

Handheld Formaldehyde Meter/Monitor



HAL-HFX205

Features

- Wide measuring range
- Fast response
- Direct real time reading
- Manual and auto data save (user-defined auto log time interval)
- High-speed USB with a free data download software
- Auto backlight
- Self-calibration function
- Audible and user-defined excess limit warning
- Optional RH/T sensor probe for reading correction
- Over 7 hours of operation time
- CE certified
- Simple and easy to use

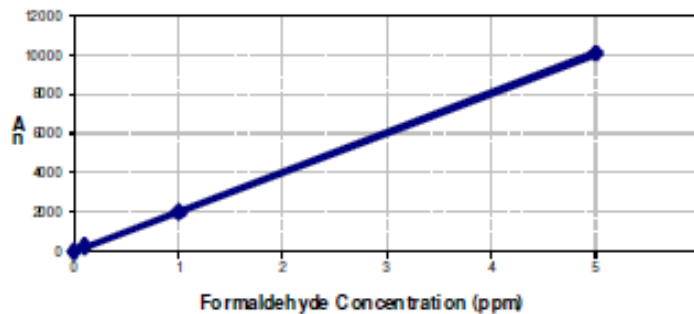
Formaldehyde (HCHO) is one of the most commonly poisonous substances found in daily life and industry. The HAL-HFX205 formaldehyde monitor/meter is designed for use in a wide variety of applications such as furniture, floor boards, wall papers, paint, gardening, indoor decoration, construction, dye stuffs, paper manufacture, pharmaceutical, medical, food, cleaning, synthetic resins, textile treatment, horticulture and cosmetics. The HAL-HFX205, based on reliable electro-chemical sensing technology, features fast response times, directly displays the formaldehyde concentration in ppm or mg/m³. Newly re-designed HFX205 has significant improvement including side-access USB and power ports, temperature-corrected reading and longer battery operating time over previously obsolete model, HAL-HFX105.

Specifications

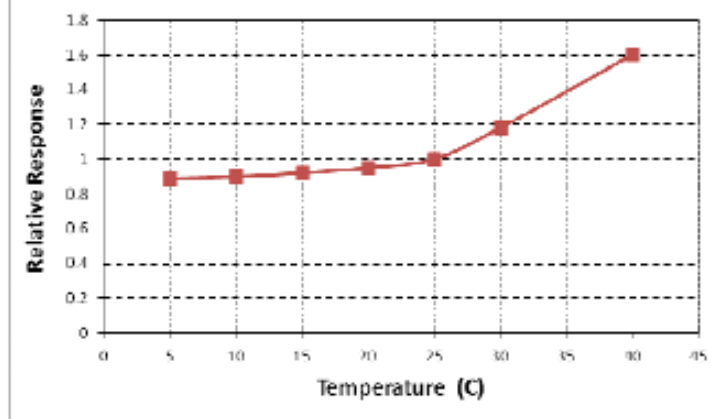
Target Gas	Formaldehyde (HCHO) in air
Range	0.00 ~ 10ppm (0.00 ~ 25ppm and up to 100ppm available for special request)
Technology	Electrochemical sensor
Sampling Method	Pump and pointing sampling
Response Time	< 30 seconds
Resolution	0.01ppm
Display Unit	ppm or mg/m ³
Memory	Up to 500 sets of data
Interface	USB for data downloading
Operating Environmental Conditions	Temperature: 0 ~ 50°C Humidity: <90%RH
Power	Replaceable and rechargeable Lithium ion battery (3.7V/1250mAh); AC adapter 100-240VAC to 5VDC/1A
Dimensions	80 (W) × 45 (D) × 157 (H) mm
Weight	About 200 grams

Sensor Performance Data

Linearity of HCHO Response



HFX205 Sensor Temperature Dependence



Sensor Cross Sensitivity Data

Chemicals	Response (HCHO equivalent)
100 ppm Methanol	1ppm
10 ppm Ethanol	1ppm
25 ppm Isopropanol	0.5ppm
20 ppm Carbon Monoxide	1ppm
25 ppm Phenol	0.05ppm
100 ppm Acetaldehyde	0.5ppm
100 ppm H2	0.5ppm
50 ppm H2S	3ppm
50 ppm SO2	0.5ppm
Methane, acetone, CO ₂ H ₂ O vapor	have no response

Handheld Carbon Dioxide Meter/Monitor



HCO202

Features

- Reliable dual-beam, non-dispersive infrared absorption gas sensor (NDIR)
- Fast response
- Direct real time digital reading
- Large data storage capacity
- High-speed USB and free data download software
- Auto backlight
- Simple and easy self-calibration and correction
- Audible excess limit warning
- Rechargeable Li-ion battery
- Optional digital temperature and humidity sensor probe
- Window XP/7/8 compatible
- CE certified

HalTech's HCO202 handheld carbon dioxide meter makes it easy to take quick and accurate measurement of CO₂ levels. Featuring the dual-beam, non-dispersive infrared (NDIR) absorption gas sensor technology, the HCO202 has a wide measuring range and quick response to ambient changes in carbon dioxide concentration with long-term stability and durability. Pressure (altitude) correction is also available. With a built-in pump capable of point-to-sample use, the HCO202 assures portability and flexibility. Exceptional stability and patented self-calibration algorithm allow very long intervals between calibration intervals.

