



# TALON<sup>®</sup> Building Control System

**Smart, Effective, Efficient,  
Scalable...and Open**

Work with your trusted Siemens Solution Partner

Solution Partner

Authorized TALON<sup>®</sup> Dealer

**SIEMENS**

# Integrate HVAC and Building Automation Control into a Single End-to-End Solution

## Fully Supported by Your Siemens Solution Partner

Seamlessly integrate LonWorks®, BACnet®, Modbus and others into a single TALON Control System that uses open protocols for its modular baseline architecture. With the expert installation and the wide-ranging support and training from your local, independent partner, your integrated solution can be virtually seamless.

You can monitor and control a wide range of devices from common user view on a PC or any of a variety of wireless Internet interfaces such as PDAs, cell phones and pagers.

## Work One-on-One with the Best in the Business

Your Siemens Solution Partner is a professional who can help you to assess your facility and present creative ways to manage your building and property while you increase manpower efficiency and lower energy costs.

## Scalable for Growth and New Technology

An open protocol enables you to build or expand with a variety of devices, and as new technology comes online it can also be seamlessly integrated. Your control system can continually grow and evolve to always be current, always be the latest technology, always be the best solution for you and your tenants.

TALON software includes the industry's most comprehensive list of devices that the software can control, manufactured by the full range of suppliers.



## TALON Delivers a Full Set of Benefits

TALON enables you to securely and remotely:

- Monitor and control your building systems through the Internet or dedicated PC.
- Access a building's "vital signs" any time of the day or night.
- Receive messages instantly if a building's performance parameters are not being met.
- Improve energy efficiency through better management of information and systems.

When the TALON Building Control System is paired with Siemens HVAC valves, actuators, sensors and VFDs, you have a comprehensive solution from a local, independent partner who offers the trustworthy service and support you expect.



In addition to HVAC, your Siemens Solution Partner can show you how to use the TALON Control System for operating and controlling your lighting, elevators, chillers, cooling towers, variable frequency drives, security, occupancy sensors, power metering, CCTV... even your landscape irrigation.



# Intelligent, Straightforward, Robust and Open

Multiple Buildings, Multiple Systems and Countless Functions...  
All Controlled from One Workstation

**Flexible** TALON's versatile and secure user interface enables any authorized user to control a building environment from a Web browser or wireless Web device anywhere in the world.

**Effective** You are able to integrate and assimilate information from multiple systems and aggressively manage a facility's energy consumption while maintaining an optimal work environment.

**Efficient** The Web browser interface minimizes the time and effort needed to manage building system information and activities.

**Practical** TALON can access and control a Staefa legacy control system, eliminating the need to replace already-installed controls.



Assign I/O terminations visually.



Live data is integrated into animated control system graphics.



Monitor space temperatures and essential parameters through system reporting.



All reports, logs, histories, audits, etc. are easy to access and can be exported to standard file formats.

### Flexible 32-Point Raptor Controller

This powerful LonMark®-compatible controller features enhanced graphical programming and online debugging.

- 16 Universal Inputs:
  - 0-10V, 1K Platinum RTD, 0-20mA, Digital Input (dry and pulse accumulator)
- 16 Outputs:
  - 8 Universal Out: (0-10V, 0-20mA, Digital Output)
  - 8 Digital Out: (onboard relay output)
- 12 Bit A/D Resolution
- Automatic file generation enables data sharing with other LonMark products
- Easy to configure with graphical programming tool
- Removable terminal blocks for simplified wiring
- Multiple panel mounting options

### Predator Controller Family

#### Full/Reduced Point and Basic Predator Controllers

- Shipped with pre-loaded LonMark certified/compliant applications, reducing engineering start-up time
- Shares information with LonMark products from other vendors
- Two-piece design protects electronics during installation and wiring
- Return from power failure without reprogramming
- Spare input/output points can be used for lighting control, etc.
- Wiring base options
- Inputs/Outputs
  - 2, 4, 6 Universal inputs
  - 4, 6, 8 Digital outputs
  - 2, 3 Analog outputs

#### Predator VAV Actuator

The one-piece design combines Predator VAV/CV controller functionality with Siemens non-spring return direct-coupled electric actuator for three-position floating control of building HVAC dampers with a 44 lb-in or 88 lb-in actuator. And the embedded LonMark certified controller has onboard termination support for 2 inputs, 3 digital outputs, 1 room sensor, and 1 differential pressure sensor.

