







AG210 SERIES GAS DETECTOR

AG210 series including model AG210, AG211, GTQ-Anr-A, GTQ-Anr-D. These gas detectors are a classic product of AIYI Technologies, which is suitable for most areas where it is necessary to detect flammable gas, oxygen, and toxic gas. The product responds quickly with an advanced gas sensor; ingress protection to IP66.

Features

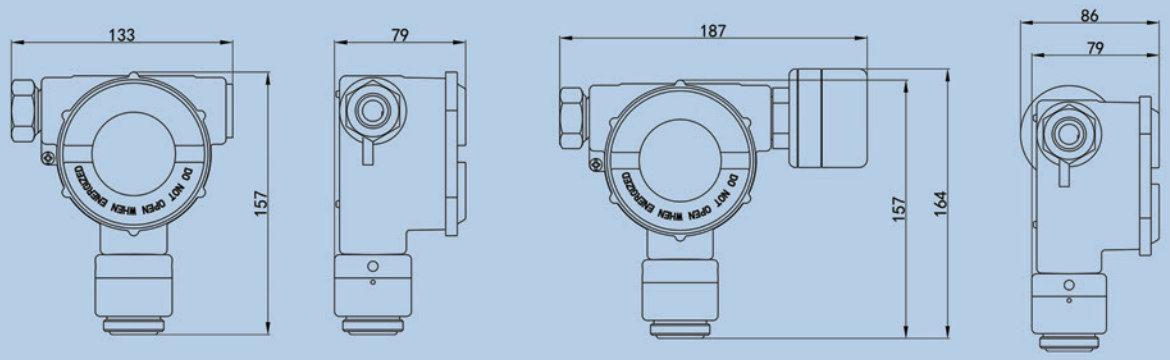
- Advanced gas sensors, fast response with a long lifespan, safer and more reliable.
- IP66 design with body material in stainless steel and aluminum alloy, suitable for harsh environments.
- LCD display, with LED indicators.
- Built-in 3 relay output and compatible with optional sound-light alarm
- Full English menu, remote control operation.
- Complete product certification (ATEX, SIL2, CNEX, CCCF, etc.)

Specifications

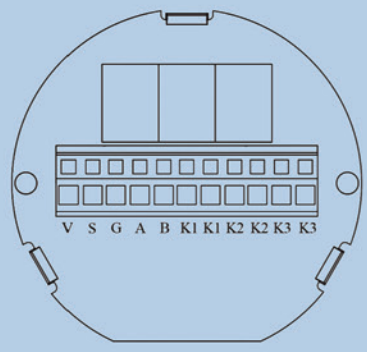
Description	Specifications	GTQ-Anr-A	GTQ-Anr-D	AG210	AG211
Gas Detected					
Ex	catalytic combustion	●	●	-	-
toxic gas	electrochemical	-	-	●	●
	infrared	-	-	●	●
	PID	-	-	●	●
Function					
measure range	see QUICK-SELECTION-TABLE	●	●	●	●
response time*	T90≤30S	●	●	-	-
	T90≤60/180S	-	-	●	●
accuracy*	≤±5%F.S	●	●	●	●
repeatability*	≤2%F.S	●	●	●	●
Electric					
power supply	18-28VDC (standard 24VDC)	●	●	●	●
power consumption	≤3.5W	●	●	-	-
	≤2W	-	-	●	●
signal output	4-20mA	●	-	●	-
	RS485	-	●	-	●
wiring	three-wire	●	-	●	-
	four-wire	-	●	-	●
suitable cable	RVVP3*1.5mm^2	●	-	●	-
	RVVP4*1.0mm^2	-	●	-	●
relay output	3 passive relays	●	●	●	●
Display&operation					
display	LCD display	●	●	●	●
indicator light	power,fault,alarm-1,alarm-2	●	●	●	●
operation method	remote control	●	●	●	●
Environment					
ingress protection	IP66	●	●	●	●
operating temperature	-40℃～70℃	●	●	-	-
	-20℃～60℃	-	-	●	●
operating humidity	10～95%RH non-condensing	●	●	●	●
operating pressure	80-120kPa	●	●	●	●
Structure					
body material	ADC12 aluminum +316L S/S	●	●	●	●
close nipple	NPT1/2	●	●	●	●
weight	about 1.45kg	●	●	●	●
dimensions	157*133*79mm(H*W*D)	●	●	●	●
Certificates					
CPA	2013C293-32	●	●	●	●
EX	Exd II CT6 Gb Ex tD A21 IP66 T80°C	●	●	●	●
CCCF	073184850124ROM	●	●	-	-
SIL	SIL2	●	●	●	●
ATEX	Ex db II CT6 Gb	-	-	●	-

Note: * refers to there's some difference vary from different gas, please contact the manufacturer for details.

Dimensions



Wiring



Terminals	Description
V	24V +
S	4-20mA signal output
G	24V -
A B	RS485 signal output
K1	relay output for alarm-1
K2	relay output for alarm-2
K3	relay output for fault



GAS DETECTION SYSTEM

Gas detection system can be widely applied in places such as petrochemical engineering, chemical engineering, steel, metallurgy, pharmaceuticals, electricity, food, and logistics where the monitoring of flammable and toxic gas is needed.

