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ESYWORLD

NEWS FROM THE WORLD OF AUTOMATION AND LIGHTING

SAVING ENERGY WITH AN OFFSET

HOW THE USE OF DAYLIGHT BY CONSTANT LIGHTING CONTROL CAN BE IMPROVED EVEN FURTHER

POWER WRITER

PUBLISHER AND EDITOR-IN-CHIEF GUDRUN ARNOLD-SCHOENEN ON HER WORK IN THE ELECTRICAL INDUSTRY

ENERGY EFFICIENCY ARENA

HOW THE EUROPA-PARK STADION IN FREIBURG IS READYING ITSELF FOR THE ENERGY FUTURE

WELCOME

About the cover photograph: As shown here using neon laser lines, offsets appear in a wide range of forms in many technical fields.
Demand-driven building automation uses offsets to improve energy efficiency.

Dear Readers,

Whether you are looking to take the strain off your budget, reduce global CO_2 emissions or secure a stable energy supply in these times of crisis, energy efficiency has never been more important.

One key factor in this regard is the use of intelligent presence and motion detectors to control modern LED lighting. This starts with switching lights on and off automatically and extends to energy-efficient human centric lighting. However, there are also many other approaches. In this latest issue of ESYWORLD discover how presence and daylight dependent constant lighting control can be improved even further using a simple offset, and more!

We hope you enjoy your read,

Mareks Peters

Chairman and CEO, ESYLUX

TOPICS

SAVING ENERGY WITH AN OFFSET

HOW THE USE OF DAYLIGHT BY CONSTANT LIGHTING CONTROL CAN BE IMPROVED EVEN FURTHER

Use energy only when it is really needed: that is the principle behind demand-driven building automation. In terms of light control, presence and daylight dependent constant light control implements this premise particularly well through its energy-efficient use of daylight — although this can be improved even further using a simple concept.

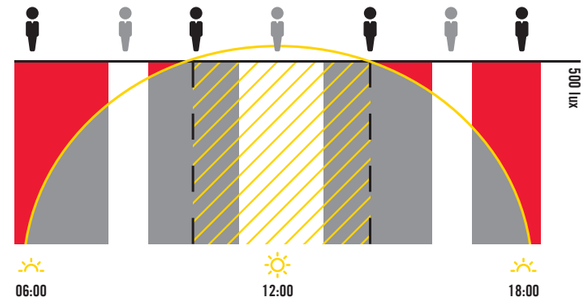
Central perspectives, parallel perspectives and colour perspectives — just like in art, things in buildings can also often be seen from completely different points of view. One example of this is the use of daylight, which has become very important in architecture today. Daylight systems direct diffuse, natural daylight into the depths of buildings to help people in that building feel better and work more healthily. To achieve this, the architect calculates the ratio between the strength of indoor and outdoor lighting, also known as the daylight quotient.

THE PRESENCE DETECTOR — A PARTNER TO ARCHITECTS AND PLANNERS

However, the architect is not just interested in the biological effect of daylight. The optimal use of daylight also reduces energy costs: the more that daylight is used in the building, the less artificial light is required. In this age of energy transition, this concept will become just as important as daylight-dependent constant lighting control with a presence detector. After all, this also achieves the energy-efficient use of daylight. Simply from a different perspective.

The use of daylight by constant lighting control involves dimming lighting to take account of the amount of daylight coming into the building. It works as a sort of congenial partner to the architect. While the architect directs daylight into the building, the presence detector checks how successfully this process is working. The architect uses the daylight quotient as a basis for calculations, and the presence detector is guided by the nominal level of brightness to ensure safe lighting which meets all applicable standards. These two perspectives share a common goal — greater energy efficiency to reduce energy costs and global CO_2 emissions. ►

PRESENCE AND DAYLIGHT-DEPENDENT CONSTANT LIGHTING CONTROL



The best use of daylight: constant lighting control with a presence detector. The nominal level of brightness at a screen workstation is 500 lux.

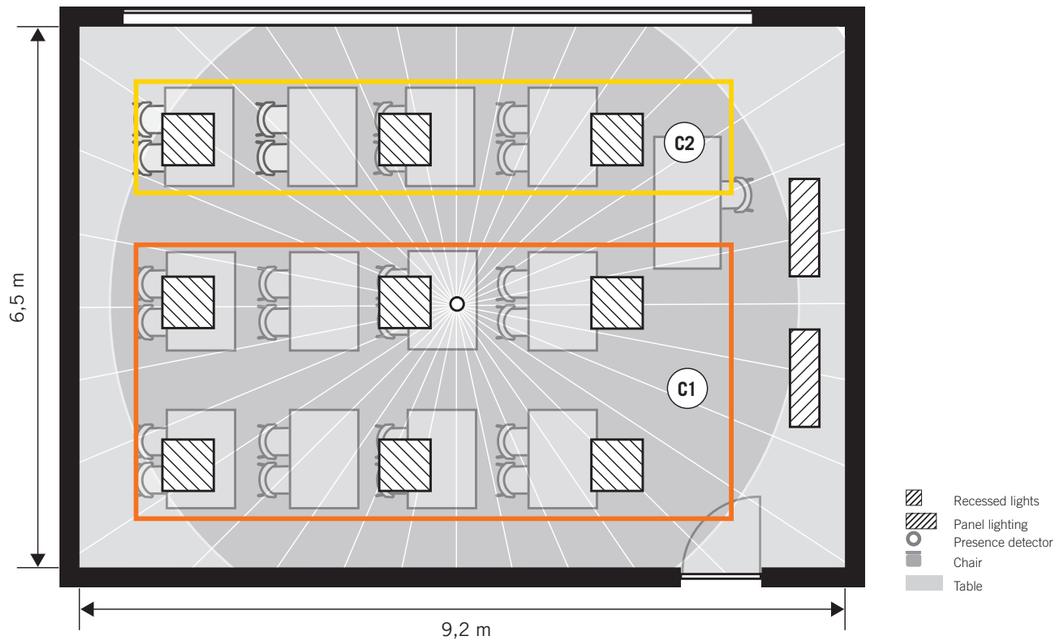


Fig. 1: As this planning example shows, lights further away from windows and those nearer to the windows in a classroom are each assigned to a different light channel of the DUO DALI. ▲

A SIMPLE SOLUTION TO ENSURE MAXIMUM USE OF DAYLIGHT: OFFSET WITH JUST ONE REGULATING PRESENCE DETECTOR

The presence detector achieves constant lighting control using an integral light sensor. This also means that at least one detector is always required to control the light in a specific room zone. On the one hand, of course it would be ideal to do this in as many zones as possible to optimise the use of daylight. However on the other hand, it makes little sense to increase the number of detectors simply to achieve this.

So what do we do? This is the question that automation experts were also faced with — and they found a simple but effective solution: an offset between multiple lighting groups controlled by a presence detector. In other words, an offset that improves the use of daylight even if there is only one detector installed in a room. A first example of how it works is provided by the DUO DALI presence detectors in the COMPACT series from ESYLUX, which control two light channels in broadcast mode.

DUO DALI FOR TWO LIGHT CHANNELS

Classrooms are a typical application for DUO DALI presence detectors. These rooms generally have windows on only one side, which creates the perfect conditions for an offset. This is because the lighting required in the zone near the windows differs massively from the zone further away. The two zones are therefore each allocated to a different light channel of the DUO DALI (Fig. 1). After installation, the detector is immediately ready for use with the default settings. To enable both light channels to be controlled through the offset, however, an adjustment has to be made using the

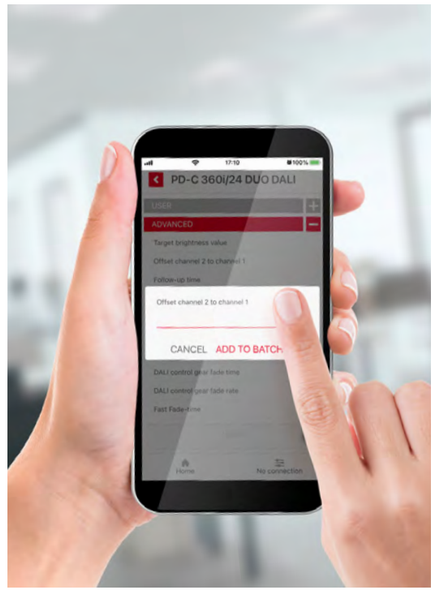


Fig. 2: The optimal value of the offset between channel 2 and channel 1 is very often 30 %. The value can be adjusted easily using the ESY-App interface. ▲

remote control or the ESY-App (Fig. 2). This requires a fixed offset between channel 2, the zone away from the windows, and channel 1, the window side. The optimal size of the offset depends on the actual room situation, but in many cases it is 30 %, which is why this value has been used here as an example.

DIFFERENT LIGHTING NEAR THE WINDOWS AND FURTHER AWAY

The following now occurs when the lights are used: As the daylight entering the classroom increases during the morning, the detector initially dims only the lights near the window. The zone away from the window still needs 100 % light output. When the light output from the lights near the window falls to 70 %, the offset of 30 % has been reached (Fig. 3). The detector then starts to dim the lights away from the window. Once the daylight is sufficient in both zones, it switches all the lights off.

If it gets darker outside again due to the weather or the time of day, this sequence is reversed. The detector first increases the light output from the lights away from the window while the offset delays the same process for those near the window. Only when the lights away from the window have reached 100 % and the daylight continues to fade does the detector finally also set the lights near the window to full light output. The offset therefore improves energy efficiency through the earlier reduction or delayed increase in light output from the lights near the window as the daylight fades or brightens. ▶

Fig. 3: As the level of daylight increases, the DUO DALI dims the light channel near the window first. The lights away from the window follow at an offset. ▲

DOUBLE OFFSET OF THE APC PRESENCE DETECTOR

The DUO DALI with offset variant and simple 2-channel broadcast mode has repeatedly proven its worth, making it one of the most popular products with ESYLUX customers over the years. However, anybody requiring a more flexible form of light control can now find a different solution: the APC presence detector for the updated DALI-2 standard, which can control up to 16 groups — and operates using an enhanced offset concept.

