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SEE THE WORLD IN A NEW LIGHT

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Information for our partners in the lighting industry

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Publisher: OSRAM GmbH
Hauptabteilung E&C M
Rainer Wrenger
Hellabrunner Straße 1
D-81543 München
Fax: +49 89 6213 3456
E-Mail: r.wrenger@osram.de

Editor: Dipl.-Ing. Ursula Sandner
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Cover photo: Tonhalle Düsseldorf
(Photo: Thomas Rhiele)



Hans-Peter Birkhofer

Dear Reader,

This issue of our ECG-SPOT customer magazine once again presents innovations, trends and applications for electronic equipment in lighting. As 2007 draws to a close, we can say retrospectively that conditions were ideal for innovation over the past 12 months.

The economic climate made it a good year for the lighting industry, with much of the growth coming from the following sectors:

- Energy-saving through the use of electronic control gear and energy-efficient systems with T5 fluorescent lamps
- Dynamic light with dimmable control gear for regulating light output, colour and atmosphere
- High quality light in retail outlets through the use of metal halide lamps with their ceramic burner and electronic control gear
- New applications for light-emitting diodes in general lighting

Be it in the form of energy-efficient control gear, light control components or light management systems, the use of electronic equipment makes a major contribution to resource conservation in all of these areas.

The DALI standard for controlling dimmable ECG is widely accepted today. In addition, the advantages of DALI are increasingly being exploited in emergency lighting, both for addressing and even for automatic function tests.

OSRAM now presents its DALI ECG as a complete family, meaning the operation of compact fluorescent lamps from 18 W to 57 W benefit from the "intelligent" QTi circuitry concept with automatic lamp detection. These universal DALI ECG units permit simple push-button operation, as well as room solutions or integration into building systems equipment.

DALI projects should cause a stir again at Light+Building 2008 in Frankfurt, where the AG-DALI working group will for the second time be bestowing the DALI Award on the most attractive installation for 2007/2008. More information about this competition can be found on the Internet at www.dali-ag.org. I once again hope you enjoy reading the latest ECG-SPOT and wish you all the best for the festive season and every success in 2008.

Yours,

Hans-Peter Birkhofer - Manager Marketing and Product Management, Electronic Control Gear

A new-look shopping experience

Brilliant lighting with HID systems from OSRAM



Fig. 1. The PUB department store in the heart of Stockholm now has a new, radiant look

Lifestyle centre – for the spirit of tomorrow

Greta Garbo once advertised Paul U. Bergström hats. The traditional department store (Fig. 1) on Hötorget Square is opposite the Concert Hall in the heart of Stockholm. Today, the PUB, as the building is now known, is more of a shopping arcade than a department store. There's still plenty of choice, from household goods to hats, but fashion, beauty, music and food now tend to dominate.

The transformation from a classical shopping centre into a "lifestyle centre" of tomorrow was realised under the architectural direction of Bau Arkitekter. Step by step, the light designers from Ljusarkitektur helped metamorphosise the building into an exclusive shopping arcade through their contemporary lighting ideas.



Fig. 3. PTi 2x35 I – one unit for optimum operation of two 35 W HCl lamps



Fig. 2. Stylish presentation – optimised by lighting systems with metal halide lamps from OSRAM

Fresh impression guaranteed

A decisive contribution to the fresh, high-class look of the PUB is made by the newly installed light systems. HCl metal halide lamps and electronic control gear from OSRAM are used to achieve this (Fig. 2).

Approximately 850 "Scene 6" two-lamp downlights from Swedish luminaire manufacturer Annell Ljus + Form AB are a central element of the light concept. These very stylish-looking luminaires are each equipped with two HCl-TC 35/830 compact metal halide lamps. These feature a ceramic burner and the new, greatly improved Secure-Fix base. This is operated on a PTi 2x35 I two-lamp ECG for stand-alone installations (Fig. 3).

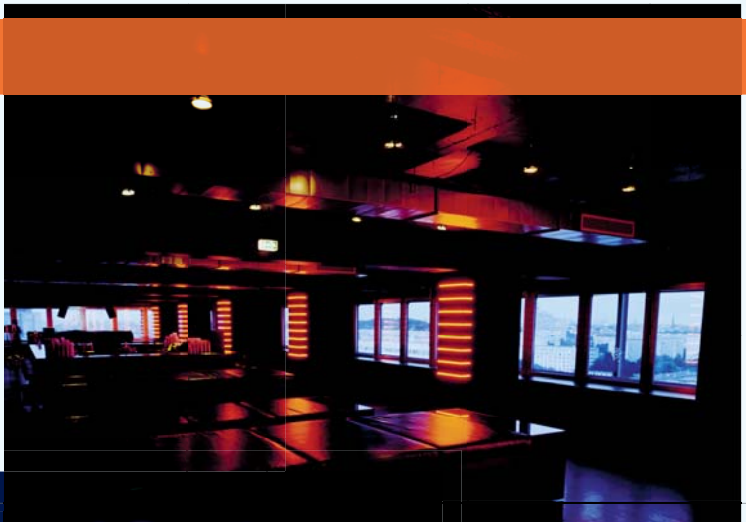
The vertical surfaces are additionally illuminated by "Vario" wallwashers with double-ended HCl-TS 70 and PTi 70 I lamps.

The system for success

The quality of the individual components was what tipped the balance

in OSRAM's favour. Due to their spherical burner, the HCl-TC 35/830 metal halide lamps offer brilliant, colour-stable and durable light. The PTi 2x35 I two-lamp ECG has excellent thermal qualities and is easy to install through the wiring system. In addition, the combination of system components ensures safe and reliable lamp operation for many years. The high quality of OSRAM products is demonstrated through the extended 5-year System+ guarantee. The renovation and refurbishment of the PUB department store is yet another impressive demonstration of how modern lighting technology can combine economical operation with an attractive ambience.

Wolfgang Mayershofer,
OSRAM Munich, and
Anders Harlestad,
OSRAM Sweden



Above the rooftops of Berlin

Since November 2004, visitors have been able to enjoy the view over the rooftops of Berlin from the 12th floor of the Sharp Tower. The “Week12end” club in the former “Haus des Reisens” is right on Alexanderplatz Square – the symbol of Berlin’s “New Centre” – and is a byword for style and sophistication with a “super sound” and, above all, top-notch events.



New ideas wanted

Although the “Week12end” was still trendy, the time had come for the 12th floor to be redesigned in early 2007. The Konzept Licht planning office from Berlin (www.konzeptlicht.de) was entrusted with the light design, project execution and programming. The club is now bathed in a funky, interactive light.

