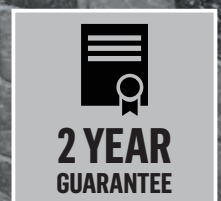




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50

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Welcome

Recently, I attended Super Rod's Hall of Fame event in Abergavenny, Wales. The day was an opportunity to meet the inventors behind some of Super Rod's best-selling products, such

as the Cable Tongue, the QuikReel and the Duoxim Arbor. These products all have one thing in common - they started out as 'hacks', invented by real-life installers to alleviate a problem they were having on site. It was fantastic to listen to the inventors speak about how they came up with their ideas and how they were able to bring them to market, offering time-saving solutions to their fellow tradespeople. See the full story on PG44-45.

As I write this, the Electrical Industry Awards 2019 is only just over 24 hours away! And by the time you read this the winners will have been announced. In such a fast-paced and vibrant industry, there are so many reasons to celebrate and, after months of prep, myself and the team are very much looking forward to joining the finalists and guests in what is set to be a fantastic evening.

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Appointments

■ ESP has announced that its growing range of CCTV, access control, fire protection, emergency and external security lighting products are now being channelled throughout Scotland by the Scolmore Scotland sales team.

Headed up by sales director for Scotland, Barry Taylor, the team comprises three highly experienced sales managers – Shaun Harrison, Innes Chapman and Kevin Durkin – plus group specification manager, Alex Seath.

■ Roptec UK has appointed a process manager to spearhead the company's growth in this sector. Ross Mannin will cover an area stretching from Scotland to the South West.

■ Mechanical and electrical building services provider J S Wright has boosted its expanding electrical business after appointing a new senior electrical estimator. Stacey Wall, who has 30 years of experience in electrical services, will cost the electrical element of M&E projects across the hotel, residential, social housing, student accommodation, leisure and commercial sectors.

■ Manchester-based Coolair Equipment Ltd has recruited a new national administrator to its aftersales division. Leanne Duckworth will work alongside aftersales service manager Mark Cooper and contracts coordinator Karen Swallow in meeting increasing demand for the company's maintenance service from developers, contractors and clients.

■ Panduit EMEA, the global provider of industrial, IT and data centre infrastructure solutions has appointed Martin Kandziora as senior marketing manager to lead the international and country marketing teams across Europe, Middle East and Africa.

Prefectlrus - 100 per cent tax deductible



Prefect Controls has announced that its Prefectlrus system has been listed on the Energy Technology List (ETL), enabling buyers to claim an Enhanced Capital Allowance. The ECA scheme means that a business can invest in energy-saving plant or machinery that might otherwise be too expensive.

The Energy Technology List is one of the world's largest databases of top performing energy-efficient products. The first-year allowances let businesses set 100 per cent of the cost of the assets against taxable profits in a single tax year. This means the company can write off the cost of the new plant or machinery against the business's taxable profits in the financial year the purchase was made. Businesses buying products listed on ETL can also make significant energy-savings.

Prefectlrus is a building management system specifically designed for multi-occupancy properties such as student accommodation or hotels – and controls rooms individually. Prefectlrus ensures energy is only used when heating is required, if rooms are empty or windows are open the system automatically reverts to lower settings, only increasing temperatures when inhabitants return. Occupants have control over the comfort of their environment, but ultimately energy managers have control over energy use via the web-based portal. Along with temperature, Prefectlrus also controls and monitors humidity, light, CO2 and decibel levels as well as hot water – even alerting management if leaks are detected. Another feature is the ability to automatically buy energy when tariffs are low, avoiding costly peak times use.

By embedding the ETL into procurement processes, organisations can reduce the time it takes to find good quality products, and can deliver resource, energy and financial savings.

J S Wright secures £1.5m-plus contract for Jolles House

J S Wright has secured a deal worth more than £1.5 million for a major new development at Jolles House on Bromley High Street in Tower Hamlets. The one to three-bed scheme is being developed by housebuilder Hill to help meet a growing local need for high-quality affordable accommodation.

J S Wright will design and build the heating, hot and cold water, drainage and ventilation services for the landscaped development.

The energy efficient and carbon-reducing systems and services will include a low-pressure hot water (LPHW) heating system with distribution pipework to feed radiators in all the apartments, as well as a cold-water plantroom to deliver boosted cold water as part of the domestic hot and cold-water services. J S Wright will also supply and install a heat interface unit (HIU) in each apartment to deliver instant hot water on demand at low return temperatures. The installation of sanitaryware, above ground drainage and internal rainwater systems are also part of the commission. In addition, the company will fit a mechanical ventilation heat recovery (MVHR) system, which recovers outgoing air from each apartment to heat incoming fresh air, and dry risers and domestic sprinklers for fire protection. It will also provide building management controls, including a pre-payment billing system for each apartment's energy use, and 12 months' maintenance.

Work on site on the 12-month project is scheduled to start this month.



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NAPIT's latest publication *On-site Solutions*, is due for release in November 2019 and provides practical solutions for a number of installation types, allowing the electrical contractor to fully understand what is required by The IET 18th Edition of The Wiring Regulations

The guide covers Parts 1 to 7 of BS 7671 and offers solutions for:

- Electric vehicle charging installations
- Surge protection devices
- Smart home solutions
- Outbuildings
- RCD selection
- Consumer unit considerations
- Selection of equipment
- Designing circuits
- Safe isolation of electrical supplies
- Inspection, testing and certification
- Documentation

This publication covers the main requirements of the Building Regulations that are associated with electrical installation work in England and Wales and also covers Health and safety legislation.



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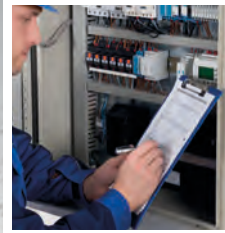
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FLIR LAUNCHES MULTIPLE PROGRAMS TO SUPPORT U.S. MILITARY VETERANS

FLIR Systems has announced an initiative to honour and support United States (U.S.) military veterans. As part of its FLIR HERO Corporate Social Responsibility (CSR) strategy, the company plans to double the percentage of verified veterans employed at the company by the end of 2022. Also, through the FLIR TradeForce Program, it will offer free introductory-level infrared training and certification for U.S. military veterans transitioning to a skilled trade.

For almost four decades, FLIR has provided the U.S. military with lifesaving technology and solutions to help accomplish its mission. Today, approximately 9 per cent of the company's U.S. workforce is self-reported as veterans in a range of job roles, including engineering, operations,



finance, business development, customer support, and executive management. To help veterans in their transition to the civilian workplace, FLIR aims to employ 18 per cent of its U.S. personnel as veterans at all levels of the company, with significant career opportunities within its Government and Defense Business Unit.

Additionally, the company introduced FLIR

TradeForce, a program to help U.S. veterans start or expand a career in the skilled trades. TradeForce offers free thermography training provided by its U.S. Infrared Training Center (ITC). The need for more qualified thermal imaging experts, or thermographers, across industries continues to grow in areas such as electrical, building inspection, moisture remediation, HVAC, and gas inspection.

Veterans completing the training course requirements and a field assignment will receive a Level I Thermographer Certification and are eligible to receive a FLIR E8 thermal camera to help start their skilled trade career. FLIR is partnering with Hire Heroes USA, a national nonprofit that provides free employment services to U.S. military members, veterans, and military spouses.

Bureau Veritas states £14bn spending pledge signals 'vital progress' for sustainability



Amid the government's recent vow to end austerity and boost public spending by almost £14bn, Bureau Veritas has welcomed the move, stating the extra funding will be vital to making tangible progress on sustainability.

In his first budgetary announcement as Chancellor last week, Sajid Javid's Spending Review pledged to increase

investment in the environment, education, transport and health. This includes a £7.1bn cash boost for schools and a £6.2bn increase to NHS spending, as well as £200m to transform UK buses to low-emission vehicles. What's more, £422m will be made available to the Department for Environment, Food and Rural Affairs (Defra) to help tackle climate change and meet the government's net-zero emission targets, with £30m set aside to improve air quality, and local authorities implement and manage strategies on sustainability, air quality, maintaining asbestos control and electrical safety.

For further information, call 0345 600 1828 or visit www.bureauveritas.co.uk

M&E specialist celebrate 30 year anniversary

North West commercial mechanical and electrical contractor, Genlec, is celebrating three decades in business. The family owned operation, led by former electrician and entrepreneur, Jonathan Twentyman, has grown to become one of the largest contractors in this specialist sector.

Today the firm employs a large local workforce and with a current turnover of £15million has recently announced plans to double turnover in the following five years. Jonathan commented: "Genlec has grown steadily and organically through the years, and is today known as a provider of large, complex projects operating across a wide range of industry sectors.

He added: "I've been determined to retain our presence in Leigh, employing local people and providing long term, sustainable employment opportunities. It's through our people, our drive and ambition that we have developed a market leading reputation, which we will continue to build upon moving forward as we drive forward our ambitious growth and expansion plans."



Vent-Axia named a Business Superbrand for 2019



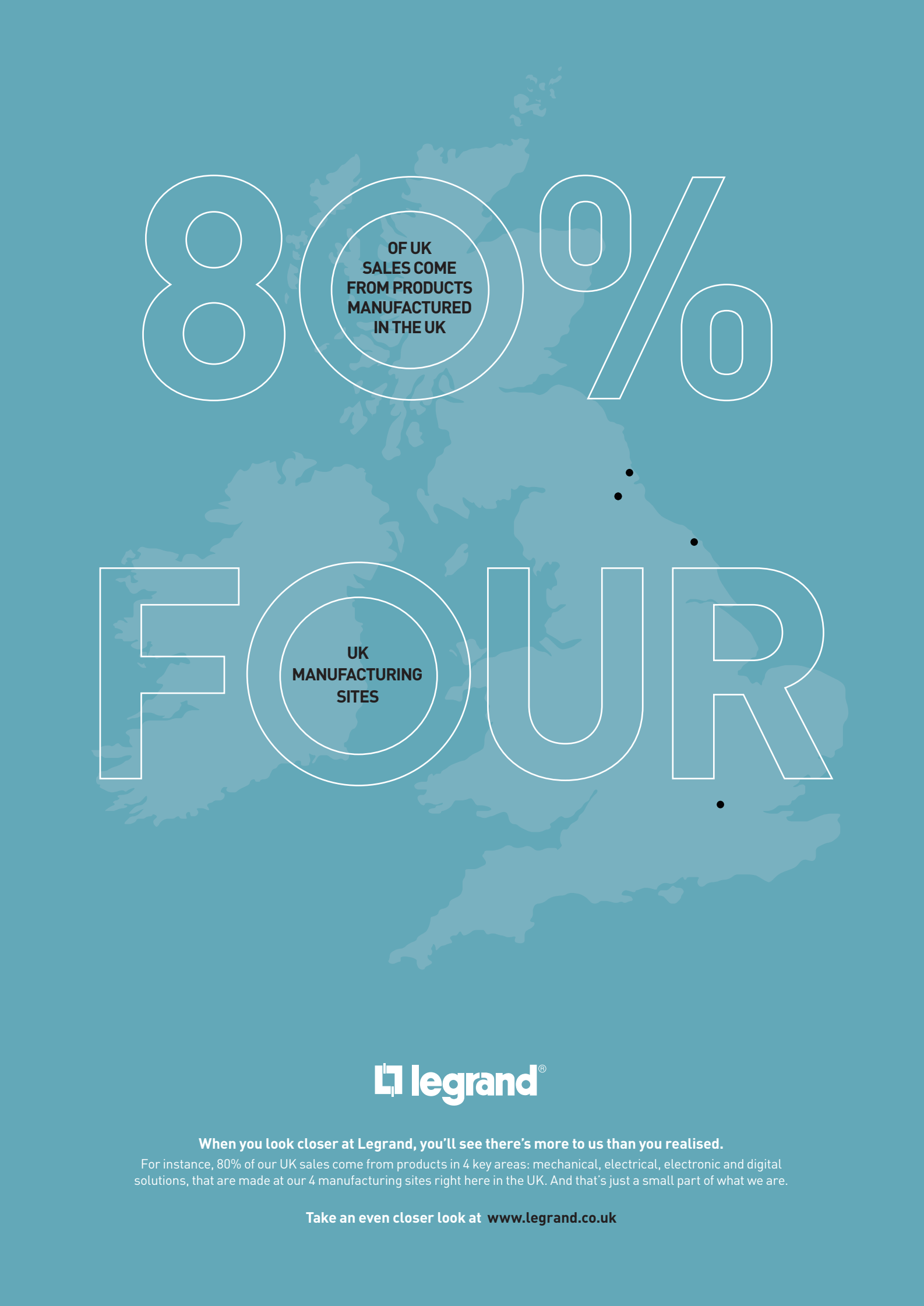
Vent-Axia is delighted to have been named in the UK Business Superbrand list for 2019. The award follows robust independent research commissioned by The Centre for Brand Analysis (TCBA), which identifies the UK's Superbrands in an annual league table. The ranking recognises the company for quality, reliability and distinction.

