HEALTHCARE FACILITIES

Ensuring patient safety and optimising the energy efficiency of your hospital
Your challenges

Increasing demand for medical care
Faced with the rising number of chronic and age-related diseases as well as the emergence of new pathogens, hospitals need to tackle increased demand for medical care and to implement more efficient processes.

Progress and new medical technology
Medical equipment is becoming increasingly sophisticated as it keeps up with medical and technology advances for better treatment of diseases. The hospital has to manage increased equipment expenditure (more than 6% per year in Europe) and also ensure the optimum operation of such sensitive and mission-critical equipment.

Increasing energy costs
Healthcare facilities are among the most energy-intensive in the service sector. One of the challenges faced by hospitals today is to reduce their energy bill whilst ensuring the safety of care.

Safety of patients and medical staff
The availability of a reliable electrical power supply is vital to ensure the continuity of care. Power failures of any duration that can lead to critical situations are unacceptable.
Our responses

The resilience of the installation’s electrical architecture plays a large part in the overall performance of your medical facility.

Safety
Ensuring the safety of patients and hospital personnel
• To provide guaranteed manufacturer solutions adapted to operating constraints that control risks throughout the facility.
• To propose the appropriate architecture for your electrical installation to ensure the service continuity of your equipment.

Efficiency
Optimising the operating conditions of the facility
• To monitor, analyse and optimise energy consumption for sustainable management of the facilities.
• To ensure the level of availability expected for both equipment and data.

Flexibility
Anticipating future requirements by providing optimised and scalable solutions
• To upgrade facilities safely and without negative impact on the existing installation.
• To implement solutions that are compatible with the latest developments in medical and IT equipment.

Compliance
Respecting regulatory requirements and standards
• To implement products and solutions that fully comply with standards and regulations governing healthcare facilities.

Power & Energy Performance for your healthcare facility
Our adapted responses to your applications

**Electrical infrastructure**

Solutions for:
- securing the power supply in HV/LV transformer stations,
- a secure and reliable power supply for all buildings,
- a power supply adapted to the level of criticality of medical premises.

**Medical premises**

Solutions for:
- continuity of the electrical power supply in medical premises,
- patient safety via specific electrical power distribution (hospital isolated power system).

**Services**

Pre-project phase:
- help with the design and realisation of customised solutions,
- performance of required qualification tests (Socomec is an IEC 61439 specialist).

On-site:
- commissioning,
- equipment maintenance.
**Medical imaging**

Solutions for:
• service continuity of medical imaging equipment (MRI, X-ray machinery, CT scanners, etc.).

**Monitoring of buildings**

Solutions for:
• controlling building energy costs,
• monitoring critical power circuits,
• protecting power circuits for security systems (fire, emergency lighting, access control, video surveillance, etc.).

**IT infrastructure**

Solutions for:
• the protection and availability of IT systems,
• the availability and security of patient data and hospital communication systems.
Socomec’s solutions

Expertise and products tailored in terms of availability and the quality of electrical power to ensure the performance of your medical facility.

### Solutions for the electrical infrastructure

<table>
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<tr>
<th>SOLUTIONS</th>
<th>FUNCTIONS</th>
<th>BENEFITS</th>
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</table>
| **FLEXYS** low voltage switchboard system | • Fixed inputs/outputs up to 4,000 A.  
• Fixed or plug-in functional units up to 1,250 A. | • Guaranteed quality and performance.  
• Upgradeable (an “open” switch panel compatible with other manufacturer systems).  
• Safety (form 2, 3, 4).  
• Availability (service index IS 323).  
• Robust.  
• Compact.  
• Reliable: complies with standard IEC 61439-1. |
| **ATYS** automatic and remote-control transfer switches from 40 to 6,300 A | • 3 operating modes: automatic, manual, padlocked.  
• Mechanical interlocking of positions.  
• Integrated auto-configuration.  
• Product operating status continually indicated. | • Ensured availability of the power supply  
• Reliable: complies with standard IEC 60947-3 and IEC 60947-6-1.  
• High levels of performance (up to AC 33B).  
• Simple configuration.  
• Safe operation.  
• Safe and easy emergency operation.  
• Operator safety.  
• Optimises maintenance procedures. |