- Controllers are shipped with pre-loaded applications, reducing engineering start-up time
- Other actuator applications:
  - CO<sub>2</sub> with 44 lb-in
  - Supply Air Temperature (SAT) reset control with 44 lb-in



Flexible 32-Point Raptor Controller



Predator Controller Family



Predator VAV Actuator

## Open Communication Provides More Options

The TALON open protocol is able to seamlessly link LonMark, BACnet, Modbus and other common open protocol devices into a single, robust control system.

### TALON Workstation

This straightforward and robust system interface provides efficient facility monitoring and control through either the Internet or an Intranet.

- Requires no special software, only a standard browser
- Powerful alarm, messaging, and database management
- Sophisticated alarm processing and routing by e-mail, text messaging, PDA or pager
- Database changes, storage and backup, calendar, central scheduling, control and energy management routines are stored for easy auditing
- Security uses standard Internet authentication and encryption techniques
- Online Help explains features, commands and menu selections
- Information can be exchanged at the enterprise level using HTTP, HTML or XML text formats

### Remote System Access

TALON can be controlled anywhere you can access the Internet — from a desktop or notebook computer to a cell phone or PDA.

### TALON Network Manager

These versatile network application servers provide system-level control of an area or building functions, as well as global applications such as alarming, trending, scheduling and totalization information.

- Manages networks with LON, BACnet or other protocols
- Internet ready, right from the box
- Acts as Web server for access to Graphix, schedules and logs
- Coordinates event and equipment scheduling and line trend functionality
- Off or online graphical application network tool
- Expandable with optimal 16 and 34 point I/O modules

### TALON Repeater

The two- and three-port repeaters amplify the LonWorks TP/FT-10 communication signal to extend a free topology network. Pass-through signal amplification does not impact node count or communication traffic.

### Raptor Programmable Controller

The Raptor is a high-powered LonMark compliant 32 universal I/O point-count to be used as a controller for high point-count mechanical equipment or to implement complex control applications.

