

Shopping malls


Optimized Power & Control solutions

**Nothing is as precious
as a happy customer**



Merlin Gerin
Square D
Telemecanique

Schneider
 **Electric**
Building a New Electric World

A photograph of two women on an escalator in a shopping mall. The woman on the left is wearing a white floral shirt and black pants, smiling and looking towards the woman on the right. The woman on the right is wearing a red hoodie and blue jeans, carrying a pink shopping bag and a white bag, and looking back at the first woman. The escalator is moving upwards, and the background shows the interior of a modern shopping mall with glass railings and a patterned floor.

The construction and operation of a shopping mall requires the reconciling of several objectives: optimizing return on investment, keeping control of completion deadlines, minimizing building operating and maintenance costs and not making any concessions in terms of the comfort and wellbeing of shoppers.

- Attracting shoppers to a shopping mall and making it a pleasure to shop,
- increasing the loyalty of the tenants of the various chains to ensure optimum use of store space,
- keeping in control of energy expenditure,
- upgrading the building without disturbing business...

The smooth operation of a shopping mall relies on a number of parameters and any shortfall can have major risks or lead to financial losses.

Schneider Electric is a partner who knows your business and who understands your needs.

The leader in the Power & Control sector, Schneider Electric has renowned expertise in building energy management and energy performance enhancement. On the strength of its experience the group has developed a dedicated range of optimized Power & Control solutions for shopping malls. These solutions provide dependable, comfortable and high performance buildings; buildings which are attractive for consumers and storekeepers while being profitable for investors and operators.



Alpo Mäkinen

Project leader in main contractor SRV Viitosen Oy, Finland.

Project: Ideapark shopping mall (100 000 m²), in Lempäälä (Tampere).

«Schneider Electric set-up a full logistic project, closely involving and managing its wholesaler network, in full respect of project planning. Such an organisation enabled to quickly fix any problem occurring about component, order modification or delivery. We felt comfortable and secure, as Schneider Electric fully reliable, and aware of our huge financial issues at construction time control.»»

> Optimizing return on investment

Reducing construction and renovation timeframes for maximum public opening.

Shopping mall investors, developers and operators have the same priority: having a building that is open to the public as quickly as possible and having it subject to disturbances that are as infrequent and as short as possible. During construction, the main contractors are directly impacted by the need to open the shopping mall as quickly as possible since they are subject to major penalties: on average 1% of the global budget for every day of late delivery! In the same way, work intended to modify or upgrade an existing building must be carried out in a very short lapse of time: one day's closure for a store costs around 0.25% of the annual turnover, without counting shoppers that switch to the competition as a result.



It is fully possible to reduce a site construction and upgrading times by complying with a few simple rules:

- limiting the number of people and suppliers involved,
- at the design stage, simplifying electrical and control architectures,
- limiting on-site work and preferring factory-built solutions and equipment,
- choosing flexible and modular solutions enabling installation reconfiguration and extension to be carried out simply and quickly.

Optimized Power & Control solutions for shopping malls take account of these principles.

■ **They are based on:**

- **Factory-built equipment and the flexibility of electrical distribution equipment.** For example on certain sites, selecting flexible busbar trunking systems for electrical distribution can enable the installation time to be cut more than 50% compared with a traditional solution.

□ **Scalable building control solutions.** Since they are easy to install and reconfigure, natively open and scalable, integrated Building Automation systems allow us to optimize the time and cost of cabling and integration. In addition, they use a unique user interface and so reduce the need for user training.

■ **Through the depth of its offer and its network of partners and distributors, Schneider Electric can also commit itself to delivering equipment on time.**

Its logistics expertise concerns all aspects: electrical distribution installation, VDI distribution and building energy management systems. The main contractor can therefore avoid any discrepancies in deadlines and prevent the risks of late-delivery penalties.



Toivo Sukari

Investor in the Ideapark shopping mall (100 000 m²), in Lempäälä (Tampere), Finland.

◀◀ *In a previous shopping mall project, involving TAC-Schneider Electric at quite an early design and construction stage has enabled us to target such extremely low energy consumptions, that investors thought that there could be an error in the cost estimates. Practical experience and close monitoring soon proved that these performances were reached and could be trusted. In the best days, the operating costs could be cut by as much as half compared with the average costs for commercial buildings. For Ideapark project, TAC-Schneider Electric commitment was even enlarged to technical facility management.* ▶▶

> Cost control

Guaranteeing the best costs/services ratio to increase the loyalty of stores and ensure their long term future.