The idea was to develop a concept for the room that expanded the dance floor to encompass the entire club. This was done by using lighting effects and these are synchronised with the music. The focus is on the centre of the room, with its well stocked bar, which is surrounded by a small dance floor and the quieter lounge area. The conceptual frame is formed by six columns on the window side. This serves as lighting elements designed to set the scene. Each column was fitted with eight LINEARlight Colormix Flex RGB LED modules from OSRAM (Fig. 1). Each LINEARlight Colormix Flex strip is 1 m long, and all 48 can be controlled individually. A Windows-based user interface for programming and control of the light is used which offers countless possibilities. Also available are multimedia functions and automatic or interactive sequence control.

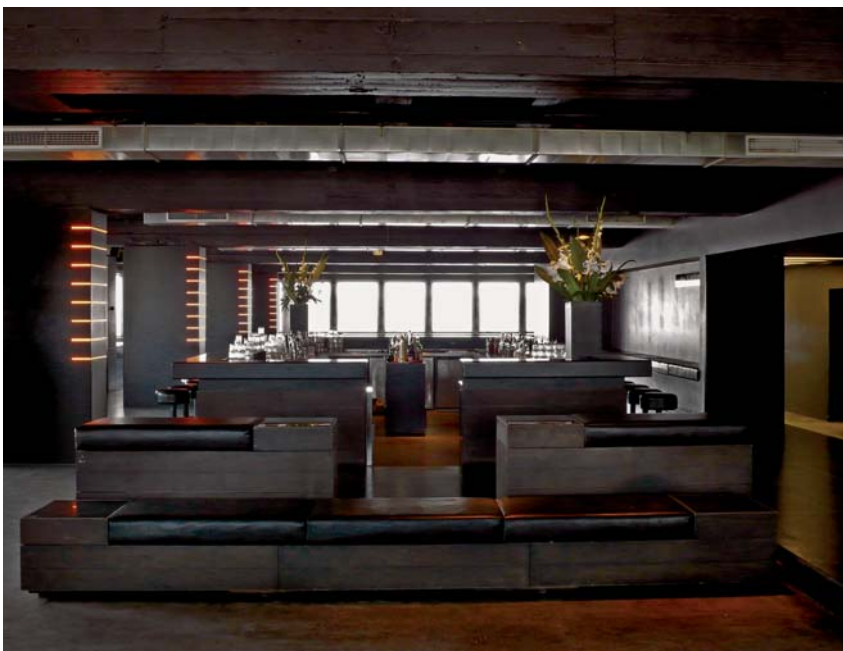


Fig. 1. Integrated in the columns, the lighting elements with Linearlight Colormix Flex LED modules add colour at the bar as well

This makes it possible to generate dynamic light sequences, such as “sound-to-light” effects that pulsate and change colour to the rhythm of the music. A gateway converts the Ethernet signals into DMX signals to ensure smooth communication.

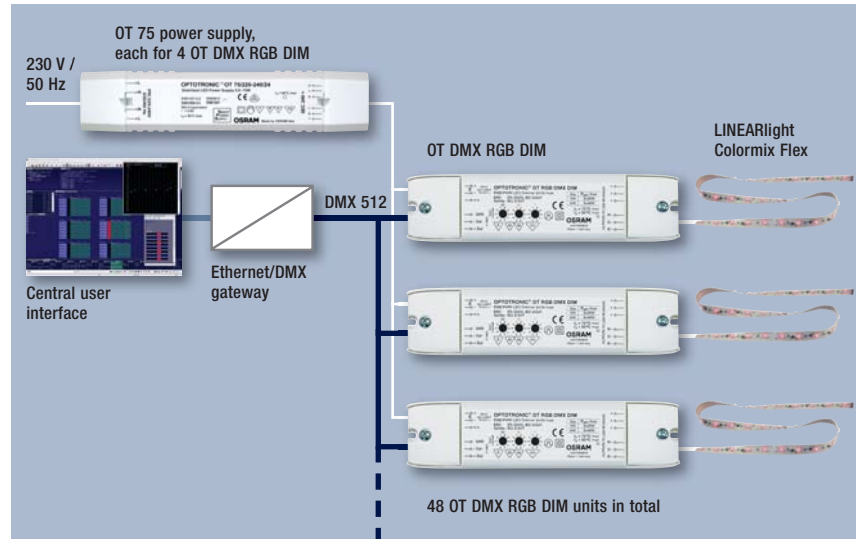


Fig. 2. Structure of the DMX light control system

Technology in the background

The DMX signals generated in this way control the OPTOTRONIC DMX RGB DIM PWM dimmers for the required light effects (Fig. 2). Each of the 48 units has three DMX

addresses that are defined on three rotary switches in the housing cover. The DMX address set is always assigned to the Red channel. The Green and Blue channels are automatically given the next addresses. For example, with a setting of 001 for Red,

002 corresponds to Green and 003 to Blue. The three 24 V PWM signals of the OT DMX RGB DIM are used to control the three channels for RGB colour mixing.

The power for the OT DMX RGB DIM PWM dimmers is supplied by twelve OT 75/200-240/24 units on the primary side. These devices provide electrical isolation of the LED installation and guarantee optimum supply to the LED modules.

Both OPTOTRONIC devices have a cable clamp for stand-alone installation.

Eye to the future

The innovative LED components from OSRAM are ideal for the emotional light design of Konzept Licht. As a result, the “Week12end” continues to be one of the best-looking clubs in town – très chic. It bridges the gap between the old and the new, just like the Berlin that lies at its feet.

Diana Tolksdorf,
OSRAM Munich

Electrifying appearance in blue

QTi DALI control gear with outstanding dimming quality



Figs. 1 to 3. Entirely in blue, Düsseldorf's Tonhalle presents itself as an atmospheric concert venue – while the back-lit metal fabric makes for a constantly changing appearance (Photo: Thomas Rhiele)

Two steps to music

A beautiful planetarium was built on the banks of the Rhine in Düsseldorf in 1926. By the 1970s, the city's familiar dome was then converted into a concert hall. Known as the "Tonhalle", it was the place where enthusiastic audiences came to see international stars of every musical genre.

By 2005, the building was again in need of thorough restoration. The update included fire prevention

systems and complete renewal of the technical installations, including the lighting system. Visually, the Tonhalle has remained faithful to the planetarium, but the "sphere" now shines with a metallic blue light. Similarly, the acoustics have been greatly improved, i.e. the so-called "knocking ghost" has been eliminated, by installing sound absorption and diversion devices. Audience and musicians can now enjoy brilliant surround sound.

