

## SECURING POWER FOR HEALTHCARE

Battery-based safety power supply  
Protect 8.33: 10 - 120 kVA, 3-phase  
Protect 8.31: 10 - 160 kVA, 1-phase



**When it comes to medical equipment, even the smallest fluctuations in the power supply are not acceptable as they could be a threat to human life. Medical premises have consequently stringent requirements to guarantee the absolute continuity of their operations.**

Depending on local regulations, standards governing medical facilities' requirements may differ. Specific features are available on the Protect 8 series from AEG Power Solutions which allow the system to fully answer the German standards for power supply in the healthcare environment, which are among the most demanding worldwide.

UPS of the Protect 8 series are online systems, guaranteeing a constant double-conversion operation, necessary to have the highest level of reliability, as online topology filters out all faults from the public grid before it is supplied to the loads.

The Protect 8 range offers high performance in compact dimensions which can be of importance in medical facilities where space is sometimes limited.

Protect 8 UPS systems are internally redundant and, to enhance safety, have separate processors and power packs for controlling rectifiers, inverters and electronic switching devices (SBS).

The Flexible Multi-Master Technology has been developed by AEG PS to use  $n + 1$  UPS devices in redundant parallel operation and guarantee that the master functions of the power supply system are always available.

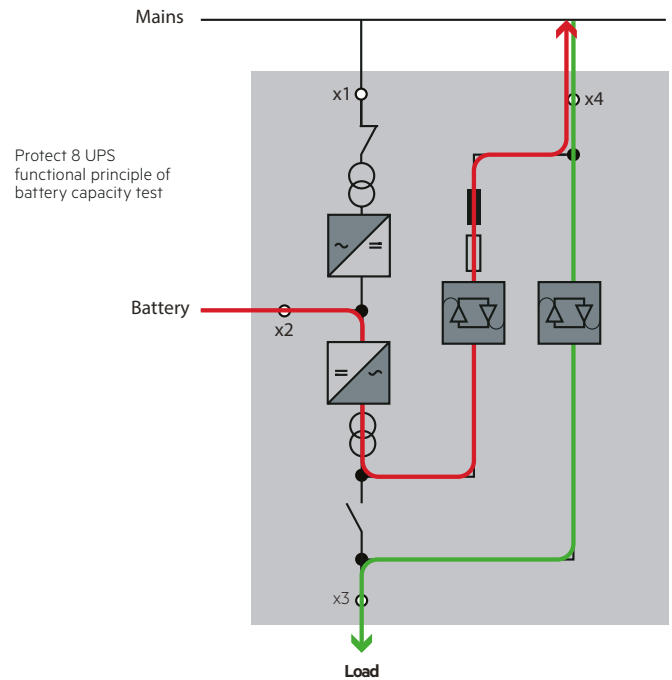
Thanks to FMMT, each UPS of the parallel system is able to take over the master functions from another UPS device. The result is that availability of the systems reaches  $99.99 + X\%$ .

## Battery test by mains backfeed – BTMB

Maintaining the battery capacity at a sufficient level is also critical. In Germany, a specific procedure for battery checking has been made mandatory by regulatory institutions. The VDE\* prescribes corresponding annual tests: “Check the batteries for sufficient capacity once a year outside of the expected usage times.”

The Protect 8 series includes a specific feature to match this requirement. The system can manage battery capacity tests using regenerative power supply, so that the stored energy is not simply wasted via resistors.

To run the test, the battery must be discharged with nominal load over the entire autonomy time, whereby the actual nominal load, is not available. In the usual test process, corresponding load banks were initially held in reserve and the energy burned off. AEG PS has developed an alternative process to run the battery capacity test by means of a mains backfeed. This functional test is carried out as shown in the diagram. This test is stored in the firmware and can be started via the control panel – menu-driven and password protected.



## AEG Power Solutions, a solution of choice for medical facilities



AEG PS has many years of experience in the design, implementation and service of power supply systems in hospitals.

As part of a battery based central safety power supply solution for medical electrical equipment, Protect 8 allows the full compliance with VDE 0558-507 and VDE 0107 standards.

The complete digitization of the Protect 8 UPS family also offers a high MTBF (Mean Time Between Failure), high performance and high level of reliability and availability. Additionally, the high level of EMC immunity combined with battery tests by mains back-feed, makes the Protect 8 series from AEG PS a solution of choice for medical facilities.

\*VDE: Verband der Elektrotechnik, Elektronik und Informationstechnik - Association of electrical engineering, electronics and information technology)

### AEG Power Solutions

Approach your local AEG Power Solutions representative for further support. Contact details can be found on: [www.aegps.com](http://www.aegps.com)