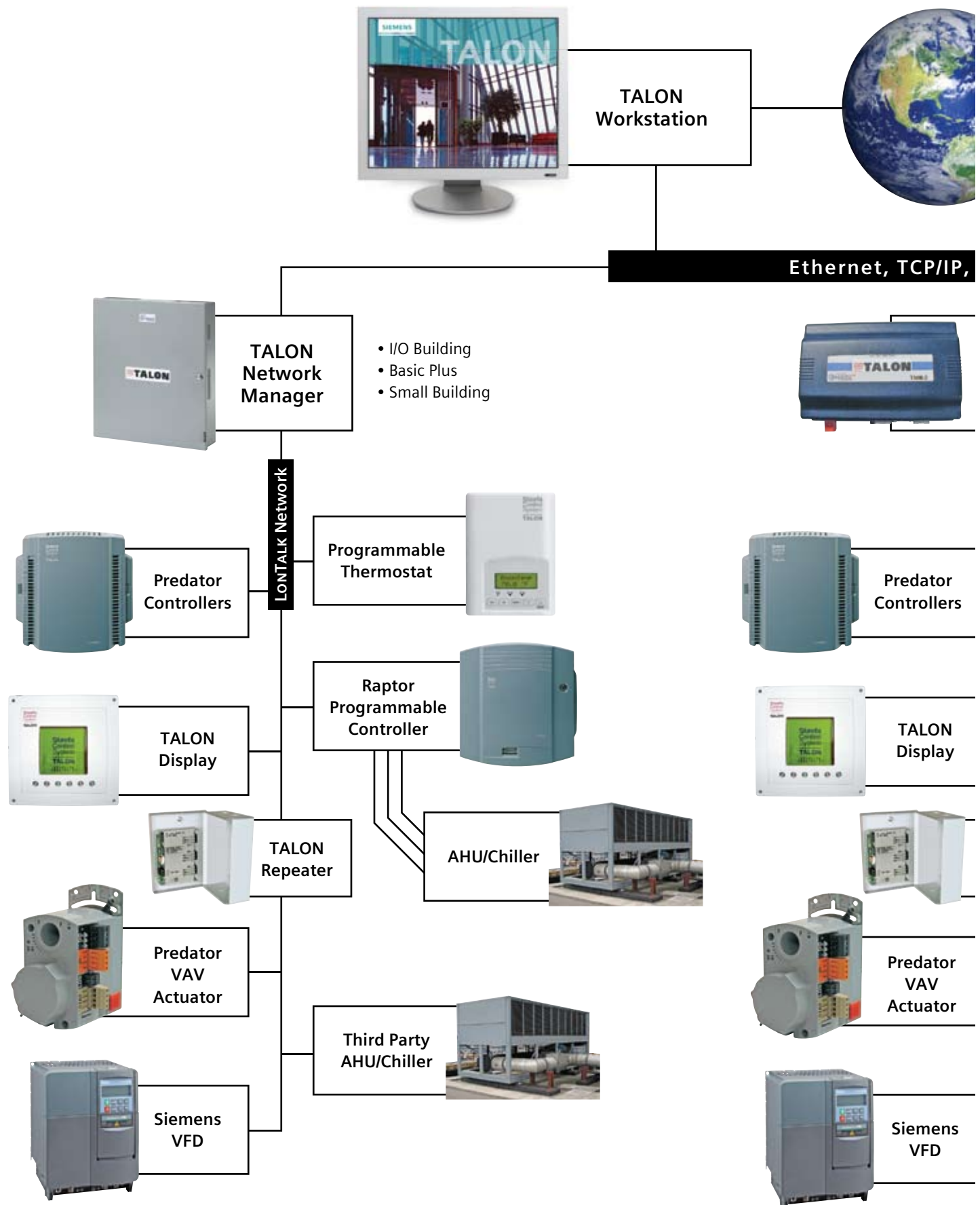
- Easy-to-use graphical programming for flexible mechanical equipment control
- Built-in energy management applications and DDC control strategies for complete facility management

### Predator Controller Family

These controllers are LonMark certified and compliant. They provide full-featured control of a wide variety of HVAC equipment with flexible I/O and are available for a growing list of applications:

