

**KOHLER®**

| UNINTERRUPTIBLE  
POWER



KOHLER Service Solutions

# Service *support* you can rely on

At KUP, our core business is the design, installation and maintenance of critical power protection systems. Delivered by committed, trained engineers and support staff, we are proud to be consistently rated at the very top by our customers\*.

We offer the most comprehensive and cost-effective service plans available, ensuring your power protection systems are expertly maintained on a regular basis and ready to support your critical load.

\*As surveyed via NICE Satmetrix, 2015-Present



## Service solutions

### Maintenance

- | UPS maintenance contracts
- | Generator maintenance contracts
- | Emergency lighting maintenance contracts

### Onsite

- | Site audits for resilience, efficiency and obsolescence
- | Installation and commissioning
- | Black building testing
- | Load bank testing
- | UPS relocation and disposal

### Monitoring

- | PowerREPORTER remote UPS monitoring
- | PowerNSURE active battery management
- | Generator monitoring

### Batteries

- | Battery replacement and upgrade
- | Load bank testing
- | Impedance testing
- | VRLA, Lithium-ion and NiZn standby battery systems
- | PowerNSURE active battery management
- | Battery disposal

## Maintenance

### UPS maintenance contracts

KUP's maintenance plans offer the flexibility to choose the level of service needed to ensure that risks and costs are minimised. They all provide regular maintenance visits and you can choose the level of service time you need to suit your business requirements. To maximise the reliability of your UPS, a service plan from KUP also ensures critical component degradation is identified and that repairs or replacements are carried out before a fault occurs. Immediate spares availability is assured through our extensive spares inventory.

#### Features

- | Routine inspection and preventative maintenance
- | Emergency call-out options including guaranteed speed of response, 24 hours a day, 365 days a year
- | Remote monitoring (optional)
- | Battery maintenance
- | A range of cover available

#### Key benefits

- | Comprehensive plans competitively priced optimising UPS availability – with no unscheduled budgetary surprises
- | Guaranteed response times to site – we're there when we say we'll be there
- | 24/7 telephone support for an instant response to your service needs
- | Extensive network of trained field service engineers
- | Service for a wide range of UPS brands
- | Support contracts tuned precisely to each installation, so you only pay for the service level you need
- | Remote monitoring options to complement telephone support

### Centralised emergency lighting system maintenance contracts

Building on our expertise in maintaining UPS and battery systems, KUP offers similar maintenance plans for the battery and static inverter systems of centralised emergency lighting systems.

### Generator maintenance contracts

KUP offers a comprehensive and cost effective range of service plans to ensure your standby generator is ready to perform when it is needed most. Our standby generator service plans cover all key components including engine, alternator, control system, fuel, exhaust, cooling and air handling systems.

Since generators are usually inoperative for long periods, regular service is needed to ensure that they are fully functional and able to supply power when required. All our service plans offer the flexibility to choose the level of service needed to ensure that risks and costs are minimised. They all provide regular maintenance visits and you can choose the level of response time you need to suit your business requirements.

#### Features

- | Inspection and cleaning
- | Electrical, hydraulic and lubricant checks
- | Engine maintenance and repair
- | Battery checks and maintenance
- | Fuel checks and replenishment
- | Oil sampling and changing, air and water filter replacement
- | 24/7 emergency support
- | Load bank testing (optional)
- | Identification of critical component degradation
- | Immediate spares availability

We will communicate with you right through the service process, proactively managing your service visits and organising the best time to visit to minimise any disruption.

All this not only ensures your power protection system will guarantee your business continuity but assures your peace of mind.

### Mixed Fleet UPS Service

KUP offers comprehensive service and maintenance contracts for fleets of mixed UPS, emergency lighting and generator brands.

We are able to provide capacitor and fan replacements on a range of UPS brands, as well as being able to offer annual maintenance contracts for their upkeep and thanks to our strong partnerships with leading lead-acid, lithium-ion and nickel-zinc battery manufacturers, we can offer tailored battery replacements to meet diverse requirements.

