

PORTABLE MULTI-GAS DETECTOR GT300-AQ/VOC is suitable to detect Air Quality and Various Odors ...



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GASTECH is a professional manufacturer in various gas detectors, carbon monoxide detector, carbon dioxide detector, methane detector, oxygen detector, odor detector, VOC detector, hydrogen sulfide detector and various gas analyzer, carbon monoxide analyzer, carbon dioxide analyzer, methane analyzer, oxygen analyzer, odor analyzer, VOC analyzer, hydrogen sulfide analyzer also. GT200-3G, GT200-2G, GT300-AQ, GT300-VOC and Portadetector are our product and brand name. Welcome tour our website www.portadetector.com

GT300-AQ/VOC provides CIAQ (Composite Index of Air Quality) suitable to use in various applications and detect air quality and various odors such as swage-sludge gas, methane, smoke, smelling breath, particular gas, VOCs, THC and so on. GT300-AQ/VOC makes the detecting easily and fun.

GT300-AQ/VOC can detect hydrocarbon compounds in the air, especially high sensitive of hydrogen and transfer the CIAQ (Composite Index of Air Quality) shown on the display. CIAQ define that fresh air and/or zero air is "1". According to concentration of hydrocarbon compounds and hydrogen in the air, the CIAQ is unlimited in theory. Applicant in the living, when concentration of hydrocarbon compounds over some limit in the air, the sense of smell will not have multiple effects; therefore CIAQ is designed in reasonable range in living. Please refer table as below:

Environment and Application	CIAQ of GT300-AQ/VOC
Fresh air and/or Zero air	1
Living room	1 - 8
Super market, Convenient store	10 - 20
Office	5 - 20
Road side or Bus stop of downtown	10 - 30
Public lavatory	10 - 40
Packing lot or Tunnel of automobile	10 - 40
Hospital or Sickroom	15 - 25
Smoking room of airport	30 - 90
Temple	30 - 50
Fart (close detecting)	50 - 100
Smelling breath (Around blow 5 sec continuously)	20 - 35
Opening sewage	20 - 40

In above table except zero air CIAQ is absolutely "1", the other index may be different with user actual detecting, but the higher CIAQ means the more pollutant or hydrocarbon compounds exist. Basically GT300-AQ is more sensitive than GT300-VOC in detecting hydrogen and smoke smell. But it cannot expose in the environment of high concentration VOC for a long time. If detecting targets are VOC and LPG etc, the GT300-VOC is more suitable.

Part of GT300-AQ / VOC functions

Odor detecting

The smell and sense of human is difficult to define, some of scent sense good but some persons might not accept the smell. Although everybody has various different sense of smell that cannot define. Anyway, the smell depends on the concentration of hydrocarbon compounds in the air.

Smoke detecting

GT300-AQ is very sensitive of hydrogen, which generated from smoking or incomplete combustion. Therefore, GT300-AQ is suitable for air-conditioner management and non-smoking surveillance. Besides, GT300-AQ fire detective performance is superior to normal smoking detector.

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Leakage detection of LPG and LNG

GT300-AQ/VOC is very sensitive and suitable to detect leakage of Natural Gas (Methane / City Gas) and LPG (Propane).

Detection of VOCs emission

It is hard work to find out the source of emission of VOCs? GT300-AQ/VOC will help user to detect the source of leakage easily.

Environmental index

CIAQ is objective index of environmental either living in most application. Due to smell and sense of human is difficult to define but GT300-AQ/VOC is non-subjective instrument that makes comparison and evaluation of environmental.

Kiss Index

In order to win some person favor, pay attention to the politeness is necessary. Bad breath affects most people at some stage of their life, but GT300-AQ/VOC is simple detector to prevent it and help you win the favor.

Air-conditioner management and air cleaner

There are various factors such as smoking, odor of rotten food, using volatile solvent, using liquid eraser, bad ventilating and so on, cause polluted air and high CIAQ. In order to improve air quality, we may use air cleaner. But nobody knows what is the air cleaner performance? GT300-AQ/VOC will help user to know the air quality and air cleaner is effect or not.

VOCs, THC and Particular gases detecting

It is not easy to buy suitable gas detector for some of particular gases. In the case, GT300-AQ/VOC might be a substitute and solution. There are some notices that the concentration of target gas should be 10~1000 ppm, balance gas should be air without interfered gases or exist few stables interfered gases. For example GT300-AQ/VOC is more sensitive and practical than other professional detector to detect exist less than 100 ppm of hydrogen. If the gas cannot measure by diffusion or high concentration that out of CIAQ range, dilute detection is possible, put GT300-AQ/VOC in the bottle and takes the sample gases then inject bottle and read the CIAQ. Neither diffusion or dilute, Silicon compounds gases is not suitable to use GT300-AQ/VOC, e.g. SiH₄.

