



---

# A Measurable Difference

Why accurate airflow measurement matters -  
and why **EBTRON** leads the way

# Why Measure Airflow

## Protecting Health, Buildings, & Budgets



### Occupant Health, Well-being, & Productivity

Indoor air quality (IAQ) affects occupant health and productivity. Insufficient ventilation and HVAC system performance allows harmful pollutants to accumulate indoors, increasing the risk of headaches, fatigue, respiratory issues, cognitive impairment and even the spread of airborne diseases like COVID-19. Proper airflow measurement helps ensure fresh air circulation, maintaining optimal IAQ and promoting a healthier, more productive environment for all occupants.



### Code Compliance & Regulatory Standards

Compliance with codes and standards like the UMC, IMC, ASHRAE 62.1, and Title 24 requires accurate airflow measurement. Many factors impact airflow, including changes in occupancy and system wear, making it difficult to rely on initial design assumptions. Real-time measurement ensures ongoing compliance, preventing inefficiencies, legal risks, and violations.



### Liability & Risk Management

Inadequate airflow measurement exposes building owners and engineers to legal and financial risks. Poor ventilation can lead to health complaints, lawsuits, and regulatory fines. Accurate airflow measurement, particularly time-stamped data, provides proof that systems meet design standards and mitigate risks related to poor IAQ or non-compliance.



### Health of your Building

Proper airflow measurement is critical to maintaining stable building pressurization. Balanced pressure keeps contaminants, humidity, and unconditioned air from infiltrating indoors, protecting both IAQ and energy efficiency. In sensitive spaces like hospitals or labs, precise airflow ensures sterile conditions. Continuous monitoring also supports proactive HVAC maintenance and long-term system reliability.



### Energy Efficiency

Airflow measurement is crucial for optimizing HVAC system efficiency. Over-ventilation wastes energy, while under-ventilation affects air quality. Accurate airflow data enables airflow strategies such as demand-controlled ventilation (DCV), adjusting air intake and delivery based on actual space needs. This helps prevent excess energy consumption while ensuring a healthy indoor environment.



**Buildings only exist to support the people within them, providing the environment they need to thrive. Accurate airflow measurement is the foundation of that support.**

# Why Choose EBTRON

## Setting the Standard in Airflow Measurement & Control

### Superior Technology

EBTRON pioneered thermal dispersion airflow measurement in the early 1980's, transforming HVAC ventilation and airflow control. Using bead-in-glass thermistors, each sensing node within the array, measures airflow by detecting the temperature differential between a heated and reference thermistor. This delivers precise velocity profiling across the airstream. Unlike pressure-based systems, this method ensures consistent, repeatable, drift-free performance without recalibration. With advanced microprocessor-based signal processing, EBTRON supports smarter HVAC control, energy efficiency, and superior IAQ.

### Performance & Accuracy

EBTRON's thermal dispersion measurement devices deliver unmatched accuracy and repeatability, ensuring precise airflow control in any application. With a NIST-traceable, 16-point factory calibration, each sensing node delivers  $\pm 2\%$  of reading accuracy and  $\pm 3\%$  installed accuracy ( $\pm 5\%$  for OA), even at the lowest of air velocities. EBTRON's sensors maintain reliable performance and repeatability even in non-ideal duct conditions, offering greater tolerance to placement variability and flow disturbances. EBTRON sets the standard for performance.

### Quality Construction & Reliability

Engineered for long-term stability and durability, EBTRON thermal dispersion devices ensure performance that stands the test of time. With over 3.5 million sensing nodes in the field, our proven technology delivers unmatched reliability in HVAC applications. Bead-in-glass thermistors are hermetically sealed for moisture and contaminant protection, while oven-aging ensures lasting accuracy. Marine-grade epoxy potting shields sensors from vibration, and Kynar-coated wiring with FEP plenum-rated cable enhances durability in demanding environments. With superior materials and decades of field-proven success, EBTRON provides the long-term performance you can trust.



### Value Added Benefits

#### 01

##### EASY INSTALLATION

EBTRON offers various sensor configurations to accommodate different duct sizes, placement locations, and mounting styles, ensuring a smooth installation and ideal fit for any application.

#### 02

##### PLUG AND PLAY CONNECTIVITY

EBTRON devices support industry-standard communication protocols, making integration with building automation systems (BAS) quick, seamless and worry free.

#### 03

##### ADVANCED MEASUREMENTS

EBTRON calculates velocity weighted temperature & enthalpy, humidity, and dewpoint, providing the most accurate data for outdoor air mixing, economizer control, and HVAC energy optimization.

#### 04

##### EB-LINK MOBILE APPLICATION

*EB-Link* makes commissioning, troubleshooting, and data access effortless. This mobile app gives instant visibility into device performance, diagnostics, and real-time airflow measurements.

