

FIXED GAS DETECTOR

SPECIFICATION



Version : A0

Functional characteristics

- LCD panel design, direct display;
- Smart sensors, modular design, convenient maintenance;
- Multi-point calibration + temperature compensation, the data more accurate;
- One-click restore factory Settings to prevent wrong operation;
- Triple waterproof design;
- 4 ~ 20 mA, RS485 output signal is optional;
- Two groups of passive relay output;
- The infrared remote control, dangerous places to avoid open operation;
- Three color backlighting: white (normal), orange (failure), red (alarm) indicating the scene state;

Performance

Detection gas: combustible gas, toxic gas, VOC

Detection principle: catalytic combustion type, electrochemical type, light ion type, thermal conductivity type, infrared NDIR type

Accuracy: $\pm 3\%$ F.S.

Reduplication: $\pm 2\%$

Response time: $T_{90} < 30S$ (combustible gas)

Electrical characteristics

Power supply: 24VDC (normal working voltage range: 10 ~ 30VDC)

Power consumption: $< 1.5W$ (toxic gas) ; $< 2.5W$ (combustible gas)

Output signal: three-wire 4 ~ 20mA or four-wire RS485 or both output at the same time ; Two passive relay (24VDC 2A)

Structural features

Main material: aluminum alloy

Weight: about 1.6kg

Size: 185*137.2*90.7mm (L*W*H)

Installation: wall - mounted, horizontal pipe, vertical pipe

Electrical service environment

Protection class: IP66

Temperature range: -20°C ~ 50°C(toxic gas)

-40°C ~ 70°C(combustible gas)

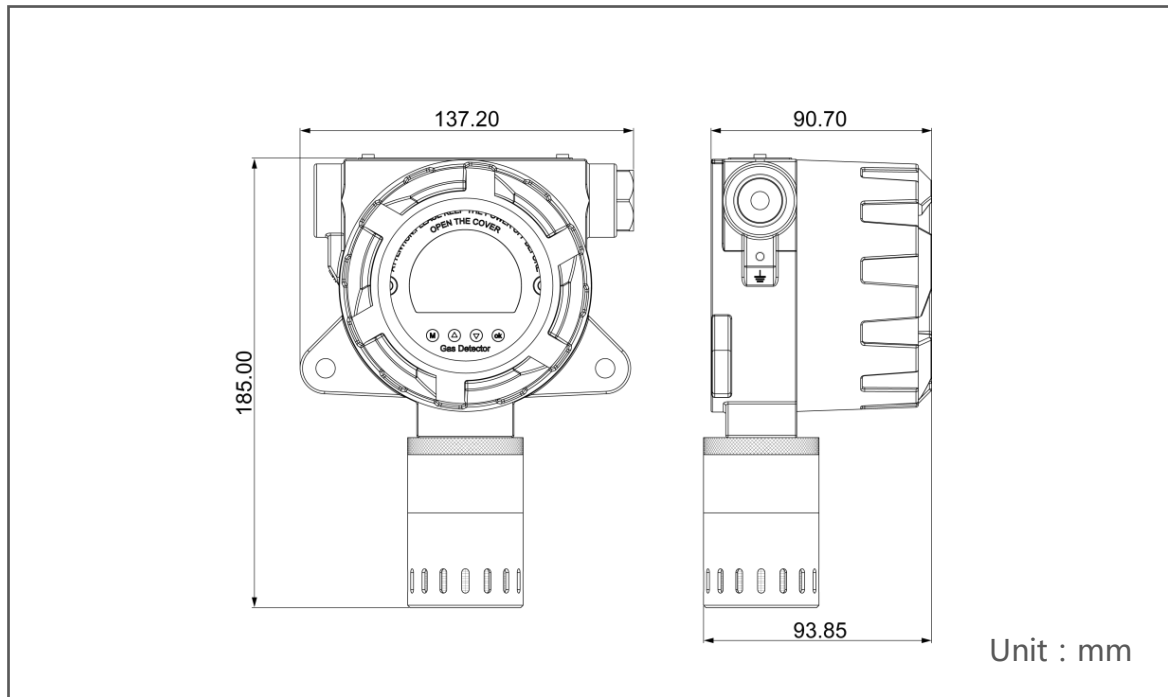
Humidity range: 10 ~ 95%RH (no condensation)

