



INDUSTRIAL GAS DETECTOR

QINGDAO ALLRED ELECTRONICS.,LTD.

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- 🌐 www.allredgd.com
- ✉ alison@allredgd.com
- ☎ +86 0532 86766369
- ☎ +86 15064237518
- 📍 No.13 Hancheng Road, Qingdao Free Trade Zone, Shandong Province, 266555 China



COMPANY PROFILE

Qingdao ALLRED Electronics Co., Ltd. is a high-tech enterprise specializing in the research, development, manufacture, sales and service of Remote Methane Leak Detector, which has 20 years of technical accumulation in energy safety storage and transportation, and is a leader in the field of safety equipment in the petrochemical and natural gas industries.

Some users of the ARD series of Remote Methane Leak Detector launched by the ALLRED include Towngas, China Resources Gas (CR Gas), ENN Gas, China Gas, Kunlun Gas, Beijing Gas, Hangzhou Gas, Guizhou Gas which belong to CNPC. ALLRED have made indelible contributions to the safe operation of gas companies.

Our company will adhere to the corporate culture of "customer, innovation, process, self-organization", always put customer needs first, take customer satisfaction as the first goal, and insist on providing customers with more value. Hope to be your trusted partner!

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ARD Series Remote Methane Leak Detector

Model: ARD3000



Specification

Model	ARD3000
Measurement Range	0ppm · m ~100000 ppm · m
Sensitivity	2.5 ppm · m
Response Time	0.05s
Detection Distance	200m
Detector Laser	Class I
Spotter Laser	Class III R
Aiming Method	Green spotter laser and optical sight
IP Rating	IP66
Ex Marking	Ex ib IIA T4 Gb
Operating Temperature	-20°C ~ 50°C
Battery Operating Life	12 hours
Power	2 Replaceable Lithium Battery
Size	201mm x 76mm x 248mm
Instrument Weight	0.75kg
Display Screen	2.3-inch high brightness LCD
Inspection Software	IOS and Android, PC client end
Ranging Measurement	With range finder to measure as far as 100m

Application

Gas pipeline inspection



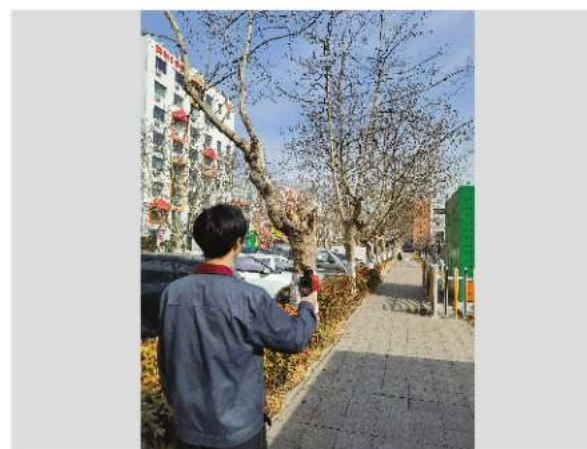
0.05s response time,
greatly improves the inspection efficiency

Industrial gas station inspectio



2.5ppm · m sensitivity,
tiny leaks can be detected

Long distance inspection



200 m detection distance,
suitable for huge gas plant inspection



Suitable for urban building inspection,
gas leakage in 30-story buildings can be found

ARD Series Remote Methane Leak Detector

Model: ARD4000 & ARD4100 & ARD-MINI



ARD4000

ARD4100

ARD-MINI

Specification

Model	ARD4000	ARD4100	ARD-MINI
Measurement Range	0ppm · m ~100000 ppm · m		
Sensitivity	3 ppm · m	5 ppm · m	5 ppm · m
Response Time	0.05s		
Detection Distance	200m	120m	60m
Detector Laser	Class I		
Spotter Laser	Class III R		
Aiming Method	Green spotter laser with optical sight	Green spotter laser	
IP Rating	IP68		
Ex Marking	Ex ib IIC T4 Gb	Ex ib IIC T4 Gb	
Operating Temperature	-20°C ~ +50°C		
Battery Operating Life	12 hours	6 hours	
Power Supply	Direct charge or replaceable lithium batteries	Direct charge	
Size	198mm x 131mm x 58mm	130mm x 37.5mm x 40mm	
Instrument Weight	0.55kg	0.26kg	
Display Screen	1.8-inch high brightness LCD	1-inch high brightness LCD	
Inspection Software	IOS and Android, PC client end		
Ranging Measurement	No		

Laser Methane Gas Detector Module

Model: AFD1000B

This module can be applied to drones, PTZ monitoring system, and vehicle-mounted inspection system, and output RS485 standard signals to transmit methane concentration information in real time.