Difference number one: APC presence detectors not only enable the use of a single offset between two lighting groups, but can also provide a double offset. This is best demonstrated using a dimming curve (Fig. 4). As it shows, an upper offset can be set between group 2 and group 1 as well as a lower offset between group 2 and group 1. This double offset creates greater flexibility for the design process. Above all, it further increases energy savings.

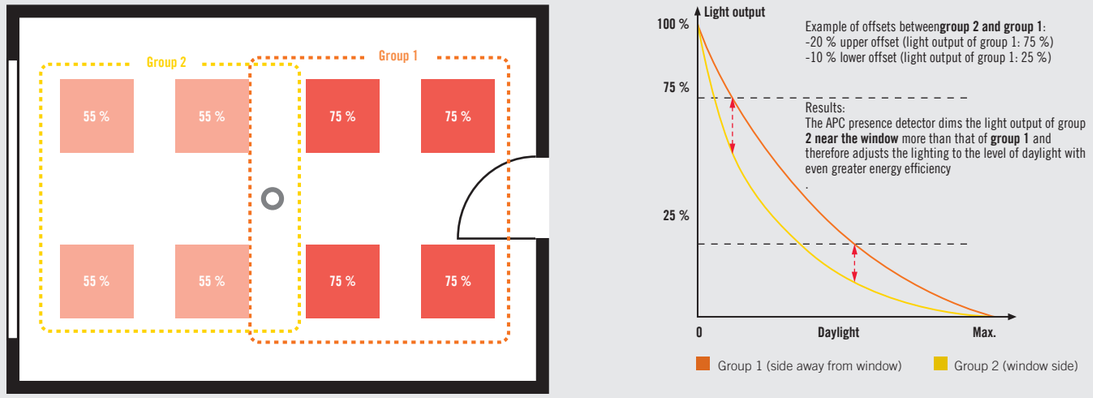


Fig. 4: The double offset of the APC presence detectors extends the scope for design and further improves overall energy efficiency. ▲

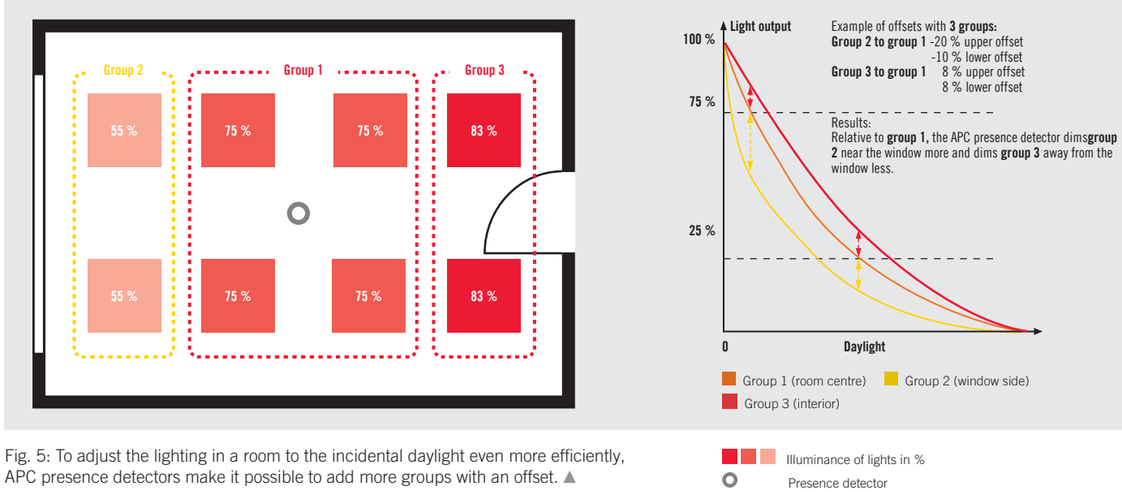


Fig. 5: To adjust the lighting in a room to the incidental daylight even more efficiently, APC presence detectors make it possible to add more groups with an offset. ▲

The offset can be used to achieve energy efficiency even in rooms with windows on multiple sides. The flexible group formation of APC presence detectors makes this very straightforward. ▲

MORE LIGHTING GROUPS = MORE OFFSETS

Another difference is that APC presence detectors allow even more lighting groups to be formed within a room than when using the DUO DALI, all of which can then be controlled by a single presence detector. This also has an effect on the offset concept of the APC detectors: additional double offsets can be set for each newly added group. Figure 5 shows an example: the same room, but now with 3 lighting groups. In addition to group 2 by the window and group 1 further away, there is now group 3 near the door.

In the example, a double offset relative to group 1 is set for both the window group and for the door group. A negative offset for the window group, a positive one for the door group. As the level of daylight increases, the window group is dimmed earlier than group 1, while the door group is dimmed later than group 1. In a room with windows on just one side, this creates a depth graduation that adjusts the lighting even better to the daylight on one side of the room and therefore provides an even greater increase in energy efficiency.

DUO DALI presence detectors and APC presence detectors for DALI-2 show how simple offsets can improve the use of daylight by constant lighting control in different ways. And all with just one detector, and therefore just one light sensor in the room. This is a simple but effective concept that improves energy efficiency yet ensures that all zones have lighting in compliance with general standards. Particularly when using APC presence detectors with their multiple groups, this approach can also be implemented for rooms with windows on more than one side. ■

A particularly clear presentation of the functions of the DUO DALI presence detector can be found in the configuration video on our YouTube channel. A tutorial for APC presence detectors can also be viewed there. Page 28 of this edition of ESYWORLD also provides an introduction to the concept of DALI-2 with ESYLUX.

POWER WRITER

PUBLISHING MANAGER AND EDITOR-IN-CHIEF GUDRUN ARNOLD-SCHOENEN TELLS US ABOUT HER WORK

For almost 70 years, the family-run trade journal ElektroWirtschaft has been the mouthpiece of the Federation of German Electrical Wholesalers. As the daughter of the founder and now the journal's editor-in-chief, Gudrun Arnold-Schoenen has experienced a large proportion of that time and has also had her own influence on events. In our interview, she tells us about the changes over time and her view of the industry.

Ms Arnold-Schoenen, how often have you yourself been interviewed during your life?

Not very often. The last time was when we did an interview for the 66th anniversary of ElektroWirtschaft. I was interviewed by my daughter. But most of the time, of course, I'm the one asking the questions.

Arnold-Verlag, which you manage, and ElektroWirtschaft have been family-run from the very outset. How did the whole thing come about?

It started in 1911 with my grandfather. He was one of 11 children, each of which was given a gold thaler coin by their parents. And my grandfather used his gold thaler coin to open a printing works here in Dortmund-Mengede. He was a trained printer and wanted to set up his own business.

Later he was joined by my father. He was a trained typesetter who had studied business and journalism in Königsberg and then worked as a reporter and war correspondent. When everything was in ruins after the war and my grandfather asked him to come and work here, he built up the printing works again. However, he was also an editor at Handelsblatt and did not want to be dependent solely on printing. So, he founded Arnold-Verlag, which published its own journals. And this resulted in the birth of ElektroWirtschaft in 1955.

And when did you become involved with the business?

That was in 1982 when my father was getting quite old and asked me whether I wanted to return to the family business. At the time I was on the publishing management team at Gruner & Jahr. But when you work in a large business, you're only a small cog in the wheel and it's difficult to make your mark. That is why I decided to come back to Dortmund. Then in 1987 I became the managing partner. ►

Business and journalism graduate Gudrun Arnold-Schoenen has been managing Arnold-Verlag and its trade journals for 40 years. In addition to ElektroWirtschaft, its publications include Nahverkehrspraxis and, since 2021, the electrical trade journal, BusSysteme. The publishing company's head office is in the former mining region of Dortmund-Mengede. Prior to working at her family's publishing house, Gudrun-Schoenen worked for the market research team at Axel Springer and was a member of the publishing management team at Gruner & Jahr.

Filtering out the right topics from a flood of information is part of the everyday work for the ElektroWirtschaft editorial team: Gudrun Arnold-Schoenen at the conference table in Dortmund-Mengede with portraits of her father (left) and grandfather in the background. ▶

Many readers may not really understand what you do — how would you describe a typical day as an editor?

In one word: hectic! And things get even more critical as the deadline approaches. The date for each edition is fixed. And the deadline by which the editorial team has to submit the edition to the printers shapes my everyday work.

And the content?

First of all, there are the topics we choose ourselves. But we also continuously receive information from press offices at associations, companies and institutions. The editorial team has to manage this flood of information. What do we actually need to publish? What will be published in the journal in what circumstances? And what should we definitely discard? Once a month, we hold an editorial meeting with the German Federation of Electrical Wholesalers (VEG). We also hold internal conferences, and have to plan and conduct interviews and investigate stories. The editorial work is broken up by company visits, press conferences and trade shows. Our editorial plan, in which we define the topics for the next year, is also very much based on what type of events are being held.

As the mouthpiece for the Federation of Electrical Wholesalers, ElektroWirtschaft has a genuinely unique selling point. How does that affect the content?

We concentrate on companies involved in the three-tier distribution chain: manufacturers, wholesalers and customers. We publish only brief information about companies that operate at just two of these levels. Siemens, for example, used to have its own wholesale business in the form of E-Centres. That is why we never published reports about Siemens. It was like a big red rag to us. But fortunately, things have changed. Siemens closed its E-Centres towards the end of the 1990s and attempted to establish links with wholesalers through us. In 2000, we were then able to accept its first advertisements.

