

ISN Connexsys™ Controls

100% BAGnet®
for HVAC

 **YORK®**

Complete HVAC connectivity using the BACnet® protocol

Finally—HVAC equipment with open communications



BACnet® is a registered trademark of ASHRAE.

Complete connectivity is the goal of every controls designer and owner: controls that connect and communicate seamlessly with other control systems. That goal has finally been realized for HVAC control. YORK® is the first HVAC manufacturer to offer a control system that provides native BACnet® connectivity from the smallest terminal unit to the largest chiller.

ISNConneXsys™

Introducing the Integrated Systems Network ConneXsys™ line of controls.

ISN ConneXsys™ controls all speak BACnet®

For network devices to communicate clearly and efficiently, they all must speak the same language, and ISN ConneXsys controls do! The basis of YORK's control communication is BACnet—the open protocol that has become the popular standard for building-control connectivity.

YORK offers a full range of ISN ConneXsys™ controls to meet any system requirement.

In the past, many HVAC manufacturers offered controls that spoke only their own

proprietary language. Recently, some have responded to BACnet's popularity by offering translators that convert their proprietary language to BACnet. Others offer BACnet capability, but only for portions of their systems.

In contrast, ISN ConneXsys controls provide complete connectivity by speaking native BACnet at every level of control.

ISN ConneXsys controls help reduce costs

Because they speak BACnet right out of the box, ISN ConneXsys controls help cut the capital cost of buying, installing, and commissioning translators to convert proprietary languages to BACnet.

Installation costs can be reduced, because time is not wasted resolving interoperability conflicts—ISN ConneXsys controls are BACnet-compatible. Their Auto Discovery ability automatically reports device parameters upon connection with the network—including non-YORK BACnet devices. This feature eliminates laborious entry of device addresses into routing tables.

ISN ConneXsys controls offer greater flexibility

A proprietary network protocol hampers a control system's ability to grow and adapt. Only controls that speak that proprietary language can be easily integrated, which puts severe constraints on network design.

But ISN ConneXsys controls can be added to existing BACnet systems without fear of connectivity problems. Because BACnet is embraced by controls suppliers, installation of ISN ConneXsys controls will not limit the choice of future additions to a control system.



Unsurpassed communications capability at any scale

Controls that are simple, swift, and smart

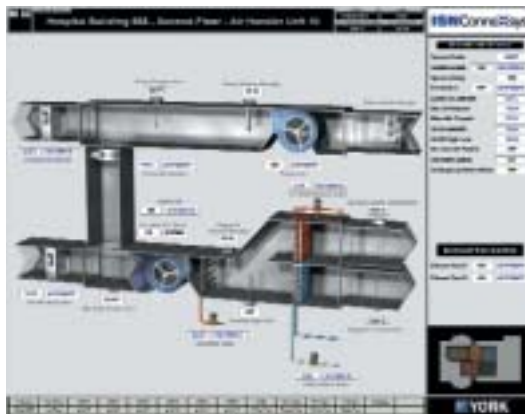
Simple: ISN ConneXsys components can be connected by common, twisted-pair cable. Auto Discovery ability recognizes devices automatically, so no manual configuration is required at the Operator Work Station.

Swift: 38,400 bits per second throughput can handle significant program messages; provide real-time access to information within the network.

Smart: Allow for subsystem integration, including lighting, smoke control, power, refrigeration, and access control; Internet-ready, so they can stay current with emerging technology and innovations.

Easier operation

ISN ConneXsys controls offer easier operation thanks to the Operator Work Station, which offers the finest graphical-user interface in the industry. Equipment graphics are displayed in a realistic and animated format. A global perspective lets you monitor the entire network from one location. A glance at the graphics shows the current state of any zone or component.



An accurate picture allows operational problems to be easily identified and operators quickly trained.

Internet connectivity reduces costs and response times

ISN ConneXsys technology takes advantage of BACnet/IP to provide remote access of control systems over the Internet. Displays, setpoints, reports, and schedules can be managed anywhere there is Internet access. Labor costs can be reduced because real-time information can be accessed at remote sites.

Alarms can be sent automatically to email, cell phone, or pager—even to multiple devices. So information is easily accessible after hours.

Connect multiple buildings

The ISN ConneXsys system takes advantage of BACnet's extensive network capabilities. As a result, you can create a BACnet network that ties together multiple remote buildings over your existing campus-wide internetwork. No custom hardware or software is needed for integration. Best of all, one ISN ConneXsys Operator Work Station can operate your entire campus.