Something special

The space-creating construction is dominated by a metal fabric that is transparent to light and sound. This structure constantly changes firstly shimmering in silver, then gold, then gets brighter, now darker. The appearance of the metal fabric is influenced by the lighting behind it (**Figs. 1 to 3**). Consequently, the lighting concept devised by Cologne-based, Atelier für Tages- und Kunstlichtplanung Kress & Adams, played

a key role. The most important feature of the installation is the flexibility offered by the numerous combinations of lighting. The general lighting, the effect lighting of the dome and the scene-setting stage lighting blend to give a harmonious overall impression. Remembering the former use of the Tonhalle as a planetarium, the effect lighting of the dome consists of a representation of the sky with the constellations of the northern hemisphere. Both sunrises and sunsets can be simulated.

Partners in the dome lighting project:

Execution: Hoch Tief Facility Management GmbH, Düsseldorf Branch
 Control system planning and site supervision: Ingenieurgesellschaft von Wnuk-Lipinski mbH, Berlin
 Light planning: Kress & Adams Atelier für Tages- und Kunstlichtplanung, Cologne
 Luminaire manufacturer: RSL Rodust & Sohn Lichttechnik GmbH, Sankt Augustin

Sophisticated hardware

To create these effects, luminaires with 21 W HE T5 fluorescent lamps from OSRAM and blue filters were positioned in such a way that the dome is indirectly immersed in

intense blue light. The luminaires from RSL Rodust & Sohn are mounted on 48 metal girders, which are arranged in circular fashion below the concrete shell. Each girder holds up to 24 luminaires fitted with QT*i* DALI electronic control gear from OSRAM. To ensure minimum noise emissions, the luminaire and ECG were tested and approved by a sound laboratory before hand. A total of 950 dimmable luminaires with DALI interfaces form the basis for creating different celestial simulations, from daytime effects to the sky at night. LEDs are used to recreate the constellations.

Intelligent control concept

Only an intelligent control concept was capable of turning the ideas into reality. That, and site supervision, was the responsibility of the Berlin-based Ingenieurgesellschaft von Wnuk-Lipinski mbH. The communications between DALI, EIB/KNX and DMX signals proves to be a unique feature in this case. All segments of the lighting installation can be controlled via a DMX512-based system controller on the DMX light control console (Fig. 4). The DMX commands are translated by a DMX/EIB gateway from Elka-Elektronik and transmitted

to the 18 GE 141 EIB/DALI gateways from Siemens. The DALI signals generated, then control up to 64 of the OSRAM QT*i* DALI control gear units on each of the five lines as a group.

Prevailing conditions mastered

The superior dimming properties of the DALI control gear were not the only advantage of the OSRAM system. The savings on wiring with DALI were also invaluable, given that the space on the girders was extremely confined. In addition to the power supply line, DALI systems only need a two-wire control line. The luminaires can be controlled individually or in groups. A five-wire line was used in the Tonhalle – two wires for control and three wires for the power supply.

Model dimming properties

On the one hand, QT*i* DALI control gear is characterised by its outstanding dimming properties. However on the other hand, the ECG guarantees maximum lamp service life for applications involving dimming. This therefore greatly prolongs the maintenance intervals for the lighting installation.

The sophisticated lighting solution, highlights the building's former use as a planetarium and emphasises the unique ambience of the Tonhalle. Together with the improved acoustics, the conditions are perfect for an outstanding experience for the ears. The North Rhine-Westphalian capital of Düsseldorf has yet another great attraction to offer. This is proved by the 200 plus concerts held every year. These concerts draw over 220,000 people to the venue and make the "Neue Tonhalle" a magnificent centre for culture.

Rainer Wrenger,
OSRAM Munich

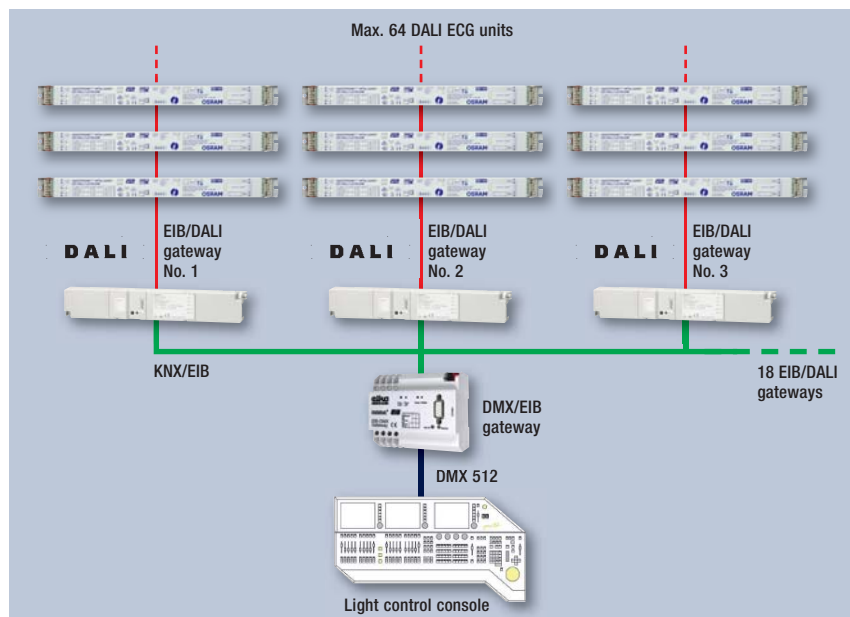


Fig. 4. Structure of the DMX/EIB/DALI control system for the 950 dimmable DALI luminaires



Fig. 1. Coloured light reduces the stress on the patient during surgery (photo: Trilux)

Innovative lighting for gentle medicine

EASY Color Control has benefits in sensitive environments

Focus on people and light

The field of research examining the positive effects of dynamic and coloured light on people is still in its infancy. However, it is already known that the human psyche reacts to stimuli and it can be influenced through light. Initial experience regarding the effect of light in hospitals has shown that patients feel more at ease in treatment rooms fitted with dynamic light. They tend to co-operate better with doctors and nursing staff. This knowledge is now also being put to

use at Markgröningen Orthopaedic Hospital. When it came to renewing the lighting equipment, attention focused on possibilities for reducing the stress on patients undergoing surgery. Modern operating and treatment techniques are now complemented by soothing lighting effects.

