CASE

STUDY

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The Veris Sensors

Business Needs/Background

In today's world, energy efficiency and indoor air quality are paramount concerns for businesses and building owners. HVAC systems play a crucial role in maintaining comfortable and healthy indoor environments. To achieve these goals, accurate and reliable measurement of pressure and air velocity is essential.

• Energy Efficiency: Optimize HVAC systems to reduce energy consumption and lower operational costs.

• Indoor Air Quality (IAQ): Maintain optimal indoor air quality by monitoring and controlling airflow and pressure differentials.

• Safety and Compliance: Ensure compliance with building codes and safety standards by monitoring pressure and airflow in critical areas.

• Preventive Maintenance: Detect potential issues early by monitoring system performance and identifying deviations from normal operating conditions.

Differential Pressure / Air Velocity Transducers are critical components in HVAC systems. They provide real-time data on pressure differentials across filters, dampers, and other components, as well as air velocity in ducts and rooms. This information enables building operators to:

• Balance HVAC Systems: Ensure proper airflow distribution throughout the building.

• Monitor Filter Efficiency: Identify when filters need to be replaced to maintain optimal airflow.

• Detect Duct Leakage: Pinpoint and repair leaks to reduce energy loss.

• Optimize Ventilation: Adjust ventilation rates to maintain desired indoor air quality levels.

By addressing these business needs and leveraging the capabilities of Differential Pressure / Air Velocity Transducers, organizations can significantly improve energy efficiency, enhance indoor air quality, and reduce operational costs.

Tech Stack Summary

Frontend:
• Mobile: iOS (Swift UI), Android (Kotlin).