The annual Business Superbrand survey involves voting undertaken by marketing experts and business professionals. Brands do not apply or pay to be considered; rather an extensive database of UK brands is compiled using a wide range of sources from sector reports to industry league tables. Only the most highly-regarded brands from each category are awarded Superbrand status.

As a Superbrand, Vent-Axia is considered to have established the finest reputation in its field. Companies with Superbrand status are considered to offer customers significant emotional and/or tangible advantages over their competitors, which customers want and recognise. To identify the Superbrands voters were asked to judge brands against following three criteria: quality; reliability and distinction.

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The GTC 400 C offers a variety of sophisticated thermal functions for different job site situations.

Whilst being extremely versatile, the thermal solution easily understands temperature distributions, which would normally be unseen to the naked eye – making it great value for money and saving valuable time.

Bosch GTC 400 C

Detecting within a temperature range of -10°C to $+400^{\circ}\text{C}$, the device has four convenient measurement functions; Automatic for automated temperature ranges, Manual mode allowing temperature limits different scenarios, Cold Detector showing only cold spots in an intuitive grayscale display for easy readability; and Heat Detector, simply showing hottest areas on screen.

The GTC 400 C's intuitive display presents temperature differences within the camera's field of view when scanning a room. The hottest and coldest point are displayed, making it easier to draw conclusions and evaluate the temperature distributions and causes. The GTC's 500 image storage not only saves thermal images, but real images are also automatically saved. These can be accessed when the device is connected via Micro USB to a laptop. This is useful as it puts the thermal measurements into context alongside

real-life images, which allows the user to draw conclusions and explain a job site scenario to a customer.

The large 3.5-inch colour display and infrared sensor resolution of 160×120 , detects temperature variances within seconds. Each of the 19,200 pixels correspond exactly to one measuring point and provides a detailed, informative thermal image. Dual power supply provides flexibility and the contents of GTC 400 C set comes with a 12 V Li-ion battery and charger from the Bosch Professional range. Alternatively, it can be powered with AA batteries. For added security the GTC 400 C has IP53 dust and splash protection, perfect for construction sites.

Smart connectivity

The GTC 400 C provides the option to transfer and store measurements on the Bosch Measuring Master app or through Micro USB to a laptop. Simply enable the WIFI hotspot on the device and connect the GTC to the Bosch Measuring Master App. The wide functionality of the Measuring Master App means thermal images are ready to be edited in order to provide ease of understanding for customer and clients. Emissivity of individual images can be adjusted and edited from thermal to real image, in order to provide clear understanding to clients. If using a laptop, simply connect the Micro USB from the laptop into the GTC. The

images imported can then be edited using the GTC Transfer Software, which is available to download online. This allows the user to edit and analyse measurements in greater depth than the Measuring Master App.

Essential solutions for electricians

The GTC 400 C is perfect for taking detailed measurements and provides picture-perfect analysis of existing conditions, unseen to the eye. Thermography gives immediate indications of issues that could have proved to cause costly errors. Applications could be:

- Identifying weak or overloaded components in electrical systems. Accuracy is facilitated by setting the camera to overlay thermal and real image, putting the area that is being detected into context, whilst making it easier to assign and locate measurements.
- Assessing the conditions and effectiveness of insulations in roofing, windows, or doors, with the automatic display of hottest or coldest points, as well as adaptable temperature graphics.
- Locating and assessing the distribution of electrical cables, joints and panels, without needing to disrupt installations such as walls or flooring.
- Checking the functionality of underfloor heating systems and the effectiveness of radiators and vents, aided by the display of hot and cold points.

“The GTC 400 C is perfect for taking detailed measurements and provides picture-perfect analysis of existing conditions, unseen to the eye.”





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Should you do your own accounts?



By Benjamin Dyer of **Powered Now**

With around 90 per cent of trade businesses having ten or less employees, most businesses are not sufficiently big to employ a full-time accountant. If that sounds like your business, then this article is designed to help. The question is should you continue with your current approach?

When it comes to maintaining small business accounts, there is personal preference. If you like being in total control of your business, doing your own accounts may come completely naturally. In contrast, some may prefer to leave it all to the experts. This article aims to help people that don't quite fall into these black and white positions and weigh up the pros and cons of both methods.

Taking control

At the moment, 'taking control' is a popular phrase with 52 per cent of the population. The upside of taking control of your own accounts are as follows:

- You are the master of your business and no one could have as much of a handle on it as you do. Cash flow is the critical factor in business survival, therefore by doing the

accounts yourself, you will as on top of things as it's possible to be.

- You needn't wait. You can control your own time management and make sure that things happen as intervals that suit you.
- You can save money. Accountants don't come cheap!
- No one cares about your business more than you do. An accountant may not have as much passion for the company's success as you do and if you're unlucky, they may prove incompetent.

The downsides

We have looked at the reasons for doing it yourself, but what are the downsides?

- You will get the hassle if there are mistakes. This normally leads to time-consuming disputes with HMRC.
- Doing the accounts doesn't always come naturally to electricians and it can be complex and hard work. No-one enjoys paperwork, and doing your own accounts can add to your admin considerably.
- Fixing mistakes often takes longer than if doing the job in the first place. Unless you are completely confident and have a natural ability from number crunching, doing your

own accounts may cost you more in the long run, especially in terms of time.

Enlisting an expert

There are many upsides of getting the accounts done by a professional:

- Accountants are the experts at legally minimising tax and it can be hard to keep up with all the changes to tax rules without an expert advice. They should do a better job than you and this should cover their fees.
- Lots of people rely on their accountants for general business advice.
- If you work the hours you would have spent on the accounts, you will arguably be better off, even after paying fees.

Summarising the argument

While most trade business owners choose not to enlist an expert when it comes to their accounts, there are many ways in which it could prove beneficial. However, some may feel pros do not outweigh the cons. The right answer will differ from person to person and from business to business, but what is always essential is a balance between control, cost and effort. Getting this right could be key to success.

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HAGER SOLUTION IS TOP OF THE CLASS

A broad range of **Hager** energy distribution, wiring accessories, lighting connection and control systems have been specified for a major refurbishment project at **Auchterellon Primary School** in Aberdeenshire

Built in 1974, the school's existing legacy electrical and lighting systems were struggling to keep up with increased demand from users. As a result, the local authority decided to invest in a complete overhaul of the school's electrical system. Providing education for more than 400 children in the local area, the school's open-plan structure, which means there are no individual classrooms, required a lighting system that was not only fully flexible to individual needs, but also scalable. The school's bespoke requirements saw the project's specification engineer specify Hager's distribution and panel boards, as well as its market-leading Klik lighting control system.

Now in place after a year-long installation project, school managers have the ability to scale up the new system to match the changing requirements of the school should it expand in the future. One of the primary benefits of the project is the highly flexible

performance capability of the Klik system, which can adjust to daylight levels to deliver the school an energy-efficient solution. Fully compatible with all DALI control solutions, Klik functionality allows the school to optimise lighting effects, such as easily dimming light in specific areas for presentations and school-led activities, or ensuring areas are not lit when unoccupied. Control is simple and full use of the system is accessible to all staff at the switch of a button.

Klik also provided significant installation benefits. Its plug-in and socket connection options mean that luminaires were simply plugged in in seconds, without the need for circuit isolation. In addition, Klik's self-wired plugs now provide a highly adaptable solution whenever the system needs to be altered. Hager's David Strachan, comments: "This was a significant project for the school and means that its entire energy distribution and lighting control system has been future-proofed. In

addition, the project team had to ensure a smooth installation that minimised disruption to the day-to-day operation of the school. This meant a high degree of forward planning, including weekend working when the 800 amp panel board was installed to ensure no disruption to staff or pupils. The ease of installation and configuration of the Klik system also helped with the work schedules."

James Douglas, from the Aberdeenshire Council, says: "This was an important project for Auchterellon Primary School. It ensures that the essential energy distribution and lighting systems are fully up-to-date and can meet the needs of a busy school going forward. The project was timely and cost-effective with disruption at the school kept to a minimum. We are also highly confident that the decision to specify Hager products ensures the systems installed will deliver the exact performance needs we require now and in the future."

A WINDOW INTO CABLE MANAGEMENT



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the 18th Edition: Choose the right products to stay compliant



By Adrian Fowler, managing director at MIDFIX

The latest revisions to Wiring Regulations (the 18th Edition) came into force at the beginning of the year, putting a number of requirements in place to make buildings safer in the event of a fire. Applicable to all installations designed from January 2019 onwards, one of the key amendments relates to cable installations and how they are fixed throughout buildings.

MIDFIX has developed the single most comprehensive range of fireproof cable accessories to help electrical contractors comply with the new rules. It is important to be aware that the legislation applies to all cable types, from power to communications to alarms and CCTV. Anyone installing, hanging or suspending electrical cabling of any type, even temporary installations, needs to be fully up-to-date with the requirements. This includes construction site managers and health & safety managers.

What are the rules?

Previously the rules prohibited the use of plastic containment and cable fixings as the sole means of support for cable installations along escape routes, to prevent premature collapse in the event of a fire and reduce the likelihood of fallen wiring creating a hazard for occupants trying to exit or fire-fighters trying to manage the fire.

This has now been broadened to apply to wiring installations of any type, throughout the entire building, not just the escape routes. As well as applying to the design, erection and certification of new installations in developments of any size or type, the regulations also apply to additions and alterations to existing works.

What does this mean?

It's important to point out that plastic cable fixings and plastic cable management have not been banned. They remain a cost-effective way of managing cables – however they cannot be used as the sole method of support. Plastic cable ties and clips and plastic cable supports must all be adequately supplemented with metal supports to make the installation compliant.

However, one practical difficulty of this approach is deciding how often to use a metal fixing and how to ensure they are not inadvertently omitted. This has led to some contractors switching completely from plastic to metal cable fixings.

Finding alternatives

Anyone using plastic cable supports needs to start thinking about finding an approved metal alternative for each product in order to stay compliant. Consider how you work, what equipment you currently have and how the

products are going to be used when choosing your replacements.

Cable ties – It is advisable to think about where the tie is being used as not all metal cable ties are the same. Most metal cable ties being used are 316 grade stainless steel, originally designed for use in harsh environments. However, these are relatively expensive so MIDFIX have introduced a more economically priced steel cable tie which is ideal for general use both internally and externally. Remember you'll also need a tensioning tool designed for use with metal ties.

Cable mounts – When replacing plastic tie mounts there are a number of options depending on the method of installation and the size of cable being fitted. Screw or adhesive-fixed mounts can be replaced with a like-for-like metal equivalent or for faster installation the metal push mount is simply pushed into a 6mm hole, eliminating the possibility of using incorrect fixings. MIDFIX innovative firesafe tie mount can be used with all cordless nailing tools – the snap-off tab for holding and positioning the mount during installation removes the need to change noses, making fitting quick and easy.