Simple, convenient solution

EASY Color Control units from OSRAM are used to control the lighting in three operating theatres and the associated recovery room.

Seven clean-room luminaires from Trilux, with 54 W HO T5 fluorescent lamps in red, green and blue, together with QTl DALI dimmable control gear are used in each of the operating theatres. These luminaires are used to supplement the normal working light.

Simple operation is ensured by a Touch Panel or, alternatively, the EASY remote control unit. Thanks to its compact dimensions, the associated IR receiver could be inconspicuously integrated in the ceiling.

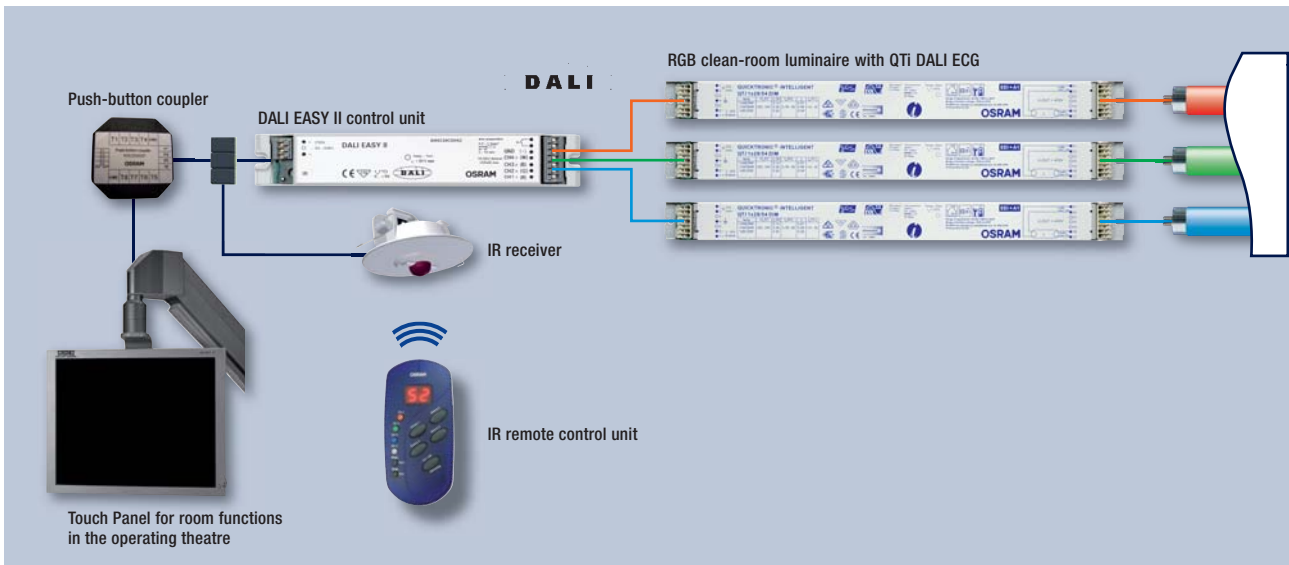


Fig. 5. Diagram of the EASY Color Control system with infrared remote control

As a result, a “feel-good light scene” can be individually set for each patient, in order to alleviate the stress factors naturally occurring during an operation (Fig. 1).



Figs. 2 to 4. The U-shaped array of BlueMotion luminaires from Trilux supplements the general lighting in the recovery room (photo: Trilux)

RGB light is also used in the recovery area. A total of 25 BlueMotion luminaires from Trilux (Figs. 1 to 4), arranged in a U-shaped lighting strip, create a soothing room atmosphere that can be easily changed by the hospital staff. This is done by selecting individual colours or dimming the colour channels via the Touch Panel. This also changes the entire room atmosphere at the same time.

Functional and competent

The EASY Color Control system is primarily characterised by its great functionality, together with simple operation and installation. The digital data link with extra-low voltage has the necessary requirements for use in sensitive areas, such as operating theatres. The Touch Panel is connected via the 8-fold binary input of the EASY push-button coupler. Through this, all components with floating outputs can be connected, such as push-buttons, switches or motion detectors (Fig. 5).

For safety reasons, the use of devices emitting radio waves is generally undesirable in medical departments. This is where the digital infrared technology of the EASY system demonstrates its added value, since it can be even used without any

problems in critical environments, such as operating theatres.

EASY Color Control has proven its worth in projects in the medical sector, and equally in numerous other applications.

Together with DALI control gear from OSRAM, this control system offers maximum safety and reliability. The system properties and the reliability competence of sourcing components from a single source, i.e. lamp, ECG and control system, made this lighting installation the solution of choice for the orthopaedic hospital in Markgröningen.

The EASY Color Control light control system from OSRAM thus demonstrates its potential even in highly sensitive fields of application. Here, coloured, dynamic light impressively promotes the well-being of the patients.

Axel Pilz,
OSRAM Munich

For energy efficiency and sustainability

QTi DALI and QTP electronic control gear offers added value

Demanding restoration

The headquarters of the BMW Group in Munich, known in German as the “Four-Cylinder”, are familiar the world over. Three decades after the high-rise building was put into service, its technical equipment (heating, ventilation, electrics, ablutions and fire protection) was upgraded with state of the art technology. Completed in 2006, the restoration focused not only on the preservation of the building as an architectural monument, but equally on aspects of energy efficiency and ergonomics (Fig. 1). This resulted in the scrapping of full air-conditioning, as well as the optimisation of daylight utilisation at workstations by means of light guidance. Dimmable QTi DALI control gear from OSRAM is one of the components used for achieving energy efficiency of the lighting installation. Owing to the circular layout, plenty of daylight is available in the offices. Artificial light is added to complement the natural light. The luminaires are



Fig. 1. Following its restoration, the BMW Tower is a beacon of energy efficiency and ergonomically designed lighting solutions

controlled as a function of daylight and occupancy for maximum energy efficiency. In addition, the DALI ECG

provides a link to the higher-ranking LON building automation system.

Solution for simplicity

This solution proves that ECG with a DALI interface is cutting edge technology and has a bright future. DALI-based lighting installations are not only easier to plan than systems using 1...10 V technology, for example, but also much simpler to install. Moreover, the light groups can be defined after installation and adapted without altering the wiring. Added value is offered by supplementary functions, such as status messages from lamps and ECG, as well as the low-cost integration of standard luminaires in emergency lighting systems.