Specification

Measurement Range	0-99999 ppm. m
Sensitivity	5ppm. m
Response Time	0.05s
Detection Distance	150m
Detector Laser	CLASS 1
Spotter Laser	CLASS 3R
Power Supply	12 V
Power	≤ 4 W
Size	124*61*62mm
Weight	0.4 kg
Communication Method	RS 485

Pump Suction Laser Gas Detector

Model: AXD1000

AXD1000 pump suction laser gas detector is suitable for leakage detection of gas equipment such as regulator box, buried pipeline, valve well, etc. It has a fast response time, high sensitivity and longer life, and it can detect the concentration of methane.

Due to the wavelength locking technology, AXD1000 gas detector does not need regular calibration, and can be directly installed on carts, electric vehicles, and automobiles, which greatly improves the efficiency of leak detection and positioning accuracy.



Laser principle detection, faster and more accurate leak detection

Handheld probe and trolley, easy to cope with more inspection environments

Optimized integrated design, more compact appearance



Used with gas patrol car or electric car, all-round detection of gas leakage

Equipped with high-flow gas pump to improve inspection efficiency

With intelligent inspection APP, real-time record of detection data

Specification

Gas Detected	Methane (CH ₄)
Measurement Range	0–100% VOL
Sensitivity	1 ppm (Methane)
Response Time	0.1s
Battery Operating Life	≥ 10 hours
Unit	ppm, %LEL, %VOL
IP Rating	IP66
Ex Marking	Ex ib II C T3 Gb
Operating Temperature	–20°C ~ 50°C
Size	155mm X 130mm X 60mm

Application



AFD Series PTZ Gas Leak Monitoring System





Our PTZ gas monitoring system is suitable for inspection of various types of gas stations and large gas equipment. Each system is equipped with a laser gas detector and video camera to obtain real-time images and comprehensive data on natural gas concentration.



Specification

Model	AFD1000	AFD2000
Measurement Range	0ppm · m ~ 100000 ppm · m	
Sensitivity	5 ppm · m	
Response Time	0.05s	
Detection Distance	200m	150m
Detector Laser	Class I	
Spotter Laser	Class III R	
IP Rating	IP68	
Ex Marking	Ex d IIC T6 Gb/Ex Td A21 IP68 T80°	Ex ib IIC T4 Gb(主机) [Ex ib Gb]IC本安电源
Operating Temperature	-40℃ ~ 60℃	
Size	502mm x 292mm x 443mm	200mm x 200mm x 315mm
Power Supply	220VAC	DC12V
Instrument Weight	30kg	7kg
Camera	300w pixels, 30x zoom	
Motion Range	Horizontal 360° Vertical +/-90°	

Strength

-  360° omni-directional scanning
-  7x24 hours uninterrupted monitoring
-  Suitable for large areas, large equipment inspection
-  Suitable for complex station environments

Application



Vehicle-Mounted Gas Leakage Inspection System



Specification

Detection Principle	TDLAS	Gas	Methane
Sensitivity	5ppm · m	Detector Laser	class 1
Response Time	0.05S	Spotter Laser	class 3R
Measurement Range	0-100000ppm · m	IP Rating	Ip68
Detection Distance	0-150m	Operating Temperature	-40°C~70°C
Visual Terminal	Tablet PC	Operating Temperature	5 ~100%RH
Alarm	Audible + Display	Movement	Pan360° Tilt +90° ~-45°
Application	Security Inspection Assistant	Screen Pixel	2 million
Data Interface	Wi-Fi	Power	20W
Supply Voltage	DC12V	Display	Numerical Display
Weight	7kg	Dimension	200*200*315mm