Cable clips – Metal versions of the traditional-style nail-fixed clip can be used alongside standard plastic cable clips and metal U and F clips can be used to secure cables within plastic trunking or as a standalone fixing. Single and double metal stag clips are easy to install and are ideal for T&E, FP and alarm cables.

Cable harness – Metal cable clasps are an economical way of installing cable bundles without using cable containment. Available in different sizes for wall or ceiling mounting, cables can be easily added or removed as the installation progresses.

Having selected the appropriate cable fixings, remember that the screws and expansion plugs used also need to be fire resistant to ensure the installation is safe. Buying from a reputable company with an 18th edition compliant range helps to ensure that compatible fixings also meet the regulations.

Trusted suppliers

The internet makes it easy to source untested products from unknown sellers but this can quickly prove to be a false economy. When you buy from an industry specialist, the products often more innovative and higher quality and come with expert advice and support.

For further information visit www.midfix.co.uk or call 0115 922 1585.

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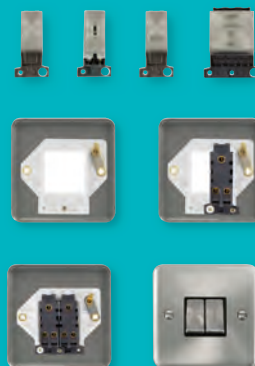
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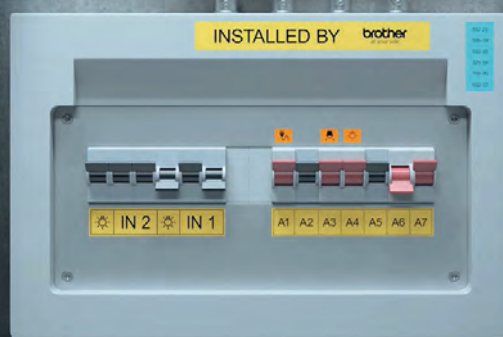
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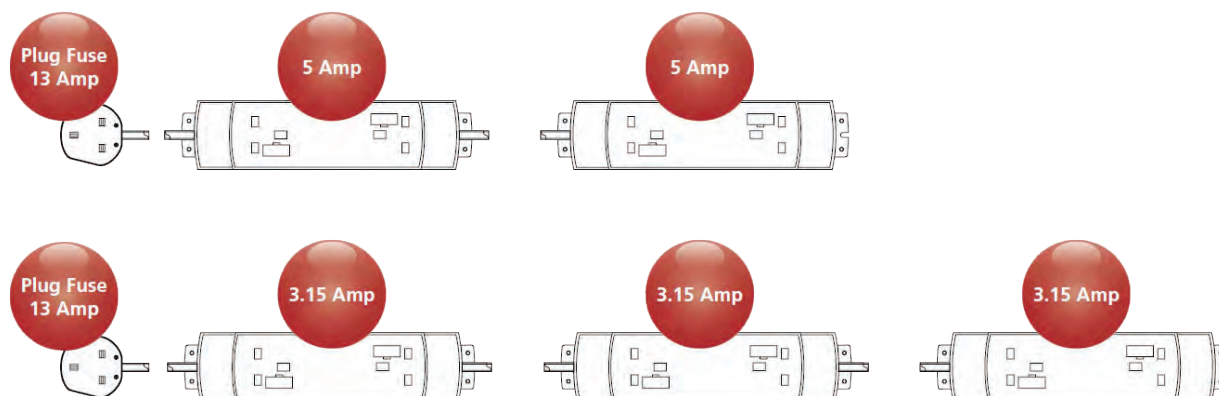
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The importance of BS 6396



CMD outlines the BS 6396 - Electrical systems in office and educational furniture

British Standard (BS) 6396 (BS 6396:2008+A1:2015 - Electrical systems in office furniture and educational furniture) is the relevant standard for electrical systems in office and educational furniture, which are connected to the mains via a 13 amp plug. It sets out requirements for ensuring electrical power, data and telecommunications systems in office furniture, office screens and educational furniture are safe.

All electrical equipment must be designed and tested to make sure it's safe and complies with laws and regulations - in particular, the Electricity at Work Regulations and the Health & Safety at Work Act.

Electrical sockets

Plug sockets installed in office and educational furniture are intended to supply electrical equipment with a fuse rating of no more than 5 amps. Section 7 of BS 6396 describes the need to test such equipment and sets out the procedures for doing so.

You should carry out these tests on reconfigured desks and screens as well as new installations. You must repeat the tests periodically to fulfil the requirements of BS 6396 and the Electricity at Work Regulations in maintaining a safe working environment.

Meeting the requirements of BS 6396 means following the points listed below when configuring electrical systems. Any electrical system being fed from one 13 amp BS 1363 UK plug must not have more than six individually

fused sockets rated at 3.15 amps each, or four individually fused sockets rated at 5 amps each as shown by the diagram.

If you have equipment rated higher than 5 amps, do not plug it in to your office or educational furniture as the sockets are designed for office equipment only. Also, make sure all sockets have the correct fuses - each socket must be rated at either 3.15 amps or 5 amps, and all power modules have the correct fuses - even if the electrical system has surge protectors, mini circuit breakers (MCBs) etc. installed.

Residual current devices

BS 6396 was updated in December 2015 with a requirement for all electrical systems within office or educational furniture to include safety protection in the form of a 30 milliamp (mA) residual current device.

What is an RCD?

An RCD monitors the flow of electricity (measured in amps) through a circuit. If the current sent down the live (brown) wire to the electrical appliance does not match the current returned via the neutral (blue) wire, the RCD sees that as a leak in the circuit and automatically stops the flow of electricity. For more information on RCDs, go to www.electricalsafetyfirst.org.uk/guidance/safety-around-the-home/rcds-explained

Why do I need a 30mA RCD?

Although all RCDs do the same job, the speed at which they stop the flow of electricity is determined by the device's rating, measured in milliamps (mA). BS 6396 says electrical systems within office or educational furniture should include a 30 mA RCD. This is classified as a high-sensitivity device, capable of stopping the flow of electricity within around 40 milliseconds and preventing irreversible heart damage or death

from electric shock. As little as 0.5 mA can cause electrocution in less than a tenth of a second. Anything over 40 mA is likely to be fatal.

BS 6396—Exclusions

The requirements of BS 6396 do not apply in the following circumstances: Electrical equipment connected to the mains by some other form (i.e. not a 13 amp UK plug); an individual piece of equipment needing more than 5 amps - this must be connected directly to its own 13 amp wall socket; or any electrical system in office or educational furniture which exceeds 13 amps.

CMD makes its products safe

At CMD, we put electrical safety at the heart of what we do. Our highly trained and experienced team of engineers are all qualified in aspects of compliance with BS 6396, and we are able to offer our entire range of power modules (including Rotasoc) to meet the standards of BS 6396 for any office or educational environment.

It's up to our customers to ensure their installations comply with BS 6396. We make sure that all our products meet the standards.

RCDs in our products

We can supply the following products with residual current devices:

Power Modules: Conti Connect (metal and plastic); Rotasoc (switching/protection module) - can be retrofitted; Elite+ (RCD protection module) - can be retrofitted.

Underfloor power: One Piece 'Fast Fit' Floor Box (20 Series) - supplied with socket outlets incorporating a residual current device (SRCDs); Individual Compartment Floor Box - supplied with SRCDs; Integral RCD/RCBO Floor Box; Slab Box - supplied with SRCDs; Cleaners Hive - supplied with SRCDs; Cable Hives - supplied with SRCDs.

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MAXIM 10 OFFICES GET MAXIMUM ENERGY EFFICIENCY FROM CP ELECTRONICS & AKD



The latest in a prestigious range of commercial developments across Scotland, Maxim 10 marks yet another significant landmark project for lighting controls specialist CP Electronics and electrical contractor AKD.

The building, comprising a mix of open plan areas, and meeting rooms, with a capacity for over 200 workstations on the ground floor alone, required a modular lighting system flexible enough

to meet its changing needs. Brian Hedley, area sales manager of CP Electronics, said: "We used our Vitesse Modular lighting control system. It's a highly flexible and easy to use solution which enables a huge variety of configurations."

By combining 2-way and 4-way starter and extender modules, CP's Vitesse Modular system enables all lighting needs to be met with a simple plug and play solution. Once in place, it was simply a question of plugging in the luminaires and necessary PIR detection systems into the lighting control modules (LCMs).

To ensure maximum detection and reach at optimal cost, two types of PIR were used. In the larger areas, mid-range PIRs gave 16m by 6m coverage, while in smaller spaces including storage cupboards, the standard PIRs provided a detection pattern of 7m. Lights were programmed to timeout after 20 minutes, keeping energy usage to a minimum.

In total, the building uses 144 starter modules, split between 2-way and 4-way variations, along with 167 extension modules and 144 PIRs. In addition, just over 1,000 of CP Electronics' pre-wired luminaire leads were used to save even more time during installation. From start to finish, the lighting controls part of the project took just nine months.

For more about CP Electronics and AKD please visit cpelectronics.co.uk and akd.net

Is poor lighting putting your workforce's health at risk?

The HSE (Health and Safety Executive) recorded an estimated 71,062 employee non-fatal injuries as reported by employers in 2017/18, most of which occurred by common yet avoidable incidents. The two biggest problems highlighted were slipping, tripping and falling followed by handling, lifting and carrying.

Ineffective lighting in the workplace is associated with a range of health issues from eye strain and posture, to lethargy and attention problems. However, in environments such as factories, warehouses and distribution centres, a dark or dimly lit facility can also lead to injuries and even fatalities.

It is important that employers regularly review lighting to highlight any light-related issues that may cause harm or injury. Companies often buy or lease an empty building where the lighting is just about adequate. However, once obstacles like racking or machinery are installed, light levels will drop dramatically. Inadequate lighting also burns more energy than necessary.

When designing a lighting system – for a new building or as an upgrade within an existing facility – it is important to: design for a uniform level of lighting, preventing eye strain; use accurate reflectancy levels; design to levels equal to or above CIBSE guidelines; use a colour rendering that promotes the feeling of wellbeing and productivity; ensure adequate emergency lighting is designed for; position fixtures in relevant places, relative to activity and walkways; pay particular attention to hazardous areas; ensure the lighting is high enough to avoid collisions with workers/machinery.

Further information on energy saving LED lighting schemes is available from Ecolighting on 01455 552511, by emailing enquiries@ecolightinguk.com or by visiting the company's website at www.ecolightinguk.com



INTEGRAL LED LAUNCH NEW LOGISTICS HUB IN AYLESBURY, UK



LED lighting manufacturer has relocated its European logistics and warehouse operations to Aylesbury. The new Rabans Lane site will be central to a network of supply links to the company's resellers throughout the UK and to support their subsidiaries in France, Netherlands and Spain. At an official ceremony on Friday 13th September the management team were joined by Sir David Lidington, MP for Aylesbury, and the Town Mayor, Councillor Mike Smith, to celebrate the official opening of the new facility that marks a major step to accelerate European-wide trading despite the existing backdrop of confusion caused by Brexit.

"Whatever the outcome of the UK Government's negotiation with the EU, we are committed to providing improved supply-side support to our customers throughout the domestic market and on the continent. Faster stock deliveries and ultimately more competitive product margins will provide a major benefit to trading partners ahead of challenging market conditions. Ultimately, we believe that British businesses have an exciting future in the European market if they are agile and remain responsive to the demands for disruptive technologies like LED lighting," commented Sunil Kotecha, MD of Integral Memory plc.

"I welcome the vote of confidence Integral has given to the business future of Aylesbury", noted The Rt Hon David Lidington. "It is heartening that this company is doing what it needs to be successful in the 21st century – designing lighting that delivers better value for money for end customers."