A shopping mall succeeds by keeping its good tenants over time. To persuade them to set up and to keep them in the shopping mall, the building must provide a good balance between the level of services and the cost of space occupancy. This requires precisely calibrated comfort parameters, equipment in perfect operating condition, controlled and clearly identified energy consumption.



Operators and tenants have the same expectations: correctly managing their investments and obtaining immediately quantifiable benefits to increase profitability. This means:

- **Having the exact level of comfort at a minimum cost.**
- **Providing guarantees for tenants that they only pay for the energy they use.**
- **Having equipment, systems and services that generate savings.**

Power & Control solutions are designed to satisfy all the expectations of all shopping mall owners and operators:

- **optimizing energy consumption** for a determined comfort level: climate, lighting and shutter control, reactive energy compensation.
- **measuring energy consumption and cost management:** managing energy and various fluids (water, gas, air, electricity, fuel, etc.), detecting discrepancies to carry out immediate corrective actions, detailed sub-billing of tenants.

- **optimizing electrical distribution installations:** preventive maintenance, installation diagnosis, power quality control and reduction of harmonic pollution problems, electrical overload prevention.

Choosing integrated building energy management systems boosts performance through:

- **the diversification of power sources** and the automatic switching to the least expensive energy at a given instant (public network, power generator, etc.),
- **reducing installation and operating costs** through transversal automatic control (electrical, climatic, security, etc.),
- **saving in terms of time and efficiency at all levels** by combining cabling equipment, optimizing system configuration and user training.

Rupert Goodman

Project Leader for a shopping mall Promotor, San Diego, USA

◀◀ *Our purpose was to embed the highest possible value from available technology in our new mall development projects. We wanted, on one hand, to provide the best environmental and security conditions for shoppers, while, on the other hand, cutting energy costs and operating malls with limited technical and security staff. Schneider Electric enabled us to package together in a unique system for HVAC and lighting control, energy monitoring and security. Thanks to training and support provided by Schneider Electric, our teams were fully operational within a couple of weeks. Advanced technology provides powerful tools, such as CCTV videosurveillance application: only one person is required to efficiently operate hundreds of cameras.▶▶*



> Comfort and safety

Providing the best environment to attract shoppers and make their visit a pleasure.

In a shopping mall, many aspects contribute to creating an atmosphere of wellbeing and giving a feeling of safety: well lit or soft lighting for different areas, correctly regulated temperature and ventilation, discreet access control, no poorly lit areas, emergency exit signs, the availability of lifts and escalators, the fluidity of check out operations, etc. Conversely, a partial or total power failure could cause stress and risks for the safety of visitors and shops.



Schneider Electric's specific solutions for shopping malls allow you to take preventive measures against the possibility of electrical power failures and satisfy all needs relative to the comfort and safety of people.

The strengths of optimized Power & Control solutions:

■ **A high level of electrical power availability** to supply lighting systems, security and sound systems, voice-data-image networks and critical equipment such as lifts or escalators.

■ **Systems and equipment intended to provide optimal safety:**

- video surveillance,
- access control,
- security lighting,
- emergency route and exit marking,
- fire alarm, intruder alarm,
- technical surveillance,
- remote maintenance and remote alarm management.

■ **Environment control systems** providing comfort but also a source of energy savings with control of lighting, ventilation, air conditioning, blinds and shutters.

Optimized Power & Control solutions to reduce investments and operating costs.

