Total Protection Solution

3S INSTRUMENTS

An ISO 9001 : 2015 Certified Company

HAZARDS IN AIR

- Portable Gas Detectors
- Fixed Gas Detection Systems
- Leak Detectors / Leak Rate Detectors
- Aerosol Monitors, PM 1.0, PM 2.5, Resp., PM 10.0 and Total
- Air Quality (IAQ) Monitor
- Combustion Emmission Analysers
- Gas Sensing Solution (Specialised)
- Standard NDIR Based Gas Benches
- Respiratory Air Monitors

TEMPERATURE

- Thermal Imagers
- Non Contact IR Thermometer
- Contact Type Thermometer
- Calibrators

Three S Instruments Pvt. Ltd. is engaged in businesses of International quality products based on complete knowledge & assured after sales-services with back up of

GIG · CAI envea Group · TSI® · ION · sauermann® · Wahl INSTRUMENTS INC.

With complete technical know how & team of experts, we provide free warranty services. There after we undertake annual maintenance as well as calibration contracts on regular basis.

Calibration of Gas Instruments with International Certified Gases

www.3si.co.in

Contact at : Tel : +91-11-25882080, 43895104 • E-mail : sales@3si.co.in
• Bengaluru : bangalore@3si.co.in • Chennai : chennai@3si.co.in • Kolkata : Kolkata@3si.co.in • Mumbai : mumbai@3si.co.in

PORTABLE GAS DETECTORS

Multi Gas Detector Polytector III G999

With integrated suction pump and optional Bluetooth and radio module

- The **smallest** and most light-weighted 4-7 gases detector.
- Send Live measured data - GfG Link or to mobile app by Bluetooth
- Individual sensor configuration–any profile requirement.
- Ex Protected Integrated lamp, **ATEX approved**
- Data logger & Man down alarm
- **IP 67,** Hybrid sensor (%LEL, PPM, % Vol.), **PID & NDIR** sensor

Multi Gas Detector Microtector III G888

Gas Detector with optional Bluetooth and radio module

- Send Live measured data - GfG Link or to mobile app by Bluetooth
- AutoCal function.
- Ex protected Integrated lamp
- Data logger & Man down alarm
- **IP 67, ATEX APPROVED**

Multi Gas Detector G460 & G450

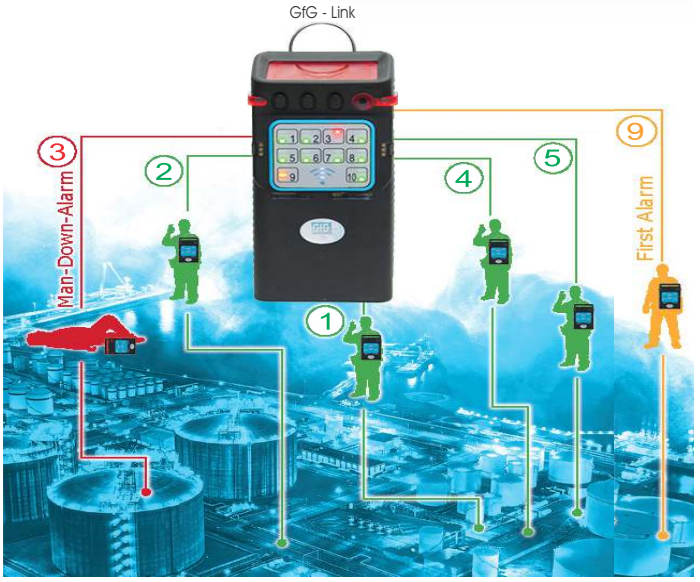
The World's Most Advanced Multi-sensor Atmospheric Detector

- Detects up to 7 gases together, including **PID sensor for direct reading of Volatile Organic compounds**
- **Full 3-year warranty on O_2, combustible, CO, H_2S, CO_2 (IR) sensors**
- Wide range of additional sensors including **CO_2, SO_2, Cl_2, NH_3, HCN, HCL, PH_3, H_2, NO, NO_2, ClO_2, O_3, Silane, Sulphur dioxide & ETO** & more with 2 year warranty

DS 400

Docking station for G450, G460, G888 and G999

- **Fully automatic** bump test and **quick** calibration
- **Easy handling** with **No PC** required
- **Reduced** cost of ownership.
- **Allows simultaneous charging** of both the **gas detector** G450/G460 and the **attached motorised pump** plus the new G888 and G999 units.