Pressure range: 86 ~ 106kPa

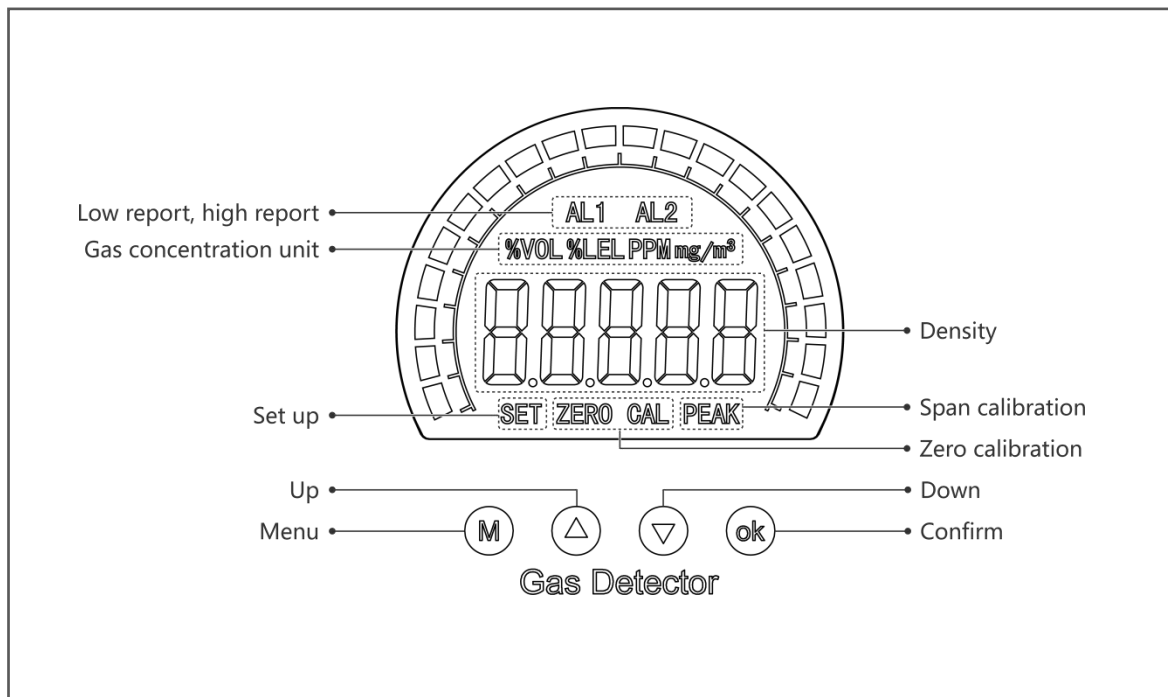
Certification

Execution standard : GB15322.1-2003 , GB3836.1-2010 , GB3836.2-2010 ,
GB3836.4-2010 , GB12358-2006