In particular, emergency lighting systems with a central supply, and luminaires with a DALI interface offer great benefits. One such benefit is that every luminaire can be monitored to check the status of the lamp and ECG. The existing DALI lines and the

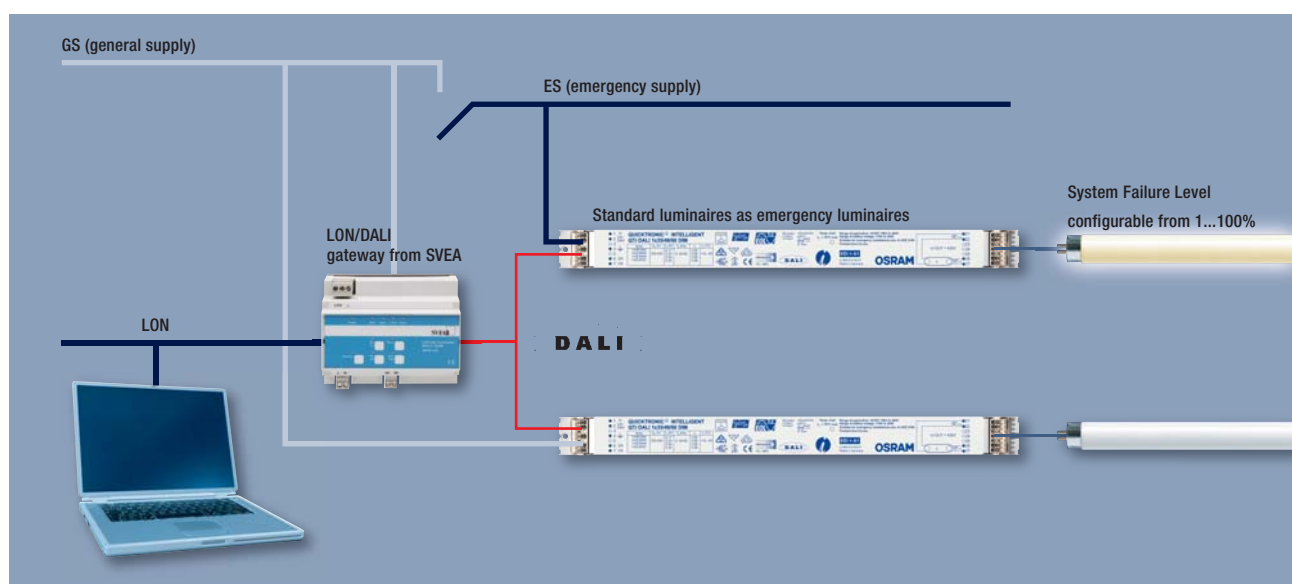


Fig. 2. Integration of standard luminaires with QTi DALI ECG in the emergency lighting installation of the BMW Tower. Following a mains power (GS) failure, the emergency supply (ES) feeds power to selected standard luminaires

infrastructure of the building automation system can be used for this purpose, via the SVEA gateway. This establishes the required conditions for low-cost emergency lighting systems. It is even possible to assign each luminaire its own luminous flux value in the event of a mains power failure (Fig. 2).

Stringent selection criteria met

The successful car maker attaches great importance to energy efficiency and sustainability not only in its offices, but also in its production plants. Consequently, the luminaires used there are generally equipped with electronic control gear. In the past 25 years, the BMW Group has installed more than 500,000 QUICKTRONIC PROFESSIONAL ECG units from OSRAM at its various production locations. Components and systems



Fig. 3. The extremely long service life and extraordinary reliability of QTP8 ECG prove to be the most important criteria for use in production at BMW

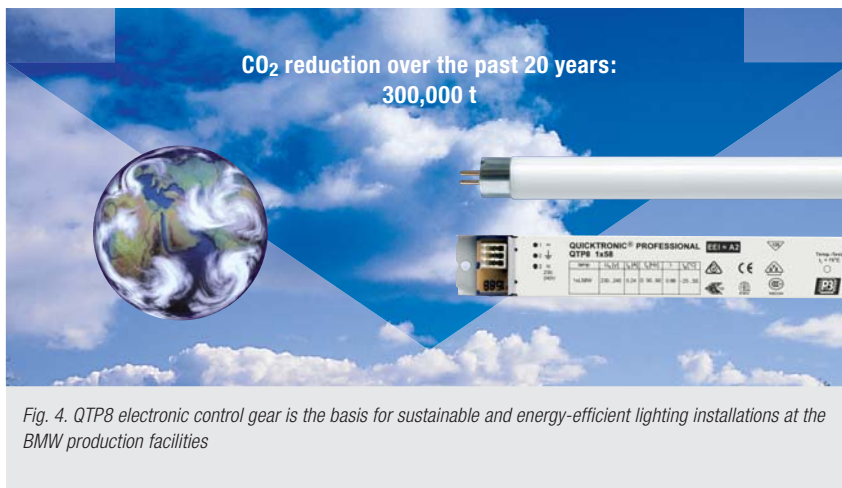


Fig. 4. QTP8 electronic control gear is the basis for sustainable and energy-efficient lighting installations at the BMW production facilities

are selected after stringent testing against BMW's in-house quality standards that relate to efficiency, durability and interference immunity. This is easy to understand in view of the fact that production locations use approximately 30% of their total electrical energy consumption operating their lighting installations. It is for this reason that the energy efficiency and sustainability of lighting installations have top priority. Günter Kellerer and Gerhard Daum are the managers responsible for the energy structure and technical equipment at the BMW Group. The reliability and extraordinarily

long service life of the components used, are the most important criteria in this context (Fig. 3).

This is where QUICKTRONIC PROFESSIONAL electronic control gear from OSRAM scores highly. A two-shift operation equates to 4,500 hours of operation per year. In this time, ECG operation saves up to 70 million kWh of energy per year compared to conventional LLCG. This is equivalent to a CO₂ reduction of about 30,000 t. As a result, the BMW Group has saved approximately 300,000 t CO₂ over the past 20 years by using electronic control gear in its

production plants (Fig. 4). An ECG service life of 100,000 hours is therefore demanded to guarantee the sustainability of the lighting systems in BMW's production departments. OSRAM ECG achieves this figure and is prescribed as the quality standard. The generation of harmonics is a key feature of QTP ECG. This is proven by systematic monitoring of the harmonic distortion in the power supply networks in the BMW production facilities. Due to its mains input filter, QUICKTRONIC PROFESSIONAL control gear generates no significant mains current harmonics – this is far less than LLCG. QTi DALI and QTP8 electronic control gear have been demonstrating these various qualities in both the offices and production facilities of the BMW Group for years. Sustainability is one of the key features of OSRAM ECG in these applications.