Dual Gas Detector

Micro 5 G222

Sturdy and compact dual gas detector for

toxic gases, H_2 and O_2

- **AutoCal** Calibration
- Lasts upto **9** months on **single** user replaceable "AA" alkaline battery
- Ultra bright alarm lights with 103dB audio, visual and vibrating alarm
- Maximum weight of 135g with sensors, battery and clip.
- High quality, precise, durable and easy to change sensors available for 20 different gases and a wide range of measuring ranges.
- Data logging of measured values, alarms, TWA AND STEL values, time as well as temperature information.

G222

Single Gas Detector

MICRO IV

Smallest size. Non-disposable MICRO IV

- **Three years sensors warranty***
- AutoCal® calibration
- User replaceable "AA" battery & sensors
- Ultra bright alarm lights and 91dB horn
- Interchangeable sensors
- TLV/STEL/TWA Reading & Datalogging (MICRO IV)
- ON "AA" Battery last upto 9 months

*** For CO, H_2S & Oxygen only**

DS 220

Docking station for MICRO 4

- **Fully** automatic and simultaneous testing of 6 MICRO IVs
- **Simultaneous** Function test & adjustment
- **Integrated** Pump for test Gas

LEAK DETECTORS / LEAK RATE DETECTORS

Portable Leak Detector

G 300 Series

- Small, light and durable leak detector
- For Methane, LPG, Natural gas, CNG, LNG Referigerants and Ammonia
- More than 8 hours continuous operation
- Explosion-proof models available

GasCheck

Advanced Gas Leak Detector

- Advanced micro thermal conductivity sensor for the rapid, effective detection of gas leaks down to cc/sec, mg/m³ or ppm levels.
- Handheld & robust with LCD Back Lit display

Gases He, Hydrogen, Ammonia, Butane, Krypton, Methane, SF_6, Acetone, Argon, Refrigerant R502, R404a, R410a, Deuterium oxide, H_2S, Acetylene, Ethane, Ethylene Oxide, Nitrogen, Oxygen.

FIXED GAS DETECTION SYSTEM - TRANSMITTERS

IR based HC gas Detector IR 29i/Di

Infrared Transmitter for Combustible Gases

IR 29Di *

IR 29i **

- First **intrinsically safe** infrared transmitter for explosion protection
- ATEX II 1G Ex ia IIC T4 Ga C0158 can also be used in Ex zone 0
- Temperature, moisture and pressure compensation
- Patented infrared (NDIR) 4-beam 4-wavelenghth
- The energized IR sensor head can be replaced in Ex areas
- Maintenance and service-friendly

* IR 29 Di - Intrinsically safe transmitter for hydrocarbons (LEL) with graphical display
** IR 29 i - Intrinsically safe transmitter for hydrocarbons (LEL)

Transmitters CC28 - Combustible gases

with Local Display & Alarm CC 28 DA | with Local Display & Alarm CC 28 D | Blind CC 28

Display of gas concentration at transmitter
Ex-proof visual and audible alarm
ATEX approval II 2 G EEx dem ib IIC T4
Output 4-20 mA,
Casing Protection Ip64
Electromagnetic Interference Protected

Gases Name (Range in 0-100 % LEL)

Methane	CH_4	Toluene	C_7H_8	Heptane	C_7H_{16}
Propane	C_3H_8	Ammonia	NH_3	Methanol	CH_4O
Hydrogen	H_2	Acetylene	C_2H_2	Methyl acetate	$C_3H_6O_2$
Aceton	C_3H_6O	Benzene	C_6H_6	Methylisobutylketone	$C_6H_{12}O$
Diethylether	$C_4H_{10}O$	n-Butane	C_4H_{10}	Octane	C_8H_{18}
Ethylene	C_2H_4	Butane-iso	C_4H_{10}	Pentane	C_5H_{12}
Ethyl acetate	$C_4H_8O_2$	2-Butanol	$C_4H_{10}O$	Propine	C_3H_4
Hexane	C_6H_{14}	2-Butanon (MEK)	C_4H_8O	Propylene	C_3H_6
CC sensor Methane	CH_4	Cyclohexane	C_6H_{12}	Xylene	C_8H_{10}
n-Nonane	C_9H_{20}	Dimethyl ether	C_2H_6O	Carbon monoxide	CO
Propane	C_3H_8	Ethane	C_2H_6	Natural gas	HC-Mixture
Isopropanol	C_3H_8O	Ethanol	C_2H_6O		

Transmitters EC28 - Electrochemical Sensors

For toxic gases, oxygen and hydrogen
ATEX certificate Ⓔx II 1 G EEx ia IIC T4 / Ⓔx II 2 G EEx em [ib] IIC T4
One-man calibration at transmitter Plug-in smart sensor

- Output signal 4 – 20 mA,
- Casing protection IP64
- Intrinsically safe (EC28i, EC28 Di) 1 relay (EC28 DAR),
- Electromagnetic Interference Protected - EN 50270