Specifications

Target Gas	Carbon Dioxide (CO ₂) in air
Range	0 - 50,000ppm or 0 - 5%
Technology	NDIR
Response	< 2 seconds
Accuracy	±70ppm or 5% of reading @STP
Resolution	±10 ppm or ±5% of reading
Stability	<2% full scale over the life of sensor
Non-Linearity	<1% of Full Scale
Sampling Method	Flow through and point sampling with a built-in pump
Memory	Up to 500 sets of data
Interface	USB for data down loading
Operating Conditions	32°F to 122°F (0°C to 50°C), < 90%RH (non-condensing), 950 - 10,000 mbar
Power	Rechargeable Lithium ion battery (3.7VDC/1250mAh); AC adapter 5VDC/1A
Dimensions	80 (W) × 42 (D) × 158 (H) mm
Weight	About 230 grams

Handheld VOC Meter/Monitor



HVX501

Features

- Reliable PID sensor
- User selectable over hundred target gas
- Fast response
- Direct real time digital reading
- Large data storage capacity
- High-speed USB and free data download software
- Auto backlight
- Simple and easy self-calibration and correction
- Audible excess limit warning
- Rechargeable Li-ion battery
- Optional digital temperature and humidity sensor probe
- CE certified

HalTech introduces a brand new designed HVX501 handheld volatile organic compound (VOC) meter and it can easily take a quick and accurate measurement of VOC levels. Featuring the best-available-on-the-market photo-ionization-detector (PID) sensor technology, the HVX501 can detect a wide variety of organic compounds and some inorganic gases (a few hundreds of chemicals) in ambient air. Intrinsically safe PID sensor ionizes chemicals in the gas sample whose ionization potential less than the UV lamp energy and at least 200 times more sensitive to VOCs than conventional Heated Metal Oxide Sensors (HMOS). It can be utilized in a variety of environmental and safety applications for industrial, commercial, and residential markets.

The HVX501, with a data logging ability, has selections of wide measuring ranges, high sensitivity and high resolution of sensors (0-2ppm with 1ppb sensitivity and up to 2000ppm range) for continuous monitoring and research applications. With a built-in pump capable of point-to-sample capability, it can trace the origin of sources and offers a fast response to ambient changes in VOC levels with long-term stability and durability. Exceptional stability and patented self-calibration algorithm allow very long intervals between calibration intervals. It is fully compatible to Window XP/7/8.

Applications

- Industrial hygiene & safety monitoring
- Confined space entry
- Fugitive emission
- Soil contamination and remediation
- Hazmat sites and spills
- Solvent vapor monitoring for clean and degas processes
- Low concentration leak detection
- EPA Method 21 and emissions monitoring
- Arson investigation

Specifications

Target Gas	User selectable over a hundred of VOCs in ambient air
Detection Range	0~ 2.000 ppm 0 ~ 20.00 ppm, 0 ~ 200.0 ppm or 0 ~ 2000.0 ppm (Isobutylene standard) (special custom request for other range possible)
Technology	Photo ionization detection
UV Lamp Energy	10.6 eV (9.6 eV for special custom request)
Lamp lifetime	> 6000 hours
Response Time	< 6 seconds (T90)
Sensitivity	1ppb for 2ppm, 0.01ppm for 20ppm, 0.025ppm for 200ppm and 0.05ppm for 2000ppm
Humidity Effect	< 1 ppm @ 90% RH
Onboard Filter	To remove particles and liquids
Sampling Method	Flow through and point sampling with a built-in pump
Memory	Up to 500 sets of data
Interface	USB for data down loading
Operating Conditions	32°F to 122°F (0°C to 40°C), < 90%RH (non-condensing), 950 - 10,000 mbar
Power	Rechargeable Lithium ion battery (3.7VDC/1250mAh); AC adapter 5VDC/1A
Dimensions	80 (W) × 42 (D) × 158 (H) mm
Weight	About 230 grams

Gas List

The relative factor is given so that, if necessary, a user can calculate the VOC concentration post-measurement. The user can default to Isobutylene and multiply the response by the factor below for the specific gas type.