Rainer Wrenger,
OSRAM Munich

For consumer-friendly light in China

The durability of QUICKTRONIC QTP8 is the trump card



Fig. 1. Metro supermarket in Shanghai/China

The China opportunity

China is a country of superlatives: it is the most populous nation in the world, attracts more direct foreign investments than any other country and occupies the largest area in Eastern Asia. Moreover, China is among the global leaders in terms of the volume of trade and economic

strength, as gauged by the gross domestic product. Increasingly the Chinese are profiting from the boom: private consumption has risen by approximately 27% since 2002. To exploit the growing market opportunities, the Metro Group expanded into the Middle Kingdom in 1996. Since which time it has been repre-

sented in this market with its Metro Cash & Carry stores. The company has opened 34 hypermarkets (Fig. 1) in just eleven years, and another six per annum are to be added in the coming years.

Light as a presentation factor

Throughout the world, Metro Cash & Carry is a byword for successful supermarkets. When it comes to designing them, not only do the economic aspects play an important role, but also the effect of the lighting. After all, lighting makes a major contribution towards the presentation of goods and can have a positive impact on the buying behaviour of the customers.

Time and again, the national Metro companies work closely with technicians and decision-makers on implementing suggestions and new ideas. They pay special attention to the different customer mentalities and demands.

Needless to say, this also applies to the 34 Metro and Makro Cash & Carry outlets in China. These stores attract customers with ever-longer opening hours, which offer them the best possible service. Hours of business of at least 12 hours a day, six days a week, have in the meantime become standard in most countries. This has in turn led to a substantial increase in the demands on the lighting, due to the longer average burning time per year.

OSRAM's answer to these demands is economical, long-life electronic control gear, such as the QUICKTRONIC PROFESSIONAL QTP8 for operating T8 fluorescent lamps. With a service life of up to 100,000 hours, this standard ECG is also ideal for round-the-clock use.

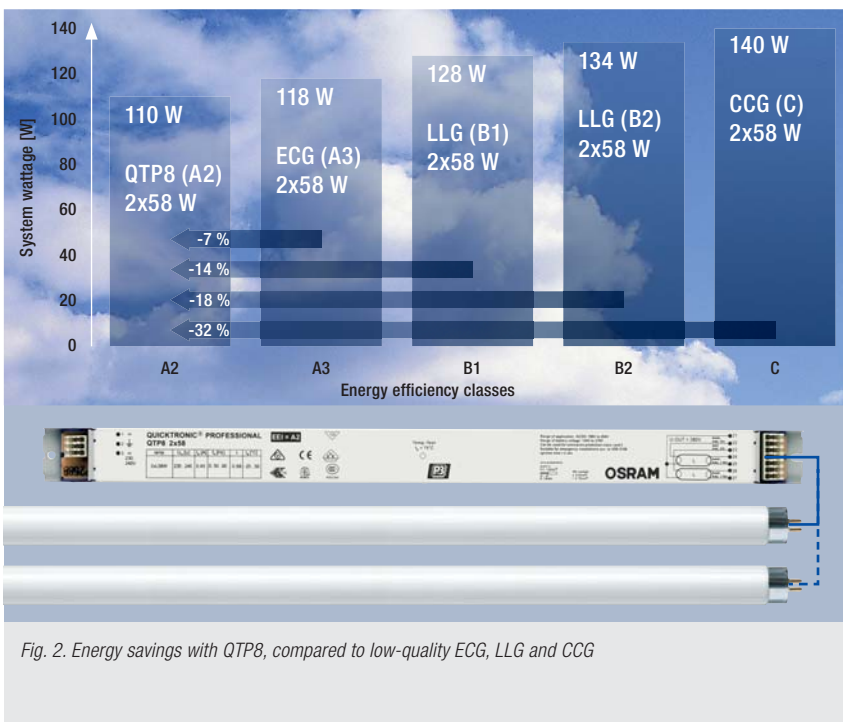


Fig. 2. Energy savings with QTP8, compared to low-quality ECG, LLG and CCG



Fig. 3: Energy-efficient lighting solution with QTP8 ECG, which is characterised by a very long service life

Decision-making criteria in detail

The lighting solution for the Metro store in China was intended to stimulate customers, and to be characterised by outstanding technology (Fig. 3). The decision-making process focused primarily on the following criteria:

- Economy,
- Energy efficiency,
- Long system service life to minimise maintenance costs,
- Local technical support,
- Lamp + ECG system from a single source.

With its innovative lamps and electronic control gear, OSRAM meets these requirements exceedingly well.

System concept again guarantees success

The reliability of these components is demonstrated by numerous reference projects around the globe, where OSRAM systems have been operating constantly for many years. For instance, thousands of QUICKTRONIC PROFESSIONAL control gear units are in use at Frankfurt Airport – and similarly in the automotive and chemical industries. The quality of OSRAM ECG is underlined by a confirmed service life in excess of 100,000 hours, where they have operated trouble-free under tough industrial conditions.

Top-class energy efficiency

QTP8 is a winner not only because it has a long service life and is very reliable, but it's also extremely energy efficient. Compared to the conventional operation of two 58 W fluorescent lamps, QTP8 control gear saves more than 32% energy (Fig. 2). In this way, OSRAM ECG actively contributes to reducing CO₂ emissions. Moreover, the operator's energy bill becomes much smaller. Return on Investment (ROI) is achieved after less than twelve months.

At the Metro supermarket in Shanghai, 8,000 QUICKTRONIC PROFESSIONAL QTP8 control gear units (2x58 W version) are used to operate the 16,000 LUMILUX 58 W T8 fluorescent lamps, guaranteeing pleasant and also energy-efficient light for shoppers.

Cornelia Fürst,
OSRAM Munich, and
Jacob Ye,
OSRAM China

Advantages of QUICKTRONIC PROFESSIONAL QTP8 electronic control gear

- Highest standard of safety to EN 61347-2-3
- 100,000 h service life*, i.e. longer maintenance intervals due to long system service life
- Low power loss, i.e. low thermal load, and thus reduced power consumption of air-conditioning systems
- Compliance with all relevant standards relating to electromagnetic compatibility (EMC) to EN 55015, EN 61000-3-2 and EN 61547
- Reliable lamp ignition at ambient temperatures from -25 °C to +55 °C
- 3 or 5-year system guarantee for OSRAM systems if the installation is registered

* At t = 65 °C at tc with max. 10% failure probability

“Palau de les Arts” in a mass of colour

QTi DALI control gear for convincingly precise dimming



Fig. 1. The “Palau de les Arts” arts centre in Valencia has an impressive appearance

Versatile arts centre

As a part of the “City of Sciences and Arts” complex in Valencia, the “Palau de les Arts” arts centre seems to polarise opinion. Its nicknames, at least, certainly give this impression: giant beetle, ocean giant or big-mouthed whale. The building, designed by the renowned architect Santiago Calatrava, is characterised



Fig. 2. The RGB ceiling elements can be used as an integral element of the stage lighting

by curving lines together with the use of white concrete, steel and glass as materials. It is used as an opera house, theatre and concert hall. (Fig. 1).