Gases and Detection Ranges (ppm)

Ammonia NH_3	Chlorine Cl_2	Chlorine dioxide ClO_2	Hydrogen chloride HCl	Hydrogen cyanide HCN	Ethylene oxide C_2H_4O	Hydrogen fluoride HF	Carbon monoxide CO
0 .. 200 0 .. 500 0 .. 1000	0 .. 50 0 .. 250	0 .. 2	0 .. 30 0 .. 200	0 .. 50 0 .. 200	0 .. 100	0 .. 10	0 .. 500 0 .. 2000

Ozone O_3	Phosgene $COCl_2$	Oxygen O_2	Sulfur dioxide SO_2	Hydrogen sulfide H_2S	Silan SiH_4	Nitrogen dioxide NO_2	Nitrogen monoxide NO	Hydrogen H_2
0 .. 1 0 .. 5	0 .. 2	0 .. 30 Vol.-%	0 .. 50 0 .. 500	0 .. 200 0 .. 1000	0 .. 50	0 .. 50 0 .. 200	0 .. 300 0 .. 1500	0 .. 2000 0 .. 1 Vol.-% 0 .. 4 Vol.-%

Transmitter Series 22

with analog or digital Modbus RS485 output
All models come with optional display

Transmitter CC22 for combustible gases

- Uses the proven heat of reaction principle
- Long service life of the sensors
- High efficiency and low follow-up costs
- Cost-effective single-man adjustment
- Affordable solution for many measuring tasks

Transmitter CC22ex

For flammable gases and vapours in Ex zone 2
Gases and Detection Range:

- Flammable gases and vapors such as H_2, CH_4, C_3H_8, C_9H_2O, C_2H_6O Etc.
- Dependant on the sensor used, 0 to 100 % LEL Catalytic combustion (CC)
- Output Signal: RS-485 (Modbus) T90 ≤ 10 seconds

Transmitter EC22

for toxic gases, oxygen and hydrogen

- Long service life of the sensors
- High efficiency and low follow-up costs
- Cost-effective single-man adjustment
- Affordable solution for many measuring tasks

EC22 DS Transmitter

Monitor exhaust gases from gasoline and diesel engines

- Internal combustion engines are used in enclosed or partially enclosed spaces or buildings, there may be elevated concentrations of carbon monoxide (CO) and nitrogen oxides.
- The **EC22 DS dual sensor transmitter** is designed to provide reliable and cost effective monitoring of these gases.
- Sensor combinations **CO/NO and CO/NO_2**

Transmitter EC22 O for Oxygen

For electrochemical partial pressure sensors

- Optional: retrofittable display
- Analog output signal 0,2 .. 1mA or 4 .. 20mA or digital output signal (RS485/Modbus)
- Parameterization via digital interface
- 2 status LEDs for operation (green) and fault (yellow)

Transmitter ZD22 for oxygen (O2)

- More than 5 years sensor life
- Extremely fast response time: t90 < 5 sec.
- No pressure, humidity, or temperature influence
- No damage due to CO_2

Measurement principle: Power Limited sensor based on zirconium dioxide

Standard measuring range: **0-2 % Vol., 0-25 Vol.-%, 0-1000PPM O2, 0 - 96% O2.** Other ranges on request

Transmitter IR22

For carbon dioxide (CO_2) CH_4, Propane and Difluoromethane - combustible gases (HC)
Durable sensors with expected lifetime >5 years

Transmitter IR22F

CO_2 monitoring down to -40 °C
Gas and measuring range: CO_2 in the range 0 to 5 vol.% Resolution: 0.01 vol.%
IP 65

FIXED GAS DETECTION SYSTEM - TRANSMITTERS

Transmitter CS22

for the monitoring of toxic and combustible & refrigerant gases

The Transmitter CS22 combines the proven method of chemisorption to detect combustible and toxic gases with the innovative technique of our new transmitter series 22.

- Precise measuring also in dry air conditions and up to **96%** relative air humidity
- Large dynamic measuring range of a few ppm up to Vol.-%
- The cost-efficient and durable alternative to electrochemical sensors
- Linear measurement signal with temperature compensation

Transmitter CI 21

Carrier Injection NH_3 Monitoring in Refrigeration Plants

- Low temperature operate in upto **-40 °C**
- Selective and precise detection even in almost dry air and up to 100 % rel. humidity.
- No false alarm from hydrogen, natural gas, carbon monoxide, oil vapours.
- No damage by high ammonia concentrations.
- **NH3 - 0 to 200ppm, 0 to 1000 ppm or 0 to 10000ppm.**

TVOC

Fixed continuous VOC detector for the detection and measurement of total volatile organic compounds (VOCs)

- A robust fixed VOC detector, TVOC has a selectable detection range of **0 – 10** ppm, **0 – 100** ppm or **0 – 1000** ppm and is ideal for use in manufacturing & process industries where VOCs are typically present.
- 4 - 20 mA analogue output
- Can be simply integrated into a DCS control system
- ATEX approved.

