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# REDISCOVER THE GREAT INDOORS

Let's Take This Inside!



Introducing our New  
**AirAssure™ Indoor**  
**Air Quality Monitor**  
connected with  
**TSI Link™ Solutions**









## LET'S TAKE THIS INSIDE

When we're together in the same classroom, amazing things happen – collaboration, creativity, and innovation. The global pandemic has made us more aware of our indoor air quality (IAQ), and there are steps that can be taken to help students and staff get back inside.

## THE IMPORTANCE OF INDOOR AIR QUALITY MONITORING

According to the Environmental and Health Impacts of Air Pollution: A Review study, human-made air pollution is responsible for 9 million deaths per year. Indoor air can often be more polluted than outdoor air, and as school districts prepare to welcome students back full-time and operate with fuller classrooms, it's important to be aware of the health of your building's indoor air quality (IAQ).

Poor IAQ has been linked to allergies, asthma, Sick Building Syndrome (SBS), and even reduced academic performance and absenteeism. In fact, monitoring the health of the air in your building can give you the data you need to help assure the health and wellness of your students and staff.

## WHAT TYPE OF IAQ MONITOR IS BEST FOR MY SCHOOL?

To get a comprehensive look at the health of your indoor air quality, it's important to have a monitor that measures both particle matter (PM) and gases. According to the US Environmental Protection Agency (EPA), nearly 1 in 13 children suffer from some form of asthma, so it is important to maintain an optimal level of IAQ in schools.

Common sources of indoor air pollution within school buildings include:

- + Fumes from synthetic building materials and furnishings
- + VOCs from arts and crafts materials
- + Printers and copiers
- + Cleaning chemicals and aerosol sprays

# WHAT IAQ CRITERIA DO I NEED TO CONSIDER?



## TEMPERATURE AND HUMIDITY

While temperature and humidity levels are often linked to comfort complaints, these parameters also affect other contaminants in your air. For example, high temperature and humidity levels can increase concentrations of some pollutants – such as formaldehyde – if there is little air movement, on top of increasing the potential for mold growth. Maintaining the design setpoints for temperature and humidity is one of the main functions of a properly designed, constructed and operating HVAC system.



## VENTILATION AND OUTDOOR AIR

Studies suggest that poor ventilation is linked to student absenteeism because the lack of fresh air causes pollutants to build up, which triggers health-related illnesses. A key parameter you can measure to inspect the effectiveness of your ventilation is the level of Carbon Dioxide (CO<sub>2</sub>). Elevated levels of CO<sub>2</sub> indicate that not enough fresh air is getting into your school. While opening windows or doors will increase the percentage of outdoor air, it is the mechanical ventilation or HVAC system that plays a vital role in providing proper ventilation along with other IAQ parameters for occupant comfort and safety.



## GAS MEASUREMENTS

### Ozone (O<sub>3</sub>)

Ozone is a main component of smog, and high levels of O<sub>3</sub> can increase respiratory issues. School-aged children are often at more risk of complications from high O<sub>3</sub> levels because their lungs are still developing. Other sources of O<sub>3</sub> include copier machines and air purifying machines within a school building.

### Nitrogen Dioxide (NO<sub>2</sub>)

A number of sources contribute to elevated NO<sub>2</sub> levels, which may cause respiratory issues. One example of elevated NO<sub>2</sub> levels found at schools is combustion from idling school buses and other vehicles outside during pickup and drop-off hours.

### Sulfur Dioxide (SO<sub>2</sub>)

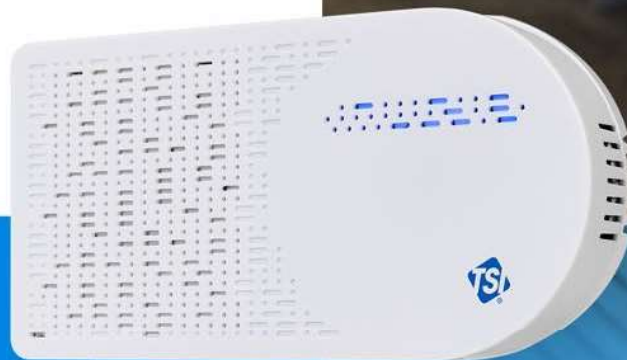
Most SO<sub>2</sub> emissions are generated by refineries, power plants and industrial facilities that burn fossil fuels and may affect students and staff outdoors as well as inside school. Emissions from buses and vehicles near schools also contribute to elevated SO<sub>2</sub> levels.

# TRUST THE LEADERS IN THE INDUSTRY

TSI® Incorporated, a global leader in precision measurement instrumentation for more than 60 years, is proud to introduce the AirAssure™ Indoor Air Quality Monitor connected with TSI Link™ Solutions. With this real-time, low-cost solution, you can monitor particulate matter (PM), traditional IAQ parameters, and up to six gases. View, analyze and share actionable data all within the cloud-based TSI Link™ Solutions.