Since their arrival six years ago, Integral LED has built its LED lighting brand on a quality message at keen prices. A 25-year track record of managing technology and products in the semiconductor market shaped their approach to the lighting market. An in-house, fully-equipped lighting laboratory was operational one year before they sold a single lamp. In recognition of this vigilance, Integral LED earned a reputation for reliability and are a familiar choice at trade counters across the country and aims to become a well-known option throughout Europe.



smart home lighting

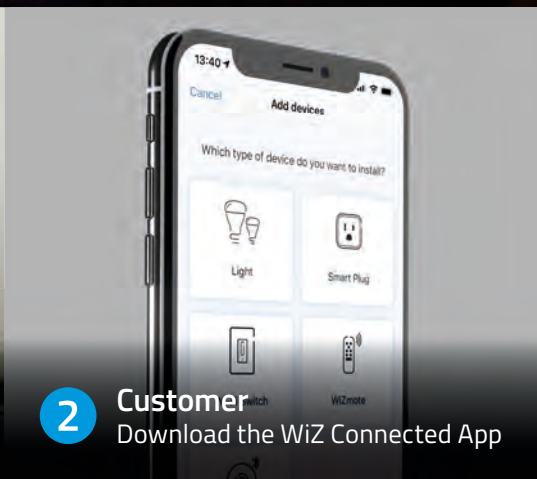
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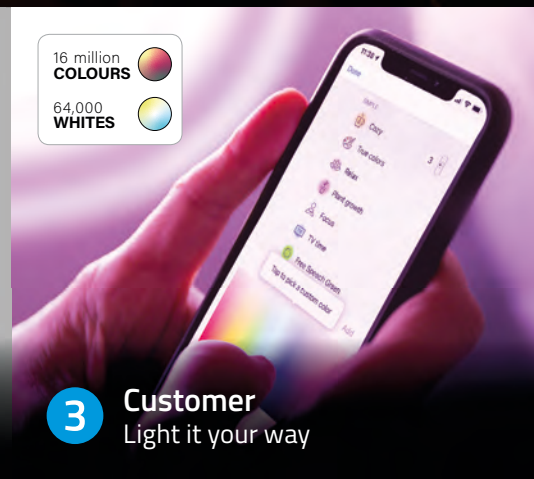
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ENERGYS GROUP LED UPGRADE AT LEYTONSTONE SCHOOL IS SET TO DELIVER £8.7K ANNUAL SAVINGS

Leytonstone School is on track to significantly reduce its annual energy use following the final part of its LED lighting upgrade. Financed by the London Borough of Waltham Forest's Salix Fund, the project is estimated to achieve annual savings in the region of £8,700 against a project cost of £69,639. This is estimated to lead to carbon reduction savings of 24.61 tonnes of CO₂/pa with a lifetime carbon savings of 615 tonnes. Return on investment is predicted to be within 7.3 years.

Raj Gunasekaran, business development manager at Energys Group proposed a solution to which could be delivered with minimum disruption. Self-learning Intelligent Wireless Control LED lights were installed, which use iDim Active+ sensor technology. This is an intelligent wireless automatic control that provides daylight harvesting and presence detection, without need for re-wiring or modification to existing circuits.

Energys Group estimated that the project would take ten days to complete and, in order to minimise disruption to the school timetable, the project was scheduled for the Summer half-term holiday. The majority of the project was completed during the half-term week and the team finished off the project by working a couple of early mornings and late evenings.

The school's site manager Sean Goffin was very pleased with the way in which Energy Group delivered this project: "The work was completed on time and with minimum disruption to the school day and teachers have already commented on the improvement in the quality of the lighting, which is an excellent outcome."

"Nothing has been too much trouble for them (the Energys Group team) and, whilst it is still early days in terms of seeing the energy savings coming through, I am already noticing a reduction in the maintenance time for the lighting in these two buildings."



LIGHT'S ON AT CAE GLAS PARK



Megaman has had a number of its innovative lighting solutions installed at Cae Glas Park. The renovation project focussed on the refurbishment of public toilets in Cae Glas Park, which after years without being renovated had started to look dated and was showing signs of wear and tear. Oswestry Town Council approached its electrical contractor partner, Highline Electrical for a solution and Megaman's low-energy

lighting solutions was recommended. The team fitted over 20 new Megaman lighting units, including Megaman's RICO LED Downlights, as well as its FONDA Integrated LED Bulkhead. Both ranges have been designed, tested and produced to comply with the necessary environmental legislation and industry codes of practice.

Commenting on the project, Andy Vaughan, director of Highline Electrical Ltd commented: "The space looks a lot better than it did before and is running off far less electricity. Thanks to Megaman's low-energy lighting solutions the toilets are operating more efficiently, which is helping to reduce the council's energy bill."

The ease of installation of Megaman's products facilitated a quick turnaround for the development team. The project, which broke ground in February 2019 was completed in March, just one month after the units were installed. Crucially, the redevelopment was finished just in time for summer and the park's busy schedule of live music, fun days, sponsored walks, bowling, tennis competitions and band concerts.

Speaking on the refurb, Lloyd Robson, project & specification business development manager at Megaman, commented: "This was a great project to be involved with. For companies and councils alike, there has never been a better time to make the move away from fluorescent lights to LED units. There are a number of tax offsets on offer to those moving to more low-energy lighting solutions. It's great to see Oswestry Town Council join the movement and make real efforts to cut its carbon footprint."

For more information about Megaman, please visit: www.megamanuk.com, like Megaman UK Ltd on Facebook or follow @MegamanUKLtd on Twitter.

Scolmore's EVO LED bulkheads save time and money for social landlord



With responsibility for over 4,000 domestic properties, and in the wake of the Grenfell Tower tragedy, Fife-based social landlord, Kingdom Housing Association, decided to immediately increase the general and emergency

lighting provision in all their communal areas, over and above any likely guidance emanating from the Hackitt report.

Aiming to keep their tenants as safe as possible, and not wanting to wait for inquiry findings, they decided to retrofit emergency lighting into existing blocks of three storeys and above that did not already have this fitted. The challenge they faced was to procure a product that did not require rewiring, as most of these blocks were wired in two core cabling.

With the need to keep costs, installation time and disruption to a minimum, and with various products given consideration, it was Scolmore's innovative EVO LED bulkheads that provided the solution to this full refit project. The products specified was the EVO microwave sensor & emergency version for the emergency lighting provision and for the replacement of general lighting it was the EVO standard bulkhead. Andy Walls, Kingdom Housing Association's property maintenance manager, responsible for overseeing the installation project, says: "What is so great about working with Scolmore and having this product designed to meet our requirements, is that they have enabled us to save time and money on a lot of aspects of this project, as well as ensuring delivery of the product to meet our timescales."

"The fact that the bulkheads are so quick and easy to install, with the minimum amount of cabling and no rewiring required, meant a huge saving in labour costs. With no disruption from major works in the common areas for us and our tenants, it meant that Health and Safety issues were minimised, along with noise and mess. In addition, the energy efficiency of these bulkheads, their 50,000 hours of life, plus the minimum amount of maintenance required to service them, all added up to a positive situation for us."

"We also looked at the environmental aspect of the project and concluded that we would be reducing the pollution to the environment from not having to recycle the old fluorescent tubes - eliminating the harmful gases and pollutants that these products produce and also using less energy over the lifespan of the product."

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New Emergency Light Test Switch from ESP

ESP's Ducer range of emergency lighting products has been expanded to include two new emergency light test switches. Designed to test batteries, lamps and duration function of emergency lighting luminaires in accordance with current emergency lighting standard BS5266, the new products will help building owners and responsible persons to maintain compliance.

These automatic, key-operated emergency lighting test switches are permanently wired to the emergency luminaire supply. The key switch is used to interrupt the supply for a pre-programmed period of time. At the end of that period, the supply to the luminaires is automatically reinstated, so there's no risk of depleting the batteries in the emergency fitting by leaving them connected for prolonged periods.

www.espuk.com



New C.K Rechargeable LED Floodlight - Makes light work of awkward spaces!

C.K continues to expand its successful work light range with innovative new products, combining high performance with great features. The new C.K Rechargeable LED Floodlight (T9715R) is no exception, with a range of advanced features and benefits designed to more than meet the needs of professional tradespeople.

Strong, reliable lighting conditions are essential when working in awkward spaces. The new C.K Rechargeable LED Floodlight with its powerful super bright flood beam, versatile clamp mechanism and handy 360° swivel head, offers complete flexibility, to light even the most difficult areas and allows the job to be done quickly and effectively.

www.carlkammerling.com



Meridian LED Track Lighting

The CED Electrical Group's 25th Anniversary Year has seen many new Meridian LED Lighting products, from domestic under cabinet lighting, to outdoor wall and garden lighting and on to ZFL Industrial floodlights. Now the Track Lighting range sees the addition of black fittings to complement the current white range.

Round, hexagonal or square designs are available – all made from high quality steel, IP20 rated, RoHS compliant and meeting BS EN 60598 Part 1 standards. Fittings are designed for use with GU10 lamps up to 50w, but are suitable for energy saving LED options.

Single circuit 1 and 2 metre track comes wired with live, neutral and earth, whilst accessories include couplers, single, 3 and 4 way track connectors, end caps and bends - making this range highly flexible yet easy to install.

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Enhanced worker wellbeing and safety at Sandwell Council House

The building is undergoing plans for total refurbishment, focused on rationalising and maximising office space to create a more contemporary working environment, that together with flexible working conditions which will enable culture change. Central to achieving this was a significant upgrade to the lighting system in the offices. Tam-lite Lighting was part of the pilot project encompassing Urban Design, Highways, Planning, Asset Management and Leisure Services. The lighting system, room design and layout underwent a major overhaul, as part of the overall objective to improve working conditions.

Agile working environment

An agile working approach was introduced giving employees the option to locate at any available desk or table suitable for their work. This, in conjunction with a new lighting system, gives employees a workspace that provides a better collaborative environment, allowing them to stay focused on tasks for longer.

Tony Davies, project manager at Sandwell Council House, comments: "As a local council, we take employee wellbeing seriously. We have over 200 people in this office alone, and the Tam-lite lighting design team understood and developed a lighting scheme that complemented our agile working plan."

Tall windows encase the large office, providing an abundance of natural light, which is a major benefit in terms of people's wellbeing at work. The human circadian rhythm is strongly linked to the intensity level and colour temperature of natural light. People will feel more alert, active

and, as a result, can feel further productive when exposed to more natural light.

The new lighting system works in conjunction with the natural level of illumination. Fittings with photocell receptors were specified, reducing the intensity of the luminaires when natural light levels increase. This ensures that daylight is still the main source of illumination for occupants. However in the darker months the ambient light adapts accordingly in concert with the installed fixtures.

Tony Davies says: "The new lighting system has received a lot of positive comments, people have said that it feels much brighter in the office now. Plus, the fittings themselves look great, more than just a flat panel, giving a bit of character to the room and creating a more visually pleasing environment."

The use of daylight harvesting photocell controls, on top of the initial switch to LED, ensures that energy consumption has been significantly reduced. "We have an energy policy at Sandwell - for example we have used sustainable materials throughout the office - and the energy savings associated with LED lighting made the decision for us. Tam-lite's quality luminaires and warranty made it easy to choose them for the project," says Tony Davies.

Keen to promote circular economy and sustainability, Tam-lite luminaires can be maintained long beyond the warranty ensuring long-term, quality lighting solutions.

Emergency Lighting

With such a large open plan office and over 200 employees to keep safe, ensuring that the emergency lighting systems were upgraded

throughout Sandwell Council House was paramount. The emergency lighting system was upgraded throughout the offices. In addition to emergency exit signs, recessed emergency downlights were installed around the working spaces and meeting rooms. The right emergency lighting ensures that people remain calm and quickly exit the building in the event of a severe emergency, such as a fire. Emergency lighting can also be used to allow people to continue working inside the building in the event of a power cut or non-threatening loss of mains power.