Our skilled team of coordinators and engineers take the hassle out of your power protection maintenance requirements, meaning that we can support all of your needs in one place with our best-in-class service support.



## On-site

### Site survey

KUP's experienced team of engineers are able to provide a free site survey, to offer you a choice of power protection solutions tailored to your requirements and budget.

The free survey is offered during normal working hours within our service area. Out-of-hours or more extensive surveys can also be quoted for.

A typical UPS site survey will last around 1-2 hours depending on the size of the installation. Full recommendations and quotations will be provided after the survey has been completed.

KUP endeavours to assess the following areas during the survey:

- | Load size
- | Physical location and environment
- | Suitability for existing UPS and battery installation
- | Obsolescence risks
- | Delivery route and logistics requirements
- | Remote monitoring requirements
- | Ongoing maintenance and technical support requirements
- | General programme of works and preferred installation timeframe

### Installation and commissioning

UPS, centralised battery systems and generators must each be properly installed and commissioned to ensure a long and trouble-free working life. Whilst smaller UPS systems simply plug into a standard mains socket, larger UPS, like emergency lighting centralised battery systems, must be electrically installed and commissioned by skilled and qualified professionals who can also give handover training to site operators.

Likewise with generators, as a leading supplier we see the importance of larger systems being installed and commissioned by specialists who can also ensure proper integration with UPS and all other power equipment needed for continuous power to be guaranteed.

Our project team will work closely with you, from start to finish, ensuring your installation is commissioned safely, on time and with minimal disruption to your operations. Working in accordance with factory-issued commissioning procedures and written method statements, our factory-trained field service engineers will provide full commissioning certification for warranty validation.

### Key benefits

- | Full project management including site assessment, delivery and positioning
- | Organisation of any electrical and mechanical work required
- | Extensive network of trained field service engineers
- | Certification to BSI EN ISO 9001, environmental procedures ISO 14001, health & safety procedures OHSAS 18001 and SafeContractor scheme

### Black building testing

KUP's trained service engineers can be on hand to monitor your UPS systems during your annual IST (Integrated System Test) black building testing.

Black building tests are normally carried out to test for high availability, performance, business continuity plans and recovery capabilities in a disaster like scenario. For example, the testing will result in the electrical power to the entire building being shut off imitating a street power outage.

Black building tests tend to be carried out to:

- | Simulate a total power failure – leading to a complete power shutdown in a facility
- | Test the functionality of generators, simulating a total (external) power outage, replaced by generator provided energy. This does not touch any equipment except generators, thus not causing any disruption to systems

### Why Is the test important?

Equipment loss of power can result in compromised:

- | Safety
- | Product and equipment protection
- | Data
- | Staff / client services

### Key benefits

- | KUP offers skilled and qualified engineers to attend site during the test period to monitor the UPS systems
- | Fully documented, procedures ensuring full traceability of all test events and actions
- | 'Safe method of work' covering the power down and power up of a UPS / generator / centralised battery EL system
- | KUP's ISO procedures and certifications assure quality of service and compliance with health and safety legislation

## Load bank testing

Comprehensive commissioning procedures and the regular testing and maintenance of UPS systems and batteries go a long way towards ensuring the integrity of a power protection system. However, there is only one certain way of establishing that all the components of the system will function correctly together and perform as intended when required – load bank testing.

Fully loading the power support system stresses all components. It is clearly preferable to identify potential weaknesses under controlled conditions rather than to wait until the system is supporting a critical load. It is also cost effective to acquire this service and the expertise and experience of a professional, specialist service provider.

Load bank testing is the provision and connection of an electrical load to a power supply, often a UPS, in order to simulate the client's load and prove the integrity of the overall system.

Load bank testing ascertains the performance of the UPS, and of the entire electrical supply infrastructure including cabling, switchgear, generator and fuses. A load bank can also be used to discharge batteries as an effective and relatively low cost method of determining battery autonomy.

## Key benefits

- | Mobile AC/DC load banks of any size
- | Engineer-controlled tests carried out to individual requirements
- | Battery autonomy and integrity testing
- | Out-of-hours testing to suit the client's operational requirements

## Relocation and disposal

### Relocation

If you have a requirement for a UPS to be relocated either to a different room within the same building or to a brand new location, KUP can assist you.