Transmitter CC 33

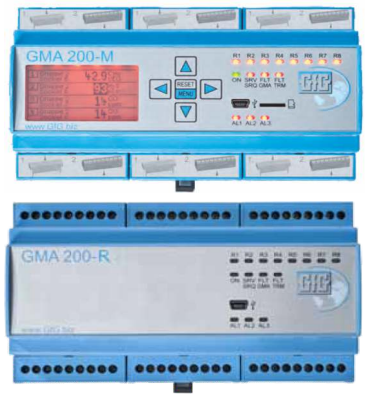
for flammable gases in explosion-proof design Ex-Zone 1

- **IP66** Rating
- Fast response of Less Than 10 seconds
- Conventional die cast aluminium with 10mm thickness & food grade body available
- Food industry can be covered by an unpainted housing made of stainless steel with a 15mm thick bulletproof glass.
- Precalibrated sensors
- Three programmable relays
- Digital & Graphic display

FIXED GAS DETECTION SYSTEM - CONTROLLERS

GMA 200 MW (Wall)/MT (Rack)/GMA 200 RT/RTD

- High Performance Gas Warning System
- Freely Programmable connection of detectors for measuring combustible and toxic gases / vapours & Oxygen
- Other measuring devices/transducers with 4…20mA output signal can also be connected
- Freely programmable Relays
- 16 analogue inputs, 2 digital inputs and 2 RS485 BUS for relay modules or digital transmitters, 1 X RS485 Bus for relay module for extension to add 16 additional relays



GMA 300/100

Fixed gas monitoring system

- Intelligent & flexible Gas monitoring & warning system
- 1 to 4 sensor controller Function tested by DMT - IBS / PFG
- Retransmission output 4-20mA available
- Suitable for all combustible, Toxic, Oxygen & Hydrogen Transmitters

GMA 40 Series

Gas Monitoring Controllers

- Single or four channel controller
- Easy mounting on DIN-rail
- Multiple alarm points with relays

MGSS

Efficient alternative to high-priced sampling systems

- Electronic sampling pump
- Fully automated flow control
- Internal gas distributor for one catalytic combustion sensor and two electrochemical sensors
- Condensate trap, water filter and flame arrestor

GMA 22

WALL MOUNTED CONTROLLER with up to 4 measuring points

- Compact unit for wall mounting optionally monitor one analog (4-20 mA / ACDC®) or up to 4 digital transmitters (RS-485).
- Available with an integrated power supply 230V and as a 24 V DC device.
- Can be configured for any transmitter
- Four relays with one CO contact each or three relays with one CO Contact each and one NO contact

AEROSOL MONITORS

PORTACOUNT® RESPIRATOR FIT TESTER

Models 8040/8048

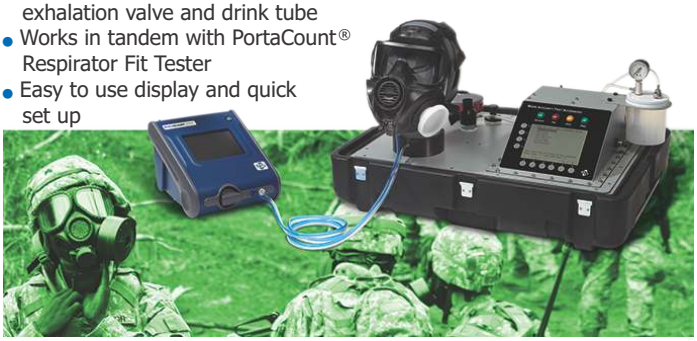
available for proven quantitative fit testing of all respirators,

- Half-face mask fit testing
- Full-face fit testing
- SCBA, Gas mask and PAPR fit testing
- Quantitative respirator fit testing (QNFT)
- Automates fit testing with FitPro+™ Fit Test Software.
- Disposable filtering-face piece fit testing for Series 100/99/95/P1/P2/P3 masks

MITA

Mask Integrity Test Accessory

- Highest Level of Protection
- Test full face respirators for leaks and ensure the functionality
- Seperate test for overall mask integrity (protection factor), exhalation valve and drink tube
- Works in tandem with PortaCount® Respirator Fit Tester
- Easy to use display and quick set up



P-TRAK®

ULTRAFINE PARTICLE COUNTER

MODEL 8525

Ultrafine particles are defined as having a diameter less than 0.1 µm (or 100 nm)

The P-Trak UPC also locates obvious pollutant sources such as boilers, furnaces, and vehicles, and it also detects the not-so-obvious sources such as photocopy machines and printers.

