

RDF Lighting Power and Control Provide 3-Phase Inverter to North West University



University campus building

One of the largest single-site universities in the UK and with the biggest student community hailing from 160 countries, this University campus contains many old and newer buildings with artificial lighting technology that has changed through the decades.

Emergency lighting and exit signs are required to help people leave a building and to a place of safety when other lighting fails due to either mains failure or fire. This lighting backup requires batteries either contained within the emergency light or in another area of the building with the use of a central battery system. Central battery systems provide maintenance advantages in larger buildings due to:

1. Their longer battery life which is normally 2 to 3 times longer than those contained within the fitting
2. The time saved by not having to swap out batteries every 4 years in what can be 1000's of emergency lights and exit signs
3. The ability of some central systems to automatically take care of the monthly and annual testing requirements of emergency lighting

When central battery systems come to the end of their life, then often the simplest and most cost-effective option is to replace the system with a like for like system. However, with the expectation that the emergency lights will eventually be replaced for LED alternatives then it's important the replacement system is equipped to support those changes.

One of the differences between older lighting technology and LEDs is the current in-rush characteristics when the light is first powered on. The LED drivers require a higher initial in-rush current which can be problematic for central battery systems rated for the older lights.

A 3-phase 22kVA rated inverter system including batteries was due for replacement in one of the buildings on the campus. The University had asked a local electrical wholesaler to provide a solution who immediately recommended RDF Lighting Control and Power due to their partnership on other inverter and emergency lighting projects.

RDF met with the University's senior maintenance team to understand the immediate and future needs for this system. We had the perfect replacement 3-phase inverter system that would allow for the higher in-rush requirements of any future LED conversions as well as providing the same battery capacity as the previous system to be able to power all the existing lighting for the required 3-hour duration.

RDF were able to offer the full service of the removal of the previous system and the installation of the new system which as of June is now providing the necessary backup power for the building's emergency lighting per the image below. This was a collaborative effort between our local RDF electrical engineers and the University's own maintenance team to ensure everything was completed to all the necessary requirements for electrical supply systems.



Power Pro 3-Phase inverter and battery rack installed at the University

Our Power Pro 3-phase inverter range are manufactured in the UK and are fully compliant to EN 50171 which is the British Standard for Central Power Supply Systems used for emergency lighting purposes.

RDF Lighting Power and Control offer a wide range of central battery systems including DC systems, AC inverters and UPS systems. We also have addressable central systems that fully automate the testing and reporting required by law to log the monthly and annual emergency lighting testing. We also have UK stock of single-phase inverters rated between 400VA and 3000VA.