What are your readers most interested in?

Personalities. Just like in the pages of the daily newspapers. Where have there been changes? Who has changed jobs? But also the various companies — what have they been doing? These are all articles that our audience likes to read. And, of course, there are articles on new products. And interviews are also something that our readers enjoy.

ELEKTROWIRTSCHAFT

ALLEINIGES ORGAN DES BUNDESVERBANDES DES ELEKTRO-GROSSHANDELS (VEG) e.V.

FRÜHER: ELEKTRO-RUNDFUNK-FERNSEH-GROSSHANDLER

19

1. Oktoberheft 1955
9. Jahrgang

Der Bundesminister für Wirtschaft begrüßt die „ELEKTROWIRTSCHAFT"

„Produktion und Absatz elektrischer Haushaltsgeräte sind in den letzten Jahren weit stärker gestiegen als der Durchschnitt der industriellen Produktion. Besonders gilt dies für Kühlschränke und Waschmaschinen, aber auch für andere motorische Geräte aller Art. Darin äußert sich die jährlich steigende Lebenshaltung weiter Bevölkerungsschichten in Deutschland. Von einer Sättigung sind wir hierin noch weit entfernt, wie ein Vergleich mit dem Ausland und zwar nicht nur mit den USA zeigt. Bei uns war vielmehr ein erheblicher Rückstand aufzuholen, der noch immer nicht beseitigt ist. Die dringend notwendige Erleichterung der täglichen Hausarbeit läßt auf lange Jahre einen steigenden Absatz erwarten, auch für heute in Deutschland noch kaum eingeführte Arten von Geräten.

Für die Arbeit in dieser Richtung wünsche ich Ihrem Vorstand und Ihrer Zeitschrift guten Erfolg."

◀ A few words on the launch of the magazine from high office — then Federal Minister of the Economy and later Chancellor Ludwig Erhard sent the company his best wishes.

You could say that our readers are split into two groups. On the one hand, we have the electrical wholesalers and tradesmen. Naturally, they are interested in interviews with managing directors of manufacturers. On the other hand, the manufacturers like to read articles about the electrical wholesalers. Many of them tell us that they take a look at ElektroWirtschaft before they hold their annual meetings. That's also the main difference between a trade journal like us and a daily newspaper. The daily newspaper is no longer up to date the next day. The only thing it's good for then is to wrap fish.

How do you think the electrical industry has changed?

When I look at the wholesalers, there have obviously been some massive changes. There are no longer as many wholesalers but, at the same time, there are lots more outlets. As far as the development of products is concerned, the main topic is obviously digitalisation. That has created some enormous changes in the
electrical industry and is still playing a very large role.

What do you think are the main topics in the industry at present?

Energy, electrification and electromobility. And photovoltaics is also making a return. One of the main topics at the moment, of course, is availability. Companies cannot always produce what they want because supplies of electronic components from China are not available. Recently, I was talking to a managing director who told me that they could have actually produced and sold twice their current output. Another major topic is the lack of trained personnel.

And what sort of mood are you detecting when you talk to representatives of the manufacturers?

Actually, the industry is booming. We are in a great position in the electrical industry thanks to all the building that is taking place. We are a successful industry. And everything related to buildings means electrification. The wholesalers are also currently making record sales. The war in Ukraine and the gas embargo are naturally damping expectations and creating a few clouds in our sunny sky. Overall, however, manufacturers are optimistic.

The media world has also changed massively due to the Internet. How has ElektroWirtschaft responded to these changes?

The rule of thumb at ElektroWirtschaft is that times change whilst brands remain. We have a cross-media approach and launched our first website in 1998, which was relatively early for a trade journal. In 2012, we launched our first app and in 2017 we opened an office in Freiburg for digital media. Then in 2018 we also entered the world of social media. At trade shows, we approach companies and produce videos. We produced our first podcast in 2021. ▶

The everyday life of editing has changed a great deal as a result. Previously, we had 12 print publications per year. Today, we have to publish news every day. That has meant that the pace of our work has speeded up quite a bit. Originally, we had a print editor and an online editor. Our printing business was here in Dortmund-Mengede and our digital business in Freiburg. But actually, things are becoming more and more blurred.

How do you see the relationship between the printed edition and online channels? Which is more important?

Still the printed edition. We have a very wide readership. We also carry out surveys, of course. Many people say they prefer to hold a magazine in their hands. They still want to receive it and read it. Personally, I come from a printing background and love the smell of the freshly printed pages when the magazine is delivered. As far as the online offering is concerned, the newsletter is very strong because it supplies the latest information. But I also believe that people prefer to read good articles in print rather than online.

You see, we spend the whole day sitting in front of a computer, at a screen. How lovely it is to go home in the evening and pick up a magazine. I can just look at it and read it in peace, leaf through the pages and have something physical to look at. I have no idea whether that will change again with the younger generation. However, it never ceases to amaze me that many young people who read most things online still say: "No, no, I would rather read it as a magazine. I love going through the pages."

Modernisieren und Sanieren 41

Licht und Luft verbessern mit System

Bei der Aufstockung eines Backsteinbaus im Wissenschaftspark Kiel entstanden Büroflächen mit modernster Raumtechnik. Ein KNX-basiertes Gebäudeautomationssystem mit intelligenter, sensorbasierter Licht- und Lüftungssteuerung verbessert Lebensqualität und Energieeffizienz. Die Mitarbeiter profitieren darüber hinaus von einem Human Centric Lighting – realisiert durch Deckeneinbauleuchten mit Plug-and-play-Installation.

Beachvolleyball, Boule-Bahn, Duschanlagen: Eine gesunde Work-Life-Balance gehört zum Kernkonzept des Wissenschaftsparks Kiel, einer Gemeinschaft aus rund 100 Unternehmen mit über 1.600 Mitarbeitern. In direkter Nachbarschaft zur Christian-Albrechts-Universität bietet der Park Raum für den Austausch mit der Wissenschaft, für themen- und organisationsübergreifendes Lernen und gelebte Innovationskultur.

Außen roter Backstein, innen modernste Raumtechnik

Dass auch die Technik im Park eine besondere Rolle spielt, machen schon die Hausnamen sichtbar. Zum Beispiel das Gebäude „Einsteineins", das wie viele der Bauten aus der Mitte des 20. Jahrhunderts stammt und nach einer Komplettentkernung mit modernster Raumtechnik ausgestattet wurde – auch um den ansässigen Unternehmen das Rekrutieren neuer Fachkräfte zu erleichtern. Seine drei Stockwerke ließen die Verantwortlichen um ein Voll- und ein Staffelgeschoss aufstocken.

Die so entstandenen rund 1200 m2 Nutzfläche gestalteten die Architekten nach einem Open-Space-Konzept. Team-Arbeitsflächen mischen sich mit Besprechungsräumen, Stillarbeitsplätzen und Telefonboxen. Glastrennwände unterstützen die offene Raumgeometrie und erlauben jederzeit Blickkontakt. Für ein Höchstmaß an Komfort bei gleichzeitiger Energieeffizienz sorgt ein KNX-Gebäudeautomationssystem.

Aufgestockt und kernsaniert: Das Einsteineins-Haus im Wissenschaftspark Kiel.

In den Dachetagen sorgt ein KNX-Gebäudeautomationssystem mit Steuerung durch ATMO-Präsenzmelder von Esylux für verbessertes Licht und optimales Raumklima.

Multisensorischer Präsenzmelder für intelligente Raumautomation

ATMO-Präsenzmelder von Esylux dienen dabei als kompakte Steuerintelligenz: Neben Präsenz- und Lichtsensorik besitzen sie zusätzlich eine Temperatur-, Luftfeuchte- und Luftgüte-Sensorik in nur einem Gerät. „Oft sind Kunden ganz erstaunt, dass sie nicht unbedingt mehrere Einzelsensoren im Raum benötigen", erzählt Elektroingenieur Jan-Philipp Wriedt, Leiter Gebäudetechnik der dc Services GmbH, die sich ganzheitlich um die Planung, Installation, Programmierung und Inbetriebnahme intelligenter Gebäudesteuerungen im gewerblichen Bereich kümmert.

Das gewerkeübergreifende Prinzip des KNX-Busses nutzt der multisensorische Präsenzmelder optimal aus. Mit seiner Temperaturmessung steuert er die Fußbodenheizung, durch seine auf flüchtigen organischen Verbindungen basierende Luftgütemessung öffnet er per Aktor bei Bedarf die Lichtkuppeln im Dach. In den Telefonboxen aktiviert er die Lüftung, wenn Frischluft benötigt wird, in den Besprechungsräumen im Staffelgeschoss die Klimaanlage. „Und über schaltbare Steckdosen", ergänzt Wriedt, „lassen sich auch Luftreinigungsgeräte einfach integrieren."

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42 Modernisieren und Sanieren

Ein Human Centric Lighting realisiert in allen Bereichen tageslichtähnliche Lichtverläufe, realisiert mit CELINE-Deckenleuchten von Esylux.

Präsenzsignal als energieeffizienter Impulsgeber

Einen weiteren wichtigen Impuls liefert die Präsenzerfassung des Melders. Sie führt nicht nur zum automatischen Ein-, sondern auch zum zuverlässigen, energieeffizienten Ausschalten aller Geräte, wenn die Räume nicht mehr besetzt sind. Ist ein Zimmer leer, senkt sich im Sommer automatisch die Jalousie, damit die Sonne nicht zu viel Wärme spendet – die die Klimaanlage später mit entsprechendem Stromverbrauch wieder herunterkühlen müsste. Die per Gateway in das KNX-System eingebundene DALI-Steuerung für die LED-Beleuchtung schaltet der ATMO-Präsenzmelder ebenfalls präsenzabhängig. Mithilfe seiner Lichtsensorik sorgt er bei Anwesenheit für eine tageslichtnutzende Konstantlichtregelung und so für die passende Beleuchtungsstärke am Arbeitsplatz. Während die Nutzer das Abschalten erfahrungsgemäß oft vergessen, tut er dies automatisch und nutzt dadurch zugleich die lange Lebensdauer der LEDs bestmöglich aus.