The best partner of canary

People knew apply canary to detect unknown gas or toxic gas since long ago. Canary will die while exposed toxic gas that warns people. Especially faced with unknown toxic gas, canary has the un-substitute status. The function of GT300 series gas detector is similar canary and sensitive most of hydrocarbon compounds in the air. Therefore, GT300 series gas detector is the best complement with canary while dispatch canaries face unknown gas or toxic gas.

More application

GT300-AQ/VOC detector has various applications, i.e. CIAQ reaction of fart (near measure) can find out who fart. Besides, above introduction others application may be develop by user.

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A fast method and cost-saving of measuring THC

It takes time and cost to measure THC (Total Hydrocarbons), VOCs (volatile organic compounds) or some of particular gases when use FID or GC. Even time is very critical but nothing can change except waiting while use them. Now, GT300-VOC changed this situation, it makes fast and cost saving of measuring.

GT300-VOC can detect hydrocarbon compounds and VOCs in the air, and transfer the CIAQ (Composite Index of Air Quality) shown on the display. CIAQ define the fresh air and/or zero air is "1". According to concentration of hydrocarbon compounds and hydrogen in the air, the high CIAQ means high concentration of hydrocarbon compounds. This characteristic can transfer the concentration of gas in ppm or mg/cubic meter.

CIAQ is created by Gastech that is very strange for every one with perplexed. But its convenient and economic features catch user eyes and make some inquiries. For example, what is change rate from CIAQ to hydrogen or THC? Actually, interfered gases and different targets influence the value of CIAQ. Therefore, no absolute change rate can be used. There is same story in wastewater control, use COD instead of BOD5 for some purpose and fast. But the change rate should be found on past data and comparison. Due to different case of wastewater content is different that the change rate of case A is not suitable in case B normally.

It is an actual case study that applies FID and GT300-VOC together and made a table as below.

THC (Total Hydrocarbons), mg/cubic meter	CIAQ (Composite Index of Air Quality)
14.9	15
29.9	22
59.9	32
119.8	43
149.8	47
199.7	54
249.6	58
299.6	60
399.4	67
499.3	71

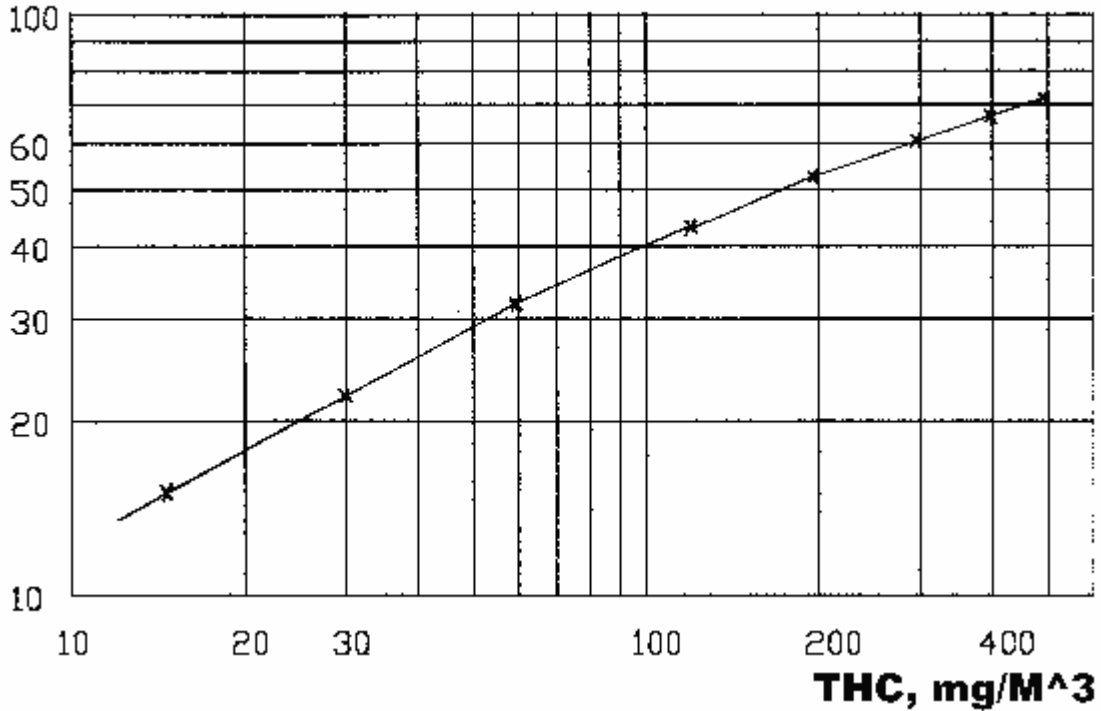
According the pair of data marks them and makes calibration curve on logarithmic graph paper, which vertical axis is CIAQ and horizontal axis is THC. The curve is nearby a line that means no more data will get high accuracy while makes calibration curve.