Valve Well Leakage Monitoring Terminal Model:GT-FGA1000V

GT-FGA1000V valve well leakage monitoring terminal is a new generation of composite monitoring terminal. It is mainly used for methane concentration monitoring, liquid level monitoring and well cover variation monitoring in harsh environments such as underground pipeline corridors, pipeline valve wells, municipal gas wells, rainwater wells, and thermal wells. The device combines gas detection, liquid level detection, wireless communication and Internet of Things technology, with the advantages of quick detection, fast response, sensitive detection and low false alarm rate; it reports to the control center through 4G/NB-IoT network, which can truly realize effective real-time monitoring, discover and eliminate potential safety hazards at the first time, and maximize the protection of relevant facilities and personnel safety.



Specification

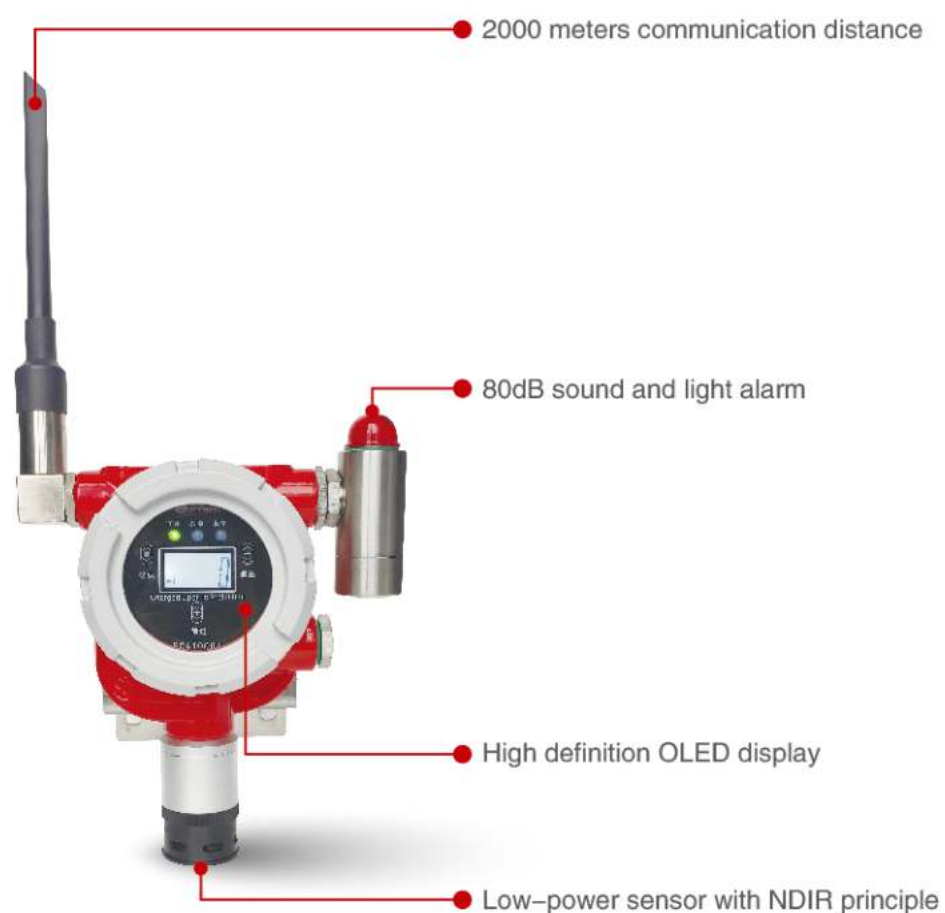
Detection Principle	TDLAS
Gas Type	Methane CH4
Sampling Method	Free diffusion
Response Time	≤ 10s (T90)
Measurement Range	0 ~ 100%LEL
Accuracy	≤ 1%LEL
Alarm Limit	25%LEL and 50%LEL (adjustable)
Inspection Interval	1-60 minutes(adjustable)
Communication Interval	1-24 h (adjustable)
Signalling Method	4G/NB -IoT
Operating Temperature	-40°C~+70°C
Operating Humidity	0%-100%RH non-condensing
Operating Voltage	3.9VDC(battery powered)
Battery Life	3 years
IP Rating	IP68
Dimension	204mm x 129mm x 64mm