The system is made of gas detector, controller and sound-light alarm, and the gas concentration data will be uploaded to the control panel. The controller collectively displays the gas concentration data of different monitoring points, and the sound-light alarm will be set off in case that any concentration exceeds over the default value. Linkage feature can be realized and the data can be also uploaded to host systems such as DCS/IPC.

FUNCTION

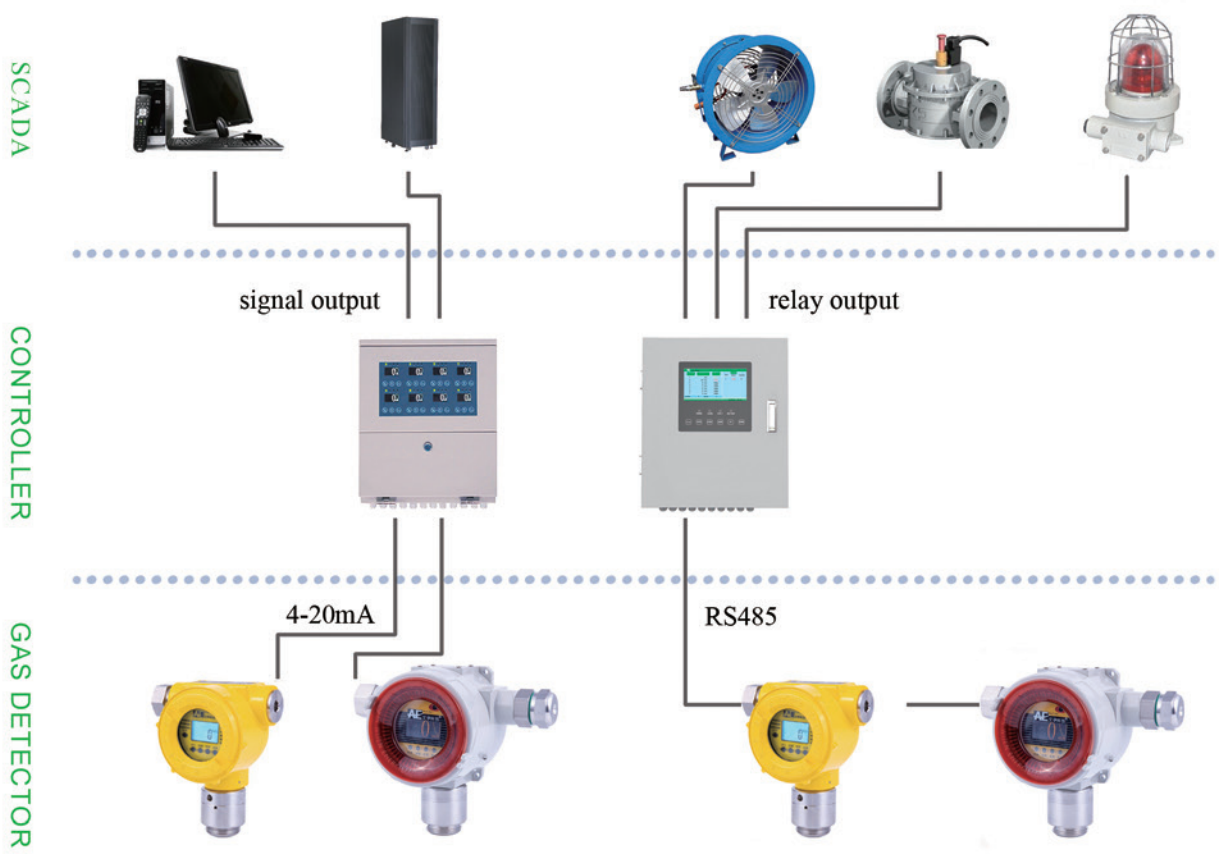


DIAGRAM of GAS DETECTION SYSTEM

1. gas detector

The gas detector is fixed in areas such as the workshop, warehouse, and storage tank for real-time monitoring of the concentration of flammable and toxic gases.

2. zone control

The controller collectively displays the gas concentration, and the sound-light alarm will be set off in case that any concentration exceeds over the default value.

3. The interlock control

It comes with relay output and fault output for the performing of automatic fan, spray, valve, and alarm.

4. The host computer

Standard 4-20mA and RS485 signal output, compatible with host computers such as DCS/PLC/IPC.