Alarms can be sent automatically to email, cell phone, or pager—even multiple devices.

The ISN ConneXsys Operator Work Station offers the finest graphical-user interface in the industry.

Powerful, personable programming



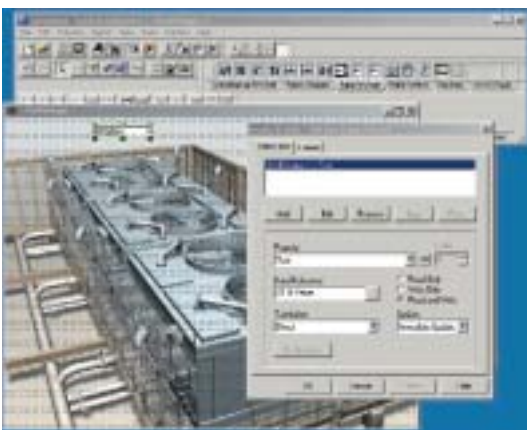
Application-engineering tool is user-friendly

It is simple for you to take control of your HVAC systems, thanks to software that's fully configurable and user-friendly. You need not settle for "typical" control routines—configure your system to operate based on specific facility requirements. The ISN ConneXsys application-engineering tool makes it easy to accomplish, using English and graphics rather than a complex programming language.



Do routine programming from any controller

Thanks to a distributed-programming architecture, ISN ConneXsys controls let you gather information and perform programming locally at the controller. Programming can be accomplished via laptop computer, or common keypad and display. Time and labor are saved because you avoid tying up operators at multiple locations, or having to go back to the master controller for any programming changes.



Do custom programming at the Operator Work Station

It's easy to create an interface that matches your application, thanks to ISN ConneXsys development tools, which include an industry-leading graphics package. The entire process is further simplified with pre-built graphics, how-to animations, and tutorials. It's easy to create standard and/or customized equipment, floor plans, and reports.

It's easy to create an interface that matches your application, thanks to ISN ConneXsys development tools.

Experience that encompasses HVAC control at every level

Control experience that spans decades

Born of our commitment to advanced HVAC technology, YORK control systems were introduced in 1982 to meet customer demands for both HVAC and facility controls. Today, thousands of customers in the US—including IBM, Kodak, Ford and Caterpillar—have chosen YORK to control HVAC and building installations. Worldwide, YORK controls are in use in over 100 countries—evidence of our capability to apply control solutions globally

Utilized successfully in a wide range of applications

Over the years, YORK controls have been applied on tens of thousands of projects worldwide. Facilities include: hotels, laboratories, office buildings, shopping centers, hospitals, sporting venues, airports, and manufacturing plants.

Single-source responsibility

YORK can provide all parts of the system, from top to bottom. As a result, control-system designers and owners can rely on one expert point of contact—YORK—for equipment integration, network design and deployment, and BAS interface and implementation. Consequently, you get components, expertise, service, and support which totally eliminates annoying and time-wasting finger-pointing if problems arise.



**Brooke Army Medical Center
San Antonio, TX**

U.S. Army's central burn-treatment center uses over 3,000 YORK controllers.



**Shell Oil
Aberdeen, Scotland**

YORK controls HVAC, lighting, and security in this office complex.



**Lancaster General Health Campus
Lancaster, PA**

Five-building, outpatient complex utilizes over 5,000 YORK control points.

100% BACnet-compatible control

An advanced product line that has you covered

Only YORK offers a cost-effective product range that elevates BACnet compatibility to a new level—every level! At the equipment tier, ISN ConneXsys controllers are available for VAV and fan-coil units, air-handling units, chillers, boilers, and towers. At the network tier, ISN ConneXsys routers and repeaters are available to extend communication range

and connect to your facility's Ethernet network, and even the Internet. Finally, at the supervisory tier, our native BACnet devices easily integrate with the Operator Work Station to provide a powerful, but simple control solution. That's why YORK can truly meet all your application needs, from smallest to largest and from top to bottom.