Wireless Gas Detector

Model: GT-FGA1000W

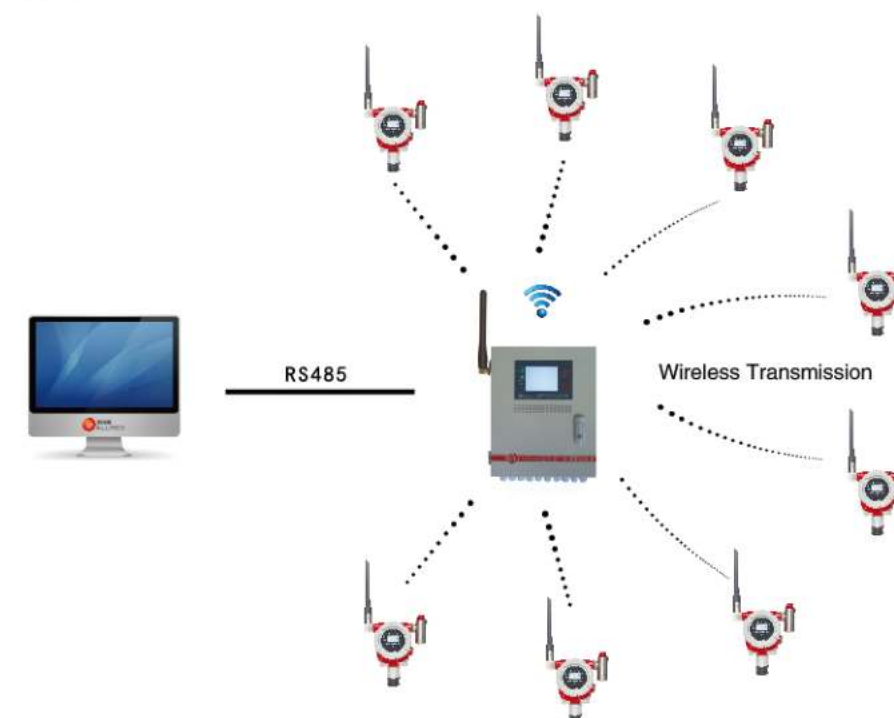
Why We Make Wireless Instead of Wired?

- » Why We Make Wireless Instead of Wired?
- » No cable laying, greatly reduce project cost and installation time
- » Possible to install and operate in places hard to reach
- » Ultra low power consumption
- » Flexible to move and change position
- » Easy to regularly examine and maintain



- 50%–70% reduction of installation cost
- 1 main battery and 1 standby battery
- 6 months continuous operating time without battery change

Application



Specification

Detectable Gas	HC Combustible gas	Toxic gas
Detection Principle	Non-dispersive infrared absorption	Electrochemistry
Sampling Method	Natural diffusion	
Measurement Range	(0~100)%LEL	(0~100)ppm (Default value, different ranges can be changed according to needs)
Resolving Power	1%LEL	1ppm (Default value, which can be changed according to different ranges)
Accuracy	± 3%LEL	± 10% or ± 5%FS
Response Time	≤ 30s (T90)	≤ 60s (T90)
Operating Temperature	(-40 ~ 70)°C	(-10 ~ 55)°C
Ambient Humidity	≤ 95%RH non-condensing	
Atmospheric Pressure	86~106kPa	
Alarm Concentration	1-stage alarm: 25%LEL 2-stage alarm: 50%LEL (self-set)	Two stages alarm, and can be set according to different gas types
Signal Transmission	Wireless transmission: NB-IoT, 4G, LoRa and other methods available	
Wireless transmission distance	1000meters without shelter	
Operating Voltage	3.6VDC (powered by lithium battery)	
Explosion Proof Classification	Ex ia IIC T6 Ga	
Ingress Protection	IP66	