It will be convenient to measure THC after users have the calibration curve. For example, GT300-VOC read out 40 CIAQ and lookup 100 mg/cubic meter THC nearly in same environment. In the past, to know the environmental THC in urgent case overslept the timing always after prepare the FID or sample tools. To use GT300-VOC will be no more regret in the case, user can measure THC and get result in anytime immediately.

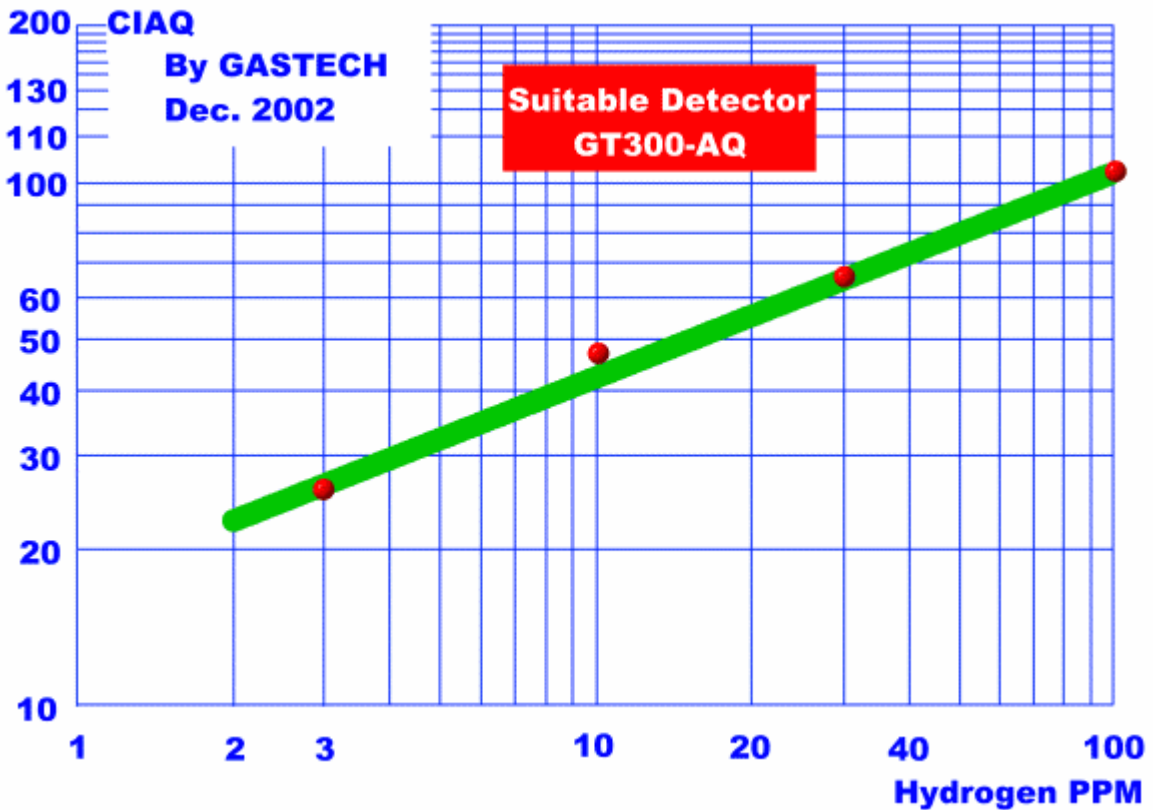
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CIAQ