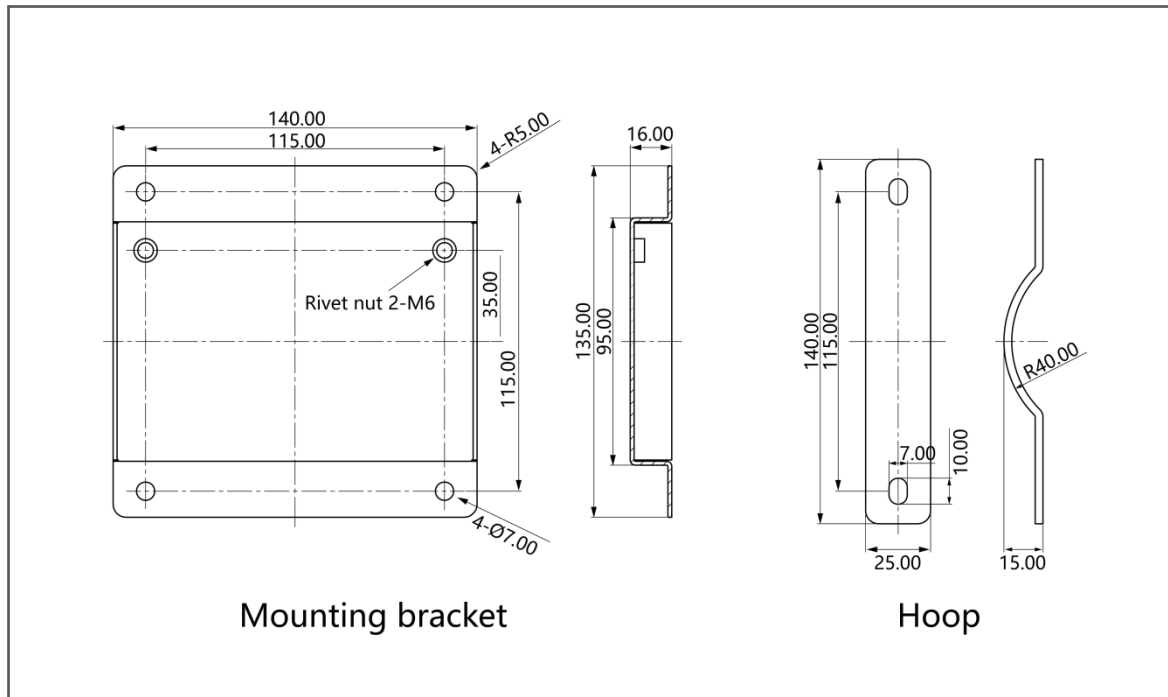
Product size



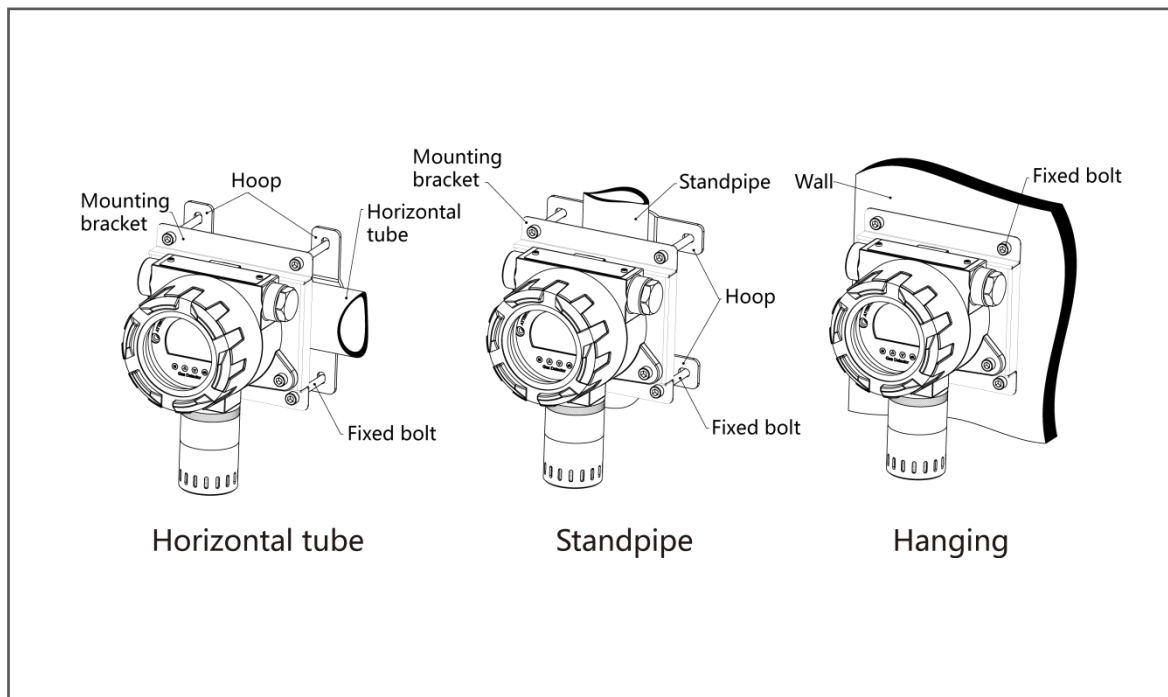
Display



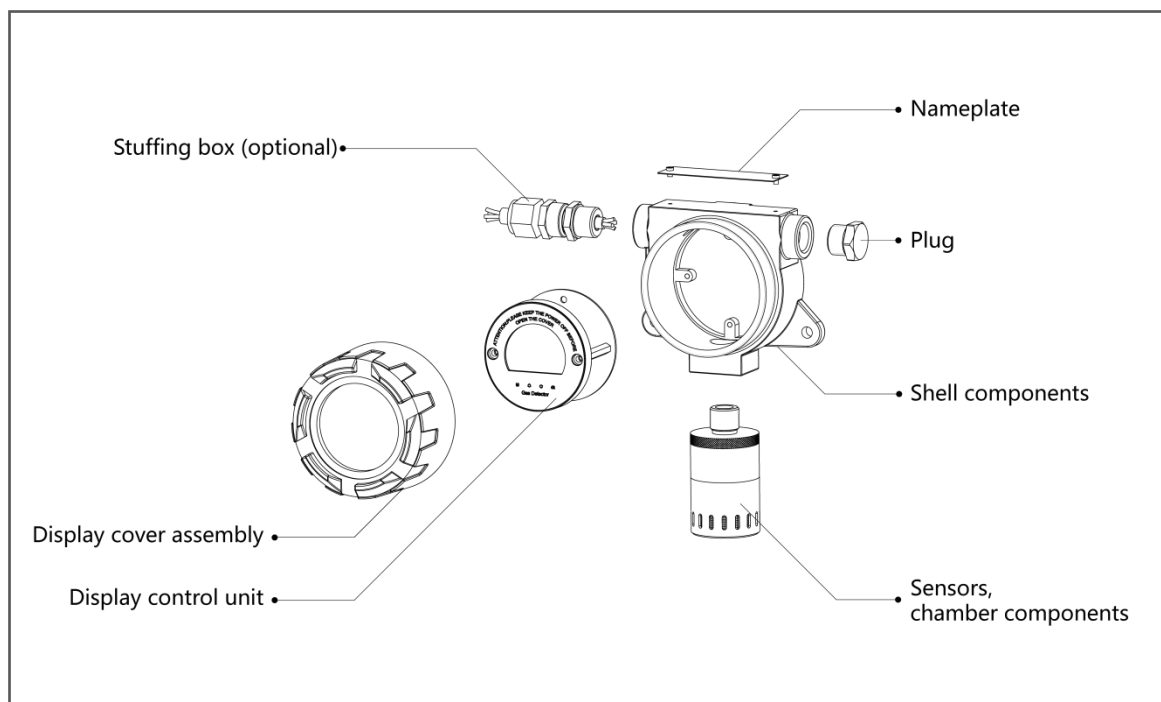
Mounting bracket drawing



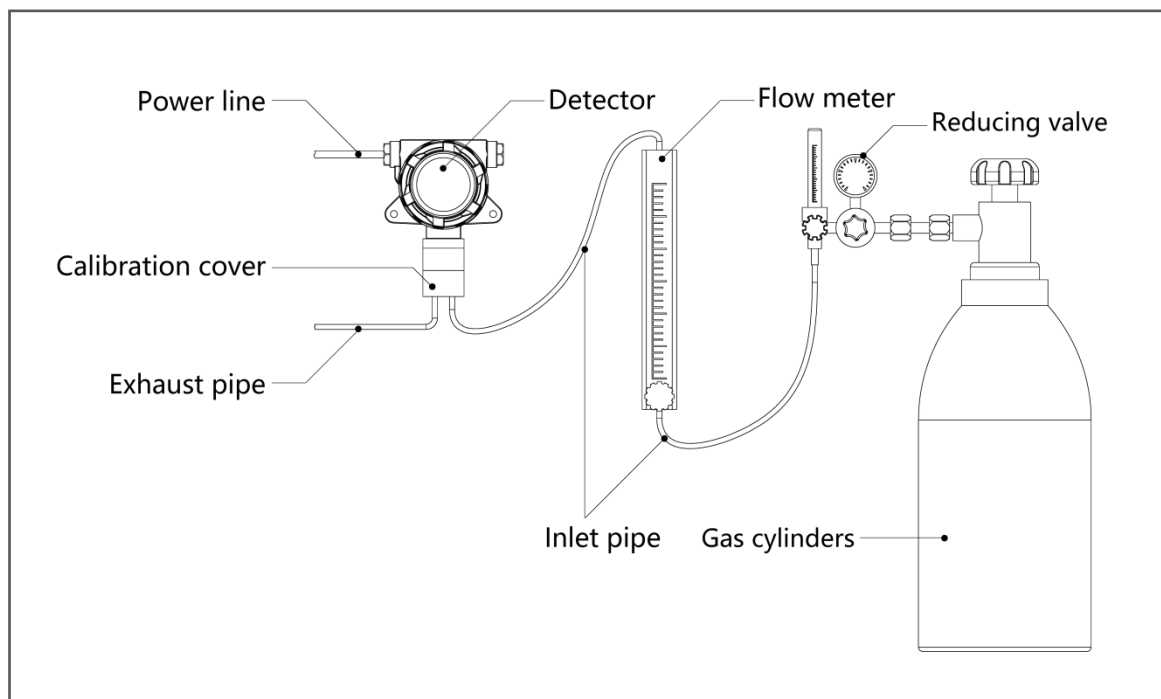
Installation pattern diagram



Chart



Commissioning and calibration chart





The cross-sectional area of the selected cable and the transmission distance of 24V power supply are shown in the table below

Cable core cross-sectional area (mm ²)	1.00	1.50	2.50
Resistance (ohms/km copper wire)	18.1	12.1	7.4
Maximum cable distance (m) (loop length)	2000	3000	4000
	1000	1500	2000

Standard accessories

Name	Note
Remote control	Black
Dust cover	With diffuse calibration function
Mounting bracket	SGCC
