



Installation: **Wago Corporation Complex, Germantown, Wisconsin**

Circon Integrator: **Egan Automation Inc, Maple Grove, Minnesota**

Building Type: **National Headquarters – production, research, warehousing, office**

Physical Description: **1 building – 2–story office section, single–story production/manufacturing are. 60,000 sq. ft.**

Duration of Project: **June 1999 to October 1999**

THE CLIENT

Wago Corporation is a leading edge manufacturer of I/O modules and other electronic products that are state-of-the-art surface mount assemblies. The new 60,000 sq. ft. plus facility is split into a single-story production and manufacturing area and a two-story office area.

THE CHALLENGE

- *Integrate lighting, HVAC and other systems on a seamless LonWorks® network*
- *A system that handles not only today's technology but also tomorrow's*
- *Over 100 separate zones of intelligent lighting required to provide selective individual control*
- *All hours access to the building automation system through graphical front end*
- *Operate the system at peak energy efficiency*

The Wago complex needed to be more than just an effective manufacturing facility and corporate headquarters – it needed to be the North American jewel in German parent Wago International's crown. The company wanted to highlight not only their own technology, but also its interoperability with other systems. To achieve their goals, they required an integrated Building Automation System with front end graphical user interface that would be efficient and scalable.

THE SOLUTION

- *Seamless integration of HVAC equipment, over 100 individual lighting zones and Wago's LonWorks based devices to provide a complete, interoperable and state-of-the-art building automation system*
- *Front end workstation programmed with Circon's Visual Integrator™ software allows for off hours access to the facility*
- *Provides cost effective system monitoring*
- *Unlimited capability for future control function expansion*

Wago Corporation selected the Circon System for a single, simple reason: they needed to know that the system would work from day one. They easily integrated their own LonWorks based devices, and through Circon's Visual Integrator™ software the entire building automation system network is monitored and controlled.

"Give Circon the highest marks for customer support and quality of their products. Once integrated, it just plain works."

Tracy Lenz, Senior Support Engineer, Wago Corporation.

THE DETAILS

HVAC AND LIGHTING CONTROLS

- *Circon controllers provide full control of HVAC throughout the complex*
- *Leviton lighting controls over 100 lighting zones*
- *Wago nodes incorporated for external light control as well as exhaust fans*

Circon HVAC controllers, Leviton lighting products and Wago devices are integrated through Circon's System Integrator™ software to allow for a single interoperable system. The lighting system senses occupancy through wall switches to turn the lights on when the zone is occupied and to turn the switches off when the zone has not been occupied for an hour. Within each office a Leviton relay pack is used to communicate between the wall switch and the building automation system. Wago LON devices are connected to the LAN network through local node controllers. These devices are used to control outdoor zone lighting, building signs, exhaust fans as well as internal baseboard heaters.

SYSTEM MANAGEMENT

- *System Integrator software ensured easy integration of third party products*
- *LonWorks based technology allows unlimited expansion opportunity*
- *Circon's Visual Integrator software provides user friendly graphic front end control with point and click maneuverability making on-site management simple and effective*
- *The complex is a showcase of interoperable facility automation*

The system can be programmed to not only provide automatic scheduled control but also system overrides for lights and temperature. Individual zone control allows people to comfortably work after hours without the need to heat and light the entire building. Circon's Visual Integrator software allows the building manager to monitor the facility. Sensors within different zones provide comfortable work environments that are energy efficient outside regular work hours.

The Wago complex is a showcase for integrated facility automation allowing individuals to view the building automation system and to see on site practical demonstrations of lighting ballast controls, automated controls and junction box wiring.

SYSTEM COMPONENTS

Circon Unitary HVAC Controllers
Circon Terminal Unit VAV Controllers
Circon Visual Integrator software
Circon System Integrator software
BAPI sensors
Leviton Lighting
Wago LAN Bus Coupler using Wago's I/O System

For more information about this case study, please call us at 1-800-338-1866.

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