Magnetic Gas Detector

Model: GTYQ-FGA1000P

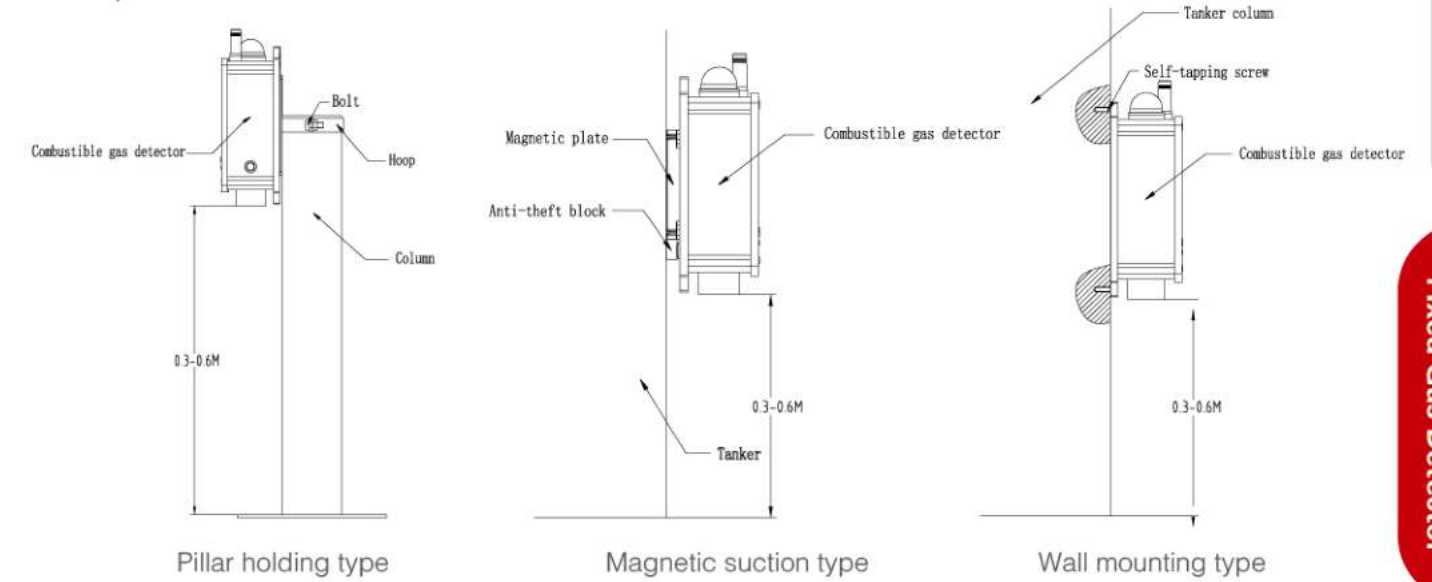
GTYQ-FGA1000P magnetic gas detector is our star product, which is very popular among customers for its compact and integrated shape, flexible installation and sensitive detection, and has achieved great success once it is launched.



- 14*10*6 cm, small size and compact
- Magnetic to metal surface, easy installation
- No cable planning, 50%–70% reduction of cost
- 5 years continuous operating time without battery change

Application

Multiple installation methods



Specification

Detectable Gas	HC Combustible gas	Toxic gas
Detection Principle	Non dispersive infrared absorption	Electrochemistry
Measurement Range	(3~100)%LEL	(0~100)ppm (Default value, different ranges can be changed according to needs)
Resolving Power	1%LEL	1ppm (Default value, which can be changed according to different ranges)
Accuracy	± 3%LEL	± 10% or ± 5%FS
Response Time	≤ 30s (T90)	≤ 60s (T90)
Operating Temperature	(-40 ~ 70)°C	(-10 ~ 55)°C
Alarm Concentration	1-stage alarm 25%LEL, 2-stage alarm 50% LEL (default value) (Can be set manually on demand)	Two stages alarm, and can be set according to different gas types
Display	LCD screen	
Operation Method	Remote control	
Status Indication	Normal, Alarm, Fault, Anti-theft	
Alarm Method	Sound and light	
Signal Transmission	LoRa	
Wireless Transmission Distance	200meters without shelter	
Power Supply	Battery powered, uninterrupted operation for 5 years	
Anti-Theft	Anti-theft buckle + sound and light alarm	
Installation Method	Magnetic and fixed type	
Explosion Proof Classification	Ex ia IIC T6 Ga / Ex ia IIIC T ₆₀ 80°C Da	
Ingress Protection	IP66	