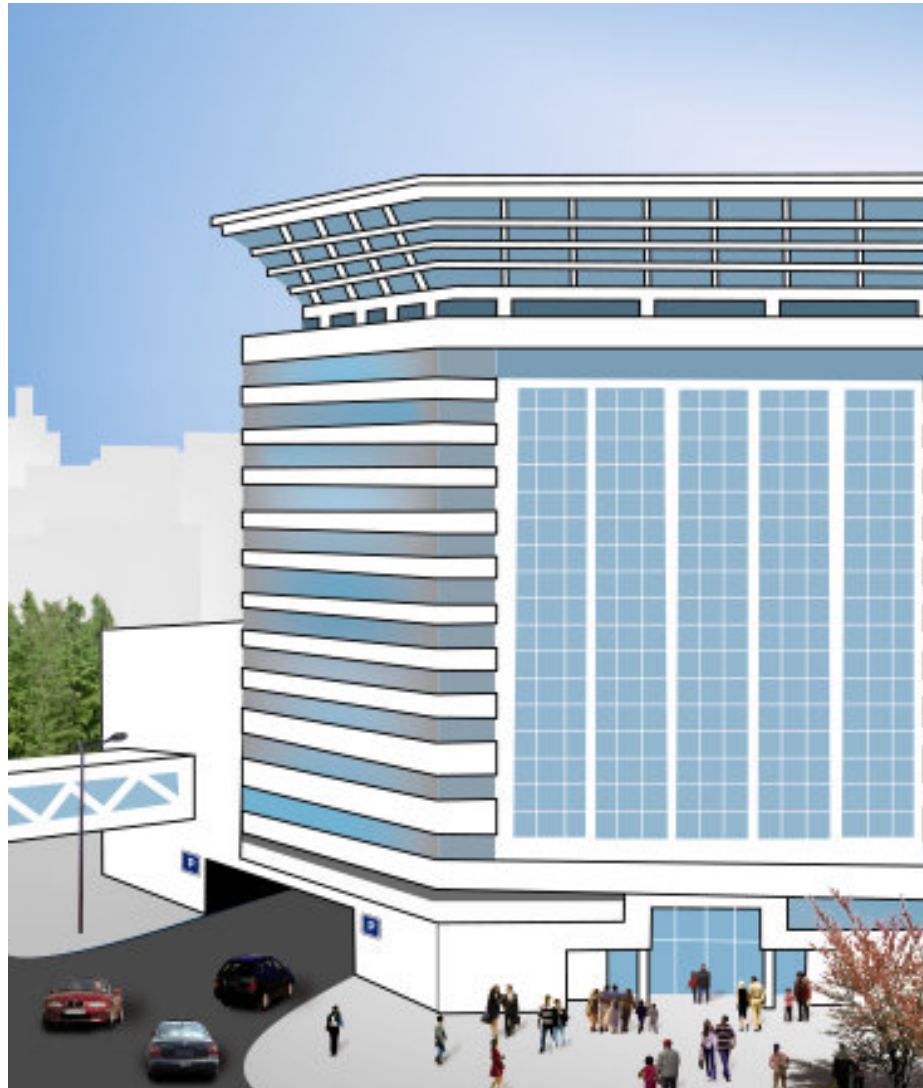


Reducing installation costs and timeframes

- Using factory-built and type-tested equipment
- MV/LV substations
- busbar trunking systems
- switchboards
- integrated control and security systems
 - on the building's shared Ethernet communication structure
 - using open-ended communication protocols.

Reducing power consumption and costs for an attempted comfort level

- Heating, ventilation, air conditioning equipment (HVAC) control.
- Control of lighting and shutters.
- Reactive energy compensation.



Controlling and managing consumption

- Managing fluids and energy (water, gas, electricity, air, fuel, etc.).
- Analyzing consumption, corrective recommendations.
- Detailed sub-billing according to actual consumption.

Diversifying energy sources and automatic switching to the least expensive at a given time

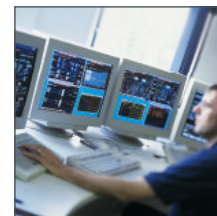
- Public electrical installation.
- Gensets.
- Public heating or air conditioning network.
- Renewable energy sources.





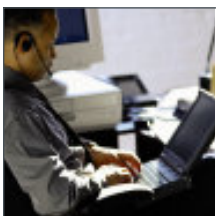
Optimizing operating and maintenance of the electrical distribution installation

- Reducing down-time by preventive maintenance and installation diagnosis.
- Reducing harmonic pollution phenomena.
- Preventing cooling and heating-related electrical overloads.



Guaranteeing the safety of people and property

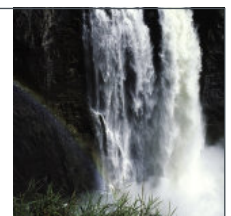
- Central video surveillance system.
- Access control.
- Fire detection.
- Intruder alarm.
- General security supervision.