Human Centric Lighting mit Szenenübersteuerung

Bei der Beleuchtung selbst entschied sich dc Services für ein Human Centric Lighting: Tageslichtähnliche Lichtverläufe, die Helligkeit und Lichtfarbe dynamisch verändern. Dies erhöht Vitalität und Wohlbefinden, das Konzentrationsvermögen und durch einen besseren Nachtschlaf auch die Gesundheit. „Man ist nach der Arbeit nicht mehr so müde", bestätigt Alexander von Dewitz, Standortleiter des IT-Dienstleisters REWE Systems, der mit seinem Team von der innovativen Beleuchtung profitiert.

Zum Einsatz kommen dafür Deckeneinlegeleuchten der Serie CELINE von Esylux mit Tunable White. „Ausschlaggebend hierfür war die besonders hohe LED-Güte, der sehr geringe Flickerfaktor und eine vernünftige Entblendung", erklärt Wriedt. Per Taster können die Nutzer die Automation jederzeit übersteuern und dabei auch vordefinierte Szenen auswählen: Ein Inspirationsmodus aktiviert abgedimmtes warmweißes, ein Konzentrationsmodus helles, kaltweißes Licht, ein Präsentationsmodus schaltet beim Start des Beamers im Vortragsraum automatisch das Licht im Leinwand-Bereich aus und fährt die Jalousien herunter.

Zeitsparende Plug-and-play-Installation

Eine Besonderheit bei den Anschlüssen hatte zudem das Installationstempo zuvor deutlich beschleunigt: Die eingesetzten Varianten der CELINE-Deckenleuchten besitzen RJ45-Buchsen. Durch passende Treibersets mit RJ45-Steckern auf der einen sowie WINSTA-Anschlüssen von Wago auf der anderen Seite ließ sich die Anlage deshalb nahezu vollständig per Plug-and-play verkabeln – ein wichtiges Argument in Zeiten hoher Arbeitsauslastung bei den Elektrofachbetrieben.

„Es ist nur eine Frage der Zeit, bis sich steckbare Lösungen auch am deutschen Markt durchsetzen", ist sich Jan-Philipp Wriedt sicher. In Frankreich, Holland oder Skandinavien seien diese schon gang und gäbe, auch wegen des zunehmenden Fachkräftemangels. Denn durch das Plug-and-play könne jemand ohne Kenntnisse der Elektrotechnik die Verkabelung übernehmen. „Bei uns waren es die Trockenbauer", berichtet Wriedt. „Diese haben die Deckenplatten und die Deckenleuchten in die Akustikdecke eingelegt und nach unserem Plan gleichzeitig die Verbindungen gesteckt. Fertig."

Auch in den Sanitärbereichen verbessert der ATMO-Präsenzmelder die Luftqualität.

ElektroWirtschaft – Ausgabe 06/2021

16 Lichtgruppen raumübergreifend steuern

Mit den APC10-Präsenzmeldern der Serie Compact präsentiert Esylux neue intelligente Automationslösungen für den weiterentwickelten Industriestandard DALI-2. Sie besitzen eine integrierte Steuereinheit sowie eine eingebaute Busspannungsversorgung und kontrollieren bis zu 16 Lichtgruppen. Ergänzt durch BMS-Präsenzmelder von Esylux als Eingabegeräte gelingt so eine autarke, dezentrale und raumübergreifende Lichtsteuerung.

DALI-2 hat sich durch die herstellerunabhängige Interoperabilität von Geräten endgültig als zukunftssicherer Industriestandard für die Lichtsteuerung etabliert. Mit den APC10-Präsenzmeldern der Serie COMPACT von Esylux lässt sich nun eine intelligente, dezentrale und raumübergreifende Automation einer DALI-2-Anlage einfach realisieren – ganz ohne Gebäudemanagementsystem und Schaltschrankkomponenten. Die APC10-Präsenzmelder reduzieren den Planungs- und Installationsaufwand durch eine integrierte DALI-2-Steuereinheit (APC = Application Controller) und eine eingebaute Busspannungsversorgung. Im Betrieb ermöglichen sie eine individuelle präsenz- und tageslichtabhängige Konstantlichtregelung von bis zu 16 Lichtgruppen und nutzen damit das ganze Potenzial von DALI-2. BMS-Präsenzmelder von Esylux dienen dabei ergänzend als Eingabegeräte für die Gruppen. Die Beleuchtungsanlage lässt sich zudem leicht an individuelle und komplexe Raumsituationen anpassen.

Flexibles Umschalten von Gruppen und Orientierungslicht

Ein Beispiel ist das flexible Umschalten von Gruppen. In Büroräumen mit mobilen Trennwänden etwa können die APC10-Präsenzmelder bei Öffnen und Schließen der Trennwand für alle Leuchten und Eingabegeräte jeweils ein unterschiedliches Gruppenszenario aktivieren. So bleiben trotz wechselnder Raumnutzung an jedem Arbeitsplatz optimale Lichtverhältnisse erhalten, ohne die Lichtregelung zu unterbrechen. Insgesamt bis zu 16 Szenen sowie individuell konfigurierbares Nachleuchten und Orientierungslicht erhöhen zusätzlich die Flexibilität.

References, innovations, interviews: ESYLUX topics are also among the articles in ElektroWirtschaft. ▲

What do you consider the greatest challenges to be in your work?

Currently it's something many people are suffering from — a lack of personnel. At the moment, that really is a massive topic for us and the biggest challenge we face. The fact that we can't find enough suitable people. And it's made worse by the continued expansion of online communication, above all the website. We have already had to invest massively in it.

And what gives you the greatest pleasure in your work?

Contact with people. The fact that I have got to know so many people in the industry. The whole electrical industry is like a big family. Everyone knows and respects each other, even if we disagree at times. That's what I have always liked most. And it's also what makes our company different. Personal contact with people.

And when leading personalities from the industry tell you that they've known you since you started out in the publishing business and have a great deal of respect for managing to keep a small publishing house above water today, and congratulate us, that really makes you proud.

Do you sometimes find that business partners tell you things in confidence?

Yes, that certainly happens. But one of the principles of our journal is that we do not use it for sensational ends. If somebody tells us something, we talk about it first. And if the manufacturers or wholesalers don't want us to publish it, we don't. I must admit that sometimes it can be annoying when other people take a different approach and publish anyway. But it's a matter of fairness. That's why many people get in touch with us simply wanting a chat. Or they say, what's going on over there, can you tell me anything about it? For example about companies, if somebody is thinking of changing job. It's simply a matter of trust.

Even though ElektroWirtschaft is more involved with the commercial side of things, how good are your own electrical engineering skills after all these years?

I suppose I can definitely say that I'm always learning. I'm not an engineer, I have to be honest about that. But I think it's important to be able to see how things fit together. You know, the same thing is true of mathematics. The more you engage with the subject, the more you find out and the more interesting it becomes. I particularly like finding out more about lighting. There have been lots of developments in the field and I have become quite interested in it. Apart from that, I see my role in defining the subject areas.

Many thanks for the interesting conversation. ■

ENERGY-EFFICIENT ARENA

With capacity for 34,700 fans, steep terraces and modern architecture, Europa-Park Stadion has been the new home ground of professional football club SC Freiburg since October 2021. The stadium has direct links to public transport, features the extensive use of renewable energy types — and has an energy-efficient light control system that uses intelligent presence detectors from ESYLUX.

Even from a distance, the diagonal roof supports of the stadium immediately catch the eye. As the new home of SC Freiburg, Europa-Park Stadion is designed to give the club an identity whilst at the same time satisfying rising demands for functionality, stadium experience and entertainment. Inside, fans benefit from its compact design, steep terraces and their proximity to the pitch. The south stand acts as the optical and emotional centre of the whole stadium and is the only single-level stand with a capacity of up to 8000 standing SC fans. ▶

The stadium can hold up to 34,700 fans, who benefit from its steep terraces and close proximity to the pitch. ►

STADIUM DESIGNED FOR LOW CO_2 EMISSIONS

From the outset of the construction period, which lasted around 3 years, the new stadium was designed not to place a burden on the climate and not to waste any natural resources. "Energy efficiency is a very high priority for us", says Alexander Karthäuser, Stadium Technical Manager. One of the main factors behind the chosen location, for example, was good links to public transport systems with three stops being able to handle more than 10,000 passengers per hour. Chargers are also available for electric cars and electric bikes to encourage fossil-free mobility.

But it is the stadium itself which has the most pioneering energy management system. Since May 2022, work has been progressing on installing the largest stadium roof solar system in the world above the spectator areas. The 15,000 square metre photovoltaic system has 6000 solar modules which will generate up to 2.3 million kWp of power and cover 100 % of the stadium's forecast annual demand. The designers also found an efficient solution for heat supply: both the main building and the turf heating for the pitch and training areas are supplied with district heating using process waste heat from a chemical plant on the nearby industrial estate.

LED LIGHTING CONTROLLED CENTRALLY BY KNX OR PRESENCE DETECTORS

Another important topic in terms of energy consumption at any stadium is lighting. This covers everything from the floodlight system to the artificial light in the fan zones and in the main building, which houses the dressing rooms, the large restaurant and the office space for the club's executives.