As the large office space is substantially above 60m², it requires an illumination level of 0.5lux on the ground in order for people to quickly identify and make their way to escape routes. High output emergency luminaires highlight escape routes for occupants, ensuring that the building is a safe place to work. All Tam-lite sales engineers are LIA certified, and the Technical Design team have over 100 combined years of experience in lighting design. As members of RELUX, they are able to design bespoke project solutions. As a BAFe certified company, Tam-lite Lighting emergency lighting system designs are confirmed to be compliant with British emergency lighting standards, providing peace of mind to our customers.

Tam-lite is also a member of the ICEL (Industry Committee of Emergency Lighting), a division of the LIA, representing the highest level of legislation in terms of luminaire quality, specialising in emergency lighting. If you have specific lighting requirements in your office facility, see how our Tam-lite can help you, for more information at www.tam-lite.co.uk





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BEG TO SHOWCASE NEW GENERATION OF KNX DETECTORS AT LUX LIVE

BEG Lighting Controls will be demonstrating its advanced range of KNX Generation Six Presence Detectors at Lux Live (stand I4) on November 13-14 at the ExCel in London.

Building on its well-proven range of presence and motion detectors, the German manufacturer has updated versions of its KNX range including a Deluxe version that has built-in logic, as well as sound and temperature monitoring. The Deluxe version will offer a premium solution for KNX integrators facing more demanding applications with extra functions, which can include a logic module, sound sensor and temperature sensor.

BEG Lighting Controls KNX System sales manager, Stephen Payne, says: "The logic module is independent of the detector operation and has proved to be most useful to integrators. The integrated sound sensor can be used in areas where there are restrictions to the normal presence detection such as a toilet cubical.

"If configured the sound sensor will

activate, but only after motion is detected. Run-on times are configurable. The built-in temperature sensor will send temperature reading to the KNX bus to be used by HVAC actuators. This means separate temperature sensor do not have to be fitted to the wall, which will save electrical contractors time and the end user expense."

The new KNX Generation Six Presence Detectors mean BEG Lighting Controls now offers flush fitting and surface mount options on nearly all of its devices with different levels of functionality, giving the widest choice of detectors on the market.

All BEG KNX Generation Six detectors can be configured to be fully automatic or semi-automatic, via the ETS software or optional remote controls. The sensors include lens shields to obscure parts of the detectable area, which is useful when detection is not required in certain sections of the space.

BEG Lighting Controls sales director for UK & Ireland, Paul Jones, says: "BEG Lighting Controls is leading the way with the widest choice of presence detectors to suit all types



of requirements in the UK and Ireland. Our new KNX Generation Six range offer more choice in operational height, detection area, installation and functionality than ever before. We even offer different colours.

"For the first time, there are products available on the market for KNX integrators to use, which can substantially reduce costs by sensing occupancy by presence and sound and then combining this with temperature monitoring and logic function.

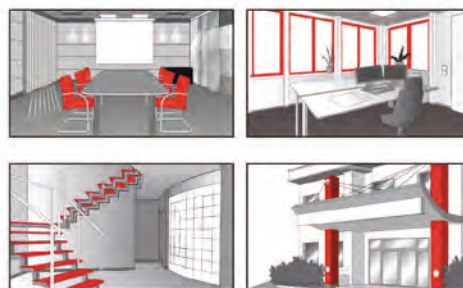
"We look forward to demonstrating the range when we appear at Lux Live where BEG will have its biggest presence for years."



The lighting control professionals



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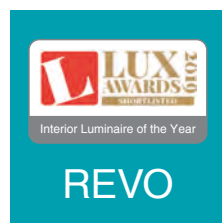
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A game-changing, 18th-century chandelier conversion

Faced with an awkward lighting project in one of Scotland's greatest ballrooms, electrician Del Campbell was in for a challenge. He had no idea how complex the job would turn out – or how simple the solution would be.

Recommended by his local wholesaler – YESSS Electrical, Livingston branch – Del Campbell, Westrigg Electrical Services, was appointed to undertake a complex LED upgrade at Hopetoun House in Edinburgh, 'Scotland's finest stately home'. Hopetoun House was one of YESSS Electricals' new key customers, and after months (if not years) of frustration with the lighting set up in the ballroom the general manager knew something had to be done. He was desperate for a simple, effective, and maintenance-free solution to lighting the ballroom, a highly sought-after wedding venue with a high-end vintage aesthetic.

The planning phase

Del soon discovered there was far more to the job than simply replacing the lamps with vintage-looking LEDs. The existing system used to control the lighting level in the ballroom was headache-inducing. Flicker and buzz were a nasty by-product of an outdated lighting control panel, and the maintenance team were deeply frustrated with constantly replacing the chandeliers' lamps – sometimes changing as many as 20 a week.

Fed up with flickering, buzzing lamps, the client required a simple, maintenance-free solution to lighting that would finally bring to life the magnificence of Hopetoun's grand ballroom. They needed their upgraded chandelier system to be maintenance-free; dimmable from one single point; completely silent; 100 per cent flicker-free; styled with vintage-aesthetic LED lamps; and able to cope with 90 LED lamps

The project scope

With the project requiring 90 LEDs that needed to be connected to existing wiring, finding a dimming solution to cope with a load of that size without an expensive bespoke dimming system would be a challenge. Aware of the issues associated with pairing LED and TRIAC dimmers, and that finding a solution to cope with such a load would be tough – Del asked YESSS Electrical for some product advice.

The team at YESSS Electrical immediately



“After month's, if not years' of frustration with the old setup, I cannot express how relieved, pleased and impressed we are with what you have done for us.”

recommended Zano Controls, and within a few minutes Del was on the phone to a member of the Zano tech-team. Del had heard about Zano's problem solving products prior to this project, but had not previously tried and tested their LED dimmers himself. Zano took no time in finding the solution: to cope with the number of LEDs required and resulting inrush current the chandeliers required the ZBARLED1000, an off-the-shelf remote dimming pack that was easy to install.

Zano frequently test lamps for compatibility with their dimmers, which meant they could advise on a specific brand of dimmable vintage aesthetic LEDs too. The three chandeliers in the ballroom required a total of 90 LEDs all at roughly 4W per lamp. With the inrush current accounted for, Del was looking at a total load

size of just under 700W/VA.

Fantastic results

Impressed by how straight-forward the ZBARLED1000 was to install, Del got straight to work fitting the 90 LEDs, soft LED uplighting around the ballroom perimeter and connecting the lighting control solution up to the chandeliers from one central point in the room.

Despite a minor hold up in the form of an ITV drama being filmed at Hopetoun (which in-turn meant the ballroom was out of action for a solid 24 hours being used as a dressing room) the process went smoothly. Del was able to return the following day to programme the dimmer using Zano's exclusive Smart Settings in time for a wedding taking place in the ballroom that weekend.

By adding a specifically designed controller for the ZBAR remote dimmer (one that's ideal for multiple control points and large loads), Del enabled rotary dimming control of the three chandeliers from one point in the ballroom. This finally gave Hopetoun House's management team lighting control in the ballroom that produced spectacular results without compromising on the light output of the LEDs.

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NEW FROM MARTINDALE: SAFETY LOCK OUT FOR MAINS CUT OUTS

Now available from **Martindale Electric** – leaders in safe isolation and electrical safety – is the new **LOK6W**, a fuse carrier locking off device for Henley and Lucy mains supply cut outs

Every year thousands of work accidents occur due to energy sources that have not been isolated. To the Electrician, safety is paramount and the selection of quality tools and equipment is vital for their welfare. Designed to restrict finger access to live contacts and prevent the reinsertion of a fuse whilst maintenance is in progress, the LOK6W is an essential accessory to keep electricians and maintenance teams safe in accordance with Electricity at Work Regulations. In common with the LOK6, the new LOK6W features an extendable design which also makes it suitable for larger Red Spot type fuse holders rated at 63A and 100A

Manufactured without any metal parts – to reduce the risk of use in live working environments – the LOK6W is constructed from a resilient flame-retardant blend of Polycarbonate and ABS for high strength and long-term durability.

Designed in Martindale's distinctive yellow casing, to make it easily identifiable, the new locking off device from Martindale Electric is quick and easy to install without the need for any tools.

The LOK6W is compatible with a wide range of locking padlocks with shackles up to 7mm wire diameter. Martindale Electric recommends utilising the PAD11R or for added safety the insulated padlock PAD21R.

Also available from Martindale Electric is a full range of locking off kits, voltage indicators, test lamps and proving units for implementing safe isolation procedures in all installation categories up to 1000V CAT IV.

For more information, please contact Martindale Electric on 01923 441717 or visit: <http://martindale-electric.co.uk/>



“Designed to restrict finger access to live contacts and prevent the reinsertion of a fuse whilst maintenance is in progress, the LOK6W is an essential accessory to keep electricians and maintenance teams safe.”



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Further amendments to the safety standards BS7288-2016 are due at the end of this month, **GreenBrook** are the first to ensure their products adhere to the latest regulations. Sales director, **Peter Ratcliffe**, explains ...

PowerBreaker – still the forefront of RCD Technology

To explain in simple terms; the amendment to BS7288-2016 requires Type A RCDs and Type AC RCDs. Type A RCDs can detect pulsating DC currents and surge faults that Type AC RCDs may not detect. Pulsating DC currents are created from faults sometimes found in modern electronic equipment, such as EV car chargers, solar panels, multi-media equipment, USB sockets, iPhone chargers, SONOS, Alexa etc.

This new standard requires much more rigorous testing of the RCDs with high voltage and short circuit tests. These tests are so intense; they are only able to be carried out by one of the industry independent test houses. Products that adhere to this standard have a more sensitive/stable trip window so are a much safer defence against electrocution.

Another visible change to this standard is the additional markings on the front plate and the coloured flag indicators; which must now be green and red. To keep with our stylishly design front plate; these indicators are placed within the window. A RED flag shows the device is ON with a live supply to the appliance. A GREEN flag shows the device is safe with the supply to the appliance switched OFF.

GreenBrook are part of the BEAMA Technical Committee who helped to write the revised standard. GreenBrook have also noticed an upturn in their Powerbreaker RCD business with the changes to the 18th Edition increasing the use of RCDs in all public areas. With this amendment, together with the increased safety requirements discussed in the recent government Hackitt Report, there is more call for using RCDs to detect and isolate products at the point of use to help prevent electrical fires, as well as helping to protect the main circuit and the consumer unit. Using socket RCDs at the point of source also helps to stop nuisance tripping further up the circuit. Socket RCD's are a perfect opportunity for wholesalers to make an additional sale, whilst ensuring that their customers adhere to the latest safety regulations.

PowerBreaker socket RCDs are available in both 30mA and 10mA trip currents in a selection of Passive and Active designs. Many people are unaware of the differences between Passive or Active products and do not understand where best to use what! So here is an easy way to understand it...

For Passive RCDs a typical application would be a refrigerator or freezer that would return to their regular mode of operation as soon as the power supply resumes normal operation. Passive RCDs are also useful to use for sockets in hard to reach places where having to gain access to re-set an RCD would be tricky, however where protection is still required.

An Active RCD is better used for electrical equipment such as hedge trimmers or power tools where unexpected restarting of the equipment could present a danger to the user in a power cut situation. You will also see PowerBreaker offer both a 30mA RCD as standard plus a 10mA option.

PowerBreaker 10mA RCDs are the super sensitive products. These RCDs trip earlier as they are more sensitive to a fault current flowing, breaking the circuit before the trip occurs further upstream and takes out the nuisance to the consumer of the RCD tripping – often then cutting out other faultless items. These RCDs have been deemed safer for use in areas with young children, such as nurseries and schools but also for use in places with more vulnerable people like hospitals or old people's homes where a chance of electric shock or machine faults could be fatal.