Features and Benefits

- Real-time ultrafine particle counter
- Solves tough IAQ problems
- Easy to use
- Data log information

PERSONAL AEROSOL MONITOR

SIDEPAK ™ AM-520

- Real-time aerosol readings of dusts, fumes, mists, smoke and fog within a worker breathing zone.
- Real – time mass concentration range **PM10, Respirable (PM4), PM2.5, PM1** and **0.8µm** Diesel Particulate Matter **(DPM).**
- Audible and Visual Alarms
- High capacity battery (more than 20 hours)
- Aerosol Concentration Range **0.001 to 100 mg/m3**

DUSTTRAK™ DRX and DUSTTRAK™ II

AEROSOL MONITORS

MODELS 8533, 8533EP AND 8534

MODELS 8530, 8530EP AND 8532

Real-time Dust & Aerosol Monitoring For Any Environment, Any Application

Features and Benefits All Models

- Real-time mass concentration and size fraction readings, as well as data logging allow for data analysis during and after sampling.
- Simultaneously measure size - segregated mass fraction concentrations corresponding to **PM1, PM2.5, Respirable, PM10 and Total PM size fractions**
- Easy-to-use graphical user interface with color touch-screen for effortless operation

Primary Calibrator

- Provides continuous real-time volumetric flow rate readings, so pump adjustment and calibration is fast and easy
- Battery powered, compact and lightweight
- Comes with a NIST traceable calibration certificate

DUSTTRAK™ Environmental Aerosol Monitor 8540 /8543 Series

- Simultaneously measure size- segregated mass fraction concentrations corresponding to PM1, PM2.5, Respirable, PM 10 and Total PM size fractions, SO_2, NO_2, Temp., Humidity
- Perform in-line gravimetric analysis for custom reference calibrations
- Environmentally protected and tamper-proof with environmental enclosure
- Cloud Data Management System for efficient remote monitoring anywhere
- MCERTS Approved

AIR QUALITY MONITORS

Q-TRAK™
Multi-function Indoor Air Quality Monitor
MODEL 7575 with VOCs

- Simultaneously measures **CO_2, CO, temp. & humidity**
- Calculates dew point, wet bulb and percent outside air.
- One instrument with multiple plug- in probe options including **VOCs in PPB** and **air velocity**
- Stores upto **39** days of data at 1 minute interval
- TrackPro Data analysis software
- **Bluetooth** communication

BlueSky™
Air Quality Monitors
Models 8143, 8145

- Lightweight, laser based particle measurement instrument.
- Can measure **PM 2.5, PM 10, temp & relative humidity.**
- Connected with TSI Link™ Solutions

SI-AQ EXPERT
Portable Indoor Air Quality Monitor

- Customizable to measure up to 7 Gases
- CO_2, CO, % RH, Temp, TVOC's, O_2, NO, NO_2, O_3, SO_2, H_2S, Formaldehyde, Barometric Pressure
- Real-Time Data-Logging Software For Graphs, Data Review, IAQ Reports
- Wireless Communication with PC & Printer
- Active Internal Sampling Pump

SI-AQ COMFORT
Handheld Indoor Air Quality Monitor for IAQ Analysis in Homes, Schools, Offices & More

- IAQ Tool for HVAC Professionals
- Real-Time Data Logging with large Internal Memory (2,000 Tests)
- Active Internal Sampling Pump
- Protective Magnetic Rubber Boot
- Optional Wireless Printer & Handheld Probe
- Long Lasting Rechargeable Battery & AC Charger

CO_2, CO, Temperature, %RH, Wet Bulb, Dew Point, Barometric Pressure

SI-AQ PRO
The Latest in Handheld IAQ Monitoring & Real Time Data Logging for Complete Air Quality Analysis

- Up to **3** Gases, Temp., %RH & Barometric Pressure Included
- Real-Time Data Logging with large Internal Memory (2,000 Tests)
- Active Internal Sampling Pump
- Protective Magnetic Rubber Boot
- Optional Wireless Printer & Handheld Probe

Select Up To 3 Gases:
CO_2, CO, NO_2, NO, O_2, SO_2, H_2S, Formaldehyde

SI-AQ VOC
Handheld TVOCs Monitor for Air Quality Analysis in Industrial Safety, Environmental, Laboratories and More

