

**Industry: Building Management**  
**Products Used: FX PLCs /// Networks**

# Shopping centre smoke control system uses Mitsubishi FXON PLCs

Millions of customers and visitors are lured to Whiteleys Shopping Centre in London every year by famous names such as Marks & Spencer, Gap and Vidal Sassoon, as well as by exhibitions, charity events, fashion shows and weekly concerts staged by Whiteleys.

The Grade 11 listed building contains 77 shops, ten restaurants, an eight-screen multiplex cinema, a healthclub and a rooftop car park. Public safety is of paramount importance in this type of development and in order to provide faster and safer evacuation, 'intelligent smoke control' has been designed into Whiteleys Shopping Centre from the outset.



Designed and supplied by Keltron the KCL S90C addressable control system works alongside the mandatory fire detection system. At the heart of the Keltron control system is a Mitsubishi Electric FXON programmable logic controller (PLC). This controls via the KCL S90C communications interface as many as 100 distributed field units which monitor or control sensors, fire or smoke dampers and fans via a two-wire fieldbus network at locations up to 2km from the central controller.

*Application story first released September 1999 by Mitsubishi Electric UK*

The Mitsubishi FXON runs the application program with the KCL S90C interface simply acting as the link between the PLC and the field units. Many programming commands and functions are available within the FXON PLC making complex programme creation extremely simple, and the application software can be easily programmed or modified using Mitsubishi programming tools.

A major benefit of the distributed design is reduced cabling costs in facilities such as shopping malls, offices, hotels, hospitals and factories. This makes it particularly cost effective for retrofitting existing buildings where the cost of dedicated wiring is high.

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Keltron Controls

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Steve Laughlin, sales manager at Keltron Controls, says "We are beginning to look at large installations where many PLCs will be used on a network. The days of smoke control systems requiring bespoke hardware and software are a thing of the past. We are very happy with the Mitsubishi FXON because it is extremely reliable and software programming is easy. Anyone can understand the ladder logic which facilitates ongoing maintenance."