The ceiling as a challenge

In the main hall, the ceiling height meant that a bespoke solution was needed to light, what is one of the world's largest opera halls. It consists of dynamic RGB light elements that can be incorporated into the stage lighting (Fig. 2). The ceiling elements can be illuminated differently by means of RGB colour mixing to suit the individual performances.

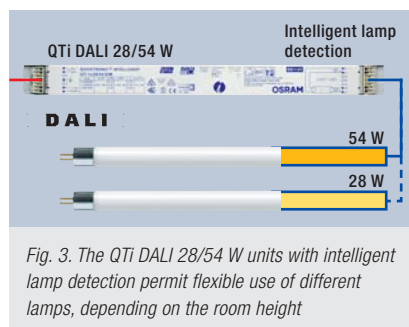


Fig. 3. The QTi DALI 28/54 W units with intelligent lamp detection permit flexible use of different lamps, depending on the room height

To this end, the ceiling elements are each divided into a section with white T5 fluorescent lamps and an area with coloured lamps. This means that event-specific lighting scenarios can be programmed and different atmospheres can be created in the room.

The background is provided by 2,125 dimmable QTi DALI 1x28/54 W control gear units from OSRAM, which are controlled by the building control system via LON/DALI gateways.

Precise dimming required

The architect and planners consciously decided on QTi DALI ECG from OSRAM, because it permits precise and very rapid dimming operations without negatively impacting the lamp life. Thanks to the intelligent lamp detection function of QTi DALI, the ceiling elements can be additionally fitted with 28 W HE or 54 W HO T5 fluorescent lamps, depending on the ceiling height (Fig. 3).

Added value implemented

DALI ECG can easily be integrated into emergency lighting systems, e.g. for the anti-panic lighting in the auditorium. If the control system fails, the QTi DALI units ensure the lighting value is set at the “System Failure Level”.

The properties of the dimmable QTi DALI control gear create the conditions required for task-specific lighting scenarios and room atmospheres in the main hall of the “Palau de les Arts”.

Rainer Wrenger,
OSRAM Munich, and
Alfonso Canorea,
OSRAM Spain

Intelligence now available for all lamps

Dimmable QT_i ECG for compact fluorescent lamps completes the range

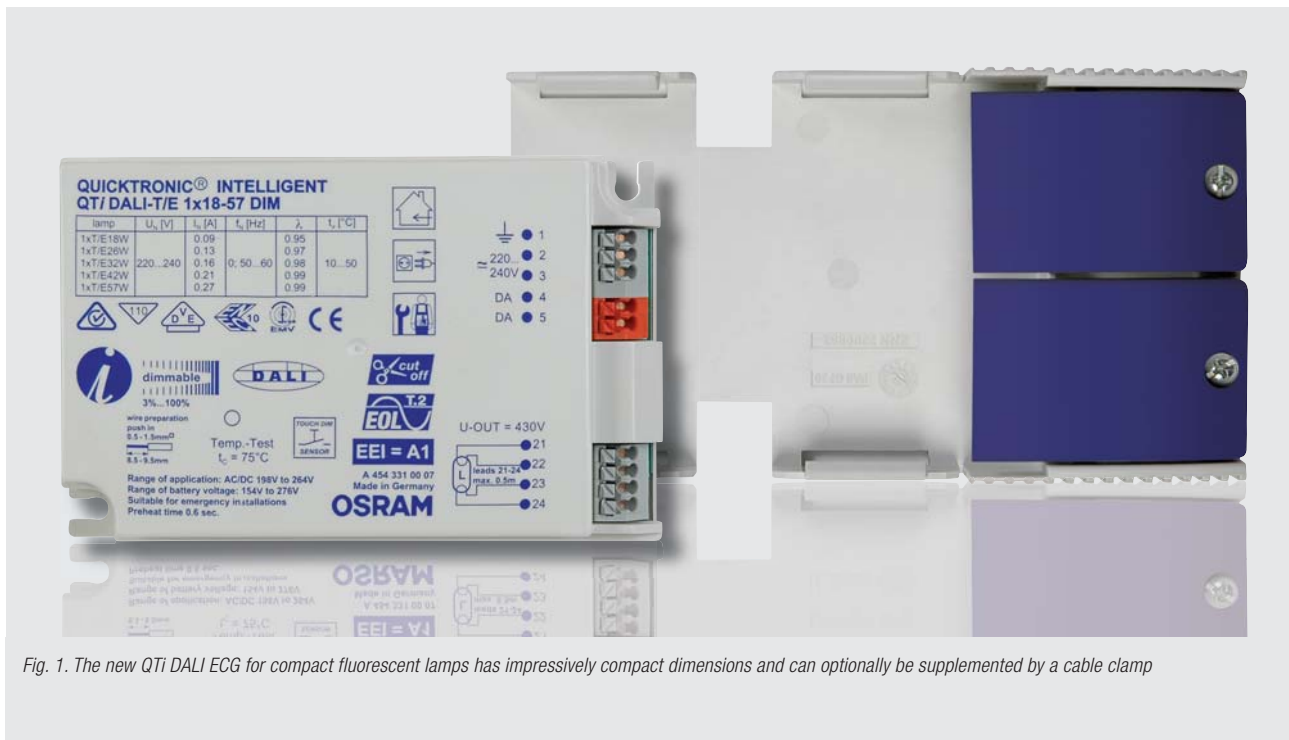


Fig. 1. The new QT_i DALI ECG for compact fluorescent lamps has impressively compact dimensions and can optionally be supplemented by a cable clamp

Perfect complement

The family of dimmable, intelligent QUICKTRONIC INTELLIGENT control gear from OSRAM now also includes QT_i versions for compact fluorescent lamps. Intelligent lamp detection and multiwatt operation have made it possible to halve the number of ECG types. Just two devices now cover the entire range of the most important compact fluorescent lamps. The QT_i (DALI)-T/E 1x18-57 DIM can be used to operate all lamps from 18 W to 57 W, while the QT_i DALI-T/E 2x18-42 DIM version is suitable for 18 W to 42 W. Similarly, the one-lamp QT_i DALI is suitable for operating the FC 22 W and FC 40 W ring lamps. For dimming, a choice is again available between a DALI or Touch DIM interface and 1...10 V technology. Another remarkable feature is the much faster lamp starting time of 0.6 s.