Gas Name	Relative Factor
1,2,3-trimethylbenzene	0.49
1,2,4-trimethylbenzene	0.43
1,2-dibromoethane	11.70
1,2-dichlorobenzene	0.50
1,3,5-trimethylbenzene	0.34

1,4-dioxane	1.40
1-butanol	3.40
1-methoxy-2-propanol	1.40
1-propanol	5.70
2-butoxyethanol	1.30
2-methoxyethanol	2.50
2-pentanone	0.78
2-picoline	0.57
3-picoline	0.90
4-hydroxy-4-methyl-2-pentanone	0.55
4-methylbenzyl alcohol	0.80
acetaldehyde	10.80
acetic acid	11.00
acetone	1.20
acetophenone	0.59
acrolein	3.90
allyl alcohol	2.50
ammonia	9.40
amylacetate	3.50
arsine	2.60
benzene	0.53
bromoform	2.30
bromomethane	1.80
butadiene	0.69
butyl acetate	2.40
carbon disulfide	1.20
chlorobenzene	0.40
cumene (isopropylbenzene)	0.54
cyclohexane	1.50
cyclohexanone	0.82
decane	1.60
diethylamine	1.00
dimethoxymethane	11.30
dimethyl disulfide	0.30
diesel fuel #1	0.90
diesel fuel #2	0.75
epichlorhydrin	7.60
ethanol 10	10.00
ethyl acetate	4.20

ethyl acetoacetate	0.90
ethyl acrylate	2.30
ethyl ether (diethyl ether)	1.20
ethyl mercaptan	0.60
ethylbenzene	0.51
ethylene	10.10
ethylene glycol	15.70
ethylene oxide	19.50
gasoline	1.10
heptane	2.50
hydrazine	2.60
hydrogen sulfide	3.20
isoamyl acetate	1.80
isobutanol	4.70
isobutyl acetate	2.60
isobutylene	1.00
isooctane	1.30
isopentane	8.00
isophorone	0.74
isoprene (2-methyl-1,3-butadiene)	0.60
isopropanol	5.60
isopropyl acetate	2.60
isopropyl ether	0.80
isopropylamine	0.90
Jet A fuel	0.40
JP-5 fuel	0.48
JP-8 fuel	0.48
mesityl oxide	0.47
methyl acetate	7.00
methyl acetoacetate	1.10
methyl acrylate	3.40
methyl benzoate	0.93
methyl ethyl ketone	0.90
methyl isobutyl ketone	1.10
methyl mercaptan	0.60
methyl methacrylate	1.50
methyl tert-butyl ether	0.86
methylamine	1.20
m-xylene	0.53

naphtalene	0.37
n,n-dimethylacetamide	0.73
n,n-dimethylformamide	0.80
n-hexane	4.50
nitric oxide	7.20
n-nonane	1.60
n-pentane	9.70
n-propyl acetate	3.10
octane	2.20
o-xylene	0.54
phenol	1.00
phosphine	2.80
pinene, alpha	0.40
pinene, beta	0.40
propionaldehyde (propanal)	14.80
propylene	1.30
propylene oxide	6.50
p-xylene	0.50
pyridine	0.79
quinoline	0.72
styrene	0.40
tert-butyl alcohol	3.40
tert-butyl mercaptan	0.55
tert-butylamine	0.71
tetrachloroethylene	0.56
tetrahydrofuran	1.60
thiophene	0.47
toluene	0.53
trans-1,2-Dichloroethene	0.45
trichloroethylene	0.50
trimethylamine	0.83
turpentine - crude sulfite	1.00
turpentine - pure gum	0.45
vinyl acetate	1.30
vinyl bromide	0.40
vinyl chloride	1.80
vinylcyclohexane (VCH)	0.54
vinylidene chloride (1,1-DCE)	0.80

Handheld Carbon Monoxide Meter/Monitor



HCO107

Features

- Wide measuring range
- Fast response
- Direct real time digital reading
- Large data storage capacity
- High-speed USB
- No warm-up time
- Auto back light
- Simple and easy for self-calibration
- Audible excess limit warning
- External temperature and humidity sensors
- Rechargeable Li-ion battery
- Over 7 hours of battery operating time
- CE certified

HalTech's HCO107 Carbon Monoxide Meter makes it easy to take quick measurements of low CO levels. Featuring the newest generation of electrochemical sensors, the HCO107 is a point-to-sample instrument and responds very quickly to ambient changes in CO concentration with a built-in pump. The special circuitry design allows for no drift and accurate measurements. The USB port provides downloading of stored data as well as continuous, real-time monitoring of the environment. The HCO107 is the perfect instrument for measurement within spaces such as industrial environments, commercial buildings, or residential dwellings where accumulation of combustion gas is possible.

Specifications

Target Gas	Carbon Monoxide (CO) in air
Range	0 - 500ppm
Response Time	T90 < 30 seconds
Repeatability	< ±2%
Typical Long Term Repeatability	< 10% per year and < 25% over 5 years
Technology	Electrochemical sensor
Display Unit	ppm
Sampling Method	Pump and pointing sampling
Memory	Up to 500 sets of data
Interface	USB
Environmental Conditions	Operating: 0~ 45°C, <90%RH; Storage: -20~ 50°C <90%RH
Storage Life	> 5 years at 20°C
Power	Rechargeable Lithium ion battery (3.7VDC/1250mAh); AC adapter 100~240VAC to 5VDC/1A
Dimensions	80 (W) × 45 (D) × 157 (H) mm
Weight	About 200 grams