- **Dynamic PID TVOC** Sensor with **0 - 20,000 ppb** or **0 - 200 ppm** range, Temp., %RH and Barometric Pressure Included
- Real-Time Data Logging with large Internal Memory (2,000 Tests)
- Active Internal Sampling Pump
- Protective Magnetic Rubber Boot
- Optional Wireless Printer & Handheld Probe

Select Up to 3 Gases in Total:
TVOCs, CO_2, CO, Formaldehyde, NO_2, NO, O_2, SO_2, H_2S

PORTABLE EMISSIONS AND COMBUSTION ANALYSERS

Si-CA 030
Residential & commercial combustion analyser

- Up to three gas sensors O_2, CO & NO/NOx
- CO sensor measurement up to 8,000 ppm
- Automatic Data logging & report creation
- Combustion efficiency & excess air calculations along with calculated CO_2 % value
- Draft & differential pressure measurements
- Calculated CO_2 % value

Si-CA 130
Residential & commercial combustion analyzer

- Up to three gas sensors O_2, CO & NO or Low NO (for NOx)
- CO sensor measurement up to 8,000 ppm
- Field replaceable precalibrated sensors
- Automatic Data logging & report creation
- Combustion efficiency & excess air calculations along with calculated CO_2 % value
- Sample conditioning unit for low NOx & high moisture applications
- Draft & differential pressure measurements

Si-CA 230
Gas Analyzer for Emissions Monitoring of Boiler, Engine, & Other Combustion Applications

- Up to Six Gas Sensors. Can inlcude O_2, CO, NO, Low NO, NO_2, Low NO_2, SO_2, Low SO_2, H_2S, and C_xH_y
- Large Color Touch Screen & Wireless Printer
- CO dilution auto-range with measurements to 50,000 ppm
- Total NOx, Low NOx, Draft, differential pressure, Stack gas velocity (with Pitot tube) measurements
- Field Replaceable PreCalibrated Sensors
- iOS & android mobile apps for Real-Time Display & Control
- Sample conditioning unit for **low NOx & high moisture** applications
- Emissions values adjusted for reference O_2
- **CO & CO_2** Monitoring in Ambient Air

Si-CA 8500
Portable Industrial Combustion Flue Gas & Emissions Analyzer For Boiler, Engine, Furnace, & Other Combustion Applications

- Up to NINE (9) Gas Sensors
- Low NO, NO2 & SO2
- Stack Gas Velocity
- Built-In Thermoelectric Chiller
- Automatic Condensate Drain
- High Accuracy NDIR Sensors
- Upgraded Memory (2000 Tests)

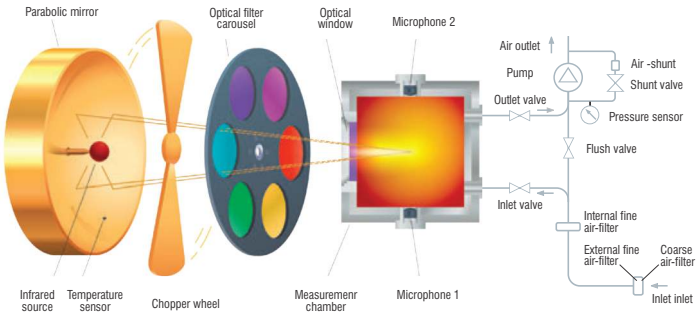
O_2, CO, CO_2, NO, NO_2, SO_2, CxHy (HC), H_2S, VOC

PID VOC Sensor Option

US EPA CTM-30 & CTM-034 Compliant

LUMASENSE SOLUTION FOR GAS SENSING

PHOTOACOUSTIC SPECTROSCOPY



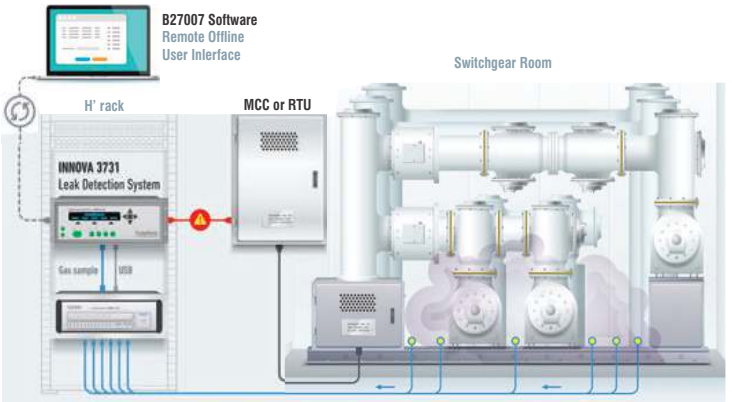
Photoacoustic Spectroscopy (PAS) gas instruments were pioneered and perfected by INNOVA™. With PAS, the absorption (proportional to the concentration) is measured directly and not relative to a background, making PAS highly accurate and stable. Furthermore, all gases and vapor in small volumes can be monitored sequentially in a single measurement chamber as it is possible to detect up to five substances and humidity to be monitored individually.