Housing concept with added value

The members of the QUICKTRONIC INTELLIGENT family for compact fluorescent lamps come in a completely new housing (Fig. 1). Because of their very low power loss, the one and two-lamp devices are accommodated in the so-called K3 plastic housing. The dimensions of this are 123 mm x 79 mm x 33 mm. The lateral cable clamp was omitted to minimise the housing volume and gain space for the electronic equipment. An optional

snap-on cable clamp is available for installation in suspended ceilings.

Unrestricted operation of amalgam lamps

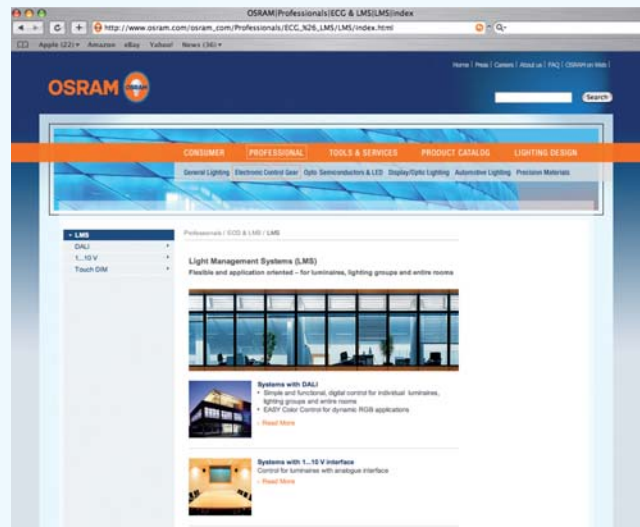
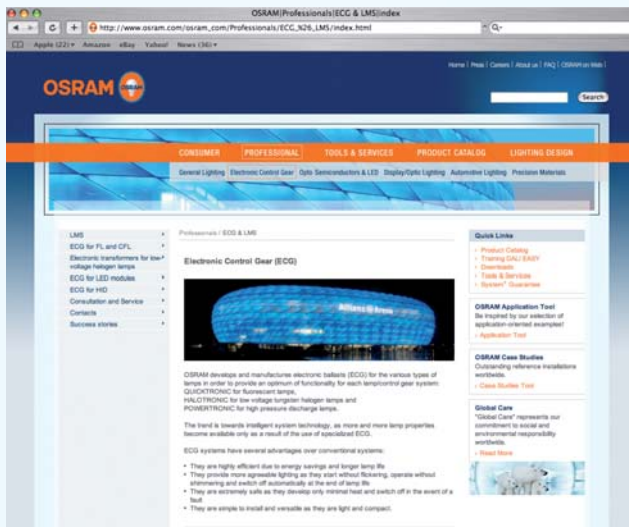
The new QT_i devices are also suitable for unrestricted dimming of amalgam lamps. In this context, the device's intelligence is used to automatically adjust the preheating at very low temperatures. Moreover, if the luminous flux values and temperatures are too low, the lamp is automatically dimmed up to such an extent that stable lamp operation is guaranteed.

Integrated service life guarantee

For design-related reasons, extremely high temperatures occur on QT_i electronic control gear in downlights, and similarly in certain false ceiling structures. To achieve a long service life, the QT_i versions for compact fluorescent lamps have an intelligent power reduction feature. This monitoring function intervenes when necessary, therefore improving the reliability of QUICKTRONIC INTELLIGENT. Intelligence from OSRAM once again demonstrates its (practical) benefits here.

Michael Hani,
OSRAM Munich

News in brief



Attractive new website for ECG and light control systems

Not only was OSRAM's website recently given a make over, but also the ECG and light control systems micro-sites given a facelift. This change was also accompanied by revision of the content, which is now designed to be

even more user-friendly. A detailed compilation of light management systems and their potential applications has also been added. We look forward to your visit to the OSRAM ECG and light control systems website. We would appreciate your feedback so log on at: www.osram.com/ecg.

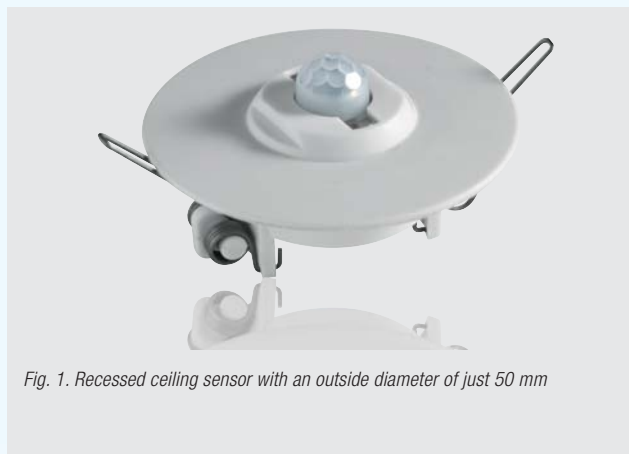


Fig. 1. Recessed ceiling sensor with an outside diameter of just 50 mm

Energy-saving made easy with DALI MULTI 3

A wide variety of functions makes the new DALI MULTI 3 light control system a versatile "energy-saver". Daylight-dependent lighting control combined with an occupancy function make it a very efficient system. Multisensors are available for installation in luminaires or ceilings. The ceiling-mounted version is one of the smallest multisensor solutions on the market (Fig. 1).

The DALI MULTI 3 system can be operated via a radio receiver for systems without batteries using EnOcean technology. The system is easy to install and does not require DALI addressing of the connected luminaires. More details at: www.osram.com/ecg-lms.

AG-DALI to present DALI Award at Light+Building 2008

The Activity Group DALI will be presenting the DALI Award for the second time at Light+Building 2008, which is to be held in Frankfurt from 6 to 11 April 2008. As in 2007, the three best DALI projects will receive

the award and be publicised on the AG-DALI website. The competition is open to manufacturers of luminaires, control gear and control systems, as well as planners and architects, who can submit DALI projects completed in 2007. Full details can be found on the internet at www.dali-ag.org.