All public access areas would be advised to use 10mA as all types of people can pass through these areas. So we see that the degree of risk depends not only on current and time but if the victim is a child or a person in poor health, the effects can be more serious so the need for RCD protection is even greater. There are many other PowerBreaker products available - we offer a selection of spurs, in-line RCD's and weatherproof RCDs.

Please visit www.greenbrook.co.uk or www.powerbreaker.co.uk for further details.



Our new RCDs comply to the latest BS7288 safety standard...do yours?

- ▶ New standard BS7288-2016 requires Type A RCDs as well as Type AC RCDs
- ▶ Type A RCDs detect DC pulsating currents and surge faults that a Type AC RCD may not detect
- ▶ DC pulsating currents can be created by faults in modern equipment (e.g. EV Car Chargers, Solar Panels, Multimedia systems, SONOS, USB Sockets, i-phone chargers, Amazon Alexa)
- ▶ The new standard demands products that can withstand more rigorous testing (High Voltage & Short Circuit Tests)
- ▶ Powerbreaker RCDs trip at least 10 milliseconds faster than the BSEN standards require
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- ▶ Clear Flag indicators (Red = on, Green = off/safe)
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- ▶ BS7288 - 2016 comes into effect in November 2019

**New Standard
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**GreenBrook are part of the BEAMA Technical
Committee who helped to write the revised standard**

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Providing a flexible and high-performing underfloor air conditioning system



One Benjamin is a new mixed-use address in Farringdon. Designed by world-renowned architects. Alford Hall Monaghan Morris, and situated directly opposite the new Farringdon station, the building provides 43,562sq ft of office, retail, and residential space.

The original air conditioning design specified four downflow units per floor, two supplying the rear zone of the building and two for the front zone. Each zone was split into two further zones; one supplying cool air towards the perimeter of the building (where it is needed more to combat solar gain), and the other providing warmer air to the central areas of the office space where there is less heat generated by the sun.

AET Flexible Space had built up a strong working relationship with the main contractor, Knight Harwood, while working on a previous project at 20 Soho Square. Having seen the advantages of the AET system on that project, Knight Harwood saw the opportunity at One Benjamin to redesign the original Stage 3 hot/cold aisle design and to implement AET's underfloor air conditioning solution for the three floors of office space. Knight Harwood felt that AET's

highly flexible system would be more suited to cope with the variations in temperature across the building caused by increased/decreased sunlight.

AET's underfloor air conditioning systems make use of the space beneath a raised access floor to create the air ventilation path, eliminating the need for ceiling-based services and associated duct and pipework. At One Benjamin, each of the three floors was divided into zones of up to 300m² depending on the potential use and occupancy density of the area. Each zone is then supplied with chilled or warmed air by a zonal air handling unit or CAM (Conditioned Air Module) and the conditioned air is then delivered into the space using a number of recessed fan terminals (Fantile).

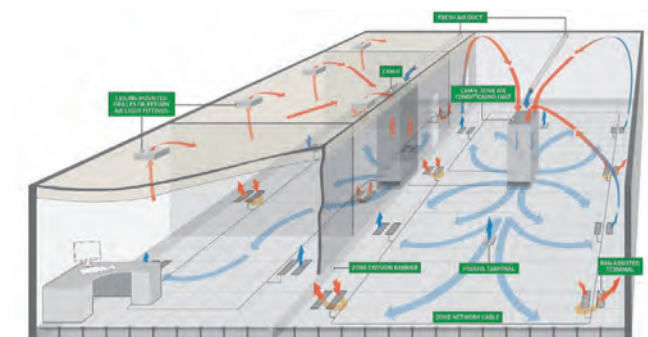
One Benjamin selected AET's most flexible system, the CAM-V, which makes use of the raised floor void as a plenum for the distribution of supply air, whilst receiving return air back to the CAM unit at ceiling or high level. With a CAM-V system there is a considerable amount of flexibility in where the fantiles can be placed, allowing for easy reconfiguration depending on the

particular needs or layout of an office. For maximum flexibility each fantile is supplied with onboard Fanspeed and Set Point adjustment, but in meeting rooms and cellular space AET offers Flextouch wall-mounted controllers, which allow users not only to adjust the fan speed and temperature, but also CO₂ and humidity monitoring and control.

Headroom Height was a key consideration during the design and build of One Benjamin, and by using the AET underfloor air conditioning system the contractors were able to eliminate much of the ceiling-based services and ductwork. The offices were developed to provide a sustainable workplace, and have been awarded a BREEAM 'Excellent' rating. The reduced amount of building materials needed for an AET underfloor system, as well as its long-term flexibility, make it an excellent choice for sustainable building projects.

The building was completed in July 2019 for the Girdlers Worshipful Company and is now beginning to rent its office space and residential units.

"Overall, AET was able to provide One Benjamin with a high-performing and flexible air conditioning system, which was more suited to its needs than the originally proposed downflow system."





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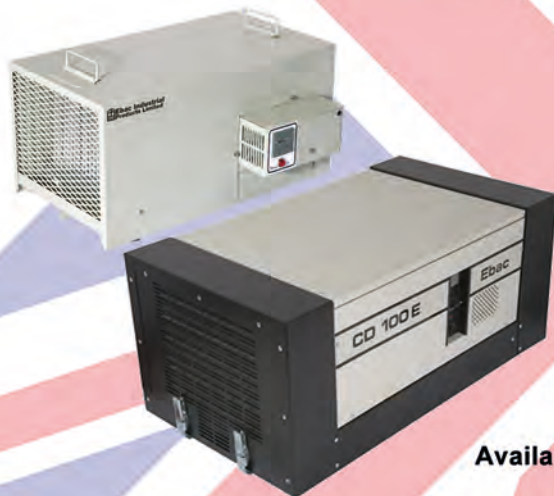
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Boosting energy efficiency in HVAC

By **Matt Wallace**, account manager, Specification (BMS/EMS) at **Schneider Electric**

Despite great strides in diversifying the country's energy sources and stabilising the grid, recent analysis from Carbon Brief shows that, while the UK is doing well in reducing overall consumption, the country is let down by a lack of progress in heating efficiency. As the seasons change, businesses will waste millions in energy costs and generate tonnes of harmful emissions. Wasteful HVAC practices, such as heating and cooling underutilised building spaces or poor control strategies, indicate that the UK stands little chance of meeting its climate targets.

Changing this is not as challenging as it first appears. Businesses can cut capital costs and, at the same time, reduce operational cost and risk by taking a smarter, more integrated approach to HVAC and building management.

New blood and new ideas

One of the major problems holding us back is soiled, conservative thinking around HVAC design. Before it can be installed, a building's HVAC system must be created according to specifications by a consultant or engineer. While they generally do an excellent job of mechanical design, system fundamentals and best practises, there is generally a lack of thought and understanding around building controls.

There is little joined-up thinking between stakeholders, designers and construction teams, while communication between engineers, the building management team and construction teams is limited. This results in a design that neither integrates well with the BMS, takes advantage of existing infrastructure or utilises the capabilities of smarter products available as standard. Yet this only hints towards a wider attitude across the industry that fails to see the true value of building management controls. It is possible to improve HVAC efficiency, but greater early design collaboration and implementing connected technologies that enable smart building analytics is key.

To achieve this will require a significant change

in perspective. Many stakeholders are unaccustomed to change and wary of new technologies, but luckily there is already light at the end of the tunnel. As today's young generation of engineers and buildings professionals are digital natives by nature, they are more likely to see the benefits of the Internet of Things (IoT) and understand how to use its insights to drive improvements.

It is up to building managers to make analytics part of the equation, and for HVAC engineers to work with them to build systems that utilise Internet of Things capabilities.

A new philosophy

To cut down on HVAC waste, building managers must leverage best of breed solutions. Smart sensors, valves and actuators – when embedded into the building structure and connected to its BMS – enable continuous monitoring of the HVAC system. They also aid commissioning and maintenance by providing mobile apps to test, commission and create auditable tracking, while also providing quality information to the analytics packages.

A centralised analytics function tracks both system and device health through BMS alarms and reports, and can use remote connection technology to keep managers and engineers informed. They can be kept up to date with a prioritised report and using systems that allow cloud-based automated diagnostics, managers can pinpoint exactly which systems have irregularities before prioritising them based on energy cost, severity and comfort impact.

Artificial intelligence capabilities can aid the process by identifying problem conditions and offering remedies to resolve them. Building managers and engineers can then use the information captured to troubleshoot problems and identify service and savings opportunities. When an engineer is called in to solve a problem with building operation, they usually struggle to make sense of data that is disorganised and spread over numerous

systems. Armed with analytics-driven insights, however, they can quickly offer recommendations for upgrades, repairs and maintenance based on the building owner or business priorities.

From data to decision

Data analytics drives positive interventions by building teams of all types looking to improve performance and sustainability.

By having a connected IoT infrastructure both mechanically and electrically – combined with insightful analytics – it is possible to drive efficiencies by giving a better understanding of the systems and building to facilities teams. It will also allow design consultants to understand the operational status of working systems, revealing why a building may be consuming more energy than the design calculations suggested. This allows teams to base their findings on factual data rather than gut feeling.

An embedded analytics function is also beneficial from a return on investment (ROI) viewpoint. In most construction projects, whether new-build or retrofit, each stage of construction pays for the next. That is, the money estimated to have been saved during one phase goes on to fund the next stage of the process. With a solution that actively monitors performance and can accurately predict costs and savings, engineers can use its insight to make better decisions and inform the rest of the project. Through this method, the most efficient buildings are built.

When minds and technology meet, great things happen. More open controls philosophies and solutions, such as Schneider Electric's EcoStruxure Building platform, deliver improved building performance and efficiency, equipment longevity, increased occupant engagement and productivity, increased resale and rental value, reduced operating costs and a stronger ROI. Connected thinking and analytics give us the insight we need to create the sustainable HVAC systems of the future.

"The challenge is not as great as it first appears. Businesses can cut capital costs and, at the same time, reduce operational cost and risk by taking a smarter, more integrated approach to HVAC and building management."





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Appy days for electrical contractors

As the number of people owning a smart phone increases year on year, so does the popularity and day-to-day use of apps. **Marie Parry**, group marketing director, **Scolmore Group**, looks at how apps are making life easier for contractors and installers

Using an app to help with electrical work may have seemed unlikely a few years ago. However electrical professionals are now increasingly using apps that deliver quick answers, manage and customise information consumption and hasten communication. Now, with information at their fingertips, they are armed with ever more powerful on-demand IT capabilities.

Tasks that used to demand laborious hand calculations or time-consuming diversions to consult hefty code books – and the conveyance of information via face-to-face meetings, phone conversations and emails – have been sped up and simplified. With so many apps and so much information available, electricians will be looking for those that bring as much material as possible to their fingertips to make their working life easier, rather than having to search through a number of different sources.

The award-winning Scolmore APP brings to contractors the most comprehensive range of features that will help them in their everyday tasks on site. The company has acted upon feedback from electricians/contractors to ensure that the free app works for them, and saves them time and therefore money.

The Scolmore App includes the free 'Tool Kit' feature, which includes a selection of valuable calculators, designed to make it quick and easy for electricians to make essential calculations on the job. Included are Z's values; Cable Selection and Voltage Drop;



Power Factor; KVA Converter; Cost Saving Calculator; Downlights Number Calculator; Resistance Calculator; Voltage Calculator; Current Calculator and Power Calculator. The Scolmore App has everything in one place, including a comprehensive tool kit. You don't have to be part of any special scheme to log into the app and you are not restricted to quoting only using Scolmore products.

Scolmore has added a new Quick Quote Calculator, which is designed to let electricians/contractors create a quick quote as they are walking around the site. As well as providing the facility to create a quick quote while on site, the new Quick Quote Calculator also has an advanced setting that allows installers/contractors to set up the unit cost of each item and how much they would like to charge for labour. It is also set up so that if a double socket for example is added to the quote, it will also automatically add a double back box.

