

Success Story: MEM® Memera consumer units, protective devices and energy measuring and monitoring



The Memera range of consumer units provides a broad scope of products to meet the requirements of the 17th edition of the wiring regulations. The new 11-way Memera RCBO board provides more internal wiring space and can be supplied with the protective devices ready fitted to meet the needs of our customers.

Liverpool refurbishment programme exceeds standards

Fifteen thousand former council homes in Liverpool are undergoing a major refurbishment programme aimed at bringing them up to a standard well above the Decent Homes standards for social housing. The electrical content of the programme includes use of Eaton's EMA wiring accessories and MEM Memera consumer units.



The consumer unit is a new 11-way unit featuring RCBO protection of every circuit and offering ample space for wiring. It is supplied with the RCBOs factory fitted.



The five-year programme began in April 2008 when the newly-formed housing association, Liverpool Mutual Homes, took over responsibility for the housing stock from Liverpool City Council. Some of the

properties date back to the 1920s. The programme includes roofing and external cladding, where required, new windows and doors, upgraded thermal insulation, central heating, complete bathroom and kitchen refits and rewiring. Initially work concentrated on ensuring that all homes were warm and dry by installing double-glazed windows and doors and central heating. The first electrical contracts commenced during 2009.

LMH and its consulting engineers, Tweeds, decided to opt for individual RCBO protection of all power and lighting circuits. This offers the maximum levels of user safety required under the 17th Edition of the IEE Wiring Regulations, BS 7671. If a device trips, all other circuits in the property will continue to function normally. (Other options such as RCD protection of groups of circuits mean that if an RCD trips, several circuits will be affected; while this ensures

electrical safety it could still represent a risk of physical injury if, for example, lighting circuits are supplied through the tripped RCD.)

A new 11-way consumer unit was developed for the project. This offers increased wiring space above the RCBOs compared with consumer units designed primarily for MCB protection. The new unit is based on Eaton's existing 12-way unit but the earth bar is moved from the top to the side of the enclosure to release more space for wiring.

The consumer units are supplied with the protective devices ready fitted. They have the LMH logo on the cover and special instruction labels fitted inside the cover. LMH standardised on an 11-way unit for all properties, regardless of size. The normal circuits – cooker, lighting circuits etc. – are always connected in the same configuration to simplify maintenance. Spare ways are available for use where tenants

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have additional equipment such as electric showers or stairlifts.

An LMH call centre is available. If a tenant calls, the operator will normally be able to instruct them on the correct procedure to identify and re-set a tripped RCBO. LMH believes that this will reduce the number, and cost, of call-outs significantly.

Eaton's EMA moulded wiring accessories are used throughout. These are stylish, robust and cost-effective accessories moulded from polycarbonate with tight-fitting plugs that cover the fixing screws and make for a smart appearance. Switches controlling major appliances such as hobs, fridge/freezers and central heating are engraved to indicate their function.

Eaton has also supplied pendant sets from its Circa ceiling accessory range.

LMH wanted a clearly-defined supply chain for electrical products. It was agreed that all the consumer units and accessories should be sourced through Newey & Eyre's Regional Distribution Centre in Liverpool. Luminaires, smoke alarms and other electrical products were also supplied by Newey & Eyre, many from it's Newlec range, thereby offering a single point of supply for all electrical installation products.

Eaton and Newey & Eyre each undertook to hold two months' stock of product, based on their knowledge of the call-off rate. This will ensure continuity of supply for up to four months for LMH's contractors.

LMH has looked for value for money rather than the cheapest option for each product. For example, kitchen units are high quality products that would not be out of place in prestige private developments. Some homes that have been empty for many years because of their dilapidated state have suddenly become desirable. Eaton's consumer units and wiring accessories offer high standards of quality and reliability.

Kitchens are provided with their own dedicated ring circuit. The electrical specification calls for three twin switched socket-outlets and two switched fused connection units feeding low-level single-gang unswitched socket-outlets. In addition there is a 45A double-pole cooker switch and a switched connection unit for the central heating boiler. However, where tenants have variants in their existing installation, contractors are instructed to ensure that all appliances have suitable connection facilities.

Living rooms are provided with three twin switched socket-outlets and a co-axial TV outlet, also from the EMA accessory range. Similarly, the master bedroom has three twin switched socket-outlets while other bedrooms have proportionate provision. Where tenants have shaver supply units these are replaced by suitable dual-voltage units. Electric showers are wired in accordance with the IEE Wiring Regulations.

Other electrical provision in the properties includes

low-energy porch lights, low-energy PIR-controlled security lights over the back door, and low-energy ceiling lights in the kitchen and bathroom. The latter are from Newey & Eyre's Newlec luminaire range with polycarbonate enclosure and diffuser, high-frequency controlgear and 16W, 28W or 38W compact fluorescent lamps. Bathroom fittings are IP44 rated.

The electrical contracts are carried out together with kitchen and bathroom refitting. Because there is a great deal of dust created, tenants are offered temporary accommodation during the work for which 15 days is normally allowed. In practice, many tenants prefer to stay in their homes; LMH endeavours to make sure that homes are as comfortable as possible during refurbishment; this includes maintaining electric power and lighting wherever possible. Work is made good as far as possible but tenants are given a decoration allowance to help with their own redecoration afterwards.

Energy-efficiency and sustainability are vital elements in the LMH programme and the housing association is concerned to avoid tenants suffering from fuel poverty. Thermal insulation is being upgraded and highly efficient Vaillant condensing combination boilers are being installed. All lighting – including the PIR floodlights at the back of the homes – has energy-efficient compact fluorescent lamps.



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