

Switchboard for a Hard Day's Night

Liverpool's luxurious new Beatles-themed *Hard Days Night Hotel*, opened this month for Liverpool's reign as European Capital of Culture 2008, has electrical power supplied through an Eaton Capitole 20 low voltage switchboard.



Just a few yards from the Cavern Club, where the Fab Four first shot to fame, the 110-bed four-star boutique hotel has been developed, at a cost of £17 million, in a refurbished Grade II listed building dating back to 1884. The interior has been designed to echo the designs and colour schemes of the 1960s with subtle reminders of the Beatles era throughout.



Installed in a basement plant room, the Eaton Capitole 20 switchboard and power factor correction unit will provide reliable, energy efficient power distribution throughout the building. The double-ended switchboard is fed from a nearby Scottish Power substation by dual 900kVA supplies, each of which supplies approximately half of the panel. If necessary, one feeder can supply the whole installation via an interlocked bus-section switch.

The location of the plant room, and the limited space available, meant that the switchboard had to be delivered to site in sections and assembled *in situ* along two adjacent walls of the plant room, with a corner section between the two halves. HFM Consulting Engineers, who were responsible for the electrical and mechanical installation design, specified that Eaton should carry out assembly and on-site testing of the switchboard.

The *Hard Days Night* switchboard and power factor correction unit were the first to be delivered from Eaton's new Birmingham assembly Satellite. The establishment of the Satellite was the continuation of a successful international programme of such facilities which commenced in North America and is being rolled-out internationally. The Satellites provide local assembly of Eaton's internationally marketed factory-built assemblies.

The *Hard Day's Night* switchboard is a Form 4 Type 2 factory-built assembly, ensuring high levels of protection for maintenance personnel. In addition to being a right-angled assembly incorporating dual supply and bus-coupling facilities the switchboard also incorporates extensive metering to facilitate the monitoring of energy consumption. Both incoming supplies feature associated multi-function meters and 58 of the 60 outgoing circuits are fitted with kWh meters for compliance with Building Regulations Part L.

Eaton devices are used throughout the assembly. Magnum 1600A air circuit-breakers, complete with a remote switching facility at ground-floor level for use by fire officers, are fitted to both incoming supplies and the bus-coupler. Eaton 100A, 200A and 400A fused combination switches are used on the outgoing circuits. Eaton transient surge protection (TVSS) units are fitted to each incoming supply.

The power factor correction unit is a compact, single column Form 4 Type 2 factory built assembly containing two totally separate fully automatic PFC units in one column to reduce space requirements. Each of the two PFC units is associated with one of the dual supplies.

One of the special features of Capitole switchboards is Kema-Keur accreditation. This ensures that the entire assembly, including all the components, the panel and the way it is put together, form part of a coordinated programme with third-party certification. Capitole switchboards are type-tested and certified by Kema. Circuit-breakers, switches and other components also carry Kema-Keur certification. Implicit in this certification is ongoing surveillance of the manufacturer's production facilities by Kema engineers.

HFM Consulting Engineers' decision to specify the Eaton switchboard, was based on previous experience of working with Eaton. Eaton delivered the switchboard on schedule and installed and tested it in accordance with the Consultant's requirements.



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Company Information

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