Hoop	With the mounting bracket

Options

Name	Note
Flow hood	Circulation type
Gas chamber extension welding cover	304 stainless steel
Sound and light alarm	Optional G1/2, G3/4 thread interface

List of measurable combustible gases (For unmarked gas and test range, please contact our sales personnel)

NO.	Name	Molecular formula	Relative density	Burning limit (V%)	
				lower limit	upper limit
1	methane	CH ₄	0.55	5	15
2	toluene	C ₆ H ₅ CH ₃	3.2	1.2	7.1
3	methanol	CH ₃ OH	1.11	6.7	36
4	Methyl formate	HCOOCH ₃	2.07	5	23
5	Ethyl formate	HCOOCH ₂ CH ₃	2.65	2.8	16
6	Methyl ether	CH ₃ OCH ₂ CH ₃	2.1	2	10.1
7	ethane	CH ₃ CH ₃	1.04	3	15.5
8	acetylene	CH≡CH	0.9	2.5	100
9	ethanol	CH ₃ CH ₂ OH	1.59	3.3	19
10	ethyl benzene	CH ₃ CH ₂ C ₆ H ₅	3.66	1	6.7
11	ethylene	CH ₂ =CH ₂	0.97	2.7	36
12	Methyl acetate	CH ₃ COOCH ₃	2.56	3.1	16
13	Ethyl acetate	CH ₃ COOCH ₂ CH ₃	3.04	2.2	11
14	N-butyl acetate	CH ₃ COOCH ₂ (CH ₂) 2CH ₃	4.01	1.7	7.3
15	propane	CH ₃ CH ₂ CH ₃	1.56	2.1	9.5
16	propyl alcohol	CH ₃ CH ₂ CH ₂ OH	2.07	2.1	13.5
17	propylene	CH ₂ =CHCH ₃	1.5	2	11.1
18	acetone	(CH ₃) ₂ CO	2	2.6	12.8
19	butane	C ₄ H ₁₀	2.05	1.9	8.5
20	pentane	C ₅ H ₁₂	2.48	1.4	7.8
21	hexane	CH ₃ (CH ₂) ₄ CH ₃	2.97	1.1	7.5
22	heptane	C ₇ H ₁₆	3.46	1.1	6.7
23	octane	CH ₃ (CH ₂) ₃ CH ₃	3.93	1	6.5
24	nonane	CH ₃ (CH ₂) ₇ CH ₃	4.43	0.7	5.6
25	carbon monoxide	CO	0.97	10.9	74
26	ammonia	NH ₃	0.59	15	33.6
27	hydrogen	H ₂	0.07	4	75
28	benzene	C ₆ H ₆	2.7	1.3	7.1

