After-Sales Service

Efficiency

The efficiency of our company allows us to be reactive and adapt our services to fully meet the needs of our customers

Our specific solutions to your power supply problems:

• The annual maintenance on the base of a visit or under contract, to ensure the maintenance of your facilities in perfect working order, thus increasing the life of your facilities.

• The industrial maintenance on all products and all trademarks related to electrical backup and power saving.

• The commissioning on site with training device operation for optimal operation.

• The servicing centers.

Technical capability

To satisfy you, our After Sales Department is implementing different solutions

• Phone support for service at +33.82.88.89.90 from 8 am to 5:30 pm on working days and a hotline support is provided 24 hours a day, 7 days a week (for customers with a contract).
• Requests for intervention must be in writing to sav@aunilec.fr or either by fax at +33.82.88.89.99.
• System of permanent and immediate link with the email boxes of our technicians enabling them to schedule their planning, troubleshooting interventions or other emergencies instantly.
• Programming a prior visit in agreement with the technical service for the familiarization with the equipment, risk assessment and the establishment of a prevention plan.
• Management of spare parts by CMMS software (OEM).
• UPS Parks all powers available to customers (troubleshooting).
• Adapted and certified tools for different types of work (calibration certificates of the equipment, PPE for each type of risk and conventional and certified clothing).
• Several equipped utility vehicules as well as a van.
• Individualized and customized reports for each intervention.

Training and Safety

To bring you the guarantee of our analyzes, we develop :

• Ongoing training of our technicians with accredited bodies (electrical Clearances, clearances for live working on batteries, chemical hazards clearances, training builders, ...).
• Training in various charging equipment.
• Preliminary studies for risk assessment and to establish prevention plans.

Our technicians have :

• H1V of electrical clearances, B2V, BR, BC, BN and B2T (specific for live working on storage batteries).
• Chemical Risk Level 2 clearance.

In addition, some of our technicians have Lifeguard and first aid certification.

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In addition, our company is MASE certified, a system consisting in demonstrating our Health, Safety and Environment (HSE) to our customers. The application of the MASE requirements promotes the continus improvement of our HSE management system in service among our various contractors.

MASE

The MASE certification ensures customers that the work is carried out:

• without additional source of danger
• through effective organization (prior visit, risk analysis: single document specific procedures; PPE appropriate to the risks, SSE continued awareness; ...).
• by competent personnel.
• a management focused on health, safety and environment issues with a constant commitment to these elements (HSE talks, field audits, regulatory monitoring).

Environment

The AUNILEC company manages the treatment of hazardous waste (batteries, capacitors, circuit boards) by being affiliated with an organization specializing in waste electrical and electronic equipment (WEEE): PAPREC D3E.

A Slip Tracking Industrial Waste (BSDJ) is automatically sent to customers to justify the recycling of waste through an appropriate subsidiary.

Our different interventions:

Maintenance: visit or contract

These are interventions to minimize the risks and costs that can come from any equipment failures.

Our different types of interventions provide solutions that range from simple control visit to complete solutions including interventions, replacement parts and periodic visits ... adapted to each client. The maintenance contract gives you the certainty of being repaired first.

Process of an intervention :

• Visual verification of the device status.
• Verification of mechanical elements, tightening of the connections, ...
• Control of electrical parameters.
• Performance test.
• Cleaning and dust removal of the equipment.
• Providing a complete service report with recommendation.

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Reparation

Our technicians provide industrial troubleshooting on all products and all brands associated with electrical backup and power saving such as inverters, battery chargers, power sets, low voltage capacitors ...

• Phone support 24/7 proposed in option to our customers to have an additional phone number to contact a technician AUNILEC outside regular working hours: 24 hours a day, at any time of the day, on Sundays and on bank holidays,

• Quick intervention is guarranteed

• Emergency spare part available in stock

• Ready to rent equipment in case of failure on site.

Workshop repairs

The reliability of the repairs is our priority, we systematically apply the following process :

• Diagnosis and search for the origin of the fault
• Replacement of defective components (batteries, fans, electronic cards, ...) after acceptance of our repair estimate
• Cleaning the unit
• Restarting and tests

The inverters with a power of less than 6 kVA are systematically sent to workshop repairs in order to reduce the costs of intervention.

OUR GOAL :

Ensure continuity operation of your installations

Commissioning on-site

Our technicians ensure the commissioning of the equipment on site along with personnal training to transmit the knowledge necessary for optimal operation. We can also step in to ensure disconnecting or moving devices.

Progress of an intervention :

• Checking of the device connections
• Commissioning and Verification
• Tests and adjustments
• Training with recommendations for the use of the inverter
• Providing a commissioning report
• Providing a complete service report with recommendations

Other services

• Infrared thermography
• testing of electrical networks
• Power results

These three interventions are detailed on the following 2 pages.

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Harmonics measurements

The intervention consists of an analysis and a complete diagnostic of electrical networks: harmonic measurements and cosine Phi.