The stadium encourages green transport systems by providing charging stations for electric cars, like this one in front of the main building. ▼

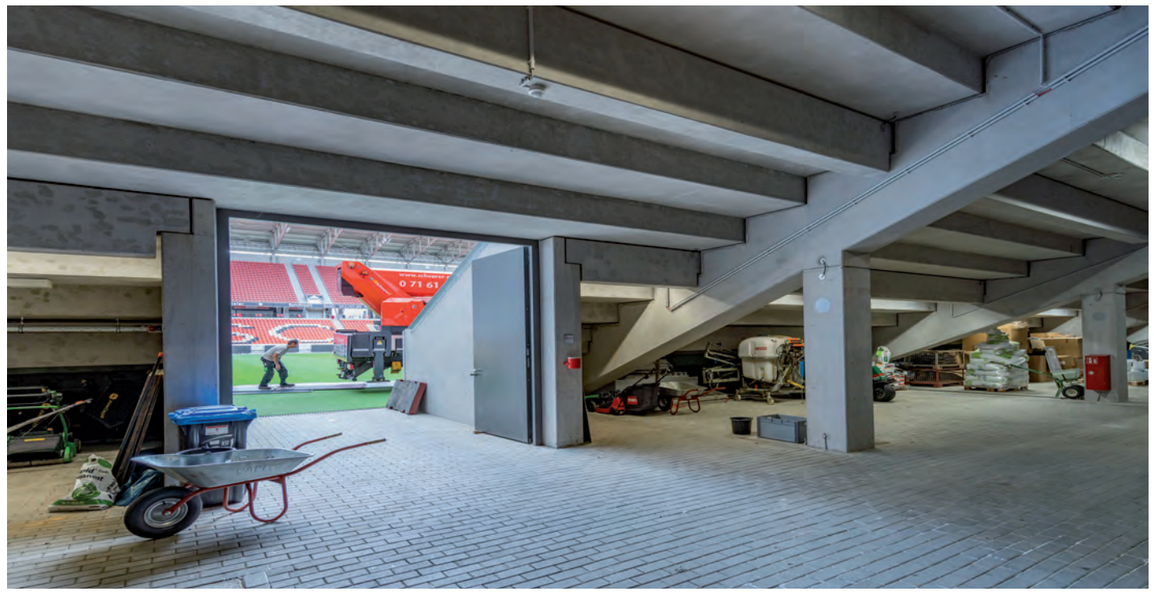
All the lighting is based on LEDs. In the main areas, it is controlled centrally by a KNX-based system. In all other zones, intelligent COMPACT presence detectors manufactured by ESYLUX deliver presence and daylight-dependent control.

"This enables us to save lots of energy because the lights are switched on and off automatically", continues Alexander Karthäuser. At other locations, he has often found that the lights were still on in half the offices when he went home at night. In this stadium, the detectors prevent this unnecessary energy consumption. They are used in staircases, hallways, sanitary facilities and to control the lights in various rooms. The detectors are more reliable than people and, by switching the lights on and off automatically, they also ensure that the long service life of the LEDs is used to the full. ►

◄ The main building houses the restaurant, the dressing rooms and the office spaces for the club executives. COMPACT series presence detectors deliver automated energy efficiency.

The mixed zone is where the opposing teams first come into contact with each other before the game. Energy-efficient COMPACT presence detectors switch on the lights in the hallways leading to this area. Slave versions are used to extend the areas covered by the systems. ▲

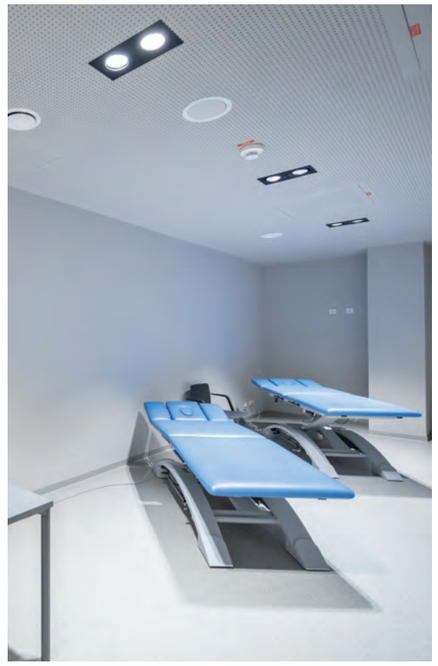
The greenkeepers also benefit from demand-driven lighting: when they approach their work areas beneath the stands in a vehicle or on foot, the lights come on automatically. ▼



EFFICIENT IMPROVEMENT IN AIR QUALITY AND BETTER HYGIENE

To include other systems, the planners chose to use presence detector versions with an additional HVAC switching output in the toilets. "The use of the HVAC contact as an additional function for automatic control of the extractor fans has a beneficial effect", adds Karthäuser. The detector automatically switches on the ventilation system when it detects human presence. The switch-off delay time ensures that the ventilation system continues to deliver fresh air for two minutes after the person has departed, following which the detector automatically switches off the system.

Another feature of the detectors in these highly frequented areas is that they replace the light switch so that the lighting and ventilation can be controlled without contact. "That's a fantastic thing for hygiene", says technical manager Karthäuser. "When several hundred people enter these areas for a short time on a match day and a large number of them have to operate the light switch, then this is not optimally adapted to the necessary needs, especially in this day and age."



Next to the changing rooms, the medical staff attend to the injuries and other physical problems suffered by the players. Presence detectors have been installed here in the entrance areas. ▲

CONVENIENT AUTOMATION FOR THE GREENKEEPERS TOO

The presence detectors also alleviate some of the work of Alexander Karthäuser and his colleagues. The automation system means that nobody has to walk round the stadium to check that all the lights have actually been switched off. It is also very convenient in the storage areas used by the greenkeepers, the people who maintain and manage the pitch: "Especially when entering the corresponding storage areas with vehicles or equipment, for example, we benefit from the fact that the lighting reacts simply and straightforwardly to the presence of people."

Another feature he likes is that the detectors can be parameterised by remote control. "That makes our work a great deal easier", says Karthäuser. If he needs to adjust the settings for any reason, he can simply use the remote control to adjust and set the brightness values and the sensitivity, for example. "In the past, the use of ladders was necessary. Settings then had to be adjusted in a correspondingly time-consuming manner. Now the process is much more comfortable and quicker to implement." ■

In the spectator areas, the presence detectors in the toilets also switch the light according to need. ▼

SERVICES GROUP ISS USES ESYLUX LIGHTING SYSTEM WITH SYMBILOGIC

When designing new office space at its Bochum site, services group ISS decided to fully modernise the working environment for its personnel. Flicker-free LED lighting and an intelligent, sensor-based light control system improve quality of life and reduce energy consumption — all achieved using an ESYLUX lighting system with energy-efficient human centric lighting.

Creating room solutions that improve business performance and make life easier, more productive and pleasant — that was the objective for ISS Facility Services Holding GmbH, a leading company in workplace experience and facility management in more than 70 countries. The publicly listed company ISS ensures that its workplaces are modernised on a regular basis to provide ideal conditions for its own personnel. One example of this is its Bochum site, where ISS specialises in providing services for key account clients from the telecommunications sector.

SENSOR-CONTROLLED LIGHTING SYSTEMS WITH PLUG-AND-PLAY INSTALLATION

"We have a high affinity for state-of-the-art solutions", explains Jörg Simon, Commercial Director at ISS. In Bochum, large open-plan offices on two storeys provide space for up to 1000 personnel with the room temperature automatically adjusted based on the outdoor temperature and with acoustic and table partition walls reducing noise levels. In addition to ergonomic chairs and height-adjustable tables, a lighting system with ESYLUX Light Control (ELC) delivers greater quality of life in the workplace.

It all starts with the lighting being switched on automatically in the morning. "The automation is really convenient", says Zozan Güllü, Team Assistant in the Backoffice Cleaning team. The lighting systems combine recessed lights with control units and presence detectors. The lighting is controlled by presence and is dependent on daylight, which makes it very energy efficient. "Energy efficiency was one of the main factors behind the decision", continues Jörg Simon, who was also impressed by the simple installation: systems can be grouped, scaled and networked using plug-and-play and are immediately ready for use using default settings with no programming work — a real bonus when trained personnel are scarce.

Above all, however, the personnel benefit from the lighting itself. The lighting system uses SymbiLogic technology from ESYLUX to achieve human centric lighting with levels of brightness and colour similar to daylight. That improves vitality, well-being and concentration and reduces the level of errors. At the same time, it stabilises the day-night cycle and ensures a good night's sleep after work is done for the day. SymbiLogic deploys this form of lighting in a particularly energy-efficient manner by using an adaptive HCL light control.

"I found the innovative technology with the automatic controls a real eye-opener", adds Jörg Simon. And Team Assistant Zozan Güllü is extremely happy with the overall office environment. "The equipment is fantastic", she says and goes on to describe how the lighting level is never too dark nor too bright due to the automatic control. Even if she spends a long period of time sitting in front of her monitor, the ambient lighting is always pleasant for her eyes. Commercial Director Simon is already thinking about how he can recommend the lighting system to others. "We always try to keep up with the times and to experience things that we can also use well for our customers." ■

Energy-efficient human centric lighting with SymbiLogic technology from ESYLUX supports the well-being and health of personnel in all departments. ▲

Whether building planning, property management, technical building management, security services or reception and telephone services — ISS facility management delivers a wide range of services in more than 70 countries. ►

COMFORT HOTEL ARLANDA AIRPORT
CONVENIENT AND SUSTAINABLE AUTOMATION FOR TRAVELLERS

The Comfort Hotel at Arlanda Airport is one of the largest airport hotels in the Nordic region, with two building sections, up to 14 floors and 503 rooms. Located right in the heart of Airport City Stockholm, it offers travellers space where they can relax and socialise in an area of around 24,600 square metres with a rooftop bar, lounge and gym. The building's environmental performance according to BREEAM-SE standards was also certified as very good.