### Solutions for building monitoring

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| **Multi-circuit measurement and monitoring system DIRIS Digiware** | • Multi-circuit measurement of electrical values.  
• Monitors energy quality.  
• Monitors thresholds and generates alarms.  
• Plug&Play system (quick and reliable RJ connection).  
• Class 0.5 for the global measurement chain.  
• Auto-configuration of parameters.  
• A modular and multi-circuit system. | • Implementation in a quarter of the time compared to exiting technologies.  
• Easy to configure.  
• High measuring accuracy.  
• Flexible upgrading and integration (on new and retrofit installations).  
• Reliable: complies with IEC 61557-12 (PMD). |
| **Energy management software VERTE LIS HY PER VIEW** | • Centralises, monitors and analyses data per utility, zone, usage and per period.  
• Real-time monitoring of all electrical parameters measured by the equipment.  
• Monitors personalised indicators.  
• Customised dashboards. | • Intuitive and user-friendly interface.  
• Enables the identification of energy saving opportunities.  
• Data can be presented and communicated in a wide choice of ways.  
• Forms part of the ISO 50001 energy efficiency approach. |
### Solutions for IT infrastructure

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</thead>
<tbody>
<tr>
<td><strong>MODULYS GP</strong> modular UPS</td>
<td>• Three-phase double conversion UPS (VFI SS 111).</td>
<td>• Optimum service continuity.</td>
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<tr>
<td><strong>MASTERYS GP</strong> centralised UPS</td>
<td>• Horizontal and/or vertical modularity.</td>
<td>• A redundant solution at the best cost.</td>
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<td>• 96% efficiency (output) in double conversion mode.</td>
<td>• A flexible solution to meet power upgrade requirements.</td>
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<td>• kW = kVA.</td>
<td>• Optimises the investment and running costs.</td>
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<td>• Hot swap (MODULYS GP).</td>
<td>• Easy installation and maintenance.</td>
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| NETYS RT UPS equipment | • 19" single-phase UPS with double conversion (VFI SS 111). | • Easy to install. |
| For a decentralised solution | • Available in 1+1 parallel configuration. | • No configuration required during commissioning. |
| | • Battery extension modules. | • Easy to use. |
| | | • Compact solution. |

### Solutions for medical premises

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<td>“Medical IT cabinet”: power distribution cabinet for medical premises</td>
<td>• Ensures the availability of electrical power for medical premises, provides control of different levels of criticality as well as localisation of insulation faults in each part of the medical neutral system.</td>
<td>• A complete manufacturer's solution; can be configured and upgraded according to your specific requirements.</td>
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<td>• Solution can be combined with a maintenance service package provided directly by the manufacturer.</td>
<td>• Easy to install.</td>
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<td>• Easy to maintain.</td>
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<td>• Service continuity even for 1st insulation fault.</td>
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<td>• Reliable: the solution complies with standard NFC 15-211 (national standards) and Harmonisation Document HD 60364-7-710.</td>
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### Solutions for medical imaging

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<td>UPS equipment for protecting medical imaging: <strong>MASTERYS GP</strong> / <strong>DELPHYS MP</strong> / <strong>DELPHYS MX</strong></td>
<td>• Three-phase double conversion UPS (VFI SS 111).</td>
<td>• Optimum service continuity.</td>
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<td>• Ideal solutions for protecting power supply to medical imaging equipment such as MRI, CT scanners, ultrasound, X-ray machinery, etc.</td>
<td>• Limits the overall impact of medical imaging equipment on the electrical system.</td>
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</tbody>
</table>
The Rennes University Hospital has eleven standard procedure radiology rooms and five radiology rooms in their cardiology and pneumology centre. These rooms are equipped with advanced medical imaging and surgical assistance equipment that does not tolerate any power failure, however short.

In 2009, we wanted to secure the power supply to euro 4 million worth of electro-medical equipment used in five of our procedural radiology rooms with a solution that offered the best technical and economic compromise. With Socomec, we opted for a 300 kVA DELPHYS MX UPS so as to aggregate this protective solution to all the five rooms. Combining a flywheel with the batteries also meant the system could absorb the peak currents you often get when running medical imaging equipment. This sort of configuration also helps prevent premature ageing of the batteries.

And of course, having a single piece of equipment to supply the five rooms means we were able to optimise our investment. Combining the flywheel with the batteries will also help us keep our maintenance and running costs down.

When the time came to make the final selection, we chose Socomec’s offer for their engineering expertise, advice, support and guidance in implementing this innovative and strategic project for the hospital’s radiology facilities.

