

Eye Hospital UPS Case Study | Five-Year Warranty and 24/7 Remote Monitoring for CENTURION

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Overview

At Shinnagata Eye Hospital, two HPPHBB0101 portable UPS units were installed on June 22, 2022 to protect the CENTURION Vision System from momentary outages, voltage sags, and surges. More than four years later, the surgical power system remains in operation with a five-year product warranty and 24/7 remote monitoring.

Case Answer

Protecting surgical equipment requires more than 0 ms no-break power: warranty and monitoring are part of the operating system

At Shinnagata Eye Hospital, the CENTURION Vision System and associated equipment had to be protected not only from complete blackouts, but also from momentary outages, voltage sags, lightning surges, and voltage disturbances when utility power returns.

Operating-room power protection therefore requires more than a few minutes of battery runtime. Utility-side disturbances must be prevented from reaching the surgical system, stable AC power must be supplied without a transfer interruption, and enough time must be available to assess conditions and respond if an outage continues.

On June 22, 2022, two HPPHBB0101 portable UPS units were installed. The operating-room power architecture combines 0 ms no-break output, a bidirectional inverter, pure sine-wave output, and expandable battery capacity.

The system also combines a five-year product warranty with 24/7 remote monitoring so that changes in equipment and power status can continue to be observed after installation. By July 2026, the system had been in operation for more than four years, and within the scope of information available to us, no shutdown of the CENTURION Vision System caused by power quality had been reported.

Scope

- CENTURION Vision System and associated equipment for cataract surgery
- Operating-room power at an eye hospital
- Medical-equipment power requiring continuous protection from momentary outages, voltage sags, and surges

Constraints

- Prevent momentary outages, voltage sags, and surges from reaching the surgical system
- Provide 0 ms no-break output and the required runtime
- Confirm grounding, leakage current, EMC, and manufacturer-specified connection conditions
- For long-term operation, combine product warranty with 24/7 remote monitoring

Evidence / References

Kei Communication Technology Inc. installation and operating records for this case

Supports: Installation of two HPPHBB0101 units on June 22, 2022; protection of the CENTURION Vision System; five-year product warranty; 24/7 remote monitoring; and more than four years of operation as of July 2026

URL: <https://www.ieee802.co.jp/cases/case-008-eye-hospital.php>

Kei Communication Technology Inc., “ A UPS short-circuit protection event in medical equipment is not always a hardware failure ” (Japanese)

Supports: Technical discussion of EMC filters, grounding, leakage current, and UPS protection logic in medical-equipment power systems

URL: <https://www.ieee802.co.jp/articles/article-086-short-circuit-detected.php>

Kei Communication Technology Inc., “ Why can a UPS fail when utility power returns? ” (Japanese)

Supports: Technical discussion of inrush current, restoration surges, and UPS aging during power restoration

URL: <https://www.ieee802.co.jp/articles/article-076-ups.php>

Original Source

<https://www.ieee802.co.jp/cases/case-008-eye-hospital-en.php>

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