Intelligent automation solutions from ESYLUX make a decisive contribution to this. Black FLAT presence detectors blend elegantly into the colour scheme of corridors, external lifts and conference rooms, where they provide presence- and daylight-dependent constant light control. COMPACT motion detectors with built-in acoustic sensors control the lighting in the changing rooms, service corridors and gym. DUO DALI presence detectors in the hotel parking garage ensure convenient automation and sustainable energy efficiency. ■

Black, round FLAT presence detectors fit into the elegant environment of the Stockholm hotel perfectly. ▲

DE OLIJFBOOM PRIMARY SCHOOL
DALI-2 LIGHTING GROUPS FOR ENERGY-EFFICIENT LEARNING

APC10 presence detectors for DALI-2 deliver constant lighting control with an energy-efficient offset in the classrooms. ▲

Growing roots and bearing fruit — these are key educational concepts for the new De Olijfboom primary school in Capelle aan den IJssel in the Netherlands. Approximately 450 pupils attend the Reformed school every day, led by a team of enthusiastic teachers. They help the pupils grow in terms of their cognitive, socio-emotional and creative abilities to ensure that learning in school and learning for life go hand in hand as much as possible.

APC10 presence detectors for DALI-2 from the COMPACT series create excellent conditions for learning with optimal energy efficiency. They control multiple lighting groups in the classrooms, group spaces, leadership team and administrative team offices, staffroom and sports hall. This provides presence and daylight dependent constant light control with an additional energy-efficient offset. Thanks to inputs for conventional 230 V buttons on the detectors, lighting groups can also adapt flexibly to a variety of learning situations. ■

DALI-2 WITH ESYLUX: HOW IT WORKS

CONTROL UP TO 16 LIGHTING GROUPS ACROSS MULTIPLE ROOMS USING A DECENTRALISED SYSTEM

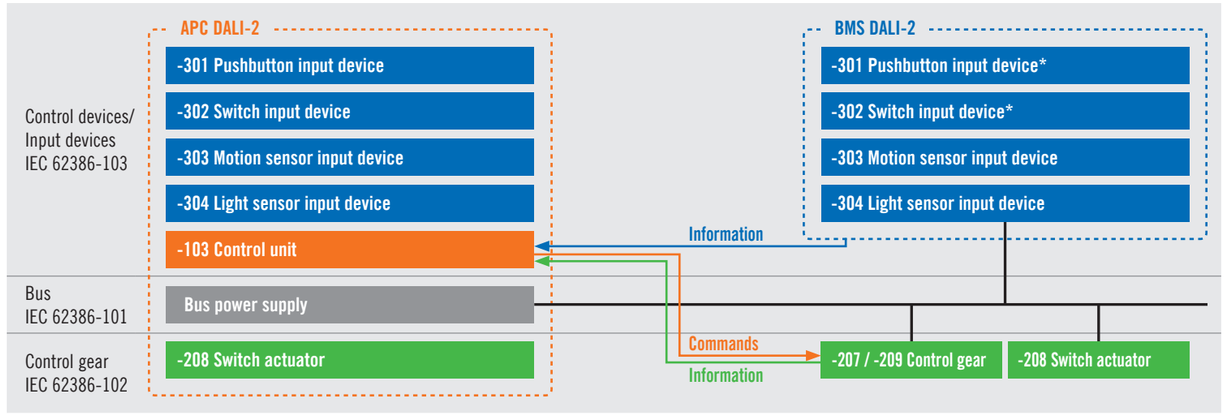
Installation requiring fewer materials and less manual effort, cross-manufacturer interoperability of all devices and energy-efficient, convenient automation for users — the DALI-2 industry standard has undergone advanced development to deliver a whole series of benefits — but it is also extremely new. We are therefore providing you with another summary of its main aspects below.

If you want to understand the structure of DALI-2, you must first know the main classes of device. These are primarily the control unit for a system (APC, or application controller) and the control gear, in other words the light drivers. The control unit and control gear communicate directly with each other. The control unit sends commands such as ON/OFF to the control gear, which sends back status information to the control unit. This digital communication also requires an additional bus power supply.

But how does the control unit know when and how it should control the system? This is where what are known as input devices come into play. They include buttons, switches and other sensor types, such as PIR and light sensors. The input devices provide the control unit with the main information it needs. If, for example, a presence detector with a PIR sensor sends the digital information for "User present" to the control unit, the control unit switches on the lighting. If a "User absent" message then follows, it switches the lighting off again.

APC PRESENCE DETECTOR WITH INTEGRATED CONTROL UNIT

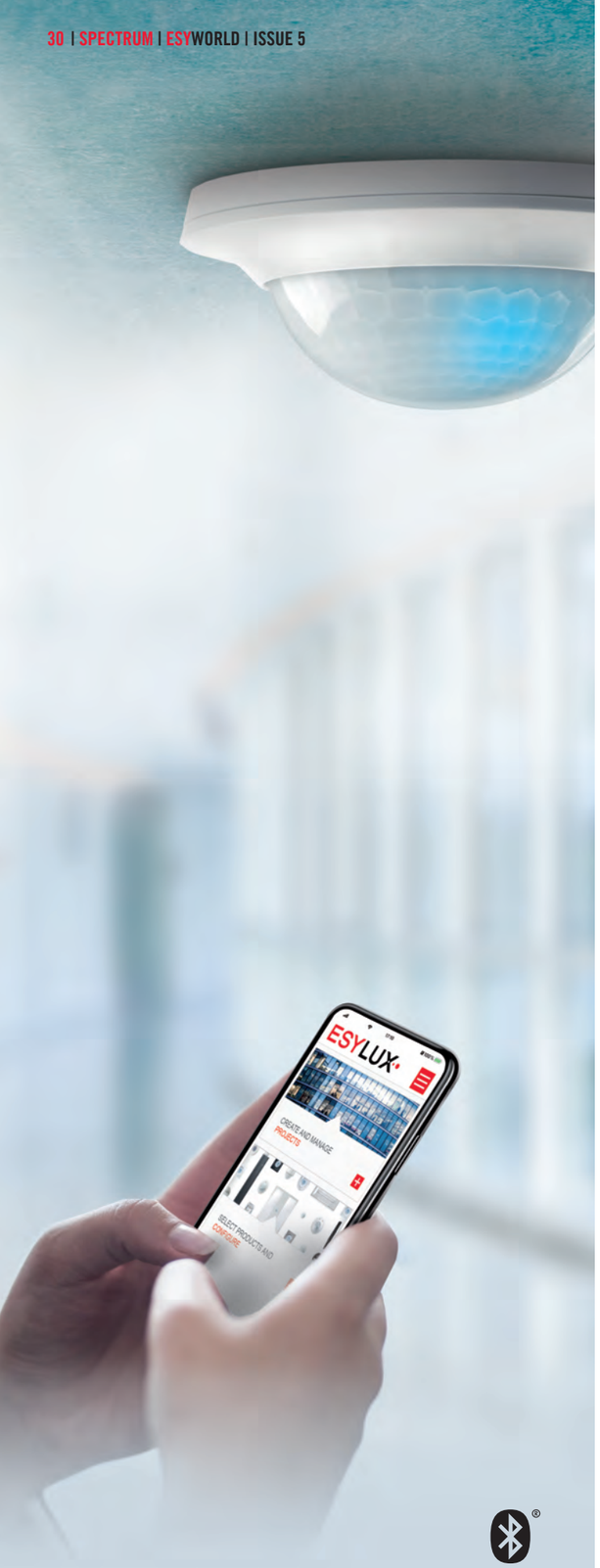
BMS PRESENCE DETECTORS AS INPUT DEVICES



* Not included in COMPACT MINI BMS DALI-2 detectors.

A DALI-2 system therefore comprises a whole series of different device types. ESYLUX has developed the APC presence detectors in the COMPACT series to ensure that planning and installation work is kept to a minimum. They combine multiple DALI-2 devices in a single housing: the control unit, bus power supply, presence and light sensors, 4 inputs for conventional 230 V buttons and a switch actuator for 230 V devices. They also make it possible to achieve the independent, multi-room control of up to 16 groups — without requiring a complex building automation system or control cabinet components.

To be able to control lighting groups in different rooms or building zones individually using presence and daylight, however, the system needs more than one APC detector. BMS presence detectors are used for this purpose. They act purely as input devices (with presence and light sensors and up to 2 push button inputs) and send information from all the zones to the APC presence detector with integral control unit. BMS stands for building management system. The BMS detectors can also be used as input devices in a central building control system, such as those supplied by Beckhoff, Wago or Helvar (Router 950). ▶



A DALI-2 system from ESYLUX can be started immediately in broadcast mode. The integral, bi-directional Bluetooth interface on the APC detectors enables you to form groups and complete the configuration work easily using a smartphone and the ESY-App. ▲

READY FOR USE IMMEDIATELY — WITH EASY CONFIGURATION VIA SMARTPHONE

The example on the right-hand page shows what a decentralised control system might look like in practice. The APC presence detector it is installed in the corridor, from where it controls the lighting in multiple classrooms and in the corridor itself. In this classroom, the lights away from the window and near the window form two groups, which also include two BMS presence detectors. These supply the required presence and brightness information. The lights in the whiteboard area form another group that can be controlled separately if necessary (during presentations, for example).