Point Type Gas Detector

Model: GT-FGA1000L

FGA series point-type combustible gas detector adopts the world's leading non-dispersive infrared absorption principle, which has the advantages of long life, wide measurement range, independent of oxygen, and anti-poisoning. This product can monitor the concentration of flammable gas in the environment under various harsh conditions, and is widely used in petroleum, chemical industry, oil field, oil depot, liquefied gas station and other occasions where flammable and explosive gases exist.



- Product: Point-type gas detector
Model: GT-FGA1000L
Warranty: **3** years

Specification

Detectable Gas	Combustible gas	Toxic Gas
Detection Principle	Non-dispersive infrared absorption	Electrochemistry
Sampling Mode	Natural diffusion	
Measurement Range	(3 ~ 100)%LEL	Parameter changes according to gas type
Resolving Power	1%LEL	Parameter changes according to gas type
Accuracy	± 3%LEL	± 10% or ± 5%FS
Response Time	≤ 30s (T90)	H ₂ S, SO ₂ ≤ 30s (T90) CO < 20s (T90)
Switch Signal	5A 30VDC / 5A 250VAC	Parameter changes according to gas type
Operating Temperature	(-40 ~ 70)°C	(-20 ~ 50) °C
Alarm Concentration	1-stage alarm: 25%LEL 2-stage alarm: 50%LEL (self-set)	Two-stage alarm, the alarm concentration can be set by yourself
Signal Transmission	4-20mA/RS485 Bus selectable	
Display	Bright digital tube display, with normal/fault/alarm indicator lights	
Operation Method	Remote control operation	
Atmospheric Pressure	86kPa ~ 106kPa	
Transmission Distance	≤ 1000m (Repeaters are required if the distance exceeds 1000 meters)	
Operating Voltage	Detector: 18-36VDC	
Alarm Volume	≥ 85dB	
Power	≤ 2.5 W	≤ 1.5 W
Explosion Proof Classification	Ex db IIC T6 Gb / Ex tb IIIC T80°C Db	Ex d IIC T6 Gb
Ingress Protection	IP65	

Gas Detection Controller

Model: ACR3000

ACR3000 gas detection controller is independently developed by our engineer team. It is a controller with practical functions and convenient operation. It can form an industrial gas alarm system together with our company's gas detectors.

The ACR3000 is a one-on-one controller used in conjunction with our company's 4-20mA detector. By cooperating with the detector and processing various data uploaded by the microcontroller, the data display and output control functions are ultimately completed.



- Product: Gas detection controller
Model: ACR3000

Specification

Operating Voltage	AC 100~240V 50/60Hz
Display	TFT Color Liquid Crystal Display
Sound Alarm	When the alarm setting value is reached, the buzzer will sound. The sound pressure level (A-weighted) at 1m directly ahead is greater than 65dB and less than 115dB
Indicator Light	Normal(NORM), Alarm(ALM), Fault(FLT), Shield(SHLD), Main Power(VAC), Backup Power(BAT) indicator lights
Control Function	3-way switch output, respectively for low alarm, high alarm and fault
Input Signal	4-20mA, RS485 and LoRa
Backup Power	Lithium Battery 1500mAh
Dimension	Wall-mounted (L280mm, W180mm, H120mm)
Operating Temperature	-10 ~ 45°C
Operating Humidity	≤ 95%RH non-condensing