Proposed Solution

The Veris Sensors App provides the ability to connect to a device and configure a variety of field-selectable parameters remotely from a smartphone via Bluetooth® wireless technology. The app allows users to create and store commonly used parameters that will reduce commissioning time and provide assurance that all parameters are properly configured with no call backs. The app can also create a trend log while connected, providing critical data for troubleshooting purposes
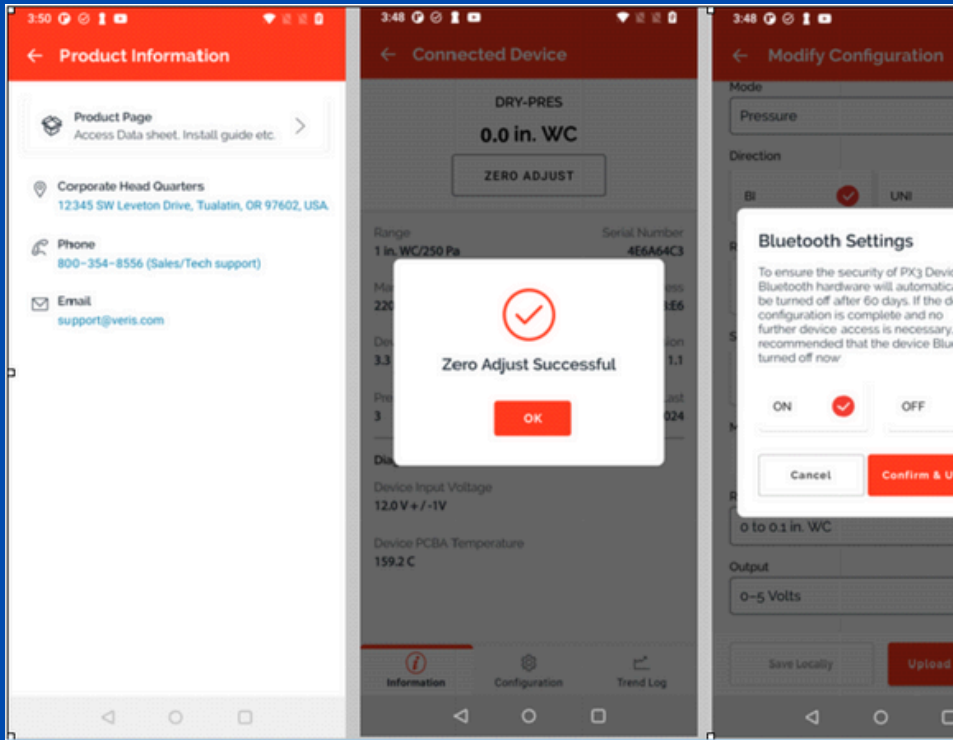
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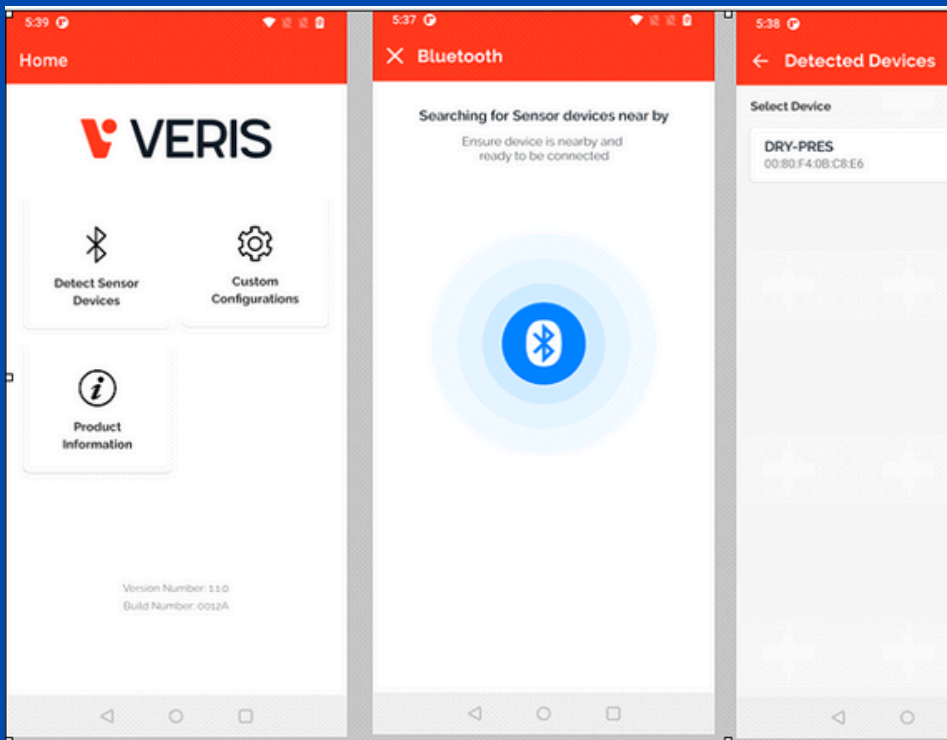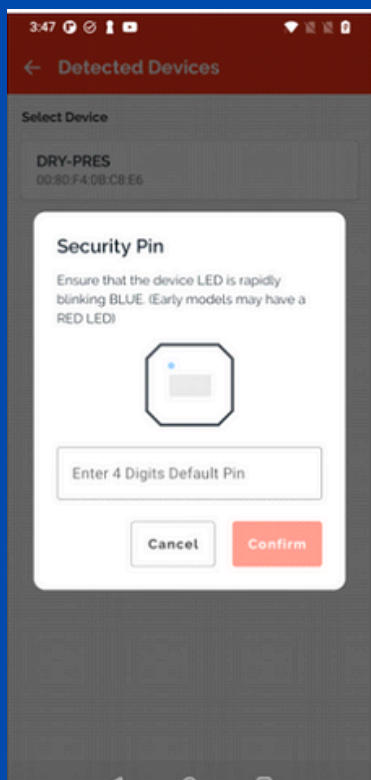
Conclusion

The Differential Pressure / Air Velocity Transducer is a versatile device capable of measuring both pressure and air velocity. Its flexible configuration options, including pressure subranges and mounting styles, make it suitable for a wide range of applications in various environments. The IP65/NEMA 4 enclosure rating ensures durability and reliability in harsh conditions.

By selecting the appropriate configuration and pressure range, users can accurately monitor building/room pressure, duct static pressure, differential pressure, or air velocity. This information is crucial for optimizing HVAC systems, improving indoor air quality, and ensuring energy efficiency.

Value Delivered to the Customer →

Reduction in overall operational infrastructure and maintenance cost by 40%.

Improved application scalability.

Increased availability of the application by 70% with multi-region deployment.

Robust disaster recovery strategy delivered for a dynamic workload.

Enhanced security.

Improved and efficient monitoring, logging and alerting system for the entire application.

For more information, write to us at hello@xfactr.ai

About XFactr.AI

At XFactr™.AI, we're revolutionizing industries with our bold 3D approach to digital transformation:

1. **Digital Full-stack Development**
2. **Data Science & AI ML**
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Data is our backbone, and AI is our superpower. We blend traditional digital technologies with cutting-edge AI to create future-ready solutions that drive real impact. With a proven track record of building and exiting successful companies, our leadership brings decades of expertise in digital tech and AI to inspire trust, innovation, and results.

Whether empowering global enterprises or fueling disruptive startups, we turn bold ideas into intelligent products. Join us—we're on track to become the next unicorn by 2040! 🚀 People might call us mad, but we're focused, ambitious, and determined to make it happen.

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