29	isobutane	(CH ₃) ₂ CHCH ₃	2	1.8	8.4
30	Isopropyl alcohol	(CH ₃) ₂ CHOH	2.07	2	12
31	1-butanol	CH ₃ (CH ₂) ₂ CH ₂ OH	2.55	1.4	11.2
32	cyclohexane	CH ₂ (CH ₂) ₄ CH ₂	2.9	1.3	8
33	cyclopentane	CH ₂ (CH ₂) ₃ CH ₂	2.4	1.4	-
34	Epoxy propane	CH ₃ CHCH ₂ O	2	2.8	37
35	Epoxy ethane	CH ₂ CH ₂ O	1.52	3.6	100
36	Diethyl ether	(CH ₃ CH ₃) ₂ O	2.55	1.9	36
37	Dimethyl ether	(CH ₃) ₂ O	1.59	3.4	27
38	xylene	C ₆ H ₄ (CH ₃) ₂	3.66	1	7

List of detectable toxic gases (For unmarked gas and test range, please contact our sales personnel)

NO.	Name	Molecular formula	Range	Response time T90 (s)
1	hydrogen arsenide	ASH ₃	0-5ppm	<90
2	acetylene	C ₂ H ₂	0-10/100ppm	<90
3	ethylene	C ₂ H ₄	0-10/100ppm	<80
4	formaldehyde	CH ₂ O	0-10/50ppm	<80
5	methanethiol	CH ₃ SH	0-10ppm	<90
6	chlorine	CL ₂	0-10/50/200ppm	<90
7	chlorine dioxide	CLO ₂	0-1/50ppm	<90
8	carbon monoxide	CO	0-100/500/1000ppm	<30
9	epoxy ethane	ETO	0-10/100/500ppm	<120
10	hydrogen	H ₂	0-1000/40000ppm	<60
11	hydrogen peroxide	H ₂ O ₂	0-100/500ppm	<60
12	hydrogen sulfide	H ₂ S	0-100/1000ppm	<60
13	hydrogen chloride	HCL	0-50/200ppm	<80
14	hydrogen cyanide	HCN	0-50ppm	<30
15	hydrogen fluoride	HF	0-10/100ppm	<90
16	ammonia	NH ₃	0-20/100/1000ppm	<90
17	nitric oxide	NO	0-250/2000ppm	<60
18	nitrogen dioxide	NO ₂	0-20/2000ppm	<60
19	oxygen	O ₂	0-30%VOL/100%VOL	<25

20	ozone	O ₃	0-1/10/100ppm	<90
21	phosphine	PH ₃	0-20/1000ppm	<30
22	silane	SiH ₄	0-50/200ppm	<60
23	sulfur dioxide	SO ₂	0-20/2000ppm	<40
24	tetrahydrothiophene	THT	0-50mg/m ³	<60
25	helium	He	0-2000ppm/0-100%VOL	<25
26	carbon dioxide	CO ₂	5000ppm/0-20%VOL	<40
27	sulfur hexafluoride	SF ₆	0-1000ppm/0-100%VOL	<50

List of VOC gases that can be measured (For unmarked gas and test range, please contact our sales personnel)

NO.	Name	Molecular formula	Range (ppm)	Response time T90 (s)
1	benzene	C ₆ H ₆	0-20/50/100	<20
2	toluene	C ₇ H ₈	0-20/50/100	<20
3	ethyl benzene	C ₈ H ₁₀	0-50/100	<20
4	cyclohexanone	C ₆ H ₁₀	0-100/200	<20
5	methylamine	CH ₅ N	0-100/200/400	<20
6	aniline	C ₆ H ₇	0-50/100	<20
7	xylene	C ₈ H ₁₀	0-20/50/100	<20
8	ethyl acetate	C ₄ H ₈ O ₂	0-500/1000	<20
9	methanethiol	CH ₄ S	0-200	<20
10	phenol	C ₆ H ₆ O	0-200/500	<20