

# Basyx Convenience Store Control Systems

Controls for the Worldwide Community....



## Basyx Convenience Store Control Systems

Basyx control products, and predecessor Facilitec control products have been manufactured and successfully installed in the commercial, industrial and retail markets since 1982. During that period the controls industry has shifted focus towards sophisticated software, open protocols and other enhancements which provide no functional differences in operation, but have significantly increased the cost of installations. Control strategies have not changed significantly, with mechanical equipment still cycled or modulated to maintain a desired condition. Global Control Solutions recognizes benefits this new technology has afforded the larger, multi-building or campus installations in the new construction market. Existing small to medium size facilities, which make up 95% of the total building market, are unable to take advantage due to the high initial costs and ownership expense of these systems. GCS continues to design and apply systems for those customers unable to afford, or which do not require this new era of controls. Our systems provide accurate and proven control strategies and software which provide the highest return on investment and lowest cost of ownership, while insuring a consistent and energy efficient operation of the facility. A system which presents all the benefits of building automation at a reasonable cost. Controls for the rest of the world ....

### Lighting Control

The Basyx system performs proper control of exterior lighting at the most optimum levels based on time of day and ambient light levels. Canopy, building and parking lot lighting may be automatically controlled without interaction from store personnel.

### HVAC System Control

Basyx is designed to accurately control all types of HVAC equipment to maintain store comfort, while utilizing specific rationale for reduction of energy usage.

### Refrigeration Control

The Basyx system provides accurate and efficient control of refrigeration equipment in order to reduce energy while maintaining the integrity of your product. Door heater control eliminates wasteful usage of power during low store humidity levels.

### Demand Management

Basyx intelligent demand control monitors peak usage to provide utility cost reduction. Unlike typical demand monitoring systems which simply turn off loads during peak periods, the Basyx system modifies system operation to reduce peak levels while maintaining full control of the facility.

### Monitoring & Reporting

Basyx may be monitored through our Web-Based interface, with email notifications of alarm conditions to insure immediate response to system operation. Factory supported service and monitoring is available to further enhance the overall operation of your facility. Our TriComm graphical interface package provides site-specific operation reports, floor plans and other system views through an internet, modem or direct plug-in connection.

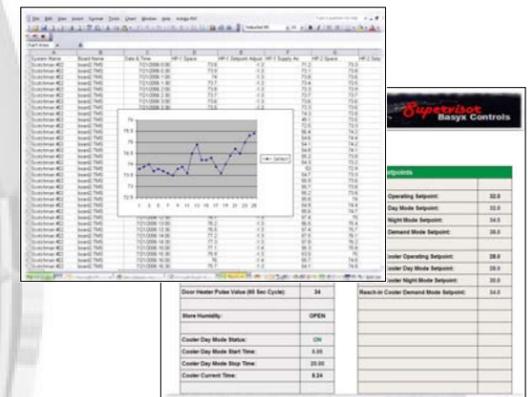
### Maintenance & Service

Basyx performs constant review of system operation, and can notify you of system problems. The remote access allows determination of issues before dispatching service personnel, reducing manpower. The system monitors the building electrical system and protects sensitive equipment power issues.

## Monitoring & Reporting

The Basyx system may be accessed through our Web-Based interface, which allows interrogation of all system operations and setpoints. Additionally, our TriComm graphical interface package provides site-specific operation reports, floor plans and other system views through an internet, modem or direct plug-in connection. Best of all, the software is license-free and comes with the system... **NO EXPENSIVE SOFTWARE TO BUY OR MAINTAIN.** Email notification of system alarm conditions insure immediate response to store issues. Extensive historical data may be uploaded as delimited files for use in standard office software for report generation and usage graphs.

- **Windows TriComm graphical interface program ...**
- **Web-based interface ...**
- **Extensive Historical Data ...**
- **License free software ...**



## Maintenance & Service

The Basyx system provides the information you need to maintain all aspects of your store operation. Automatic reporting of equipment failures and other operating conditions keep your system working at peak efficiencies. Remote access allows off-site monitoring for diagnosis of system problems, and may reduce manpower by determining the exact problem before dispatching costly service personnel.

