

## **ABB introduces BACnet as a loadable option on new variable-frequency drive for HVAC, ACH550 series**

*(First VFD to offer this open protocol – without hardware additions)*

**NEW BERLIN, Wis., April 27, 2004** . . . True open protocol has arrived for drives/motor control users in the HVAC industry, according to ABB, Low-Voltage Drives. BACnet is available as a loadable option in the company's all-new drive for HVAC, ACH550 Drive™ Low Voltage AC Drive series.

“It’s a watershed -- a technology milestone: the final piece in the serial communications puzzle is built *right into* this new drive – the *first* VFD to offer BACnet without hardware additions,” said Jeff Miller, HVAC sales manager for ABB Inc., Automation Technologies, LV Drives.

The new series, first introduced at the AHR Show in January, features a control panel modeled after a cell-phone design – a 1-500 Hp AC drives series that is extremely intuitive and simple to set up. Packed inside the drives is a full complement of features that make precise motor control across all commercial/HVAC applications easier than ever before, Miller noted. ABB calls it “sophisticated technology made simple, the kind of out-of-sight-and-mind, 24/7 constancy that gives users peace of mind from knowing these drives provide multiple modes of motor control and wide flexibility across the full range of HVAC applications.”

Formal release of the BACnet option is slated for June, according to ABB. “The testing of the protocol in beta units around the country has been immensely satisfying,” Miller said.

### **Open Protocol From Open Cooperation**

Representatives from ABB have been meeting with fellow members of the BACnet Manufacturers Association (BMA) to discuss strategic initiatives for the BACnet community. In addition to ABB, several prominent manufacturers, including Alerton Technologies, Inc., Andover Controls, Automated Logic, Honeywell, Johnson Controls, Siemens Building Technologies, and Tridium, have been contributing to the planning sessions. These and other BMA members joined forces to identify methodologies for reinforcing BACnet as an end-to-end communications protocol in the building automation space.

Numerous surveys, market studies, and interviews have been conducted to help direct the BMA/members companies’ decisions. Members analyzed data to determine how to best position BACnet via leveraging its strengths in the market. That’s what makes the community unique; stakeholders all are welcome and encouraged to participate, according to Jim Lee, President, BMA and President and CEO of Cimetrics, Inc.

BACnet is an open communications protocol developed by members of the ASHRAE community. Because it was developed and has evolved from the contributions of its members, BACnet has gained wide acceptance as a true open protocol. “We are very excited to be part of the BMA’s efforts to promote the benefits of the BACnet standard, and delighted to be able to provide the protocol as part of drives offering to this market,” said Mike Olson, manager – HVAC applications, ABB Inc., Automation Technologies, LV Drives.



## Standard Connection

With ABB's drive for HVAC, the standard connection is MS/TP, RS485-based; and it supports all BIBBs defined by the BACnet standard profile for an Application Specific Controller (B-ASC), Olson said.

"The benefits of this standard connection? – built-in capability to control the VFDs' analog and digital outputs, and to monitor all inputs!" Also, via BACnet, the expense and challenges of hardware and gateways evaporate, he said. "All those can be replaced by one language, working in real time."

## Fieldbus Control, Too, Provides Access To Automation Systems

Both an expanded I/O and/or field bus adapters are available as options and mount quickly into an option slot inside the ACH550 drives -- providing connectivity to a wide variety of major automation systems. Modbus, Johnson Controls' Metasys®, and Siemens' FLN serial communication are built in.

"Because drive users have a wide array of protocols to choose from, they can interface all of these built-in device benefits with virtually *any* automation system they have," according to Miller. "These drives accommodate fully the current state and technology of our industry; they meet *where* they are, and do *not* dictate the automation system that must be used or installed."

The BACnet Manufacturers Association (BMA) is an organization that encourages the successful use of BACnet in building automation and control systems through interoperability testing educational programs, and promotional activities. The BACnet Manufacturers Association complements the work of other BACnet-related groups whose charters limit their commercial activities. BACnet Manufacturers Association members include companies involved in the design, manufacturing installation, commissioning, and maintenance of control equipment that uses BACnet for communication, as well as other interested persons. ABB presently is the only manufacturer of AFDs to be a member of BMA. For more information on the BMA, visit <http://www.bacnetassociation.org/>.

ABB Inc., Drives, is the #1 drives supplier to the U.S. HVAC market, and has connected tens of thousands of drives to building automation systems. In the USA, ABB, New Berlin, Wisconsin, supplies a complete line of energy-efficient electric drives and motors to HVAC and commercial customers through an integrated channel of sales representatives and distributors. Products manufactured include AC and DC variable speed drives from fractional to 500 horsepower. HVAC single-motor drive applications include exhaust fans, fume hoods, re-circulation pumps, condenser fans; multiple-motor applications include multi-cell cooling towers, paralleled chilled water, and booster pump systems (<http://www.abb-drives.com>). For information on the new ACH550 drives, specifically, see <http://www.abb-drives.com/products/ACS550/ACS550.asp>.

ABB ([www.abb.com](http://www.abb.com)) is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 115,000 people. The company's U.S. operations employ about 9,000 in manufacturing and other facilities in 40 states.



**NEW BERLIN, Wis., April, 2004 . . . BACnet Offered as a Loadable Option on New ABB Drive --** ABB's all-new ACH550 Drive™ Low Voltage AC Drive family combines simplicity, convenience, fieldbus connectivity, harmonic mitigation and programmability to a degree not seen in drives before. BACnet – True Open Protocol – is available as a loadable option in this series – the first drives to do so. Available in NEMA 1 or NEMA 12 enclosures, with supply voltages from 208V to 480V, the 1 – 500 Hp ACH550 drives feature two internal slots for options, which include 115/230V digital interface card, I/O expansion, or fieldbus adapters (for LonWorks®, Profibus, DeviceNet, ETHERNET and ControlNet). And the drives have the industry's lowest input current THD (Total Harmonic Distortion) for six-pulse VFDs. The built-in choke five (5) percent line reactor reduces harmonics at both full and *partial* loads.

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