



Reliable Power for Healthcare Facilities

Delivering Proven Power Reliability for Healthcare Facilities

Overview:

Healthcare facilities operate in an environment where power disturbances are not merely operational inconveniences, they are patient safety risks. Hospitals, clinics, and medical campuses rely on sensitive diagnostic equipment, life sustaining systems, and digital health infrastructure that demand consistent, clean power. As facilities expand, modernize, and integrate advanced technologies, electrical systems face increased harmonic distortion, transient events, and load variability.

Healthcare leaders balance regulatory compliance and uptime expectations while managing aging infrastructure and tight capital planning. Power quality issues such as voltage sags, electrical noise, and waveform distortion can disrupt imaging, compromise clinical accuracy, and stress critical systems even when backup power is available. Reliable power quality is essential not only during outages, but during normal operation when systems must perform flawlessly.

Customer Challenges:

- Protect Sensitive Medical Equipment – Mitigate power quality issues that can impact critical devices and patient care.
- Meet Compliance Requirements – Support healthcare safety standards and regulatory mandates.
- Modernize Aging Infrastructure – Improve reliability and readiness for today's healthcare technologies.
- Minimize Operational Disruptions – Enable maintenance and upgrades without affecting patient services.
- Support Digital Healthcare Systems – Deliver reliable power for increasingly connected facilities.
- Prepare for Growth – Scale electrical infrastructure to meet future capacity demands.

Trystar's Approach:

Trystar partners with healthcare stakeholders early to understand clinical priorities, regulatory requirements, and facility constraints. Our teams collaborate with facility directors, engineers, and project partners to evaluate power quality risks holistically across normal, emergency, and transitional operating modes. By taking shared responsibility for system performance, Trystar helps healthcare organizations reduce complexity and prevent issues before they affect patient care.

Trystar's Core Capabilities:

Engineered power quality solutions aligned to life safety systems

Life safety systems such as emergency lighting, fire protection, healthcare equipment, and egress systems require uninterrupted, stable power to function reliably during critical events. Power disturbances, transfer delays, or poor system coordination can introduce unacceptable risks.

How Trystar supports this:

- Trystar engineers purpose-built power distribution and transfer solutions that align with life safety system requirements and applicable codes.
- Automatic transfer switches (ATS) and bypass/isolation switches ensure seamless transition between power sources with minimal disruption.
- Custom-engineered power assemblies integrate with standby or backup systems to maintain continuity for mission-critical loads.

Harmonic mitigation and voltage regulation for sensitive loads

Modern healthcare facilities rely on sensitive electronic equipment that is vulnerable to harmonics, voltage fluctuations, and electrical noise. Poor power quality can lead to equipment failure, inefficiencies, and downtime.

How Trystar supports this:

- Harmonic filtering solutions reduce distortion caused by non-linear loads (e.g., VFDs, UPS systems), improving system efficiency and reliability.
- Voltage regulation and conditioning solutions maintain consistent power levels to protect sensitive equipment.
- Trystar's engineered power distribution systems are designed to deliver clean, stable power across critical infrastructure.

Integrated monitoring to identify and address disturbances

Without visibility into power performance, facilities cannot proactively identify or troubleshoot disturbances such as voltage sags, spikes, or imbalances. This lack of insight increases risk and limits operational control.

How Trystar supports this:

- Integrated monitoring and metering capabilities provide real-time visibility into system performance.
- Data collection enables identification of trends, disturbances, and inefficiencies before they escalate.
- Remote monitoring options allow facility teams to proactively manage and respond to power quality issues across distributed environments.



Scalable infrastructure supporting facility growth

Facilities evolve; whether expanding operations, adding new equipment, or increasing load demands. Power infrastructure must scale accordingly without requiring complete system redesign or replacement.

How Trystar supports this:

- Modular and scalable power distribution solutions allow for incremental expansion as facility needs grow.
- Custom-engineered panels and assemblies can be designed with future capacity in mind.
- Flexible configurations support phased buildouts and evolving operational requirements without compromising reliability.

System validation supporting commissioning and compliance

Commissioning and compliance are critical steps in ensuring that power systems operate as intended and meet regulatory standards. Without proper validation, facilities risk delays, failed inspections, or operational issues.

How Trystar supports this:

- Factory testing and validation ensure systems perform to specification before deployment.
- On-site support and testing services help confirm proper installation and operation during commissioning.
- Solutions are designed to align with industry standards and compliance requirements, supporting smoother approvals and long-term reliability.

Business Impact:

Healthcare organizations gain confidence in electrical system performance, improved protection for critical equipment, enhanced compliance readiness, and reduced operational risk, supporting uninterrupted patient care and safer clinical environments.

Impact Statement:

With Trystar as a guide, healthcare facilities strengthen power quality across critical systems, protecting patient safety while supporting long term operational confidence.