Controllers



CX-UDC **Universal Digital Controller**
 Supply: 24VAC ± 15%
 Inputs & Outputs: Up to 110 points
 Interfaces: BACnet MS/TP, RS-232 port
 LEDs: Status, Power, BACnet, RS-232 port
 Clock: Yes
 Memory: Flash and Battery-backed RAM
 Display: Yes (optional)



CX-IDC **Integrated Digital Controller**
 Supply: 115/230VAC ± 10%
 Inputs: 4UI/+7DI/Thermistor
 Outputs: 8AO/DO
 Interfaces: BACnet MS/TP, RS-232 port
 LEDs: Status, BACnet, RS-232 port, Input, Outputs
 Clock: Yes
 Memory: Flash and Battery-backed RAM
 Options: Enclosure, DIN-rail mounting, Keypad/Display



CX-VAV: **VAV Controller**
 Supply: 24VAC ± 15%
 Inputs: 1DI/Thermistor/Voltage, 3DI/Thermistor
 Outputs: 3DO Triacs
 Interfaces: BACnet MS/TP, RS-232 port
 LEDs: Status, BACnet, RS-232 port
 Clock: No
 Memory: Flash
 Display: No
 Airflow Sensor: 0.0 – 2.0 in wg
 Actuator: 53 in-lb



115/230VAC



24VAC

CX-TDC8E & CX-TDC9E **Terminal Digital Controllers**
 Supply: 115/230VAC ± 10%
 24VAC ± 15%
 Inputs: 2UI+2DI/Thermistor
 Outputs (8E): 3AO, 1 relay
 Outputs (9E): 4 DO Triacs, 1 relay
 Interfaces: BACnet MS/TP
 LEDs: Status, BACnet
 Clock: No
 Memory: Flash RAM
 Display: No
 Options: Enclosure, TEC2, DIN-rail mounting



FlexHeat **FlexSys Controller**
 Supply: 24 VAC ± 15%
 Inputs: 3 AI
 Outputs: 4DO Triac / 1 AO
 Interface: BACnet MS/TP, RS-232 port
 LEDs: Status, RS-232 port, MIT, MFT
 Memory: Flash
 Options: DIN-rail mounting



FlexCool **FlexSys Controller**
 Supply: 115/230 VAC ± 10%
 Inputs: 2 AI
 Outputs: 2DO Triac
 Interface: BACnet MS/TP, RS-232 port
 LEDs: Status, RS-232 port, MIT
 Memory: Flash
 Options: DIN-rail mounting

at every level you require

Accessories

Keypad



Display: 80-character
 Keys: 20
 Backlight: Yes
 Interface: Cable, 10 ft

CX-UDC Enclosure



Protection: Type 1
 Options: Keypad/Display
 "Blind Display," Slave

Wall Sensor



Thermistor: 10K ohm @ 77°F (25°C) Type 3
 Setpoint: Potentiometer 20K ohm (opt.)
 Connectors: Screw-type terminal connectors
 (located on backplate)
 Wiring: 2 temperature
 2 opt. setpoint and override
 4 opt. service-port connection
 Ambient: 32° to 131°F (0° to 55°C)
 10–90% RH (non-condensing)

ISN ConneXsys Operator Work Station



PC System: Windows XP, 2000
 Minimum processor: Pentium or Athlon, 1.0 Ghz,
 128MB, 5GB HD, 1024x768
 Access key: USB
 Options: Illustrator, Analyst, Web

WEB Server

Windows 2000 Server edition for more than
 10 concurrent users

PC System: Windows XP Professional (SP1)
 or Windows Server 2003

Microsoft Internet Information Server 5.0
 (for Windows 2000), or 5.1 (for Windows XP),
 or 6.0 (for Windows 2003 Server)

Network Devices

CX-Repeater



Supply: 24VAC, 4VA x 2
 Interfaces: RS-485 (Supports 9600, 19200,
 38400, and 76800 baud)
 Technology: 8-bit Processor c/w internal A/D,
 Flash and RAM
 Connectors: Removable screw-type terminal
 connectors, RJ-11 Service Port,
 Ground Lug
 Wiring: RS-485 MS/TP on NET IN,
 RS-485 MS/TP on NET OUT
 (100-120 ohms) balanced
 STP cable, 16 pf/ft or
 lower capacitance
 Wiring: Class II
 Housing: Easy-mount housing

CX-Router



Supply: 24VAC, 40VA
 Protocols: MS/TP (RS-485), PTP (RS-232),
 and Ethernet
 Technology: 32-bit Processor, 1MB (8Mb)
 Flash Memory, 256 RAM,
 real-time clock w/ lithium battery
 for SRAM backup, visual LED
 status indication of CPU
 SCAN Status, Network activity
 LEDs
 Status: LEDs
 Connectors: Removable screw-type

ModLINC



Supply: 24 VAC ±15%, 45-65Hz
 Interface: Modbus RTU, BACnet MS/TP
 SDRAM: 8MB
 Memory: 4MB Flash

Modbus-to-BACnet interface



P.O. Box 1592, York, Pennsylvania USA 17405-1592
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www.york.com

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