

shentongroup Wins Major UPS and Generator Project for Telecoms Data Hosting Centre

Products and Services Supplied: Uninterruptible Power Supply (UPS) Systems

Overview

When a major telecoms company sought to expand its data centre operation, it turned to shentongroup to provide additional generators. These were installed alongside the company's existing 19 generators and in conjunction with an Uninterruptible Power Supply system support, all within and around the construction of a new, bespoke Energy Centre.

The Problem

The telecoms company had expanded its data centre operation, something that necessitated it building a bespoke Energy Centre to house new generators. New servers needed to work in conjunction with an Uninterruptible Power Supply and backup generator support in order to ensure continuity of service in the increasingly likely event of power outages.

As the Energy Centre is situated in an urban environment, the telecoms company stipulated that the generators should have the necessary attenuation so as not to exceed sound levels of 65dBA at one metre.

shentongroup's Sales and Marketing Director, Curtis Meek explained the magnitude of the project and some of the factors that shentongroup needed to consider in order to achieve a timely, problem-free delivery: "Considering the existing 19 generators, two new generators needed configuring in conjunction with an Uninterruptible Power Supply System. Therefore, the project needed to be orchestrated around the customer's new Energy Centre building design work. shentongroup's installation work had to be undertaken out of hours and also whilst the building was still being constructed".

Solution

shentongroup successfully beat a number of competitors to win this major project. Working closely with the project's Specifier, shentongroup provided a complete turnkey operation including; design, supply, installation, testing and commissioning.

With eight months in planning and implementation, and involving a team of 13, shentongroup supplied two 3200kVA standby generators. shentongroup's Curtis Meek highlighted how shentongroup's planning phases consider all possible outcomes, including future expansion of clients' businesses: "The generators have been installed on the ground floor of the Energy Centre and in separate rooms, designed so that a further two generators can be added at a future date if required".

Should the necessity arise, both generators are capable of providing prime power at 2920kVA with a 0.8 lagging power factor and with a 10% overload capability for a minimum of one hour. shentongroup has also provided fuel tanks with sufficient capacity to enable the generators to run for eight hours at full load.

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The generator rooms are therefore equipped with inlet and outlet attenuators with motorised louvers that have been sized to provide the appropriate combustion and air-cooling airflow requirements.

Remote Alfa Laval radiators had to be craned onto the roof of the new Energy Centre building to cool each generator. The radiators' height is less than that of the surrounding louvers and they operate at noise levels of less than 65 dBA at one metre. These are connected to the generators by two cooling circuits per generator in 6 and 3 inch welded stainless steel pipework.

Further project work involved shentongroup installing two 5000A Air Circuit Breaker Panels (ACBs). Both panels are adequately ventilated to allow continuous full load operation in the maximum ambient temperature likely to be present in the generator house during prolonged 'on load' runs. All internal connections within the panels are by means of 5000 Amp copper busbars, adequately spaced to allow for loadbank testing. Together, a total of 4850 metres of cable was used, equivalent to 3.2 miles.

Load bank testing was carried out using 3500kVA Resistive/Reactive loadbank and all the necessary step loads and cold start tests were performed.



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Outcomes

“The service provided by shentonggroup and its on-site engineers, from initial tender interview through to Valuation Engineering (VE) and fitting, was very good and well actioned”, said the company’s Construction Project Manager, UK and Ireland.

In the event of power outages of any severity, the Wembley store will continue to enjoy a continuous power supply that enables the operation of all key elements of the business, including lighting, catering, and IT, all of which allow the store to stay open and staff to remain operational.

About shentongroup

shentonggroup is the UK’s leading technical expert in standby power, uninterruptible power supplies, and combined heat and power supplies. The company provides power solutions to organisations spanning a broad array of industries that rely on continuous power supplies and includes; finance, telecoms, healthcare, IT, manufacturing, education, government, utilities, sport and leisure and of course, retail.

shentonggroup’s standby generator range includes single and three phase generator solutions, ranging from 10kVA to 3.2MVA. Being British built to the highest quality and safety standards, shentonggroup generators are ideal for use as prime power or standby power supply usage. All shentonggroup diesel generators include; a full range of weatherproof canopies to meet sound attenuation levels; proven industry-leading control systems and switchgear hardware; integral bundled base-frame fuel tanks and fuel management systems; containerised modular solutions; custom built

drop-over acoustic canopies; and skid-mounted ‘open’ sets for specific applications.

shentonggroup provides a range of DEFRA-approved bulk fuel tanks, including plastic fuel tanks and double-skinned steel fuel tanks. Polyethylene bulk fuel tanks are maintenance-free, fully-bunded and are OFTEC and DEFRA certified. They’re available in capacities ranging from 1220 to 5000 litres. shentonggroup’s steel bulk fuel tanks are purpose built and double-skinned. They are manufactured to BS799 part 5 and comply to both statutory pollution prevention PPG2 and DEFRA regulations.

To find out more about your standby power options, contact the shentonggroup technical team on 0844 888 444 5 or request a site survey by visiting www.shentonggroup.co.uk.



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