## IDEAL FOR:

- + Schools
- + Technical Schools
- + Community Colleges
- + Colleges and Universities
- + Childcare and Youth Programs



### Carbon Monoxide (CO)

Common sources of CO include leaking furnaces, wood or gas stoves, and generators, which can be found in a boiler room.

### Carbon Dioxide (CO<sub>2</sub>)

Central heating systems and water heaters are common sources of CO<sub>2</sub> within school buildings.

### Formaldehyde

This gas is commonly associated as the preservative used on animals for dissection purposes in science classes, but it's also found in pressed wood products, glues, paper products, and certain types of paints.

### Total Volatile Organic Compounds (tVOC)

Anything from paint fumes, wood preservatives and cleaning products contribute to VOC levels within an indoor area.



## MEASUREMENT OPTIONS THAT FIT YOUR NEEDS AND BUDGET

With TSI®, you don't have to compromise on accuracy while staying within your budget. So how do you choose the AirAssure™ IAQ monitor that best fits the requirements for your space? Your installation location and what you want to monitor determines which of the three models you need – and, yes, it is possible that you might want multiple units to monitor different spaces and types of rooms in your school.

**Model 8144-6** is a six-gas monitor that can be placed in areas that may have a higher potential of seeing combustible gases, such as near entrances and exits, foyers, loading docks, bus or vehicle drop-off zones, and kitchens. Because it measures ozone, it is also helpful around photocopiers and laser printing areas.

**Model 8144-4** is a four-gas monitor that can be used in hallways, classrooms, maintenance rooms, and chemical storage areas. Because it measures formaldehyde, it is ideal for rooms with pressed wood building materials or furniture and other textiles or glue.

**Model 8144-2** is a two-gas model designed to help you understand and manage common indoor air pollutants utilizing low-cost sensor technology to continuously monitor carbon dioxide (CO<sub>2</sub>), total volatile organic compounds (tVOC), and other indoor air conditions.

	Model 8144-6	Model 8144-4	Model 8144-2
Ozone (O <sub>3</sub> )	•		
Nitrogen Dioxide (NO <sub>2</sub> )	•		
Sulfur Dioxide (SO <sub>2</sub> )	•		
Carbon Monoxide (CO)	•	•	
Total Volatile Organic Compounds (tVOC)	•	•	•
Carbon Dioxide (CO <sub>2</sub> )	•	•	•
Formaldehyde		•	
Particulate Matter (PM)	•	•	•
Temperature/ Relative Humidity/ Barometric Pressure	•	•	•







# MONITOR THE AIR OF YOUR STUDENTS AND STAFF FROM ANYWHERE WITH THE TSI LINK™ SOLUTION

With the TSI Link™ Solution, data from the AirAssure™ monitor is at your fingertips, enabling you to make critical air quality decisions that help improve the health of your students and staff. By wirelessly connecting the AirAssure™ IAQ Monitor to TSI Link™ Solutions, you can control your devices from anywhere and receive real-time alerts to inform you of any air quality concerns.

## With the TSI Link™ Solutions platform, you can:

- + **Customize your solution**, giving you flexibility in addressing your school's specific IAQ health risks
- + **View, analyze and receive information** on making decisions to protect your students and staff from IAQ-related health risks, all from the easy-to-use dashboard
- + **Set up custom alerts with real-time data**, allowing you to address risks before they become a problem
- + **Easily share data and collaborate** with other staff on optimal air quality monitoring
- + **Remotely manage and adjust** all your devices from the comfort of your classroom, office, or home, for peace of mind
- + **Keep your device data private or share publicly**, whether your goal is to inform decision makers and support budgetary discussions, or give transparency to the community
- + **Interpret your air quality** with an easy-to-use, world-recognized Environmental Protection Agency (EPA) Air Quality Index; categorizing your data into ranges that identify if your air quality as good, moderate, unhealthy, etc.

View the outdoor and indoor air quality in your area using the TSI Link™ Solution.

**Create your free account today!**  
[tsi.com/tsilink](https://tsi.com/tsilink)



## An Easy Way to Begin an IAQ Program

Starting an IAQ program to monitor the health of your school's air doesn't have to be complicated. The AirAssure™ IAQ Monitor easily mounts to any wall in less than ten minutes, and you can start collecting air quality data right away.

TSI's AirAssure™ IAQ Monitor is an effortless way to start an indoor air quality monitoring program in your school.

**For more information, visit**  
[tsi.com/AirAssure-Schools](https://tsi.com/AirAssure-Schools)



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**TSI Incorporated** - Visit our website [www.tsi.com](https://www.tsi.com) for more information.

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