Free to download, the app features a complete range of searchable products (9,000 in total), product and tutorial videos, catalogue downloads and all the latest news

and events to keep users up to date with what's happening in the company and the industry. Keen to ensure that the app worked exactly how electricians want it to, Scolmore put the app to the test and prior to launch solicited feedback and suggestions from the industry, with a competition targeting a dedicated Facebook forum of 7,000 electrical contractors. This feedback has been taken on board and the original app has been updated to incorporate a number of tweaks and improvements, as well as some valuable additional features including: Quick Buy; product images - click on a product to enlarge it for superb clarity; updated Cable Selection and Volt Drop Calculator in the Tool Kit. As well as browsing the complete range of products, users can add them to their Favourites or the Quote Basket. Electricians also have the facility to email the contents of the basket for future reference, or straight to the wholesaler, providing all the information they need to obtain any quotations or make a purchase.

For further information, contact Scolmore on 01827 63454, or visit www.scolmore.com.



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With this new software from Pro Certs, the user can email the completed certificate directly from the app before leaving the site. Input your data while carrying out testing, removing the need to spend hour's handwriting reports. Produce, edit and email completed PDF (Master and Draft) electrical certificates directly to your client, including:

- EIC - Electrical Installation Certificates
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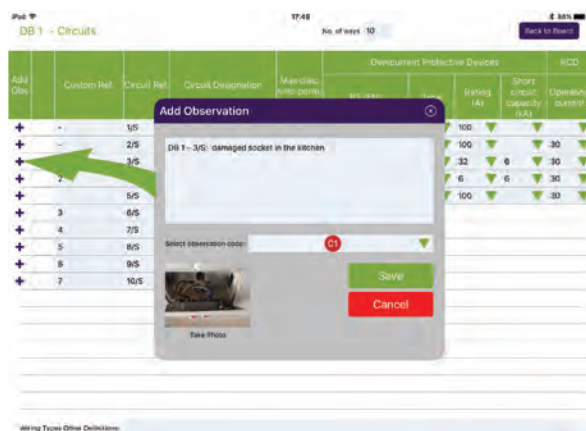
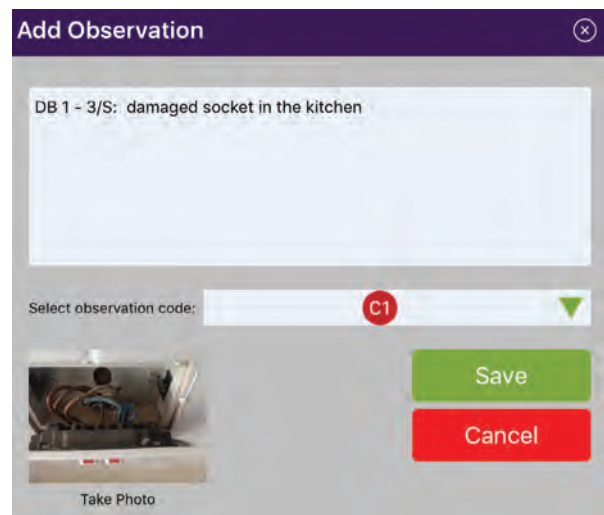
The app has some great built-in time saving features, such as automatically adding C1's, C2's, C3's and FI's, selected from the drop down list on the schedule of items inspected to the list of observations. This removes the need to manually input them.

Print site survey forms

If you prefer to hand write your certificates or would rather input your data at a later date, Print blank certificates onto plain paper. If you select an existing client and installation address this will be added to the associated fields on the blank paperwork.

Add photographic evidence

One of the many great features of this software is the ability to add photographs and append them to the electrical report. The photograph is automatically allocated the observation number for which it relates to.



Adding observations

To automatically add the corresponding circuit reference for which the observation relates to, you can add an observation from every section of the app with the dedicated "Add Observation" button, or by selecting the "+" icon next to the circuit on the circuits screen.

Client friendly reports

Most clients do not understand an EICR other than if it has passed or failed. To help with this we have utilised a colour coding system (below) for the coding of observations.



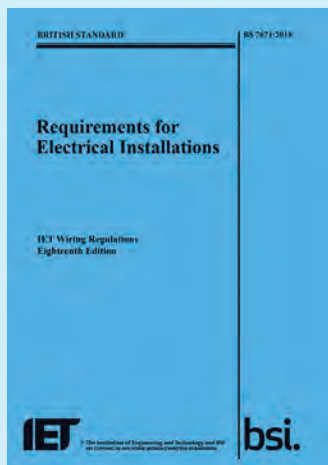
Customise your certificates

- Add your company logo
- Change the colour of the heading text to match your company colour scheme

Additional features

- Add multiple contractors, engineers, clients and installation addresses
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Find out more at procertssoftware.com/pro-certs and download the app using the QR code below.

Have your say on Amendment 1 to BS 7671:2018

The Draft for Public Comment (DPC) for Amendment 1 will be available from 1st October 2019 for 60 days.

The DPC contains proposals to amend Section 722 (Electric Vehicle Charging Installations) only, following advances in technology for this key area of electrical installation.

Find out more about the DPC and have your say at theiet.org/updates-et

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Could your invention be Super Rod's next big thing?

Editor **Lisa Peake** meets Tom Shelbourne, Patrick Lenaghan and Kyle Gamble, three tradesmen who came up with ingenious ways to make their jobs easier on site, and with the backing of **SuperRod** have been able to bring these innovations to market

On 12 September, Electrical Times was invited to a special 'Hall of Fame' event at The Angel Hotel in Abergavenny, Wales, to celebrate innovation and ingenuity in the electrical industry. Hosted by Super Rod, the event brought together people from across the sector – including journalists, social media influencers, industry innovators and the NICEIC, alongside the real-life tradesmen behind some of Super Rod's new and bestselling products.

Like those whose products he represents, Super Rod managing director Malcolm Duncan (pictured right), who has been working in the industry for more than 40 years, is a man of ideas, a visionary who sees the value in bringing new ways of thinking to every aspect of the industry.



Speaking at the Hall of Fame event, Malcolm Duncan, said: "For every one of the inventors here today, there are another 100 out there with an idea that they just haven't quite got the confidence to go out to the next stage with."

Under his guidance, Super Rod has become a champion of innovation. The company works closely with the electricians and contractors on the frontline, who have developed prototypes they believe can offer a solution to a common problem, that they themselves has experienced, or a smarter and safer way of working.

We met three such tradesmen who have entrusted Super Rod with their inventions: Tom Shelbourne, Patrick Lenaghan and Kyle Gamble. Each inventor gave us a demonstration of their product and shared the stories behind their ideas.

Tom Shelbourne

Tom Shelbourne, pictured at Hall of Fame event with Rich Heppell, director at Art of Smart (left), is the owner and director of West Country Tech Ltd, a Devon-based company specialising in CCTV, Wi-Fi and networking installations. Tom invented the Cable Tongue; a flat and flexible tool designed for pulling cables through partition walls, above ceilings and below floors.

Tom said: "I worked in Australia for three years and while I was there, I saw electricians stealing tongue and groove flooring plastic to pull their cables. It was a revelation and something I thought lots more electricians would benefit from, so when I returned to the UK I designed the Cable Tongue based on what I'd seen.

"Initially, I started selling it on eBay, but then it was picked up by Super Rod and it just took off. It's been a real journey for me and all off

the back of deciding at the age of 27 that I wanted to create something and start a business!"

Since the Cable Tongue launched two years ago, Tom has been managing its social media presence and collating customer feedback to see how he could improve on his design. Earlier this year, the Cable Tongue Pro hit the market, packed with extra features including a metal clevis fastener to make it compatible with Super Rod rods and attachments, and a new pulling sock so installers no longer need to tape their cable on.

"Social media feedback and reviews have really informed the product development process. I noticed that people were drilling holes in one end, so they could hook it from a distance. The new Cable Tongue now comes with a hole already in it, plus a compatible hook attachment."



With the Pro equally as popular as its predecessor, giving the people what they want is a strategy that is certainly working out for Tom.

Advice from the inventor: "People complain they don't have the time to invent something, but if you are passionate enough, you will work all hours outside of your working day to make it happen."



"Give people wonderful tools and they will do wonderful things." Malcolm Duncan

Patrick Lenaghan



Patrick Lenaghan is the owner of an electrical contracting business in County Louth in Ireland. He's been working in the trade for 30 years, and is the inventor of the QuikReel – a vertical spooling solution which dispenses cable, without the need for bars,

racks or stands.

Patrick said: "For many years, I had experienced the pain and frustration of trying to get cable off a reel without setting up a complicated dispensing system. I just needed something small, sturdy, lightweight and self-contained, which could be used as soon as I took it out of the van – but there was nothing like it on the market."

"Then, while rewiring an old farmhouse, I stumbled upon an old enamelled dish and seeing the way it spun on its own axis sowed the seed for the design of my QuikReel. This was the Eureka moment for me."

The QuikReel replicates the dish's spinning top action, allowing users to simply place their cable drum in the cleverly-designed dispenser and draw cable off quickly, smoothly and safely as it spins on its axis. Designed to fit most popular reel sizes, the sturdy QuikReel has the added benefit of protecting the cable drum from getting

wet or damaged too. Patrick said: "The QuikReel is a solution to a common problem that many electricians face every day. My invention is so simple – but it really works."

Before he spoke to Super Rod, Patrick approached a few manufacturers with his prototype, but with little interest. He had started to look at the cost of producing it himself, but luckily SuperRod were quick to snap up the invention for their portfolio."

Advice from the inventor:

"If you experience a frustration with the way you do things, there's a good chance other people are having the same problem, so ask yourself "is there a better way to do this?" "



Kyle Gamble

Kyle Gamble has been working in the electrical industry since he was 17 years old and is the director of KG Electrical, an electrical contracting company based in St Albans. Kyle invented the Duoxim Arbor; a unique drilling tool which makes existing holes bigger with ease. The product is ideal for widening a hole to fit new fire rated or LED downlights, and gives a uniform and tidy finish. Kyle came up with the concept for the Duoxim Arbor when faced with a project to replace 200 downlights. He said: "It was a job in London, at a house just a couple of roads down from 'Billionaire's Row'. Every room in the house was covered in downlights, so when the client asked me how he could reduce his electricity bill I suggested replacing the halogen downlights with LED alternatives.

"His response was quite simple; 'I have just

spent £40,000 having the house decorated from top to bottom; if you can do it without damaging the decoration, the job is yours."

As he'd not long started his business, it was too big a job to turn down and Kyle was determined to find a way to do it.

"When I couldn't find the right equipment to help me widen the existing holes without damaging the surrounding surface, I set about designing and making a tool that would allow me to do the job - and now we have the Duoxim Arbor."

With the help of Super Rod, the Arbor launched in January 2017, and it was an instant hit with his fellow electrical contractors. "I think the Duoxim Arbor's true value lies in its time saving properties. By swapping for a Duoxim Arbor to complete a hole enlarging job, instead of a pad saw for example, electricians easily save themselves



an hour plus they get a much cleaner finish, so there's also less time spent making good. It's a £25 tool which essentially pays for itself in a single use."

Ironically, Kyle still hasn't changed the downlights for his client as he now has some new ideas. Maybe these will inspire Kyle's next big invention.

Advice from the inventor: "The simplest ideas are the best ideas."

Scolmore launches dedicated YouTube channel - SGTV



Regular engagement with contractors via social media, trade magazines and face to face at exhibitions and trade shows is how Scolmore gains valuable insight into how contractors like to work and what they need to help them do their work in the most time- and cost-efficient way.

Scolmore's latest venture to engage with this valuable audience saw the launch of a brand new YouTube channel - SGTV - with the first episode aired on September 19th. The aim is to provide the viewing contractor audience with engaging, informative and innovative content that will help keep them up to date with the latest products and news, read the opinions of industry experts on issues that impact their working life and the chance to win some great prizes with regular competitions.