APPLICATIONS with Specialised Software

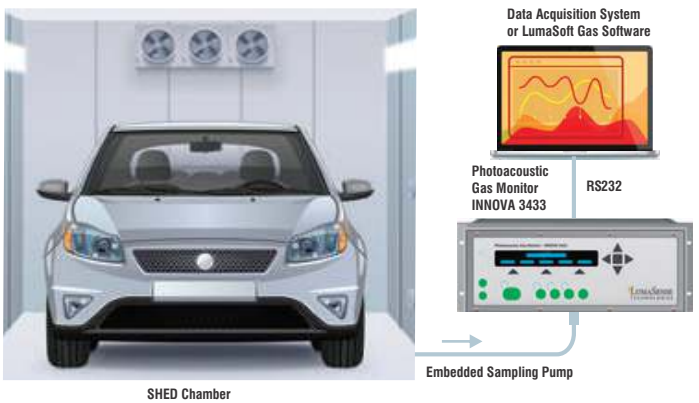
SF_6 LEAK MEASUREMENT SOLUTION

Sf_6 Leak Detection System – 3731

- Ultra-sensitive, with a limit of detection at 6 ppb
- Available in 12 or 24 channels, with sampling lines that can extend to 75 m
- Exceptional accuracy with auto-compensation for temperature and pressure fluctuations, and for water vapor interference



Automotive Emissions Monitoring



LumaSense's INNOVA 3433 Multi Gas monitor is used to measure evaporation emissions (SHED) and vehicle exhaust gas (Constant Volume Samples CVS) approved by EPA and CARB. The INNOVA 1412i can also be used for measurements of Mobile Air Conditioner emissions R134a and HFO-1234yf.

PAS BASED GAS MONITORING SYSTEMS

INNOVA 1512

1512 : Emission monitoring of greenhouse gases from agricultural production, Monitoring of anaesthetic agents in hospitals, Ventilation and air exchange using tracer gas, OHS measurements.

INNOVA 1314i

1314i : Emission monitoring - of exhausts from chemical processes, NH3 in stacks, scrubber efficiency, and filter break-through, Process quality control measurements, OHS measurements and Automotive monitoring - of alcohol content in vehicle exhausts and production of NH3 and N_2O in diesel exhausts.

INNOVA 3434i

3434i : SF6 Leak Detector - Fast, accurate, quantitative leak testing of GIS for routine quality control or during field commissioning, Area monitoring in substations, Circuit breaker leak testing and Power Utility (Energy T&D).

INNOVA 1403 Multi Point Sampler & Doser

1403 : Multipoint sampler & Doser Full remote control from a PC With special software.

INNOVA Multi Point Sampler 1409

1409 : Multi Point Sampler upto 24 points Full remote control from a PC With special software.

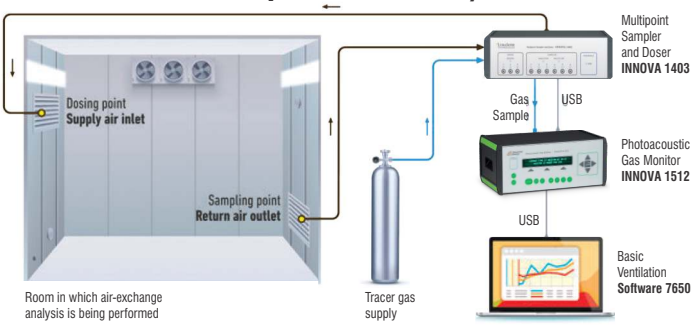
APPLICATIONS with Specialised Software

Environmental Emission Monitoring

There is an expanding list of environmental and emission applications where gas sensing solutions are needed. Our INNOVA gas instruments have measured NH_3 in swine and poultry stables, CH_4 in cattle and poultry stables, N_2O from stables and fertilizer, CH_4 from decomposing biomass, and in greenhouses and rice cropping.