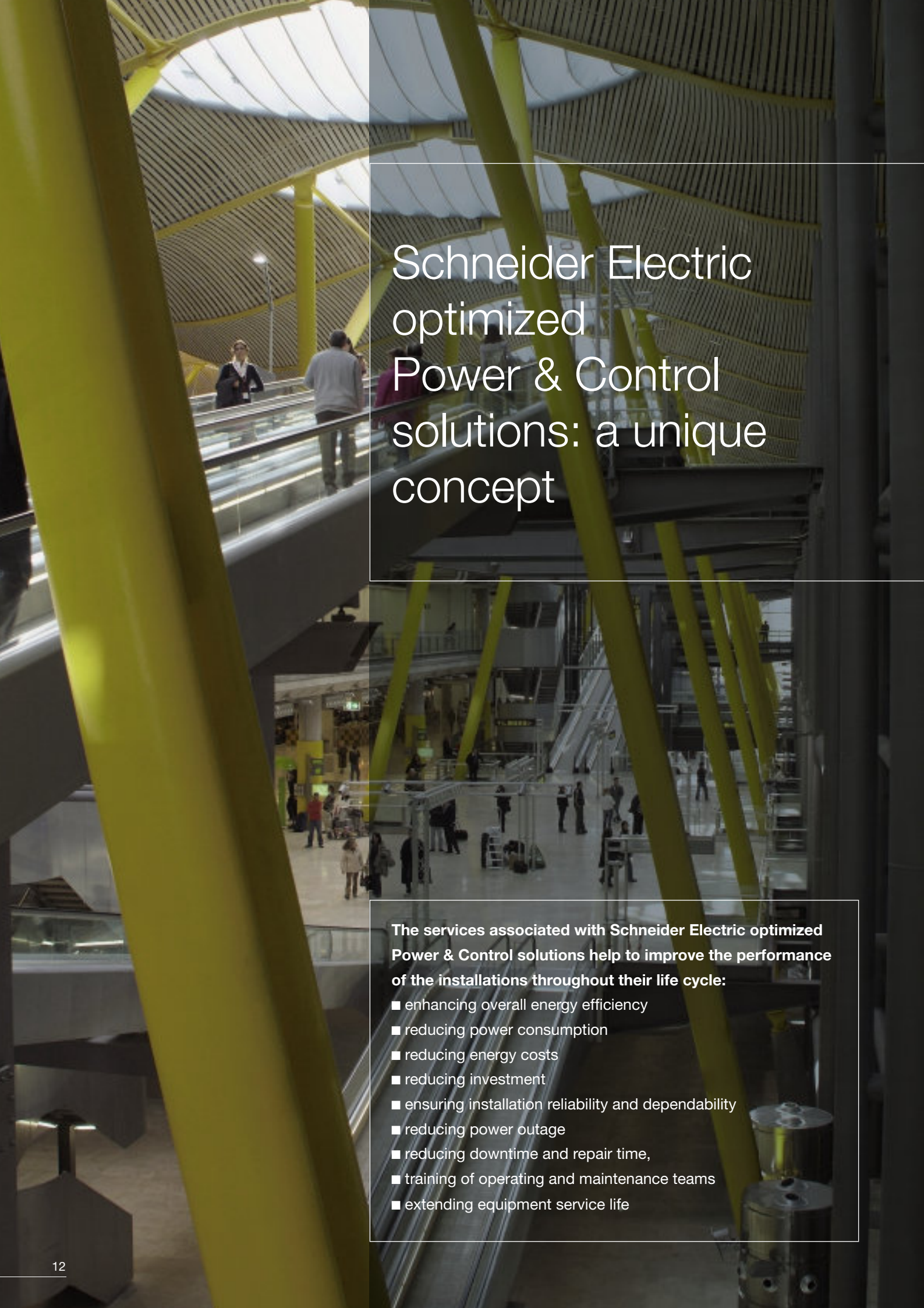


Guaranteeing access at any point in the single IT infrastructure shared by all networks: IT, telephone (including voice on IP technology), building energy management.

Ensuring the quality and availability of electrical energy at any point in the building

- Medium voltage distribution.
- MV and LV distribution.
- Low voltage distribution.
- Source transfer automation.
- Uninterruptible Power Supply systems to protect equipment (IT network, security systems...).