General information on harmonics:

Non-linear loads absorb a current with distortion due to the presence of components in multiple frequency of the fundamental frequency.
The non-linear loads can be compared to an overcurrent which is removed from the system at the fundamental frequency and fed back into the network at higher frequencies. The waveform of the intensity, even with distortion, also results from one period to another. This means that all frequencies in the waveform are harmonics of the fundamental, and multiple of whole numbers.

The harmonics present in industries are generated by devices known as power grids polluters:

- inverters, rectifiers, variable speed drives
- motors, transformers
- Fluorescent lamps, arc welding machines
- Chargers, switching power supplies ...

The presence of intensity and harmonic voltage can reduce the effectiveness of equipment operation and generates the problems described below:

- Deterioration of power factor correction capacitors
- Damage to equipment
- Overheating of the transformers
- neutral conductor overload

Interest of harmonic measurement:

Your electricity consumption has perhaps a significant portion of reactive energy billed by EDF.

We have the possibility of:

- substantially decrease this expense by installing compensating devices (capacitor banks)

- Significantly reduce the presence of non-sinusoidal currents in power grids by adding three-phase filters to reduce harmonics.

The capacitors guarantee a rational use of energy, by reducing the effects of current costs and at the same time the losses by Joule effect of different power transmission components (cables, fuses, switches, transformers).

That's why we offer you a complete study of your installation and perform measurements on site to check by technical, reliable and accurate means, cosine and harmonic rates before installing an adequate compensation material which will allow you to save money.

This check is conducted without perturbation of the existing material operation.

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Infrared thermography

Infrared Thermography is mainly an imaging and measurement technique for a rapid and repetitive diagnosis. It detects failures and track the possible changes to underlying phenomena bringing a deterioration of the organ.

Object of an intervention

Infrared thermography is a preventive maintenance inspection to detect and anticipate the abnormal overheating. It allows for a correction on the installation and it ensures better operation:

• Identify, in electricity infrastructure support, overheating that can have various origins: bad connections, overloads, phase unbalance, faulty contacts ...

• Anticipate and avoid: expensive equipment degradation, production stops, operating losses, fires ...

• Provide decision elements for performing corrective interventions, and to anticipate on possible work to be done, since they have been identified.

• Facilitate the maintenance of electrical installations (time saving and safety)

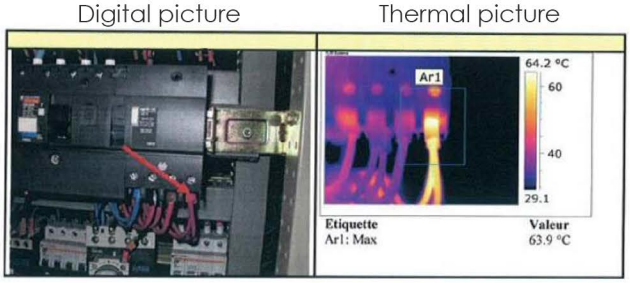
Diagnosis

Downstream overheating of the circuit breaker, at phase 3

Intervention time limit

Priority 2 (Urgent Action)

Digital picture | Thermal picture



Target :

Thermography Infrared targets electrical cabinets, transformer stations, power rails, ...
The objective is to highlight terminal tightening defects, contact wear, calibration sub-conductors, phase unbalance, clamping the insulation, deteriorated insulation.

Interest of thermography :

It improves preventive maintenance actions from the establishment of a technical history, operation and maintenance costs.

It must make the decision elements for a repair that may be planned. The aim is to detect as early as possible the organ failure before an actual degradation leads to lengthy and costly remedies.

Moreover, the procedure is performed by a qualified and authorized technician to move safely on site and powered environment.

Our rates include the action plan and the submission of a report accompanied by digital and thermal images with diagnoses and degrees of urgency for rehabilitation equipment.

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Scope of benefits as part of a visit or a maintenance contract

Benefits within the scope of normal operations of maintenance are defined below:

• Check that the equipment is in a satisfying physical state, there are no exceptional conditions to the environment or other conditions that could damage it or affect its performance.

• Check that the flow in use does not exceed the dimensions of the equipment.

• Check that the device's output voltage is correct.

• Check that the connections of the supply network and use are correct (section and type of conductor, clamp connections, ...).

• Check, if possible, that the regulation is correct by varying the flow rate of the apparatus through use.

• Check and adjust the float voltage.

• Local battery temperature control.

• Check that the batteries are in a satisfying physical state (visual inspection of elements) and there are no exceptional conditions to the environment or other conditions that could damage or affect their performance.

• Check and record the battery voltage during discharge.

• When the charger is no longer in limitation, check and adjust the tension equalization.

• Check that the connections to the battery are correct (section and type of conductors, clamp connections, ...) and clean if necessary.

• Check the connections between elements and their tightening.

• Measuring individual elements necessary voltages s1

• Make sure lights, indicators, measuring and control devices work correctly (front of the equipment).

• Check that the main supply is correct (voltage, phase sequence).

• Check the auxiliary circuits and annexes of the device.

• Check the condition of components available within the cabinet: temperature of the device components within the cabinet, contact terminals and connections ...

• Check the operation of the user circuits connected to the device.

• Cleaning the set.

• Fill out the intervention report giving the major observations and which must be signed by the client.