A number of contractors have been lined up for interviews to get their views on the issues they face in the job and demonstrate how we can help overcome these with the right products and training support. A 'Time is Money' challenge board will pit contractors against each other to see who can complete the given task in the quickest time.

It promises a wealth of valuable information via interviews, tutorials, challenges, unboxings and product overviews, as well as highlighting key industry news, events and dates for the calendar. A teaser video has been launched and features some of the industry's leading talents, with Billy Byrne, Tony Cable, Tim Shaw and Thomas Nagy all making appearances.

www.scolmore.com

ESP targets professional CCTV sector

Already offering one of the most comprehensive collections of premium quality, competitively priced CCTV systems for the domestic market with its 4MP range, ESP has now developed a brand new IP (Internet Protocol) CCTV range that will satisfy the growing demand from customers and contractors and will meet the needs of a changing market place which is moving from analogue to IP.



The new IP POE CCTV range is designed to offer superior, reliable and straightforward installation solutions for a range of applications from domestic through to larger and more complex commercial projects. The range features POE (Power-Over-Ethernet) which enables the camera and power feed to be wired in Cat5e cable up to 100 metres without the need for additional power, which makes installation much more convenient. A single Ethernet cable provides both the power and the HD digital feed, with just one cable per camera and multiple cameras can be installed anywhere on the network that the NVR is connected to.

www.espuk.com

PowerBreaker: still the forefront of RCD Technology



Further amendments to the safety standards BS7288-2016 are due at the end of November 2019 and GreenBrook are the first to ensure their PowerBreaker RCD products adhere to the latest regulations. To explain in simple terms; the new

standard requires Type A RCDs and Type AC RCDs. Type A RCDs can detect pulsating DC currents and surge faults that Type AC RCDs may not detect.

Pulsating DC currents are created from faults in modern electronic equipment such as EV car chargers, solar panels, multi-media equipment, USB sockets, iPhone chargers, SONOS, Alexa etc. This new standard requires much more rigorous testing of the RCDs with high voltage and short circuit tests. Products that adhere to this standard have a more sensitive/stable trip window so are a much safer defence against electrocution.

www.greenbrook.co.uk

Beware of the false economy!

Integrated-control heaters are acceptable for domestic situations but, in student accommodation, their features do match a control unit specifically designed for these environments, savings made on hardware and installation are soon eroded by higher energy costs.

But why higher energy costs?

Students take 2 minutes to Google the control, find how to unlock it, access the temperature control, set it to maximum - and there it stays, permanently. Within minutes a social media post relays this 'heating hack' to fellow occupants and the meter turns like a Waltzer at the fun-fair.

Prefect Ecostat2 is designed specifically for student accommodation and performance far exceeds those of its domestic rivals. Ecostat2 is fully lockable and is only unlocked with a bespoke handset. Temperature ranges are set within agreed parameters. Students hit Boost to warm up, after a set period the unit enters Setback-mode. The PIR senses occupancy - if a room is empty, the unit resets - if a room is unoccupied for longer periods, Frost-mode is entered using minimal heat. Boost, Setback and Frost, known as the "three-stage student program" - is a favourite with accommodation managers.

Managing costs is essential but, saving by fitting inferior technology has energy-managers wondering why their costs have, in fact, risen!



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CO – Why would you risk it?

The latest research commissioned by Gas Safe Register has found that home safety, including the condition of the boiler and appliances, falls low on the list of priorities for most homebuyers. More than a quarter of UK home buyers put re-decorating at the top of their list when moving into a new home, compared to a mere 12 per cent who would fit a new boiler. However, almost three in ten home buyers had to replace their boiler earlier than anticipated due to it being faulty or old. So, buyers' wishes and reality don't always go hand in hand.

Raising the alarm

A lack of awareness is the problem here. It's difficult for residents to think of a boiler being potentially dangerous. It's normally out of sight and as long as it's heating the house / hot water, it's generally forgotten about. Out of sight, out of mind. When people think of gas safety, they think of the obvious danger from natural gas – explosions. Most people are wouldn't think of carbon monoxide and many don't know what it is, where it comes from and just how lethal it can be.

Gas Safe have released a podcast which aims to provide homebuyers with useful safety tips as they move into their new homes. At Aico we have also been working hard to highlight the risks associated with carbon monoxide, most recently with our 'Why Would You Risk It?' campaign. We have released an information card which is free for you to order or download, via www.aico.co.uk/technical-support/guides-publications.

We have also been trying out new methods of raising awareness, using virtual reality at exhibitions. Unlike traditional user interfaces, virtual reality places the user inside an experience, immersing them and enabling them to interact. We are using it to show the effects and symptoms of carbon monoxide poisoning and why installing a carbon monoxide alarm could save their life.

But as an electrical installer, you also have a role to play. If you are working in a property that's recently been purchased and especially if you are fitting mains powered smoke alarms, raise the issue of the boiler servicing with the new owner, explain the dangers of carbon monoxide and recommend the use of a carbon monoxide alarm. The latter can be easily incorporated into a smoke alarm system, as long as you also fit an alarm control switch to enable residents to identify which alarm has triggered, smoke or carbon monoxide.

Explain to the home owner that a mains powered carbon monoxide alarm is the safest



By **Andy Speake**, national technical manager, **Aico**

option as it provides added reliability as batteries don't need to be changed. In the event of mains failure, they have battery back-up and if you select ones with Lithium battery back-up you don't have the concern of someone 'borrowing' the battery for another device.

CO alarms: quality counts

There are many carbon monoxide alarms to choose from but the quality varies considerably. Only buy a carbon monoxide alarm that is BS EN 50291 certified and only opt for known, reputable manufacturers. Check to see what the testing regime is during manufacture. I recommend one where each alarm is tested at multiple stages of manufacture and never one that is batch tested.

The quality of the alarm also has more widespread implications: the better the quality, the better the range of features, functions and accessories. A key feature to look out for is data extraction technology which can provide invaluable information on the alarm such as battery back-up or battery life, alarm sensor status, any alarm activation with details of when it occurred and detection levels of carbon monoxide. Aico's AudioLINK data extraction technology is available on all of our carbon monoxide alarms and is incredibly easy to use with a free app.

Quality alarms also have wireless interconnection facilities, so for maximum safety can be easily linked with other carbon monoxide alarms – and even smoke alarms – within the

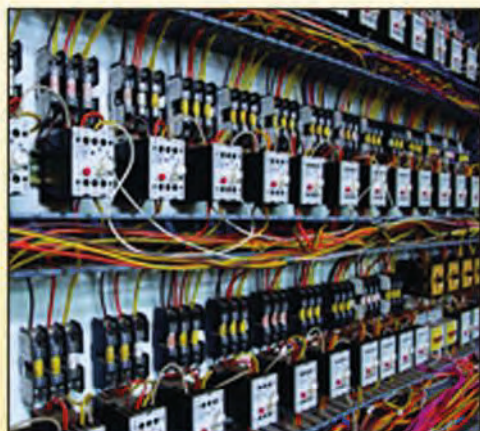
property. The very latest alarms to hit the market are combined heat / carbon monoxide alarms, such as Aico's Ei3028, designed specifically for the kitchen, providing protection against fire and carbon monoxide.

When are carbon monoxide alarms required?

Where and when carbon monoxide alarms are required is very much dependent in the location of the property and its tenure. Scotland has the most thorough regulations, requiring carbon monoxide alarms to be fitted in all properties where there is a fuel burning appliance or a flue. In Northern Ireland, it's when any new or replacement fuel appliance is installed (except cookers). England and Wales have the least stringent requirement, with carbon monoxide alarms required under Building Regulations in rooms where any new or replacement solid-fuel appliance is installed. In private rented properties in England, landlords must retrospectively fit a carbon monoxide alarm in every room with a solid fuel burning appliance.

However, we recommend following British Standard BS EN 50292:2019 which states best practice is fitting a carbon monoxide alarm in all rooms that contain any fuel burning appliance, rooms where people spend the most time and where they sleep, plus any room that has a flue running through it.

Aico is the UK's market leader in domestic fire and carbon monoxide alarms. For more information visit www.aico.co.uk



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As free as the wind blows...

Hager marketing manager Mike Lawrence talks to editor *Lisa Peake* about his love of Paragliding and how the sport has allowed him to see the world from a completely different point of view

I've been working at Hager for just over two and a half years as a marketing manager for the commercial building sector. However, I've actually been in the Electrical industry for over 25 years, including 14 years with Schneider Electric in a variety of marketing roles. Before embarking on my career in marketing, I studied mechanical engineering & design and fluid power at university. I then spent 10 years as product line manager for Eaton MEM for commercial and industrial switchgear products.

I think my engineering background works really well with the various marketing positions I have held as it allows me to critically analyse a situation, understand the main issues or objective, and then develop and rationalise a solution. This is a key component of marketing.

Hager has great ethics driven from the top, nice people to work with and receptive to creating new innovative solutions, specifically to suit UK market preferences and drivers.

A head for heights

I've always loved adventure sports, from cave diving to rock climbing and even sky diving, so I guess you could say it was only a matter of time before I tried my hand at paragliding. I've had my licence for over eight years now and can honestly say I still get the same buzz as I did on my very first flight.

As a paraglider pilot, I hold a BHPA (British Hang Gliding and Paragliding Association)

licence, which means I can fly unsupervised in the UK and around the world. In total, the training to gain my licence took around 10 days over the course of six months and was made up of theory and practical training, including written exams and several 'fly tasks' under the supervision of a qualified instructor.

A lot of the people I talk to about paragliding often have a misconception that it's an expensive hobby, but that isn't the case. Once you have your licence, a good standard kit costs around £5,000, but can last up to 10 years before it needs to be replaced. Of course you need insurance too, but this is relatively inexpensive. All in all, the cost isn't much more than someone might pay across the same period for a golf course membership or personal training sessions.

A new way to see the world

Paragliding a fantastic way to see the world, I've had a bird's eye view over some of the planet's real wonders. It's also incredibly portable. On a day with good weather conditions, I can pack up all of my kit into my rucksack weighing around 20kg, walk to the top of a mountain and, weather depending, inflate the wing of my glider and launch off into space.

Because of other life commitments, I don't get to fly often as I'd like in the UK, but each year I take part in a guided holiday, visiting places like Morocco, Turkey, Macedonia and all over Europe, with the guiding company that takes care of accommodation and recoveries from cross country flights etc. Each destination is completely different, but being able to fly effortlessly, like a bird of prey, means that I've been able to see some areas of outstanding natural beauty from a bird's eye view. Not only that, but it's always a great conversation starter with some of the locals, especially when we land in some of the more remote locations.

A number of times I have seen one or more griffin vultures flying in the same thermal



with me, climbing to cloud base. They are sometimes so close that you can see their little eyes looking at you. They are so graceful and fly so effortlessly, in tune with the air movements around them.

I'm heading to Columbia next year for two weeks, which will see me fly in stages south to north, on the west side of the Andes. I'm really excited about it.

It's a bit of a misconception that a clear sunny day offers the best weather conditions for paragliding. What you're looking for is a slightly cloudy day, with a small breeze, as this will create pockets of unstable air – 'thermals', which are used to gain altitude once you move away from the mountain. Pilots will 'hop' from one thermal to the next, as they fly cross country. The trick, however, is finding the thermals, which are of course invisible.

Part of the thrill

I think you'd be hard pushed to find a paraglider pilot who hasn't had an accident or near-miss while paragliding, especially in the first period after gaining their licence. I had quite a nasty accident while over in Turkey, after a crash on take-off, which resulted in over 30 stitches in my leg and a suspected fractured jaw. But while it sounds pretty dangerous, as a category 5 adventure sport, paragliding is actually relatively safe, as long as you are very realistic about managing the associated potential risks and continually seek coaching to improve your piloting skills.





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