Schneider Electric optimized Power & Control solutions: a unique concept

The services associated with Schneider Electric optimized Power & Control solutions help to improve the performance of the installations throughout their life cycle:

- enhancing overall energy efficiency
- reducing power consumption
- reducing energy costs
- reducing investment
- ensuring installation reliability and dependability
- reducing power outage
- reducing downtime and repair time,
- training of operating and maintenance teams
- extending equipment service life

The originality of Schneider Electric's optimized Power & Control solutions involves providing a comprehensive response to all shopping mall requirements. This overall approach enhances the building's performance and has an impact on all those involved: shoppers, shopkeepers, operators, builders, developers, investors, etc.

These solutions help to optimize operating costs and guarantee a high rate of return on investment. In addition, Schneider Electric's capacity to satisfy all requirements allows project managers to limit the number of suppliers and to benefit from special contacts who have a perfect knowledge of their project and requirements. Lastly, with its extensive network of local sites Schneider Electric is also committed to its customers in terms of logistics efficiency by guaranteeing the control of delivery times.



Optimized Power & Control Solutions

Schneider Electric's Optimized Power & Control solutions:

- 1. Minimize investments and operating costs** for Schneider Electric customers and maximize their performance in their business.
- 2. Include the very best Schneider Electric products and equipment.**
- 3. Are based on tested architectures** and over 50 years' expertise in the healthcare facility sector.
- 4. Are built on open communication protocols** for a maximum interoperability allowing to minimize investment and operating costs.
- 5. Include a range of dedicated services covering the whole of the building's life cycle:** energy efficiency audit, installation design, operating assistance, maintenance and replacement, customized services.
- 6. Meet precise performance criteria:** electrical power availability, energy efficiency, comfort, safety, scalability and return on investment.
- 7. Allow implementation by local partners** through factory-built products which simplify installation and reduce maintenance costs.
- 8. Are designed to be part of a sustainable approach to environmental protection.**
- 9. The products and equipment in these solutions are available through a major distribution network** covering more than 130 countries.



Enhancing performance
while keeping in control of
the environmental impact

In a world where energy is a major economic and environmental challenge, Schneider Electric makes electricity help its customers to be more efficient.

Schneider Electric designs and implements integrated, smart and communicative solutions to increase its customers' competitiveness and satisfaction.

> **Electrical distribution** to make the electricity available, reliable and high performance in complete safety.

World No. 1 in electrical distribution and No. 2 in installation and control systems

> **Automation and control systems** to monitor and control equipment and buildings, protect people and property.

World No. 1 in video security and No. 3 in building automation systems

> **Secure energy** to guarantee a reliable and continuous electricity supply, particularly for sensitive applications.

World No. 1 in secure power systems

■ A leader's expertise and innovation

In order to always go further in meeting its customers' requirements, making electricity increasingly safe and easy to use, Schneider Electric implements an ambitious innovation, quality and efficiency policy. Almost 5% of its turnover is invested in R&D. 6,500 researchers and developers work hard to continuously provide more value for users by focusing on energy efficiency, easy implementation and operation and the scalability of equipment and installations. In addition, by combining automation and internet approaches, building energy management systems constantly offer new ways of keeping costs under control.

■ Services for smarter features in all sectors

Schneider Electric is permanently enhancing its service offer to partner its customers throughout their installation's life cycle. To give more independence it provides call centers, online diagnosis and technical assistance services and a host of internet services: e-catalogs, software downloads, information and training.

■ A worldwide presence to be closer to our customers

With 105,000 employees in 106 countries and an extensive network of partners, distributors, panel-builders, installers and engineering offices, Schneider Electric values close relations with its customers in order to have an in-depth knowledge of their applications, working side by side with them to achieve the best performance levels.

■ A responsible company for the planet and for society

As a signatory of the WHO Global Compact, Schneider Electric has put sustainable development at the heart of its strategy. Its solutions contribute to energy saving and giving access to electricity to those who do not have it. 91% of our sites are ISO 14001 certified. The Schneider Electric offer satisfies all current standards throughout the world – ISO, IEC, Nema, UL, ANSI, BS, CCC, JIS.



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