

Automated building management of a supermarket

Retail:
Geant-Casino



FRANCE

Introduction

Geant Casino, a French supermarket chain, has been providing for the grocery needs of the world for over 100 years. Known for their ultramodern stores and the professionalism of their employees, Geant Casino has taken a major strategic stand by pursuing further development into Poland and Asia, thus building upon their success in North America.

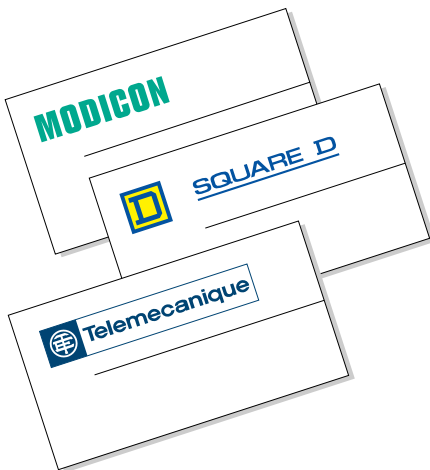
Casino's technical services personnel are pursuing a global building management strategy for large commercial centers, resulting in reduced



energy consumption, while assuring automated operation of the installation and improved service quality. A Groupe Schneider ISIS 700 system was selected to provide electrical control and distribution for Geant Casino facility in Arles, France.

The objective

The Géant Casino supermarket in Arles, France is part of a well known chain of commercial centers – such as the ones in Avignon, Angers, equipped with the ISIS 700 system from Groupe Schneider. The building control system for the supermarket is entrusted the task of controlling all the electrical equipment as well as optimizing global equipment operation while maintaining the functional autonomy of each subsystem.



GRUPE SCHNEIDER

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ISIS 700

Targets:

Supermarkets, warehouses, facilities, commercial renovations

Functions:

Electrical distribution, lighting, utilities

Average surface area:

2000 to 5000 m² (approx. 20000 to 50000 sq. ft.)

Number of points:

200 to 2000 points

Type of equipment connected:

Equipment connected using I/O interfaces, FIPIO, Batibus, all X-Way networks and custom standards

Exchanging information with third party products:

DDE, ACCESS files, local networks, field bus

Technology:

PC Windows 3 or 95 + TSX 47 pre-programmed PLC

Specific program:

Yes for PLC/PC

The solution

Various equipment groups are controlled by sophisticated automation :

- The electrical distribution system controls the following functions :
 - load shedding and reengaging according to power consumption presets and EDF (State Electric Co. – France) electricity billing.
 - Automatic sequence management according to power feed (sector and source substitution)
 - Weekly and daily load schedule programming
- The heating and air conditioning systems are controlled by PLC's running process control and combinational processing algorithms. A remote monitoring and control station coordinates the electrical equipment, monitors status and process measurements, displays and manages alarms and archives all relevant application data.
- Cold feed

This equipment group is automated using a dedicated system connected via a standard communications bus to the remote monitoring

and control station. In addition to control and monitoring functions, the system is capable of processing application analyses. Archiving process measurements obtained from load consumption meters allows trends to be displayed for each load. The trend analyses allow the user to balance and minimize the power according to EDF prescribed levels.

In the chosen architecture, the control equipment takes advantage of its intelligence and autonomy to ensure the dependability of the installation. The central control unit utilizes the archived data to generate trends. Efficient tools allow the user to understand and react to the electrical equipment in order to manage preventive maintenance and optimize the electricity billing contract with the supplier.

The benefits

The ISIS 700 solution is well adapted to diverse as well as standardized environments that demand industrial materials and the application of custom automation. ISIS 700 is an automatic, ready-to-use solution comprised of standard materials (PLC with predefined programming for the automation and PC for the supervisory functions) combined with building control software capable of real-time control, historical data and archived data processing as well as database extension capabilities for adding points.

Isis 700 systems organize and integrate :

- all equipment and machines compatible with Batibus and X-Way communications
- all automation equipment for electrical distribution
- all third party equipment on Modbus