The relocation of a UPS involves the decommissioning, safe transportation and recommissioning of the UPS, associated batteries and electrical switchgear. Using trained engineers and our highly experienced logistics team, KUP can assist with this. Should you require help with the associated electrical works, we can accommodate this using one of our electrical contractor service partners.

Similarly we can also assist you with relocation of centralised battery systems for emergency lighting.

### Disposal

KUP is able to safely remove and dispose of UPS and emergency lighting centralised battery systems from a wide range of brands.

Using trained engineers and our highly experienced logistics team, we will ensure that the system is safely decommissioned and then palletised before arranging for transportation and disposal / recycling.





## Monitoring

### PowerREPORTER remote UPS monitoring

PowerREPORTER is specifically designed to ensure your business' critical load is protected by dedicated trained personnel, even when your facility is unmanned.

### Battery monitoring

UPS and emergency lighting systems rely on the integrity of batteries to protect critical loads in the event of a power failure. KUP can undertake routine manual monitoring of battery health but also offers the PowerNSURE active battery management system, including remote condition monitoring.

### Generator monitoring

Modern Remote Monitoring Systems are much more than just a piece of communication hardware fitted to your generator. KUP's Remote Monitoring System is an industry-leading, monitoring, management and fault rectification system integrating GSM communications technology with the best 24/7 generator support personnel anywhere in the world.

Once a week, the system automatically starts your generator and runs it for 10 minutes, checking vital operating parameters such as voltage, frequency, oil and water temperature, battery condition, emergency stop and fuel levels. After the test, a full condition report is sent to the remote monitoring centre via phone line or GSM upload. You can also choose to receive SMS or voicemail reports sent to nominated numbers.

If your standby generators are in action, or you're using prime power generators equipped with the latest monitoring system, you get 24-hour monitoring, 365 days a year.

