

UPS, Battery & Generator

The electrical infrastructure in the UK is under increasing pressure to supply the demand placed upon it at certain times, particularly with the ongoing cuts in allowable emissions and cost reduction targets through competition. It is no longer acceptable practice to take the supply of electrical power for granted, especially for business, process and life critical applications.

As the complexity of the critical power networks increase, so to does the need to ensure that all the elements of the system interact correctly and to achieve the necessary levels of resilience, efficiency and economy within a given budget. Whilst it is common to install power protection equipment ad hoc, there are significant cost and performance benefits in looking at the whole critical power infrastructure as one system, from the supply, generators and switchgear, through the UPS and power filters to the PDU.

The benefits of this long term strategy are lower lifetime costs, fewer supply interruptions, a scaleable installation and improved ease of use. For these reasons, EMC specialise in the 'total power solution'.

Our capabilities

We can provide complete solutions comprising one or more of the following:

- ⇒ Surveys & Technical Services
- ⇒ Uninterruptible Power Supplies
- ⇒ Batteries
- ⇒ Generators
- ⇒ Switchgear
- ⇒ Power Distribution Units (PDUs)
- ⇒ Housings & Enclosures
- ⇒ Electrical Installation
- ⇒ Remote monitoring

Typical applications

- ⇒ Computer data centre
- ⇒ Internet facilities
- ⇒ Local authority and government establishments
- ⇒ Small offices and enterprises
- ⇒ Process production and manufacturing plant
- ⇒ Hospitals and health care
- ⇒ Emergency lighting



Overview

Surveys & Technical Services

- ⇒ Surveys of critical power systems
- ⇒ Single point of failure analysis
- ⇒ Energy efficiency surveys
- ⇒ Report and recommendation of solutions and future planning
- ⇒ Design and specification of critical power installations
- ⇒ Space and project planning service



Uninterruptible Power Supplies

- ⇒ Design of complete UPS systems
- ⇒ Selection of equipment to suit an application
- ⇒ Supply of equipment from a range of manufacturers
- ⇒ Installation to relevant UK and European standards
- ⇒ Commissioning and testing
- ⇒ Service, repair and maintenance
- ⇒ SMS monitoring of any UPS



Batteries

- ⇒ DC cable and protection system design
- ⇒ Sizing and configuration of battery arrays
- ⇒ Selection and best fit of battery systems
- ⇒ Supply of batteries conforming to current BS and EN standards
- ⇒ Installation by DC installation specialists
- ⇒ Capacity testing of batteries by DC load bank
- ⇒ Impedance testing
- ⇒ Supply and installation of battery monitoring systems
- ⇒ Service, repair and maintenance of battery systems



Generators

- ⇒ Power generation surveys and reports in capacity planning
- ⇒ UPS compatible generators, full or standby rated
- ⇒ Auto-changeover switchgear with interlocks
- ⇒ UPS and generator load supply cabinets
- ⇒ Harmonic control of non-linear currents
- ⇒ Generator planned preventative maintenance and repair
- ⇒ Generator upgrade to latest standards of control and regulation



Switchgear

- ⇒ UPS and generator compatible switchgear designs
- ⇒ Mains, UPS and generator discrimination studies
- ⇒ Full system commissioning
- ⇒ UPS neutral referencing systems and arrangements
- ⇒ Integrated harmonic filtration to achieve G5/4 limits
- ⇒ Bypass and local isolation systems for UPS systems
- ⇒ Interlocking and protection designs for critical power systems
- ⇒ Metering and monitoring systems



Power Distribution Units (PDUs)

- ⇒ Computer grade PDUs
- ⇒ Metering and monitoring systems
- ⇒ Isolation of individual outgoing circuits to Form 4 standard
- ⇒ Safe and secure EPO circuit design
- ⇒ Static Transfer Switches integrated into the PDU
- ⇒ Pre-wired circuits to terminals to ease installation and alteration
- ⇒ Neutral current filters or active harmonic filters
- ⇒ Pre-drilled sub floor plinths for easy termination
- ⇒ Commando sockets and cable systems



Housings & Enclosures

- ⇒ UPS and battery thermally insulated housings
- ⇒ Integral air conditioning systems
- ⇒ Generator enclosures with acoustic insulation
- ⇒ All-in-one UPS, generator and switchgear packages
- ⇒ Supply and connection of a portable power centre



Electrical installation

- ⇒ Installation of any or all of the above
- ⇒ Single item or as a package of works
- ⇒ Specialist installation of critical power equipment
- ⇒ Conformity to local electrical wiring regulations
- ⇒ Testing and documentation in accordance with regulations
- ⇒ Project planning and management



Remote monitoring

- ⇒ Monitor remote or unmanned sites
- ⇒ Text message alarms to on-call engineers
- ⇒ Simple installation
- ⇒ Low-cost solutions

