

PRODUCT GUIDE

ATI
ANALYTICAL TECHNOLOGY, INC.



SENSING SOLUTIONS

The quality of the air we breathe and the water we drink is of basic concern to everyone. Analytical Technology is committed to developing and improving the sensing technologies that help insure the quality of the environment in which we live and work.

At ATI, we specialize in the application of electrochemistry to air and water monitoring problems. Our sensors are at work 24 hours a day, 365 days a year, year after year, helping safeguard the workplace against the dangers of toxic gas emissions and improving the control of potable water and wastewater treatment. From simple analog transmitters to sophisticated microprocessor based systems, we strive to provide the reliability and durability demanded in today's market.

Innovative product design with an emphasis on reduced operational maintenance is the goal in every product we offer. From our exclusive Auto-Test gas sensor verification system to our unique D.O. sensor cleaning system, we provide monitoring solutions that are reliable and cost effective. Quality product design, years of sensor development and manufacturing experience, and knowledgeable application support are an integral part of the products we offer.

GAS DETECTION SYSTEMS

GAS DETECTION INSTRUMENTS

Gas detection instruments are available for a variety of toxic and flammable gases as shown in the list below. Packages are available or anything from single point to large multipoint systems.

NH_3	Ammonia
CO	Carbon Monoxide
H_2	Hydrogen
NO	Nitric Oxide
O_2	Oxygen
COCl_2	Phosgene
Br_2	Bromine
Cl_2	Chlorine
ClO_2	Chlorine Dioxide
F_2	Fluorine
I_2	Iodine
HX	Acid Gases
$\text{C}_2\text{H}_4\text{O}$	Ethylene Oxide
$\text{C}_2\text{H}_6\text{O}$	Alcohol
O_3	Ozone
CH_4	Methane (Combustible Gas)
H_2O_2	Hydrogen Peroxide
HCl	Hydrogen Chloride
HCN	Hydrogen Cyanide
HF	Hydrogen Fluoride
H_2S	Hydrogen Sulfide
NO_2	Nitrogen Dioxide
SO_2	Sulfur Dioxide
H_2Se	Hydrogen Selenide
B_2H_6	Diborane
GeH_4	Germane
AsH_3	Arsine
PH_3	Phosphine
SiH_4	Silane
HCHO	Formaldehyde
NO_x	Oxides of Nitrogen
HC_2H	Acetylene
$(\text{CH}_3)_2\text{NH}$	Dimethylamine
HBr	Hydrogen Bromide

GAS DETECTION SYSTEMS

Modular Gas Detector

GasSens Detectors provide gas measurement, display, visual and audible alarm, and analog output in a compact unit. Modular in design, these detectors are ideal for small to medium size detection applications. Detector configuration is easily customized to fit specific site requirements.



2-Wire Transmitter

UniSens Gas Transmitters are the ultimate in transmitter technology. Transmitter electronics are universal, accepting up to 30 different gas sensors by simply plugging them in. And our exclusive Auto-Test sensor self-test feature reduces maintenance time to an absolute minimum.



2-Wire Transmitter

Series B12 Transmitters provide an alternative for 2-wire applications. This transmitter provides fewer features than the UniSens but at a lower cost. For OEM use or installations where advanced UniSens features are not required, TranSens is an economical alternative.



For The Air We Breathe

Digital Gas Transmitter

Model D12 Gas Transmitters provide the ultimate in application flexibility. Loop-powered or 3-wire models with on-board relays are available, as are both combustible gas and universal toxic gas versions. In addition, digital communication using Hart™ or Modbus™ protocol are available.



Digital Gas Transmitter

Model F12 is an intrinsically safe Gas Transmitter designed for the detection of a variety of toxic gases in hazardous locations or general purpose applications. The F12 uses ATI's smart sensors that contain all calibration constants in memory thus making calibrations possible in safe non-hazardous locations.



Portable Gas Leak Detector

PortaSens II leak detectors provide a flexible tool for locating the source of toxic gas leaks from storage cylinders, process machinery, gas generation equipment, or piping systems. Interchangeable sensors allow one instrument to be used for a variety of gas detection requirements, with internal data logger standard.



GAS DETECTION SYSTEMS

Auto-Test Combustible Transmitter

Model A12-17 Combustible Gas Transmitters are unique in their ability to perform an automatic gas response test on the combustible gas sensing elements every 24 hours. A standard 4-20 mA output signal allows application in virtually any existing installation.



Wet Gas Transmitter

Monitoring gas concentrations in locations where condensation is normally present requires sensors and systems designed for that type of environment. ATI offers B12 wet gas systems for monitoring halogens or hydrogen gas in condensing environments. A special Q45S wet H₂S system is also available for odor scrubber monitoring.



Infrared Gas Transmitter-LEL/CO₂ /N₂O

Model D12IR provides gas measurements using infrared sensing technology. IR sensors are available for monitoring methane and other combustible gases, carbon dioxide, or nitrous oxide. Explosion-proof design allows use in virtually all environments, with local indication and optional integral alarm relays.