The installation of a system like this is particularly straightforward. Once the cabling and wiring are complete, the system can be started immediately in broadcast mode. The subsequent addressing and group formation are a simple matter using a smartphone and the ESY-App, and even the individual parameterisation is very straightforward. As to which functions you can use for your customers — details of all that and more can be found in our brochure "DALI-2. Concept and Functions" in the service section of our website. ■

THE MAIN BENEFITS OF APC10 PRESENCE DETECTORS AT A GLANCE

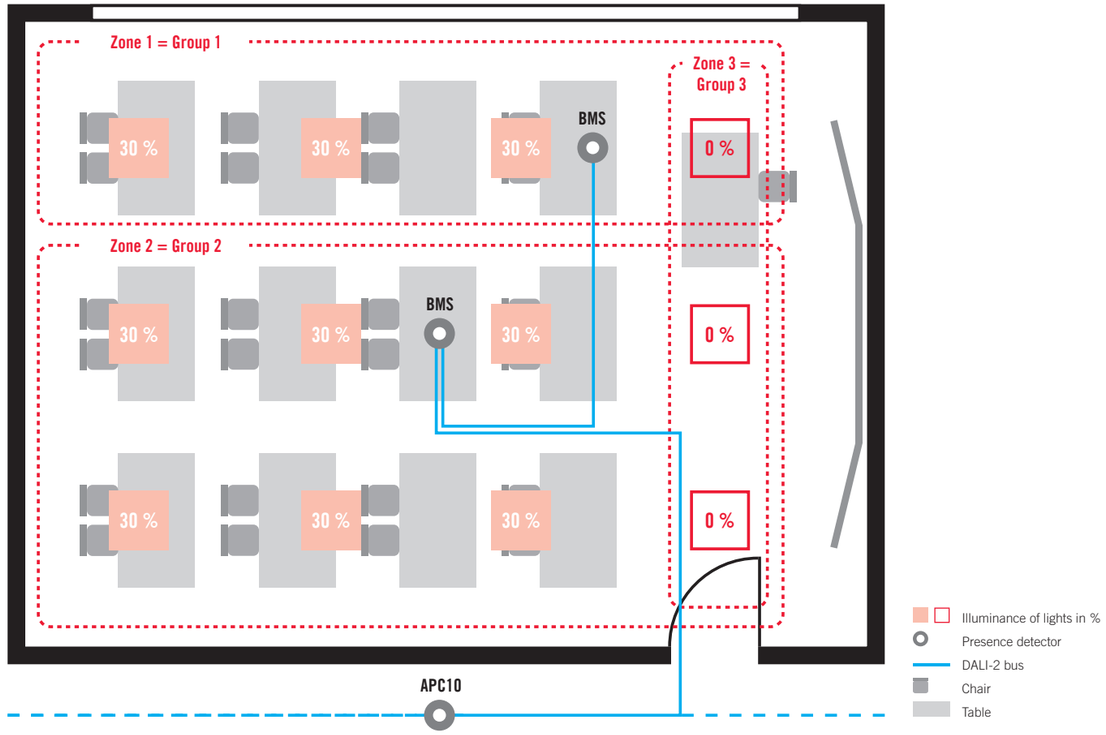
FUNCTIONS

- **Individual control of up to 16 groups**
- **Fully automatic and semi-automatic modes, manual override (16 scenes)**
- **Presence and daylight-dependent constant lighting control**
- **Group control with offset supported**
- **Manual adjustment of brightness setpoint**
- **Basic lighting through afterglow and orientation light**
- **Flexible switching of groups**
- **Switching of HVAC and 230 V lights**

HARDWARE

- **Integrated DALI control unit and DALI bus power supply (250 mA)**
- **Passive infrared presence detectors offer presence detection and light sensor technology**
- **Integrated switching output for HVAC or additional lighting (16 A relay, potential-free)**
- **Quick installation in suspended ceilings using a standard drill bit and without additional accessories (Ø 68 mm)**
- **Detection ranges of Ø 8, 24 and 32 m**
- **Bi-directional communication using built-in Bluetooth module**
- **Four inputs for conventional buttons (with potential):**
  An existing 230 V button can be used without the need for a DALI-2 button!

CONTROL USING APC10 PRESENCE DETECTOR USING THE EXAMPLE OF A CLASSROOM



APC presence detectors control up to 16 groups on a decentralised basis across multiple rooms. Supported by BMS presence detectors, they deliver bespoke light to all zones. ▲

NOW AVAILABLE: FLAT AND COMPACT MINI BMS PRESENCE DETECTORS

Whether installed in a decentralised system with the COMPACT APC10 or in a centrally controlled building management system, BMS presence detectors in the FLAT and COMPACT MINI series perform superbly as input devices anywhere. With their elegant flat or particularly small housing, they are also suitable for rooms with sophisticated interior architecture — and in action they impress with their practice-proven, high-quality sensors. ■

IMPROVING WORKING LIGHTING

USING PLUG-AND-PLAY

THE NEW CELINE-2 RECESSED LIGHTS FOR ELC, DALI, DALI-2, ON/OFF

- Energy-efficient lighting with high light quality
- • Plug-and-play connector for system lights featuring ESYLUX Light Control (ELC)
- Easy integration for DALI, DALI-2, ON/OFF with ESYLUX driver sets available as an optional accessory
- Powerful tunable white variants for energy-efficient human centric lighting

More luminosity and improved energy efficiency: With the CELINE-2 series, ESYLUX has optimised its recessed lights for lighting systems with ESYLUX Light Control (ELC). The lights can be integrated and grouped in the system using plug-and-play and are now also suitable for other lighting systems when used together with plug-in driver sets (available as accessories). Variants with tunable white deliver energy-efficient human centric lighting.

When order books are full and trained personnel are scarce, simple solutions are more sought after than ever. Lighting systems with ESYLUX Light Control (ELC) therefore allow components to be installed, grouped, scaled and networked via plug-and-play. The CELINE-2 series sees ESYLUX improving its ceiling lights and expanding the range of application beyond these systems

INCREASED LUMINOSITY AND IMPROVED LUMINOUS EFFICACY

Just like those in the predecessor CELINE series, the backlight arrangement of the LEDs in the CELINE-2 series makes for homogenous illumination and a long LED service life. Luminosity and luminous efficacy have been further improved and can now reach up to 4600 lm or 139 lm/W. At the same time, ESYLUX has reduced the weight and overall height of the lights, therefore decreasing the load and making installation easier. The RJ45 sockets are now attached to movable cables on the side of the housing to further simplify the plug-and-play connection to the control units of the ELC lighting systems.

DRIVER SETS WITH PLUG-AND-PLAY FOR ON/OFF, DALI AND DALI-2

Accessory driver sets with push terminals or WAGO-WINSTA connectors now also allow these lights to be used in other systems. With simple ON/OFF, DALI or DALI-2. A DT8-compatible driver set is also available that enables the tunable white variants to create human centric lighting even outside ELC lighting systems — although without energy-efficient SymbiLogic technology from ESYLUX. CELINE-2 recessed lights with 3000 K or 4000 K are also available as an alternative. All the versions deliver flicker-free and therefore fatigue-free lighting. ■

◀ CELINE-2 delivers maximum flexibility for selecting the control system. The RJ45 connection not only enables simple plug-and-play for ELC lighting systems, but also for DALI, DALI-2 and ON/OFF when paired with accessory driver sets.

HANDLE AND LIGHT ALWAYS POINTING IN THE RIGHT DIRECTION

THE MULTIFUNCTIONAL PORTABLE SPOTLIGHT SLP-2

ESYLUX presents the SLP-2 series portable spotlight — a new multifunctional light for use indoors or in response vehicles. The spotlight's ergonomic handle matches the direction of the light and movement of the holder, making it much easier to handle while carrying. Multiple operating modes, a tilting lamp head and a choice of installation options enable flexible use of the spotlight.

It can be used as a reliable aid when working indoors or for equipping response vehicles: If the lighting is not sufficient or it suddenly stops working, a reliable portable spotlight is worth its weight in gold. ESYLUX has now developed a new multifunctional light in the form of the SLP-2 and has made several improvements compared to its predecessor.

HANDLE MATCHES THE DIRECTION OF THE LIGHT AND MOVEMENT OF THE HOLDER

The ergonomic handle matches the direction of the light and movement of the holder. This means it is always pointing in the right direction while being carried, which facilitates easy handling. The lamp head contains the charge indicator of the maintenance-free lithium-ion rechargeable battery, as well as a button to select the operating mode. By pressing this button multiple times, the user can switch the light on and off and choose between 4 hours of work lighting, 8 hours of continuous lighting or 8 hours of flashing light. High-power LEDs featuring 235 lm and a power consumption of 3 W ensure energy-efficient illumination.

In the event of a power failure, the emergency light feature automatically switches the light on in the last operating mode selected, if the SLP-2 is in the charging cradle with a 230 V power supply. The charging cradle can be mounted on the wall and the lamp head can be tilted backwards through 90° for this purpose. If a straight alignment is required, a wall bracket is available as an optional accessory. The lamp head can be tilted forwards by up to 30° in order to direct the beam of light downwards, for example.

STABLE INSTALLATION IN RESPONSE VEHICLES

The SLP-2 is also suitable for use in vehicles. Its protection class of IP54 protects it against the splashing of water, and the charging cradle can be installed on the floor of the vehicle or on its wall using a wall bracket. The portable spotlight locks securely into the charging cradle and cannot be dislodged by vibrations. A connection cable for 12 V DC vehicle sockets and an orange diffuser disc are included in delivery — for using the SLP-2 as a hazard warning light after a breakdown. ■

ATMO MULTI-SENSORS FOR EASY INSTALLATION

HIGHEST CONFIGURATION LEVEL WITH NEW CONNECTION VARIANT

ATMO presence detectors for KNX deliver comprehensive control of room technology through their multi-sensors. A new variant of the highest configuration level now offers even easier installation: The VOC sensor provides improved air quality in an energy-efficient way while requiring only an additional 30 volts of DC power. Simply supply the voltage using the AUX output of a KNX power supply and two free wires of the KNX cable.