Ventilation Performance

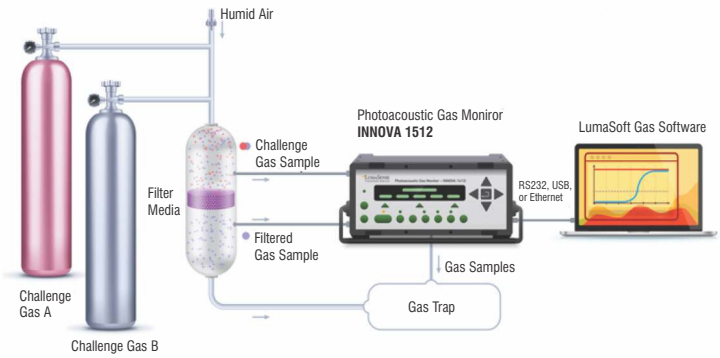
Advance Tracer Gas Systems - 3751-2 / 3751-5



Air Change Rate, or Age-of-air determination Infiltration (or inleakage) characterization Volumetric or mass flow rate measurement using tracer gas dilution Contaminant spread analysis, Re-circulation or re-entrainment testing Capture efficiency of extraction systems.

LUMASENSE SOLUTION FOR GAS SENSING

AIR PURIFICATION DEVICES TESTING USING PRECISE MULTI GAS MONITORS



Schematic view of a typical set-up for testing of filter breakthrough characteristics, with a single Photoacoustic Gas Monitor capable of measuring both the upstream and the downstream concentrations for a selection of challenge gases

7950 MULTI-POINT SOFTWARE

- Perform gas-monitoring tasks in up to 24 different locations
- Stores up to five gas concentrations for each location
- Real time displays of measurement data in both table and graphical window
- Login-secured access to measurement data
- Alarm reporting for each gas at each measurement location

Measurement of Greenhouse Gases using the Multi-gas Monitor.

Using 1314i/1512 with multipoint sampler

The most important greenhouse gases are water vapour, **carbon dioxide, methane and nitrous oxide.** Usually, measuring long-term average values is considered adequate, but taking into account the fairly big changes that take place in the interchange between the natural sources and sinks in the atmosphere. To study these phenomena properly a measuring instrument which has a response time of a few minutes is very beneficial.

ANDROS NDIR Standard Bench for Automotive and Industrial Gas Monitoring

Model 6500 for Hexane or Propane, CO_2, CO with NOx & O_2 with DP Transducer
Model 6520 for Hexane or Propane, CO_2, CO with NOx & O_2 w/o DP Transducer
Model 6511 for Methane, CO_2, CO with NOx & O_2
Model 6552 Freon for Refrigerant Leak Detection Calibrated for R404A, R507C and CO_2

RESPIRATORY AIR MONITORS

RAM 741 - Portable/Multi user option

- Meets OSHA Requirements for Compressed Breathing Air
- Continuous Monitoring of Supplied Air
- Carbon Monoxide and Vapor Detection
- AutoCal® Calibration and Maintenance
- Three Stage Filtering Option for up to 8 users

RAM 4021 - with CO, Dew Point & CO with Dew Point

- Meets OSHA Requirements for Compressed Air
- Continuous Monitoring of Breathing Air
- Optional Oxygen or Dew Point Monitoring
- AutoCal® Calibration
- Multiple Filter Panel Options

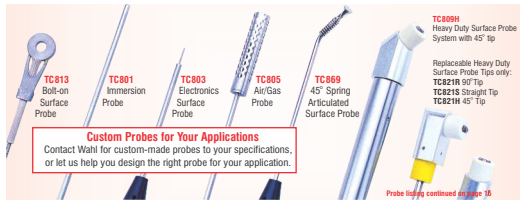
Portable Remote Compressed Air Monitor

TEMPERATURE MEASURING INSTRUMENTS

HEATSPY

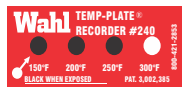
a50 Inspector/a30 Detector
upgrade both models, "a" speed at 9 Hertz captures clear, sharp images!
Camera acclimates quickly, every Pixel is individually calibrated!
"Double Vision" provides simultaneous capture, Hands-free flashlight

HEAT Prober 2500/1370 Series Type K Thermocouple Meters
Meter range -100 to 2500°F or -70 to1370°C
Meter accuracy is ±0.2% of reading ± 1 digit
Maxi-Temp® automatically holds peak reading



WAHL Heat-Prober Dipstick high-temperature Thermometers Measure Temperature of ferrous and non ferrous molten metals in monitor stoke

WAHL UNIVERSAL CALIBRATORS
Simultaneous Measurement and Source or Dual Measurement Channels
IP54 Automatic Calibration on HART Protocol Transmitter 21 CFR part 11 compliant
Measure and Generate Voltage, Current, Frequency, Resistance Signals, Resistive Probes and Thermocouples
Pressure Measurements when used with optional External Pressure Module for Absolute or Relative Pressure



Wahl Temp-Plate®
Irreversible Temperature Recorders These economical non-reversible chemical change thermometers instantly record an overheat occurrence and provide a permanent, NIST - traceable record.

Three S Instruments Pvt. Ltd.

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