



Ensuring the safety of thousands of supporters at Arsenal's Emirates Stadium

Location:

London, UK

Challenge:

A reliable, high-quality, emergency lighting system was essential to ensure large crowds could leave safely in the event of an emergency.

Solution:

A central battery system connected to hundreds of Eaton's Cooper Lighting and Safety emergency luminaires, and to any mains luminaires designated for emergency use provided the most practical and economical solution.

Results:

The use of a reliable static inverter based system has helped ensure the safety of all football supporters visiting the stadium. By employing sophisticated charging techniques, battery life in the static inverters is expected to be at least 10 years.

Home to Arsenal Football Club, the Emirates Stadium is renowned as a first-class sporting venue.

Background

Home to Arsenal Football Club, the Emirates Stadium is renowned as a first-class sporting venue. When the stadium was being designed and built, crowd safety was the paramount concern, so a reliable high-quality emergency lighting system was essential to ensure that people would be able to leave safely in the event of a mains power failure.

Challenge

Several factors combined to make some form of central battery system the most practical and economical solution for powering the emergency lighting. As well as providing inherent long-term cost benefits in such a large

venue, a central battery system offers higher light output and reduced maintenance requirements, both of which are significant advantages due to the high mounting heights of some of the emergency luminaires.

Solution

After a competitive tender, market leader Eaton was chosen to supply a system comprising 42 individual static inverters, each using valve-regulated lead acid batteries to provide a high-quality 230V AC sinusoidal output, should a mains failure occur.

Installed at various locations throughout the stadium, the static inverters are connected to hundreds of Eaton's Cooper Lighting and Safety emergency luminaires and to any mains luminaires designated for emergency use.

Each static inverter includes a bespoke Easichk testing system, which minimizes maintenance by automatically carrying out the requisite testing of the unit's batteries to comply with legal requirements.

In addition to the emergency lighting system, Eaton also supplied a wide variety of luminaires from its range of mains lighting products, including Solstar fluorescent downlights, Moduseal IP65 and Moduspec modular recessed luminaires, Moduwall asymmetric wall-washer luminaires and Crompack fluorescent battens.

Results

The use of a reliable static-inverter based emergency lighting system has helped to ensure the safety of all football supporters visiting the Emirates Stadium. By employing sophisticated charging techniques, battery life in the static inverters is expected to be at least 10 years. When replacement does eventually become necessary, this will be a quick and simple process carried out away from public areas.

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