

Lighting controls in the education sector

Plugging in to modular buildings – lighting controls in the education sector

Increased demand for public services, fuelled by a growing population, is putting a strain on the public sector and specifically, the education sector. There is now an acute shortage of school places across the UK. While the situation is particularly problematic in London, it is also a major concern in other parts of the country. As a result, local authorities are turning to innovative solutions to address the major demand for new school buildings. While finding immediate solutions is already a real challenge, local authorities are also being hampered by limited financial resources. Take into account a growing legal requirement for sustainable, low-carbon buildings and the situation is far from simple. One potential option is modular buildings. Quick and easy to install and available in increasingly high-specifications, modular buildings offer a credible solution to alleviate pressures on the education sector. Martyn Frear, Business Development Manager at CP Electronics, discusses some of the drivers behind the modular building boom and how lighting control solutions from leading players are helping to meet the requirements of modular building manufacturers.

As the government continues to pursue its programme of cuts to public spending, schools are expected to meet certain educational targets and standards with ever-tighter budgets. At the same time, we are witnessing an unprecedented surge in demand for school places. In London alone, it is estimated that more than 28,000 children will miss out on their first choice of secondary school this year.¹ Across the country the outlook is bleak, with official figures pointing to a national shortfall of 10,000 school places within four years, as pupil numbers continue to rise with each passing year. As demand continues to outstrip supply across the public sector, local authorities face growing calls to address the shortfall in school places. Armed with limited financial resources, a number of local authorities are turning to modular buildings to address the impending school building crisis.

¹ <http://www.standard.co.uk/news/education/full-scale-of-londons-school-crisis-revealed-as-record-numbers-of-pupils-miss-out-on-first-choices-a3188911.html>

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Modular buildings...a viable option?

The term modular building refers to structures made up of pre-manufactured components, which are subsequently assembled on-site. While modular buildings have existed in various forms for a number of decades, the modular building sector has grown exponentially in recent years into an industry that is now worth billions of pounds per annum. The success of the industry can be explained by a number of key factors.

Modular buildings represent a significantly quicker alternative to brick and mortar structures and are up to 70% quicker to construct compared with traditional forms of construction. They can also be reused and re-purposed, allowing schools to quickly adapt learning spaces to meet a very precise, often changing, set of requirements. Given the pressing demand for schools, this alone creates a very compelling case for the use of modular buildings. Not only does this approach allow for shortened project times, it also enables significant cost savings in the form of greater supply chain efficiencies and labour costs, since there is a reduced requirement for skilled labour.

Modular buildings have also come a long way in recent years and can now meet requirements for high-spec designs. A primary concern for schools is creating an environment that is conducive to effective learning and modular buildings are now very much capable of rising to this challenge. To meet requirements around longevity, functionality and aesthetics, stringent measures are in place to guarantee the overall quality and consistency of the products being installed.

Modular building and lighting controls

Schools face greater than ever pressure to comply with legislation and guidelines around sustainability, most notably, Part L of the Building Regulations and BREEAM which stipulates that buildings must demonstrate good practice around energy efficiency.

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Furthermore, since the introduction of the Building Information Modelling (BIM) mandate for Government construction projects, all lighting control products used in the manufacture of modular buildings will need to demonstrate compliance in this area.

With the never-ending push towards sustainability and energy efficiency, a growing number of modular building manufacturers are turning to lighting control solutions to address concerns around functionality, installation and configuration, and compliance with relevant legislation.

Options for specifiers

With traditional building methods, lighting control solutions and detectors must be manually hard-wired into a junction box, a relatively time and labour intensive process. Ultimately, this leads to longer project times and therefore, additional cost. With acute demand for plug and play solutions, lighting controls which can be installed with minimal labour and during the offsite manufacturing process can offer a real competitive advantage within the modular building sector.

There are many lighting control systems available but few offer the levels of functionality and efficiency which make them appropriate. One which takes major steps in this direction is the new Vitesse Plus system from CP Electronics, which offers a wide range of features which make them ideal for users and installers. Its built-in pre-set menu with up to four detectors enables users to configure and re-configure spaces quickly and efficiently for most scenarios.

Including PIR and microwave combined presence/absence detectors, the system also features dimming control switches to override the integral photocell detectors to alter the brightness of the automatically controlled DALI or DSI luminaires in line with natural light levels, as necessary. Not only does this mean that lighting levels can be easily adjusted to the required levels, it also ensures that energy is used in the most efficient way possible.

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Above all, CP Electronics' acclaimed range of lighting control products has been designed to satisfy key legislation around sustainability in the education sector by saving energy. With the development of BIM, and growing demand for speed of build and enhanced environmental performance, the process of specifying and designing buildings will change drastically in the coming years. Recognising this development, all CP Electronics products are now available via **bimstore** and are expected to play a vital role in the construction of sustainable modular-built learning facilities to meet the growing shortage of classrooms in the UK education sector.