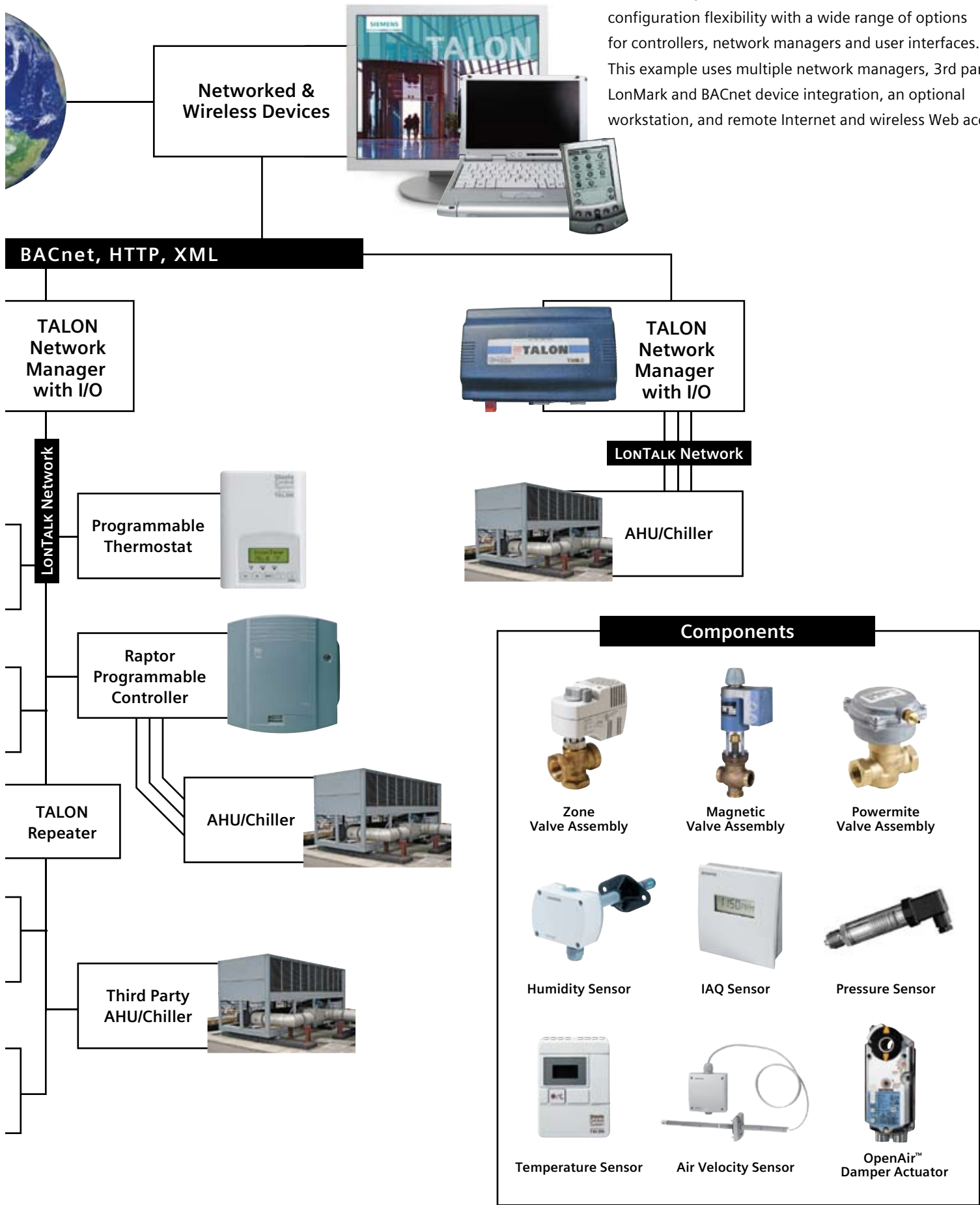
- Single zone AHU
- Triple zone AHU
- Point expansion
- HW converters
- Multiple VAV zones
- IAQ
- VAV with variable speed fan
- VAV and CV pressure independent zone box
- Variable speed VAV/CV zone box
- Single fan VAV/CV AHU
- Dual duct VAV/CV box
- Perimeter heat units
- VAV with supply air temperature reset
- Humidity control
- Unit ventilators
- Fan coil units
- Single zone 4-stage DX AHU
- Heat pumps with single- and multi-stage compressors
- Four-loop controller
- CO<sub>2</sub> controller

# TALON Open Protocol



# Building Control System

The TALON system architecture offers considerable configuration flexibility with a wide range of options for controllers, network managers and user interfaces. This example uses multiple network managers, 3rd party LonMark and BACnet device integration, an optional workstation, and remote Internet and wireless Web access.



## Legacy System Migration

You have a number of options for migrating from an existing Staefa building management system to TALON. These migration options:

- Provide a clear upgrade path to the future.
- Preserve existing customer investment.
- Provide existing customers with the latest control technology.

## Interoperability with Third Party Devices

The true value of an open protocol system is the ease with which your HVAC backbone integrates into a variety of building systems to form a single effective facility control. These devices include:

- Lighting controls
- Card access
- CCTV security
- Energy monitoring
- Chillers/cooling towers
- Asset management
- Variable frequency drives
- Major building systems

## TALON Programmable Thermostat

This versatile communicating thermostat can be used to control heat pumps, fan coil units, unit ventilators and single- or multi-stage rooftop air-handling units. Both LonMark and BACnet models are available, with or without a 7-day event time scheduler.

## Siemens Variable Frequency Drives

Siemens SED2® variable frequency HVAC drives feature an inherently low harmonics design. Power range is from 0.5 HP to 125 HP, and options include standard and electronic bypass with enhanced functionality. LonMark and Modbus-compatible interfaces are available, and an advanced operator panel makes for easy field programming.

