

## Product note

# ABB standard drives with native BACnet for HVAC applications



ABB standard drives with native BACnet offer simple installation, effective data transfer and cost-effective engineering.

### Native BACnet as standard

Introduced in 2004, the ABB standard drive for HVAC is today the market's leading AC drive with native BACnet as standard. Several thousand of these drives have been installed worldwide since their launch.

ABB standard drives for HVAC require no plug-in cards or gateways. The drives operate direct on an MS/TP (master-slave/token passing) network, supporting all standard baud rates up to 76.8 k.

The drive's I/O points can be freely used by other devices through the BACnet protocol, such as the building management system (BMS) or direct digital controllers (DDCs).

Using ABB standard drives for HVAC with native BACnet saves time, reduces installation costs and makes monitoring and fault finding easier.

### New IP router

ABB's new BACnet router, RBIP-01, enables connection from BACnet/IP to drives.

The RBIP-01 snap-on module, fitted inside the drive, is fully compatible with all ABB standard drives for HVAC, including older product generations. The module is easy to use and simple to install with built-in "Help" functionality. Web server functionality enables access and configuration from a standard web browser.

The drives can either be equipped with one RBIP-01 module each, or can be daisy-chained into a subnetwork. In this case, one router can manage up to 31 drives. The router is powered by 24 V AC or DC supply. The power for the router can be supplied by the drive itself, or by an external power supply.

## BACnet - not just a fieldbus

A range of different network technologies for various performance requirements is supported by BACnet.

BACnet can be used to fully integrate the BMS with the HVAC system, fire alarm, intruder protection and other systems in the building, from field level up to management level.

Being an open system, and with no cost associated with its use, BACnet gives users the freedom to select the most suitable equipment from a range of manufacturers.

All BACnet devices communicate in the same language, without the expense of additional hardware. Equipment using BACnet is integrated without effort and gives more comprehensive information than other communication technologies when in use.

## Integrated building management

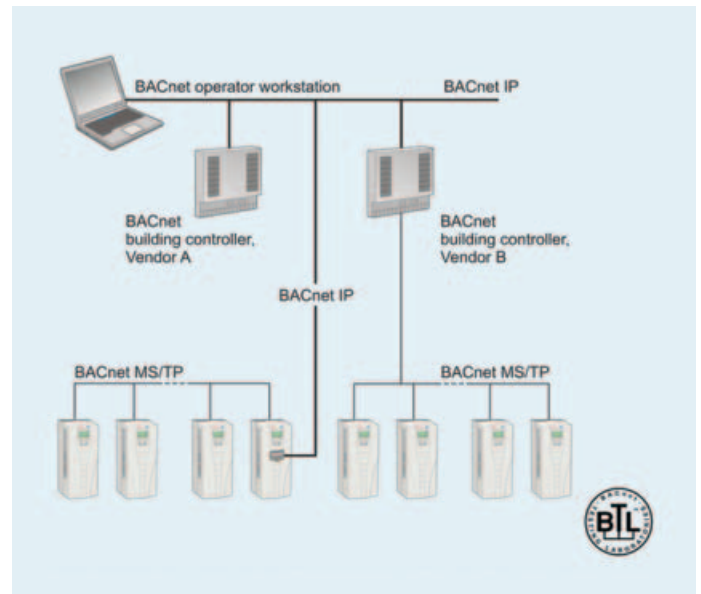
The ABB standard drive for HVAC supports 73 objects (device object, binary inputs, binary outputs, analog inputs, analog outputs, binary values and analog values).

The drive can be started and stopped from an external controller. Remote interlock ensures that run commands from the external controller can be disabled with a feedback signal. The built-in energy counter is used to monitor energy consumption. The BMS can store these values for reporting, trending or to produce instant energy consumption reports.

## Bridging network types

The ABB standard drive for HVAC uses MS/TP, which is designed to run over RS-485 twisted pair wiring. MS/TP is cost-effective and can handle up to 31 drives plus a router on the same subnetwork without additional components. The MS/TP segment length can be up to 1200 metres.

Most BMS and DDCs use BACnet/IP that allows integration to the same network. ABB's new RBIP-01 module provides a simple way to connect the ABB standard drive for HVAC to these BMS and DDCs.



The drives can either be connected using BACnet MS/TP or, when using ABB's new IP router, to a BACnet/IP network.



ABB's new snap-on IP router fits inside the drive.

For more information please contact:

[www.abb.com/drives](http://www.abb.com/drives)

[www.abb.com/drivespartners](http://www.abb.com/drivespartners)