SELECTION GUIDE

QUICK SELECTION TABLE 1 -- FIXED GAS DETECTOR

Description	AG310 series					AG210 series				AG200 series		
	GTQ-AF110	GTQ-AF111	AF110-R	AG310	AG311	AG210	AG211	GTQ-Anr-A	GTQ-Anr-D	AG200	Anr-N	Anr-S
Gas detected												
combustible gas-catalytic	●	●	-	-	-	-	-	●	●	-	●	●
combustible gas-infrared	-	-	●	-	-	-	-	-	-	-	-	-
toxic gas-electrochemical	-	-	-	●	●	●	●	-	-	●	-	-
toxic gas-PID	-	-	-	●	●	●	●	-	-	●	-	-
toxic gas-infrared	-	-	-	●	●	●	●	-	-	●	-	-
toxic gas-semiconductor	-	-	-	●	●	-	-	-	-	-	-	-
Display												
OLED	●	●	●	●	●	-	-	-	-	-	-	-
LCD	-	-	-	-	-	●	●	●	●	-	-	-
Signal output												
4-20mA	●	-	●	●	-	●	-	●	-	●	●	-
RS485	-	●	-	-	●	-	●	-	●	●	-	●
Wiring												
three-wire	●	-	●	●	-	●	-	●	-	●	●	-
four-wire	-	●	-	-	●	-	●	-	●	●	-	●

Note:

1. ● means available，- means unavailable;
2. both oxygen and toxic gas are detected in electrochemical principle, so the toxic gas includes oxygen in the above table.

QUICK SELECTION TABLE 2 -- CONTROL PANEL

Description	AGS1600F	AGS1000	AGS1000B	AGS1000D	JUDD	JUDD-S
Gas detected						
combustible gas	●	●	●	●	●	●
toxic gas	-	●	●	●	●	●
Display						
LCD	●	●	●	●	-	-
OLED	-	-	-	-	●	●
Signal input						
4-20mA	●	●	●	●	●	●
RS485	-	●	●	●	-	-
Wiring						
three-wire	●	●	●	●	●	●
four-wire	-	●	●	●	-	-
Channels	4	1-64	1-64	1-64	1-8	32-128
Installation						
wall-mounted type	●	●	●	●	●	-
cabinet type	-	-	-	-	-	●
UPS	-	-	●	-	-	-
Explosion-proof	-	-	-	●	-	-

Note: The channels of AGS1000, AGS1000B, AGS1000D, JUDD,JUDD-S can be customized.

QUICK SELECTION TABLE 3 -- GAS DETECTED

Gas		Measure Range	Principle	Resolution	GTQ-AF110	GTQ-AF111	AF110-R	GTQ-Anr-A	GTQ-Anr-D	Anr-N	Anr-S	AG310	AG311	AG210	AG211	AG200
Combustible gas	EX	0-100%LEL	Catalytic	1%LEL	●	●	-	●	●	●	●	-	-	-	-	-
	EX	0-100%LEL	Infrared	1%LEL	-	-	●	-	-	-	-	-	-	-	-	-
Oxygen	O_2	0-30%VOL	Electrochemical	0.1%VOL	-	-	-	-	-	-	-	●	●	●	●	●
Carbon monoxide	CO	0-1000μmol/mol	Electrochemical	1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Hydrogen sulphide	H_2S	0-100μmol/mol	Electrochemical	1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Chlorine	CL_2	0-10μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Sulphur dioxide	SO_2	0-20μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Ammonia	NH_3	0-100μmol/mol	Electrochemical	1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Nitric oxide	NO	0-250μmol/mol	Electrochemical	1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Nitrogen dioxide	NO_2	0-20μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Hydrogen chloride	HCL	0-30μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Ozone	O_3	0-1μmol/mol	Electrochemical	0.01μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Ethylene oxide	C_2H_4O	0-20μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Formaldehyde	CH_2O	0-20μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Methanol	CH_3OH	0-20μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Phosphine	PH_3	0-5μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Hydrogen	H_2	0-1000μmol/mol	Electrochemical	1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Fluorine	F_2	0-1μmol/mol	Electrochemical	0.01μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Hydrogen fluoride	HF	0-10μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Hydrogen cyanide	HCN	0-50μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Phosgene	$COCL_2$	0-1μmol/mol	Electrochemical	0.01μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Arsenic hydride	AsH_3	0-1/20μmol/mol	Electrochemical	0.01μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Silane	SiH_4	0-50μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Acrylonitrile	C_3H_3N	0-20μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Carbon disulfide	CS_2	0-20μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Ethanol	C_2H_5OH	0-20μmol/mol	Electrochemical	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Sulfur hexafluoride	SF_6	0-1000μmol/mol	Infrared	1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Methane	CH_4	0-5%/100%VOL	Infrared	0.1%VOL	-	-	-	-	-	-	-	●	●	●	●	●
Carbon dioxide	CO_2	0-5%/100%VOL	Infrared	0.1%VOL	-	-	-	-	-	-	-	●	●	●	●	●
Toluene	C_7H_8	0-20μmol/mol	PID	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Xylene	C_8H_{10}	0-20μmol/mol	PID	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Benzene	C_6H6	0-20μmol/mol	PID	0.1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Acetic acid	$C_2H_4O_2$	0-1000μmol/mol	PID	1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●
Volatile organic compounds	VOC	0-20μmol/mol 0-1000μmol/mol	PID	0.1μmol/mol 1μmol/mol	-	-	-	-	-	-	-	●	●	●	●	●

Note: 1. Any gas that not mentioned above, just contact AIYI Technologies for further information; 2, 1μmol/mol=1ppm



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