## Siemens Valves and Valve Actuators

Siemens provides seven different valve product lines for applications from terminal units to central equipment. Siemens valves range from 1/2-inch globe and ball valves to 16-inch butterfly valves and are matched with direct-coupled electronic, hydraulic, mechanical or pneumatic actuators. Globe valves with metal-to-metal seating, low leakage and 100:1 rangeability ensure a high level of controllability in a wide variety of system applications.

## Siemens OpenAir™ Damper Actuators

The complete line of OpenAir direct-coupled damper actuators provides long lasting and powerful performance for low to high torque applications. The self-centering shaft adapter, plenum ratings and built-in control options enable quick installation and maintenance-free operation.

## Siemens Sensors

Siemens offers a wide range of temperature, relative humidity, air quality, air velocity and pressure sensors for the TALON system.

**TALON Temperature Sensors** These are available in a wide range of space and duct applications. They all feature fast response, and room sensors have pleasing aesthetics. Options include an LCD display, set point adjustment and occupant override capability.

**TALON Humidity Sensors** Siemens offers a full range of space, duct and outdoor air humidity plus combination temperature/humidity sensors in either a 2% or 5% accuracy range. Room devices are available with or without an LCD display.

**CO<sub>2</sub>/VOC Sensors** These sensors measure carbon dioxide as well as volatile organic compounds using patented, photo-acoustic, high stability measurement technology. Both room and duct models are available with options to sense temperature and humidity in addition to CO<sub>2</sub> and VOCs.

**Air Velocity and Pressure Sensors** A range of differential and VOC pressure sensors are available, from 1" to 5" water column, 0-10 VDC output and 1% accuracy. A range of liquid and gas 1% absolute pressure sensors are also available with the option of 0-10V or 4-20mA signal outputs. A 0-10V air velocity probe is also offered.

# The Advantages of TALON Open Protocol

An open protocol system makes the entire world of control system functionality available. However, there are some factors you should consider when comparing providers:

- Are you getting a complete system or controllers from various manufacturers attached to a network?
- Where does the dealer get HVAC valve, actuator, sensor and VFD products?
- Who performs service after the installation?
- Who manages the product warranties?
- How happy are the dealer's customers?
- Is system and open protocol training available?

**Compared Side by Side, the  
TALON System Stands Apart**

## **1 TALON is a Comprehensive System:**

- TALON makes open system building controls technology work effectively by offering only the best in facility control, performance and functionality.
- Siemens Solution Partners install HVAC products from a single manufacturer so your system will perform flawlessly.

## **2 Your Siemens Solution Partners Offers the Full Line of Siemens Building Control Components:**

- Devices available include valves and actuators, sensors, controllers, and SED2 variable frequency drives.
- Your authorized TALON dealer is also a single source for equipment and total system building controls expertise, service, training and warranty.

## **3 Siemens Solution Partners are Known for Customer Satisfaction:**

- They're ranked among the best in the industry.

## **4 TALON is a Siemens Brand:**

- Siemens manufactures the broadest range of HVAC products in the industry.
- World-class ISO 9002 certified manufacturing facility.
- 100% product testing.
- Same or next day on-time delivery and global sourcing.
- Customer support for over 15,000 products to every HVAC market.



## Only Siemens Solution Partners Install TALON

Your Siemens Solutions Partner is an authorized source for a complete TALON open protocol control system in the area. Your local, independent dealer is also your source for the full line of high quality Siemens valves, sensors, actuators, controllers, and variable frequency drives. Choose TALON and get the confidence of being backed by the resources of Siemens, known throughout the world for top-quality engineered products and services for over 150 years.

- Your Siemens Solution Partner delivers unparalleled customer service, training and technical support.

- Your Siemens Solution Partner has completed extensive training to become a Siemens Solution Partner.
- There's a Siemens Solution Partner in every major market throughout North America.

Get the best comprehensive open protocol building management system. Ask your Siemens Solution Partner for new ways to help make your facility a top-performing asset.

Solution Partner

Authorized TALON® Dealer

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