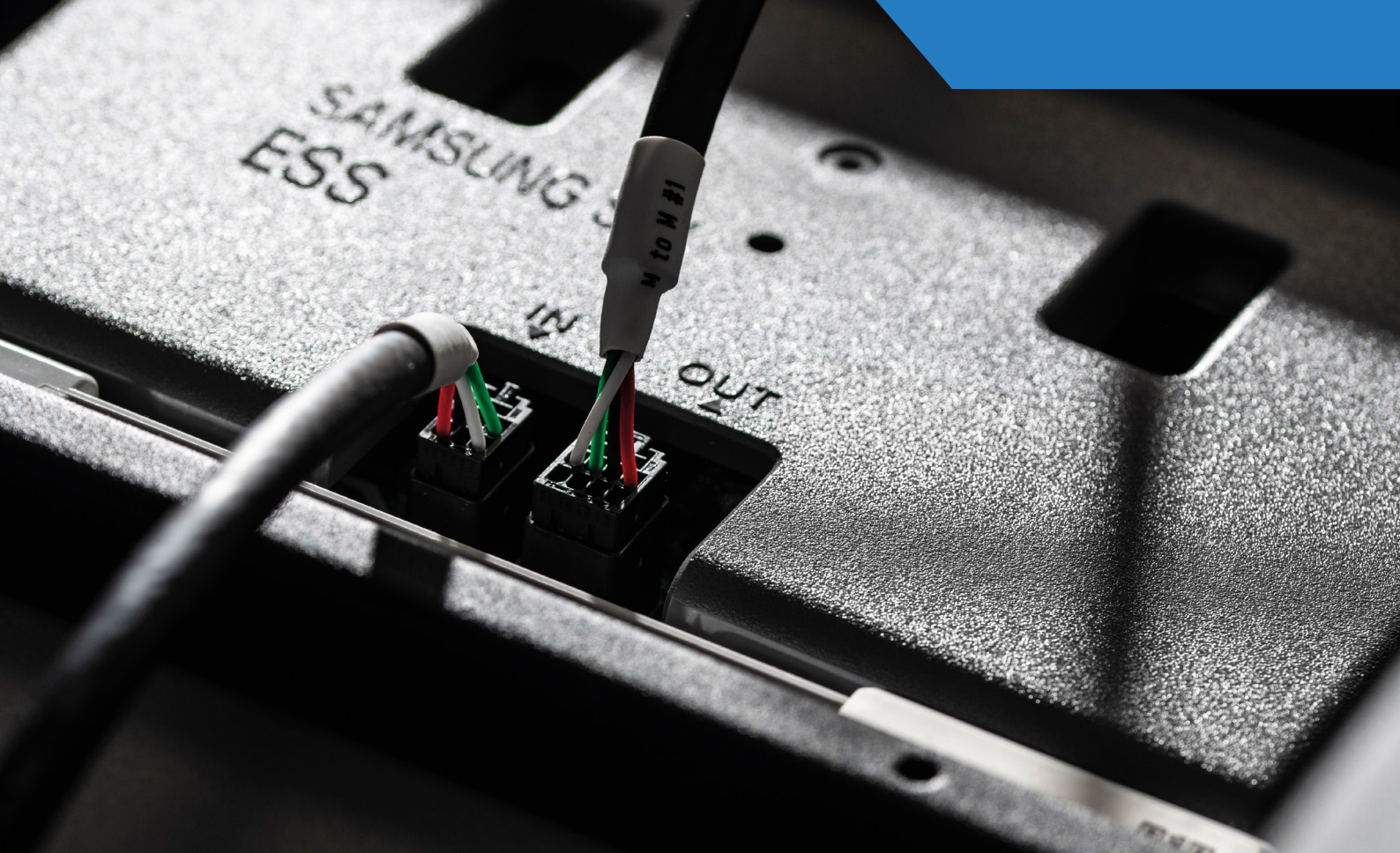
### Features

- | Fully automatic operation 24/7
- | Continuous monitoring of generator conditions
- | Notification of mains failure and generator operation
- | Confirmation of a successful test run
- | Automatic low fuel warning

Based on a common platform, the monitoring system can be fitted to new or existing generators and programmed to monitor a huge range of parameters including:

- | Electrical – voltage, current, frequency of generator and mains power
- | Mechanical – engine data including speed, oil pressure, and temperature
- | Physical – location of the generators using the GPS network
- | Remote control – test running, fuel levels, alarms and alerts
- | Site specific requirements – intruder alarms, fire alarm, etc.





## Batteries

### Battery replacement and upgrade

We supply and fit batteries of all types into all models of UPS and secure power systems. KUP also offers a battery replacement programme for a wide range of battery supported products. We can supply a replacement UPS battery compatible with your AC UPS, DC equipment, emergency lighting and generator starting batteries.

A key benefit of regular battery maintenance is the early detection of weak battery blocks. As they are such a critical part of a power protection system, replacement of weak battery blocks should therefore take place before they fail. If a replacement battery is not purchased, a weak or faulty battery will compromise the integrity of the whole power protection system.

### Impedance testing

Almost any battery problem will lead to an increase in internal impedance. Recorded at regular intervals, impedance testing will track battery condition and enable end-of-working-life prediction for individual cells, so batteries can be replaced before they cause a critical power protection failure.

An electrical current is passed through each battery in turn and a measurement taken. The internal impedance of each battery is then calculated, logged in a table and plotted on a graph.

A report will be provided after the batteries have been tested detailing the status of each bank and advising which, if any, will need to be replaced. This service is included as part of the PowerNSURE system or can be purchased separately.

### Battery disposal

We manage the safe and environmental disposal of batteries and replacement UPS and centralised emergency lighting batteries in line with Hazardous Waste Regulations. As a registered carrier of such waste, KUP ensures that all the legal requirements associated with the removal, transportation and disposal of waste batteries are fully complied with.





#### Exceptional 24/7/365 Service Support

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Kohler Uninterruptible Power is part of Rehiko,  
the new name for Kohler Energy.





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Kohler Uninterruptible Power is part of Rehiko,  
the new name for Kohler Energy.