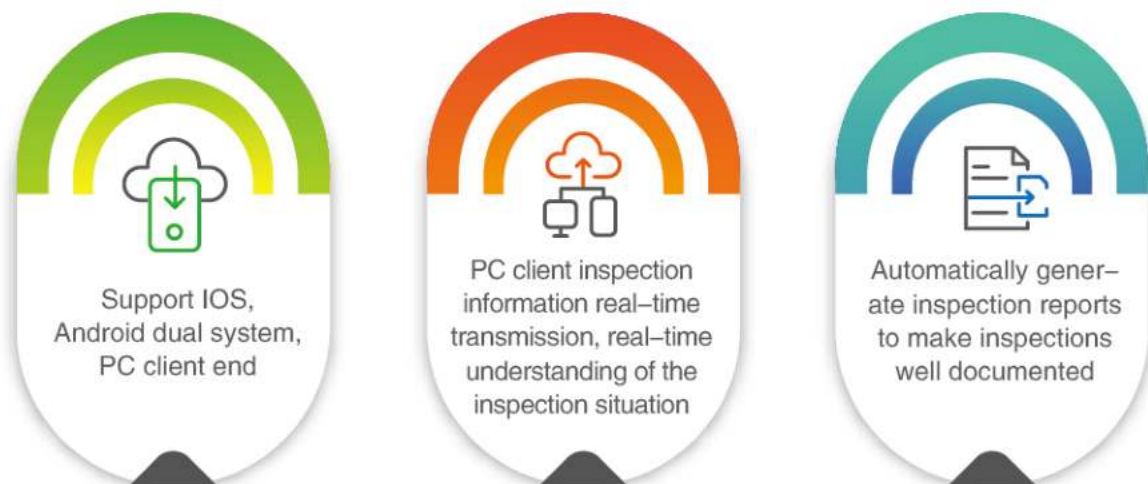
Security Inspection Assistant Software

- Mobile App and Computer Terminal
- Applicable to ARD series, AXD1000, AFD1000B

The gas leak inspection management system uses the Internet of Things technology to collect the concentration information detected by the instrument during the inspection process and the inspection path based on GPS positioning in real time through the mobile app and the laser methane remote detector communication, and upload it to the cloud server at the same time. Cooperating with the PC-side management platform, it can manage the inspection situation in real time and supports automatic generation of inspection reports.