- **Off-site monitoring assists in diagnosing system problems ...**
- **Verify conditions before dispatching service personnel ...**
- **Email notification of system alarms ...**
- **Sensors monitor operating temperatures, fan status and filter status ...**
- **Complete refrigerant pressure monitoring available ...**

## Demand Management

Many competitive systems promote “Demand Control” where certain non-essential loads are turned off during high energy usage or demand periods, disregarding the effect of the load being off. Convenience stores rarely have non-essential loads and this type of demand control is detrimental to normal store operation through high space temperatures, cooler temperature issues and loss of control.



The Basyx system provides “Demand Management” where complete control of all systems is maintained during peak conditions. HVAC setpoints are automatically adjusted to user-defined levels which will cycle off compressors, electric heat, etc. while maintaining full control of the system. Coolers and freezers are also adjusted likewise and the integrity of the product is always protected.

Individual demand setpoints are entered for billing periods as per the local utility, with separate On-Peak, Off-Peak, Summer and Winter modes automatically selected. This tool allows owners to enhance the savings capabilities of the system without effecting the customer and employee comfort levels.

- ***Reduces energy cost by reducing peak usage and associated charges ...***
- ***Intelligent control modifies setpoints to reduce peak usage while maintaining full control ...***
- ***Automatically adjusts setpoints based on local utility rate structure ...***
- ***Modifies HVAC equipment setpoints during peak periods ...***
- ***Adjusts cooler operation to reduce peak demand levels ...***

## Lighting Control

**Look Familiar** .....? *A bright sunny day, and all exterior lights are **ON** ...*

Lighting is estimated to be 30% of the total electric bill within convenience store facilities. In order to increase the bottom line, it is imperative that lighting be properly controlled to operate **ONLY** when needed. Store personnel often become involved in other duties and neglect to turn lights on or off as needed, resulting in unnecessary electrical usage.



The Basyx system incorporates an analog light level sensor for control of individual lighting groups, allowing user-customized control of canopy, building, sign and pole lighting. Using separate setpoints for each circuit, staged control can be implemented which reduces electrical usage and insures operation when required. Control becomes automatic, 365 days a year, without human intervention.

- ***Accurate and consistent control of all lighting circuits ...***
- ***Time schedules allow up to four (4) different operating schedules per circuit per day ...***
- ***Analog light level sensor allows staged control based on varying light levels ...***
- ***Reduces energy consumption by operating lighting only when required ...***
- ***Eliminates the human element from effecting utility costs ...***
- ***Timed overrides for “grey-day” or service operation ...***

## HVAC System Control



Temperature controls are typically the least considered portion of controllable operating expenses. Constant tampering with thermostat settings result in inconsistent and costly operation, and may reduce equipment life expectancy and increase system failures. The Basyx system maintains proper environmental conditions consistently and cost effectively.

The system automatically modifies system operation based on owner selected time schedules, increasing or decreasing setpoints during low traffic periods or high demand periods. Unoccupied setpoint control is provided for non-24 hour stores, which reduces overall electrical usage.

Outdoor air lockouts and changeover routines are used to insure that heating and cooling are not operated unnecessarily, further reducing energy costs.

Supply air temperature sensors are provided to monitor operation of the equipment, allowing system diagnosis from remote locations. Options allow site adjustment of setpoints within a pre-determined range, fan status, filter status and may include pressure sensing of refrigerant circuits.

- ***Accurately controls all types of HVAC systems and equipment ...***
- ***Maintains consistent control of space conditions 24 hours per day ...***
- ***Eliminates thermostat tampering thus reducing operating costs ...***
- ***Consistent control reduces stress and prolongs life of equipment ...***
- ***Time-based day/night setpoints allow further energy reduction ...***
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## Refrigeration Control

Coolers and freezers are often overlooked opportunities for energy reduction. Much like HVAC control, setpoints are altered based on time-of-day and allow compensation for high traffic conditions. During slow periods, setpoints may be raised without adversely affecting product or equipment operation.

Door heaters operate 24 hours per day, 365 days a year regardless of store ambient conditions. The Basyx system monitors the store humidity, and pulses the door heaters to eliminate fogging of the case doors. Studies have shown that this feature can save up to 70% of the cost of door heater operation.



- ***Accurate control of coolers and freezers to maintain integrity of your products ...***
- ***Time-based setpoint levels allow energy savings during low traffic periods ...***
- ***Door heater control reduces operating costs ...***
- ***Reduces energy usage through accurate and consistent control ...***
- ***Demand setpoint modification allows further energy savings during high usage periods ...***