WATER QUALITY MONITORS

Water quality instruments are available for monitoring chemical components in drinking water, process water, and wastewater to bring better control to the treatment process.

Instruments based on polarographic membrane sensors, potentiometric sensors, and laser optical sensors are designed for demanding applications requiring 24 hour a day reliability. Simplicity of operation, ease of maintenance, and low operating cost are key features of every ATI monitor.

Dissolved Oxygen
Dissolved Sulfide
Chlorine Dioxide
pH/ORP Transmitter
Residual Chlorine
Dissolved Ozone
Auto Clean pH/ORP
Peracetic Acid
Residual Sulfite
Conductivity
Dissolved Ammonia
Turbidity
Fluoride Monitor
Hydrogen Peroxide

WATER QUALITY MONITORS

Dissolved Oxygen

The Auto-Clean D.O. System is the answer to low maintenance D.O. monitoring. The system provides not only accurate measurement but also a unique high pressure air blast system that automatically cleans the sensor as often as needed, virtually eliminating manual sensor cleaning.



Dissolved Sulfide

Model Q46S/81 Dissolved Sulfide Monitors continuously measure sulfides in water and wastewater streams. Sulfides in solution are stripped into a gas stream and measured using an H_2S gas sensor, providing extremely high sensitivity. Applications include well water monitoring, wastewater influent measurements, and metal treatment systems using hydrosulfide as a reactant.



Chlorine Dioxide

Model Q46H/65 Chlorine Dioxide Monitors provide a highly sensitive and selective method for monitoring residual ClO_2 concentrations in potable water or cooling water systems. A direct measuring polarographic sensor allows measurement between 10 PPB and 20 PPM with minimal maintenance.



For the Water We Drink

pH/ORP Transmitter

Q-Series pH and ORP Transmitters provide process measurements in a rugged industrial package with both 2-wire and AC powered models available. Differential type sensors manufactured from chemical resistant molded PEEK outlast conventional sensors, providing the most economical monitoring system you can buy.



Residual Chlorine

A variety of monitors are available for chlorine measurement in water. Reagentless systems are available for Free Chlorine, Combined Chlorine, and Total Chlorine. A special Gas Phase Total Chlorine system provides reliable measurement in extremely difficult applications. For high range applications, a system is available for measurements up to 0-2000 PPM.



Dissolved Ozone

Series Q46H/64 Dissolved Ozone Monitors offer direct sensing of $D.O_3$ concentrations for high purity water systems, bottled water facilities, and ozone treated potable water. Monitors provide interference free measurement down to 5 PPB with minimal maintenance and simple installation.



WATER QUALITY MONITORS

Auto Clean pH/ORP

Model Q46 Auto Clean Monitors combine conventional pH or ORP sensing with a unique sensor cleaning system that greatly reduces manual maintenance. A high pressure air blast cleaning system automatically cleans the sensor as often as necessary to ensure reliable measurements.



Peracetic Acid

Model Q46H/85 Peracetic Acid Monitor (PAA) provides continuous real time measurement of PAA to very low levels and is suitable for chemical feed control. The direct sensing polarographic probe is selective for PAA and is not affected by changes in H_2O_2 in solution.



Residual Sulfite

Model Q46S/66 Residual Sulfite Monitors continuously measure $SO_3=$ concentration to insure complete dechlorination of water streams. Protection of RO membranes and compliance with zero residual chlorine discharge requirements are major applications.



For the Water We Drink

Conductivity

Q-Series Conductivity Systems allow measurements in both ultrapure water and very high conductivity process water. A versatile 4-electrode sensor design provides measurement from 10 μS to 2 S with a single sensor, with 2-electrode sensors available for high purity water. Toroidal sensors are also available where electrode fouling is a major issue.



Dissolved Ammonia

ATI's ammonia measurement technology provides economical, stable, and sensitive measurements of dissolved ammonia in wastewater effluents, cooling systems, or raw water intakes. A dual sensor version of the ammonia systems provides Free Ammonia, Total Ammonia, and Monochloramine in one package which is perfect for chloramination system monitoring.



Turbidity

Model Q46/76 Turbidity Monitor provides sensitive and stable measurements in flowing water samples from as low as 0.01 NTU to 4000 NTU. Using the standard 90-degree light scatter technique, the sensor can be mounted in a flowcell, submerged directly into an effluent channel, or inserted into a pipe tee.



WATER QUALITY MONITORS

Fluoride Monitor

The Q46F Fluoride Monitor provides continuous measurement of fluoride levels in drinking water. An ion-selective sensor provides measurement down to 0.05 PPM, and an automatic calibration function insures long-term measurement accuracy without operator attention.



Hydrogen Peroxide

Model Q46/84 Hydrogen Peroxide Monitor was developed to provide real time measurement of low levels of H_2O_2 in solution and is suitable for chemical feed control. The membraned sensor provides long term stability without electrode fouling and is selective for peroxide without interference from most other ions in solution.



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