### TYPICAL APPLICATIONS

- Airflow Monitoring & Control
- Building Pressurization Control
- System Performance Monitoring
- Population Based DCV Control
- Air Change Verification
- Fan Tracking
- Economizer Switchover & Fault Detection

### BUILDING TYPES

- Office Buildings
- Educational Facilities
- Hospitals & Healthcare Facilities
- Laboratories & Cleanrooms
- Data Centers
- Manufacturing & Industrial Facilities
- Hotels & Hospitality
- High Performance Green Buildings

# How **EBTRON** Benefits You

If you're a **design engineer**



## Unmatched Accuracy

EBTRON's  $\pm 2\%$  of reading airflow accuracy and  $\pm 3\%$  installed accuracy provide the most precise and reliable airflow measurement available, giving you complete confidence that your design will function as intended in real-world conditions. With this level of confidence, you can design for performance and efficiency—without compensating for the uncertainty that is common with less accurate technologies.



## Peace of Mind

Specifying EBTRON means your design doesn't have to rely on design assumptions alone after building commissioning. By removing uncertainty from airflow measurement, you eliminate risks related to under-ventilation, IAQ complaints, and any subsequent liability issues. This reliability not only protects the integrity of your design but also reinforces your reputation as an engineer who delivers high-performing, code-compliant HVAC systems.



## Design Flexibility

EBTRON products provide repeatable and reliable measurements regardless of installation conditions, giving you freedom in duct layout and positioning. This flexibility also enables you to explore advanced control strategies, such as demand-controlled ventilation (DCV), energy recovery optimization, and precise room pressurization requirements. Whether designing for new construction or retrofits, EBTRON's adaptable product configurations ensure integration into any system, eliminating the compromises often required with other measurement technologies.



**EBTRON** protects the integrity of your design but also reinforces your reputation as an engineer who delivers high-performing, code-compliant HVAC systems.

# How **EBTRON** Benefits You

If you're a **controls contractor**

## Save Time on the Front End

EBTRON products are designed for quick, hassle-free installation, reducing time, complexity, and costs on the job-site. Versatile mounting options and sensor configurations ensure compatibility with a wide range of HVAC applications. Factory-calibrated sensors provide immediate accuracy in most installations, minimizing the need for field adjustments or setup. EBTRON's streamlined installation process helps you get the job done faster.

## Save Time on the Back End

EBTRON products are built to perform reliably for years, minimizing service calls and eliminating costly return visits to troubleshoot faulty airflow readings. With no recalibration required and zero sensor drift, system performance remains stable without ongoing maintenance. Rugged construction materials ensures product longevity, even in the most demanding HVAC environments. You can complete the job with confidence and trust.



**EBTRON delivers accurate, reliable airflow data—no recalibration, no headaches, and no callbacks.**

## Seamless Integration

EBTRON products are designed for seamless integration with any Building Automation System (BAS), supporting BACnet MS/TP, MODBUS RTU, LonWorks, and analog output options for flexible connectivity. Communication over industry-standard RS-485 wiring ensures compatibility and ease of integration. With plug and play operation, multiple onboard outputs, and simplified wiring, configuration and commissioning become a breeze. You're able to bring devices online without complex programming or headaches.

## Technical Support & Expertise

With decades of experience, the team at EBTRON is committed to supporting you every step of the way. Whether it's troubleshooting, system setup, or fine-tuning airflow control strategies, our expert assistance is always available. You can trust not only the product but also the company behind it, ensuring long-term success for your projects.

# How **EBTRON** Benefits You

If you're a **building owner** or **facility manager**



## Confidence in IAQ & Ventilation Performance

Ensuring healthy indoor air quality (IAQ) and proper ventilation is critical for occupant well-being. EBTRON products give you confidence that the right amount of fresh air is being delivered—consistently and accurately. This not only helps maintain a safe, comfortable indoor environment and reduce liability risk, but also supports occupant trust and satisfaction—key to encouraging people back into shared workspaces with confidence.



## Optimize Energy Efficiencies

HVAC systems account for a significant portion of a building's energy use, and inefficient ventilation and airflow can drive costs even higher. EBTRON products help ensure your HVAC system is providing exactly the right amount of air for occupant health without unnecessary energy waste. With EBTRON, you can maximize energy efficiency while maintaining the right balance between indoor air quality and operational savings.



## A Proactive Approach

With continuous airflow monitoring and alerts, EBTRON products allow you to take a proactive approach to your HVAC system by detecting airflow deviations before they become costly problems. By identifying issues such as clogged filters, damper malfunctions, or fan inefficiencies, you can address maintenance needs early, extend equipment life, and avoid unexpected downtime and emergency repairs. EBTRON helps you maintain a more resilient, cost-effective HVAC system.



**“I’ve gotten positive feedback from the occupants, and the data trend shows that we are meeting all temperature, humidity, and room pressurization requirements - so we can call this a win!”**

Charles Lewis  
Claremore Hospital



---

**EBTRON**

1663 Highway 701 South  
Loris, South Carolina 29569  
United States  
Ph: 1-843-756-1828

[www.ebtron.com](http://www.ebtron.com)



Learn more about:  
EBTRON solutions

