-150ppm (±5ppm) 150-400 (±10ppm)	0-1000ppm
Module	M408	Semiconductor	Natural gas, LPG, Artificial coal gas	AC 220V±10%V	±5%LEL(AC 220V)	1-25% LEL
Module	M410	Electrochemical	Carbon Monoxide	9.0V±1.0V	±20ppm(CO)	50-400ppm(CO)
Module	M413	Semiconductor	CO	8.0-12.0V	Alarming: ±125ppm	50-500ppm
Module	M501	Catalytic and electro-chemical sensor	Alkyl, mellow, alkene , ketone , gasoline and other combu stible gas	DC24V±25%	1%LEL	0-100%LEL



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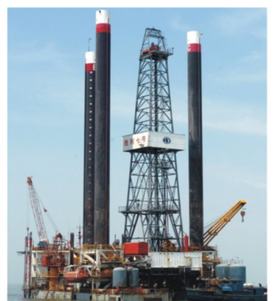

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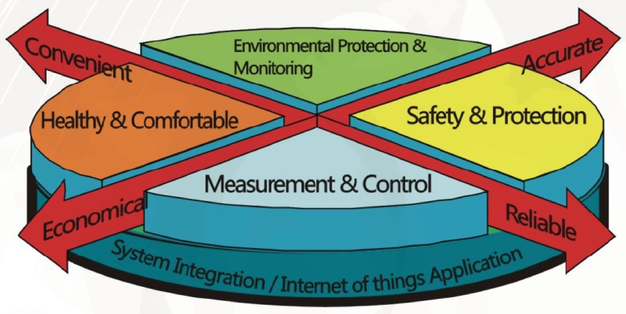

Safety Environmental Health

About Hanwei

More than 28 years history,become a listed company in Shenzhen Stock Market in 2009

Established in 1998 with ISO9001,ISO14000 and OHSAS18000 company certified

Hanwei industrial zone possesses over 80,000 square metres of area

Approx 1000 employees,hundreds of them are engineers

Products widely used in 100 countries,covering more than 20 industry fields

Own gas sensor key technology

Expertised in the R&D,innovation,manufacture and marketing

2014

2013 National and International Hanwei!
To be the leading gas detection solution supplier in the world.

2012 Hanwei Sensor science and technology park was completed and in service.

2011 Hanwei Internet of Things Industry park start construction.
Fully enter Internet of Things industry!

2010 Sensors,Instruments,Internet of Things.
Hanwei international sensor science and technology park start construction.

2009 October 2009, Hanwei Electronics became the first and the only listed enterprise in gas detection industry in China(300007).

Ten years of development,innovation! **2008**
Hanwei Electronics Incorporated Company is restructured successfully.

Do our best to supply complete system solutions! **2007**

Hanwei enter into Mining Industry **2006**

Hanwei has taken the lead in developing the Four Gases Color Portable Detector **2005**
Hanwei Industrial Park(16000M²)

Hanwei passed ISO 9001:2000 **2004**
Products passed Fire Certification **2003**

2002

2001

1998 Hanwei Electronics Established