Loïc BARDOU
Electrical Engineer, Hospital Works Department
Maintenance Manager / Electrical Operations, UH Sarreguemines
The Sarreguemines hospital (268 beds) offers a full range of clinical services. The hospital's technical facilities include a surgical unit, an obstetrics unit and an area reserved for medical imaging. The operating theatres have to remain operational round-the-clock. The role of the medical staff is to provide the right care to patients. For us, our job is to provide electrical facilities that work.

We have to secure the power supply all eight operating theatres. The technical solution must provide maximum power availability to these theatres. The engineering consultants decided on having a dedicated power supply for each theatre. Socomec was selected to equip every operating theatre with a medical IT distribution cabinet comprising a changeover switch at the level of section incomers, a modular UPS, an IMD and a medical IT transformer. The products integrated in this cabinet are robust and reliable.

Carrying out maintenance procedures on one operating theatre does not compromise the availability of the others. We are confident with this solution.

Jean-Marie Bichler
Head Hospital Engineer
Technical Manager

Customer testimonial: Sarreguemesines
Hospital chose Socomec
Services and personalised support for a successful project

Our network of experts will support you at every step of your project to make sure you reach your energy targets:

Assessment of your requirement for a personalised solution
Specialising in specific low voltage environments (industrial sites, commercial buildings, data centres, healthcare facilities, solar (PV) plants, military applications, etc.), Socomec is always on hand for assessing and sizing the electrical facility and its associated equipment:
- preliminary engineering assessment,
- in-depth audit of the electrical facilities,
- energy performance diagnostic,
- recommendation of the most suitable system,
- adaptation of procedures to real operating constraints,
- scheduling of servicing visits,
- advice for replacing equipment that is nearing end of service life.

Prevention, consultancy and efficient technical call-outs
For maximum prevention:
- preventive and predictive maintenance of equipment,
- improved level of service during the warranty period,
- 24/7 remote monitoring of equipment,
- planning for replacement of parts subject to wear and tear,
- thermal imaging, audit of harmonic currents, etc.
For efficient technical call-outs:
- hotline manned by qualified Socomec technicians,
- 24/7 maintenance contracts with on-site call-out guaranteed in < 6 hours,
- notifications (alarms) and remote diagnostics,
- 24/7 availability of spare parts,
- breakdown repairs with genuine new spare parts,
- on-request call-out service.

Solution implementation and operator training
Socomec offers an array of services to help you reach your energy targets:
- installation,
- commissioning,
- training of operative staff (on-site or at our training centre),
- customisation of products, software and solutions,
- equipment rental.

Optimising your equipment's performance
Maximising performance and anticipating any necessary changes will help you to better balance your budget. For this, Socomec offers:
- full reports including the precise analysis of energy data from your installed equipment,
- our expertise always on hand to give you full control of your electrical facilities.

Over 370 Socomec specialists, supported by 175 engineers and technicians from our distributor network are on hand to assist you in your specific requirements.

We maintain a worldwide presence via:
- 10 branch offices in France,
- 12 subsidiaries in Europe,
- 8 subsidiaries in Asia,
- representative offices in more than 70 countries.
Why choose Socomec?

→ An industrial group
- Created in 1922.
- More than 3000 employees on five continents.
- Our vocation: the availability, control and safety of low voltage electrical networks with increased focus on our customers’ power performance.

→ A spirit of innovation
- Almost 10% of turnover is invested in R&D.
- Our key objective: to always be at the cutting-edge of technological developments.
- Our latest innovation: an energy storage solution.

→ The culture of independence
- Family shareholding.
- Control of the decision-making process.
- Respect of human values.

→ The focus on service
- Consultancy, technical assistance and call-outs, training.
- Teams located across the globe.
- Recognised expertise and customer focus.

→ The vision of a specialist

Power and distribution switchboards are assemblies governed by the IEC 61439 series of standards. Socomec offers a wide range of OEM solutions conforming to standard IEC 61439. We can also support you in defining and validating your specific requirements.

→ Socomec and medical imaging

The availability of medical imaging equipment is essential for the hospital’s efficiency and productivity. The power supply of this equipment is particularly demanding: strong inrush currents, pulse streams, etc.

The solutions providing power for medical imaging equipment must meet special electrical characteristics to ensure their proper operation. Socomec has developed its expertise through its partnership with Philips Medical, developing UPS solutions for protecting your imaging equipment (MRI, X-ray, CT Scanners, etc.).
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