To improve room atmosphere in an energy-efficient way using sensor-based building automation, cross-component control is the ideal solution. In KNX systems, this is achieved through multi-sensor ATMO presence detectors for controlling lighting, air-conditioning, ventilation and heating with just one device. A new version of the highest configuration can now be installed even more easily.

VOC SENSOR WITH 30 V POWER SUPPLY

In addition to detecting presence, level of brightness, temperature and humidity, the PD-ATMO 360i/8 O AUX 30 V KNX also detects volatile organic compounds (VOCs) to deliver energy-efficient improvements to the indoor climate through air-conditioning and ventilation systems. Previously, a separate 230 V power supply was required for the VOC sensor, however the new variant requires just 30 V of additional DC power. Simply supply the voltage using the AUX output of a KNX power supply and two free wires of the KNX cable.

VOCS: THE MOST IMPORTANT REASON FOR VENTILATION

Volatile organic compounds are anthropogenic or biogenic vapours originating from sources such as building materials, cleaning products, people or food. In excessive concentrations, they adversely affect our mood and cause eye irritation, headaches, fatigue or dizziness. They are the most important reason for ventilation, particularly in enclosed areas such as conference rooms, offices, waiting rooms, classrooms or sanitary facilities.

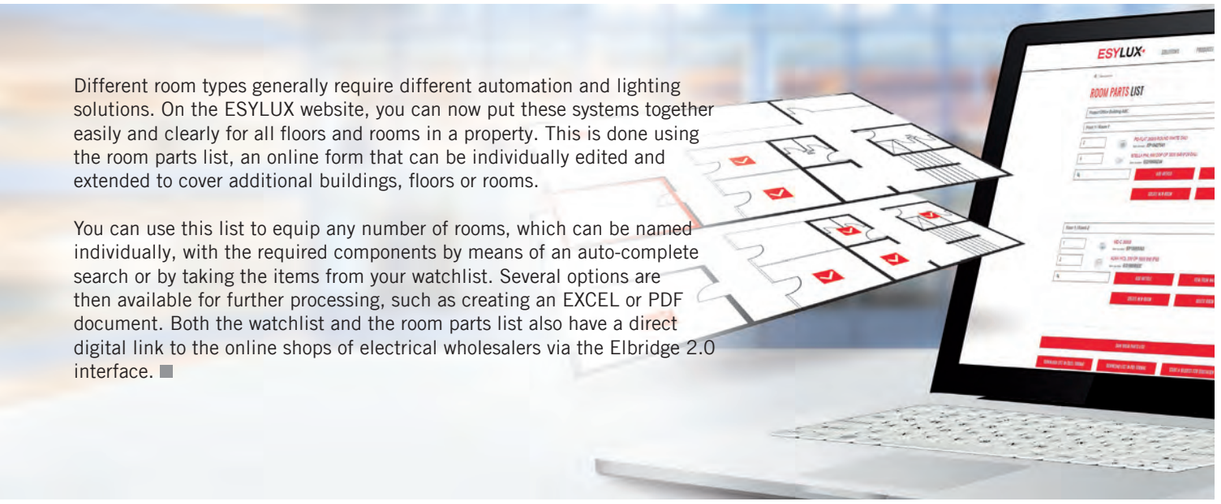
Air-conditioning or ventilation systems can be controlled based on detected VOC levels by ATMO devices using three individually configurable limit values, compared to two limit values for temperature and humidity. As with presence and daylight-dependent constant light control, devices are active only when people are present. ■

The ATMO series offers a total of three configurations. The highest configuration level can now be installed even more easily using the PD-ATMO 360i/8 O AUX 30 V KNX. ▲

The 30 V additional power supply for the VOC sensor can now be connected using two free conductors on the KNX cable. ▲

NEWSFLASH

IMPLEMENTING PROJECTS FASTER: WITH ROOM PARTS LIST AND ELBRIDGE



Different room types generally require different automation and lighting solutions. On the ESYLUX website, you can now put these systems together easily and clearly for all floors and rooms in a property. This is done using the room parts list, an online form that can be individually edited and extended to cover additional buildings, floors or rooms.

You can use this list to equip any number of rooms, which can be named individually, with the required components by means of an auto-complete search or by taking the items from your watchlist. Several options are then available for further processing, such as creating an EXCEL or PDF document. Both the watchlist and the room parts list also have a direct digital link to the online shops of electrical wholesalers via the Elbridge 2.0 interface. ■

THE BIM PORTAL: PLANNING INTELLIGENT SYNERGIES DIGITALLY

Building Information Modelling (BIM) has developed into a major factor behind digitalisation in the construction industry over a period of just a few years. It brings together all the information required for planning a project, thereby making construction more efficient and cost-effective. Planners and architects who use ESYLUX's intelligent automation and lighting solutions can now benefit from the new BIM portal in the Service section of our website.

The BIM portal provides access to all 2D and 3D CAD product data for the entire ESYLUX range, as well as a selection of over 20 BIM-specific output formats and all the relevant versions, including formats compatible with REVIT, ARCHICAD, VECTORWORKS, BENTLEY, SPIRIT and the IFC exchange format. For a higher level of detail, all product models are now being continuously optimised to LOD 350. ■

ENHANCED PLUG-AND-PLAY LIGHTING SYSTEMS

Group, scale and network systems using plug-and-play and have them ready for use immediately with default settings. Lighting systems with ESYLUX Light Control are the easiest way of modernising lighting in rooms — the perfect concept when faced with the current scarcity of trained personnel. In addition to the CELINE-2 series of recessed lights (see page 32), further improvements can now also be made using an advanced development of the SMARTDRIVER-2 control unit.

The DALI outputs on the SMARTDRIVER-2 for additional lighting are now compatible with DT8. This makes it possible to create energy-efficient human centric lighting in synchronisation with the main lighting due to SymbiLogic technology from ESYLUX. The slim housing and several detailed improvements also simplify the installation process and service accessibility. CELINE-2 and SMARTDRIVER-2 are now also integrated in the preconfigured Quadro-Sets for rooms up to around 20 m². ■

DEFENSOR REMOTE CONTROL FOR END USERS

Time -dependent operating modes, password protection to prevent unauthorised parameterisation, and intelligent vandalism and sabotage protection — DEFENSOR outdoor motion detectors deliver a range of useful functions to end users. The new DEFENSOR REMOTE CONTROL USER means that it is now also possible to adjust level of brightness values and switch-off delay times (5 or 15 minutes) easily and switch the lighting on or off for 12 hours manually. ■

CONNECTING ALVA: WELL-PROTECTED & SIMPLE

ALVA bollard lights with a DALI motion detector and integrated bus power supply can control a complete lighting group dependent on motion and daylight and, if necessary, with orientation lights or a twilight switch function. To ensure it will work perfectly for years, however, the construction and housing materials must provide good protection from environmental influences.

Like the time-tested large variants of the lights, the new slimline versions of the ALVA 700/100 MD DALI now have more than just a solid aluminium housing — the junction box and driver box are positioned at a safe height above the base plate of the bollard lights. This positioning ensures that the electrical components remain dry and undamaged even in the event of water penetrating at the bottom due to heavy rainfall. ■

TOUCHPOINTS

ELMÄSSAN | 19 – 20/10/2022
Stockholm | Sweden

BELEKTRO | 08 – 10/11/2022
Berlin | Germany

GET NORD | 17 – 19/11/2022
Hamburg | Germany

FUTURE LIGHTING | 23 – 24/11/2022
Gorinchem | Netherlands

This is an excerpt from our list of trade fairs and events. Visit our website for more information and to find out when you can meet us in person. ▲

SEE US ONLINE AT THE ESYSHOW 2.0

ESYLUX has fully updated and significantly expanded its digital trade show platform, ESYSHOW 2.0, which serves as a supplement or alternative to traditional trade shows. From innovative automation and lighting solutions to selected references — visitors are given a tour of the entire ESYLUX range with targeted entry points using hot spots. Interested? Then simply visit our trade show 24/7 via our homepage. ■

ESYLUX NETWORK GROWTH: A GLOBAL PRESENCE, CLOSE TO CUSTOMERS

International networks promote a global presence and enrich any company through inter-cultural exchange and the variety of different ideas and perspectives that it brings. However, it is just as important for ESYLUX to be accessible to all its customers on a regional basis at all times. One of the ways we are doing this is demonstrated by our new sales company in Australia and our new trading partners in Ireland and Kazakhstan. Here's to working together!

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ESYLUX SUOMI OY
ESYLUX SVERIGE AB
ESYLUX DANMARK APS

CENTRAL AND SOUTHERN EUROPE

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ESYLUX BELGIUM NV
ESYLUX NEDERLAND B.V.
ESYLUX ÖSTERREICH GMBH
ESYLUX PORTUGAL, LDA.
ESYLUX SWISS AG
ESYLUX FRANCE SARL
ESYLUX GMBH (EXPORT)

EASTERN EUROPE/ASIA

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PERFORMANCE FOR SIMPLICITY

ESYLUX develops, manufactures and distributes intelligent automation and lighting solutions for improved quality of life and energy efficiency in office buildings, educational institutions and medical facilities. People's requirements and needs are central to what we do. To satisfy these requirements, we use our experience in electronics and automation to develop products such as LED-based systems for energy-efficient, biologically effective light. The perspective ranges from the comprehensive automation and lighting of the individual room to networking and integration into building-wide systems. In view of the often complex requirements we encounter in the process, we place particular value on the simple application of our product solutions.

Our customers and partners include wholesalers, installation companies, electrical and lighting planners and architects who trust in our more than 50 years of market experience and the personal, specialist advice provided by our experts. Furthermore, we meet the highest quality standards in our research, development and production at our German location in Ahrensburg. Our sales organisation is global: ESYLUX operates in collaboration with experienced trading partners and is represented by numerous distribution companies in Europe, Asia and Oceania.

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