New Natural Ventilation Solution set to change the HVAC Industry

The global clean-tech company WindowMaster, recently launched a new, state-of-the-art indoor climate control solution that bears great potential in the US market. With a focus on IoT (Internet of Things), BMS adaptability and flexible fieldbus communication, the new solution labelled NV Embedded®, presents brand new, unmatched features that will alleviate the obstacles that previously prevented building owners, Architects, Engineers, and Façade builders to opt for façade automation as an environmentally and economically friendly ventilation alternative.

February 2020 – Several years of research and development have come to an end as WindowMaster has officially presented its latest innovation to the world. NV Embedded® is the next generation of natural ventilation solutions enabled by façade automation. It is specifically designed to make integration with BMS completely unproblematic as it can communicate via BACnet. While the company’s current natural ventilation solutions use KNX, NV Embedded® can be used without any specific bus communication and with different levels of BMS integration. Furthermore, the system benefits from an advanced cloud solution allowing building administrators to access real time- or historical building data independent of time and place.

What further separates NV Embedded® from existing solutions on the market is the relocation of the software that enables the system to automatically control the indoor climate through motorized windows based on input from sensors that monitor CO₂ level, indoor and outdoor temperature, windspeed and buoyancy and humidity. Previously, the intelligent software or motor logic was placed in an assigned PC or control panel that communicates with the MotorControllers, which in turn controls the window actuators. What WindowMaster has essentially done, is to take their ‘NV logic’ and embedded it into their MotorControllers. Accordingly, no additional control unit is necessary and users can access information about the system and the indoor climate or change settings from any computer or via a brand-new app. Setting up the solution requires little technical knowhow and can be done through the display of the MotorController. Similarly, it does not require any specific field bus technology, but can use both BACnet, Modbus and KNX depending on the level of BMS integration. As a result, the new NV Embedded® is both flexible and scalable.

“It has been an exciting journey the past couple of years, and I am pleased to finally see the new solution hit the markets. I truly think that NV Embedded® is designed with the future in mind, as it ticks all the boxes in terms of technology, installation, flexibility and usage”, says Nicolaj Rasmussen Shabtai, Chief Product Officer at WindowMaster.

“The new system will give WindowMaster a great advantage in North America. We entered the market several years ago and although the market still needs to mature, we see great potential here. People are willing to embrace the green transformation, and NV Embedded® now makes it possible for them.” Erik Boyter, CEO of WindowMaster adds.

The next generation of indoor climate control – IoT and smart buildings

The number of smart components and systems installed in buildings is growing at a rapid pace and the trend is expected to accelerate in the years to come. Hence, to reduce complexity for the building owners and facility managers, it is key to connect and exchange data between components to ensure that the building is functioning as designed.

Smart building technology utilizing cloud-based solutions facilitates real-time data visibility as well as advanced analytics, which is useful for continuous monitoring, remote controlling of systems, predictive analytics and data-driven decisions.
NV Embedded® is built on the notion that IoT (Internet of Things) provides value to all parties related to the building from the owner and operator to the end-user. By storing data in the cloud or BMS and by enabling control via an app, users can directly change their microenvironment and the facility staff can monitor and control the natural ventilation of the entire building. And by permitting the building’s operational systems to deliver more accurate and useful information, operations can be improved resulting in the best experiences for the occupants.

By embracing modern technologies, the solution is advancing a new breed of smart buildings that are better aligned with the priorities of all stakeholders.

An all in one solution tailored to the future

As more and more HVAC products reach the market, and continue to do so in the future, Engineers, Architects, Contractors, and Façade builders have more products and solutions to be aware of and keep track of; something that may lead to information overload.

WindowMaster has tried to address this issue by creating an all-in-one solution where the MotorController and comfort ventilation functions run on the same device. Furthermore, the multi-level BMS integration allows the company to potentially reach new heights by entering into new partnerships in the US:

“For WindowMaster to grow in the market, we needed to look into the future and identify the unfulfilled potential of intelligent building automation. With the different levels of BMS integration and the fact that the system doesn’t require any specific field bus technology, the launch of NV Embedded® opens a door to an exciting new cooperation with BMS companies”, Erik Boyter states.

The new solution for indoor climate control, including automated natural ventilation and hybrid ventilation, will consist of a number of MotorControllers and USB keys containing an NV license to activate the required number of ventilation zones, as well as sensors, weather stations and window actuators. It is a complete package that has been designed for simple installation.

New features will continuously be added to the system based on customer feedback and can be easily integrated into the existing NV Embedded® solution via simple software updates. For example, coming in Q2 of 2020 is the ability to control sun shading.

Read more about NV Embedded® on www.windowmaster.com/nv-embedded

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