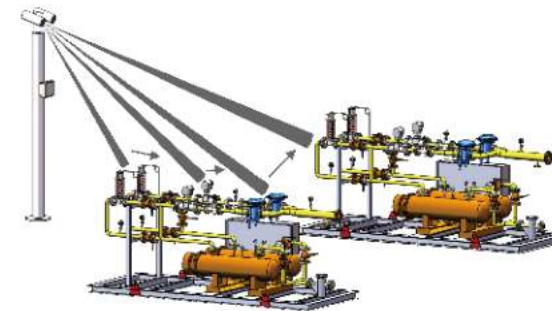
Feature



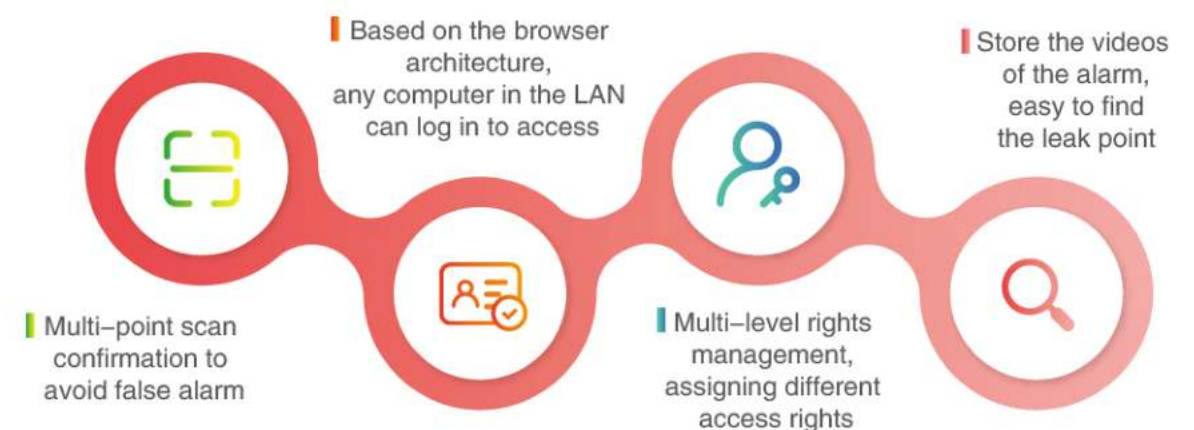
PTZ Monitoring System Software

- Computer Terminal
- Applicable to AFD1000 and AFD2000

The PTZ Laser Methane Monitoring System can display the current situation within the current monitoring range and the concentration information of the location in real time. When a leak is found, the system automatically records and stores the alarm concentration data and on-site video for easy playback and viewing. Support multi-channel PTZ access at the same time, each screen can be operated independently and set the inspection path and preset point. The software provides three modes of PTZ manual control, preset cruise, and regional cruise, online monitoring without dead ends in different weather conditions, to maximize the safety of gas in the station.



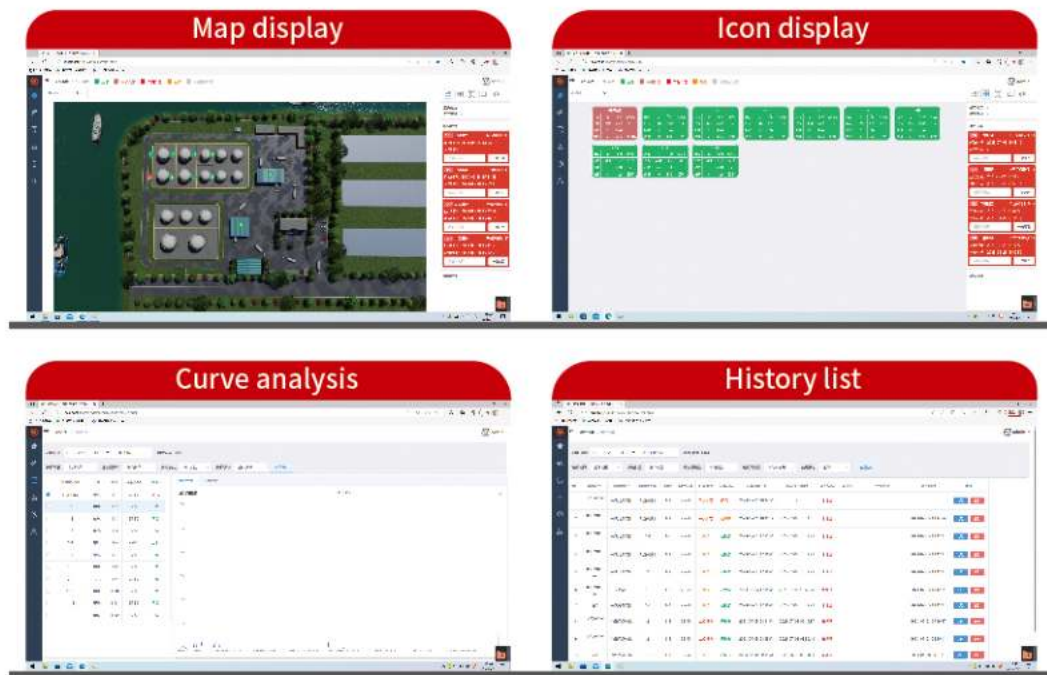
Feature



Gas Alarm Software

- Computer Terminal
- Applicable to GT-FGA1000W, GTYQ-FGA1000P and GT-FGA1000

The gas alarm monitoring software can achieve mutual communication between computers and on-site gas detection controllers, and can display the concentration information, alarm, fault, normal status of on-site gas detectors through various display methods. At the same time, on-site information can be stored, historical records and curve analysis can be viewed, and alarm sounds can be emitted through user audio equipment. The display is intuitive and clear, and the operation is convenient. Moreover it can expand the network interface to upload gas alarm information to the cloud server through GPRS, and access the cloud server through the internet. It can view real-time location information, alarm records, current concentration, fault status, shielding status, and other information.



Detection software remote networking diagram



QINGDAO ALLRED ELECTRONICS.,LTD.
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