Ambient Air Quality Monitoring Station

Introduction-

The air-sense is an ultra-compact air quality monitoring system based on well-proven hardware and software. Its platform design includes various sensors for quick and easy monitoring. The innovative air-sense provides real-time indicative measurement of typical air pollutants including o3, SO_2, NO_2, CO, CO_2, VOC, formaldehyde, NH3 (and many more) as well as PM1, PM2.5, PM4, PM10 indicated in concentrations and particle number. The air-sense allows ambient air monitoring and indoor air quality monitoring in one device. Thanks to its modular setup the air-sense can be customized to specific needs. Add-ons like meteorological sensors, sensors for measuring noise, radiation, and vehicle counters are available and can be attached and integrated into the air-sense's advanced data acquisition system.

Single air-sense can provide-

- A multi-fraction Particle sensor (TSP, PM10,PM4, PM2.5, PM1 —Mass And Numbers)
- Up to six electro-chemical (ec) gas sensors, e.g. o3, SO 2, NO, NO2,CO, VOC, formaldehyde, NH3,
- CO2 sensor (NDIR)
- Meteorological sensor, noise sensor and traffic control sensor
- Additional gas sensors are available on request

An Overview Indicative Air Quality Monitoring System The "air-sense"

Application	Basic or additional indication on air pollution levels
Typical Measurement Resolution	1 ppb
Quality of Measurements	Good for first assessments and surveillance of alarm levels
Cost Advantage (supplies and low cost maintenance)	PM-10,PM-4, PM-2.5,PM-1, Gas Sensors up to (any six electrochemical gas sensors), Meteorological Sensor and Noise Sensor.
Level of User Expertise	Individuals or organizations interested in indicative monitoring of ambient air quality or indoor air quality monitoring
Suitable Product	Air-sense

Features-

- Continuous real-time measurement .
- Quick and easy to install on walls, poles, masts etc....
- Equipped with advanced integrated data logging system .
- Easy browser-based operation and data access .
- Modular configuration for specific measurement needs .
- Low maintenance costs and efforts .
- Perfect infrastructure for electro chemical and other sensing technology .

Pre-configured application are available for-

Traffic pollution

- NO, NO2
- Dust sensor
- Wind measurement
- Traffic counter

IAQ monitoring in schools, offices,hospitals, shopping, malls,museums etc....

- CO, CO2,
- NO, NO2, O3
- VOC
- Dust sensor
- Relative humidity
- Temperature
- Unbent pressure

Construction sites monitoring

- NO, NO2
- Noise sensor
- Dust sensor

SOFTWARE & USER INTERFACE

The air-sense uses software & interface which is deployed solution in the Air Quality Monitoring Industry.

air-sense benefits from the experience of various installations worldwide.

Some of many features and screens

All parameters can be downloaded easily and quickly to your PC. Configure the default selection of parameters use Excel for further processing.
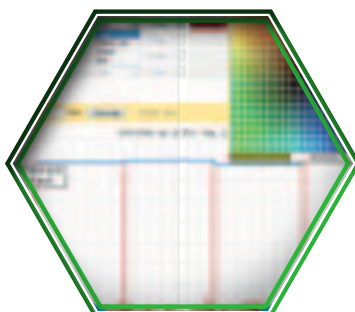

Reports may be defined and automatically created. The results are converted to pdf or xls files.

Setup is used for settings in general. Here you may enable or disable the various modules and change units such as ppb and µg/m³.
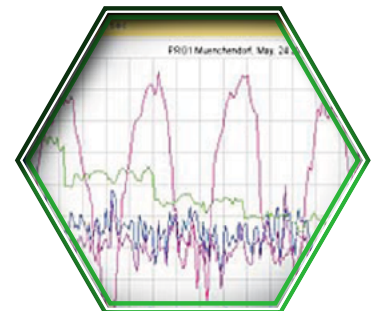
One to six parameters are displayed in a clearly arranged graphic. Zoom function allows for detailed viewing.

Graph design for the purpose of clarity, you may present measurement data in different form and in various colors: as a line, a filled line, a step or a bar diagram

Measurement campaign may be assigned to defined time periods and locations.

Radar chart/wind rose Measurement data may be displayed in relation to wind direction to localize pollution sources

Noise Sensor -

Output Type	A' weighting SPL output in the form of a 4- 20mA loop
Frequency Weighting	dB(A) to IEC 61672 -1:2002
Time Weighting	Factory set to Fast ('F') IEC 61672-1:2002
Automatic Calibration	Electrostatic Actuator System with DC voltage control
Measurement Range	30 - 100dB(A) (other options available)
Current Loop Output	Iout = 0.1mA/dB
Dimensions	1m length
Weight	4.5 Kg
Mounting nuts, 3 Jubilee Clips)	240mm x 30mm diameter pole Mounting Kit provided (2 U-brackets, 4
External Power	+12V DC in

WEATHER MONITORING SENSOR -

Temperature, Relative Humidity,Radiation, Air Pressure, Wind, Electronic Compass.

From the WS product family of professional intelligent measurement transducers with digital interface for environmental applications. Integrated design with ventilated radiation protection for measuring:
- Air temperature
- Relative humidity
- Air pressure
- Wind direction
- Wind speed
- Solar Radiation.

Model	Model Name
Titan	1.Ventus 2.WS310
Platinum	1. WS301/303
Gold	1.V200A 2.WS300 3.WS400 4.WS304
Professional	1.WS200 2.WS401 3.WS302

Technical Specifications-

PM1, PM2.5, PM4, PM10 concentrations and particle number-

Types	Details
Particle size ranges	Two channels -25ard 10.0 um (optionally available: um, TSP and number concentration)
Concentration range	0 1,000
Accurate	+ 10%te collaborated cerosel
Sensitivity	0.3 un
Sample duration	Minute

Gases	Range	Resolution	Accuracy of calibration	Precision
Co	0.50 ppm	0.01 pam	<+ o No pon ppm	0.1 ppm
03	0 50,000 ppb	1ppb	<+5ppb	5 pph
NO	0 20,000 ppb	pph	<+ 50 ppb, 0 to 100 100 pph	5 pph
NO2	0 20,000 ppb	pph	<+ ppb o to 100 pon 100 ppb	5 pph
S02	0 20,000 ppb	ppb	<+ 50 ppb, Ote 100 ppm 100 ppb	5 pph

Types	Voc	CO₂
Measuring principle	PID	Duel wavelength NDIR
Range	0.01 (isabzzzzzutylene)	0 2,000 pon low 0 10,000 ppm high
Detection limit	0.01	pom
19 response time	<5 seconds	60 seconds
Accurate	<+ 10%	<+ [50 ppes + 396