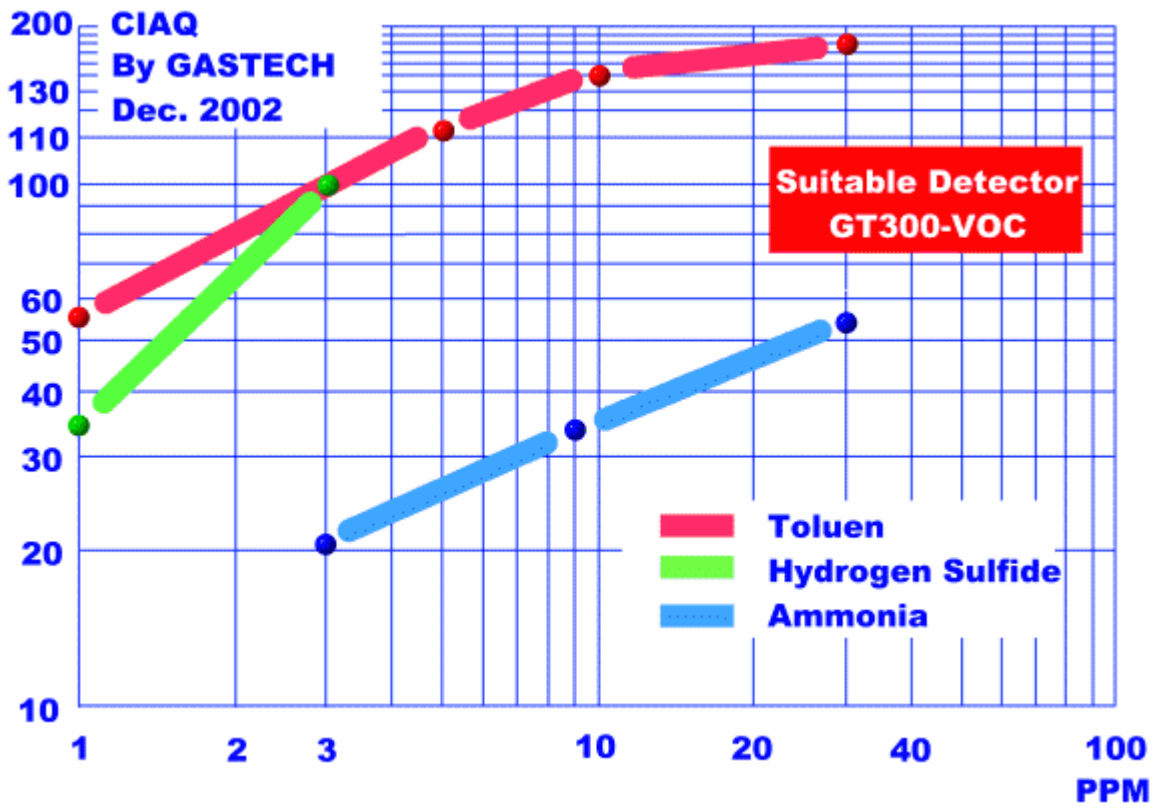
By GASTECH, May 24, 2002



Same method, GT300-VOC can be used as hydrogen, particular gases and VOCs detector. The unit of horizontal axis can be mg/cubic meter or ppm. It's a cost-saving and fast method of measuring.




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Specifications

Features \ Model	GT300-AQ	GT300-VOC
Sensor	Semiconductor	Semiconductor
Major Detection	Hydrogen, Smoke	VOCs, THC
Available / Target gases	Air Quality VOCs emission Smoke Odor Hydrogen Ethanol Iso-butane Carbon monoxide Methane / LNG Hydrocarbon Compounds	Air Quality VOCs emission Smoke Odor Toluene Hydrogen sulfide Ethanol Ammonia Hydrogen Hydrocarbon Compounds
Major Application	Air Quality	VOCs, THC
Sampling frequency	Continuance	Continuance
Alarm	High alarm (Resetting available)	High alarm (Resetting available)
Audible alarm / Alarm message	Available	Available
Backlight alphanumeric LCD	Available	Available
Standard language	English	English
System clock	Year, month, day, hour, minute	Year, month, day, hour, minute
Battery management	Available	Available
Dimensions	131mm x 46mm x 25.5mm	131mm x 46mm x 25.5mm
Weight	130g	130g
Battery	Built-in 2000mAH rechargeable lithium-ion battery	Built-in 2000mAH rechargeable lithium-ion battery
Standard accessory	Adaptor	Adaptor
International standard met	CE	CE
Package size	208 mm x 156 mm x 68 mm	208 mm x 156 mm x 68 mm
Package outline		

(Specification maybe changed without notice)

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