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PRESS RELEASE

Spanish authorities are switching to LEDs

Protocol for convenient control of luminaires from different manufacturers

Dornbirn, March 19, 2018. **What links the pedestrian precinct in old town centre of Lloret de Mar with a housing development in Tarragona, the promenade in Sitges and the Torres Villà Park in Granollers? They are all in public areas and need flexible, reliable lighting that consumes as little energy as possible and that can be conveniently controlled. Tridonic has successfully renovated the lighting together with service partner SECE of Barcelona.**

As is the case throughout Europe, outdoor lighting in Spain is gradually being upgraded to efficient LEDs. If the lighting systems are suitably designed from a technical point of view, LEDs can lower energy consumption, cut down on the time needed for maintenance and therefore reduce running costs. To meet their current requirements, authorities and operators are often looking for simple, cost-effective and yet convenient solutions that can be adapted, if necessary, to suit future demands.

Greater convenience and lower energy consumption needed

The requirement at all the above-mentioned locations was for the conventional lighting to be replaced by LED lighting, energy consumption to be reduced and convenient and robust lighting control to be integrated.

The popular tourist destination of Lloret de Mar is a good example. The lighting in the central pedestrian precinct was to be renewed and at the same time adapted to changing requirements due to the different seasons and associated wide fluctuations in the number of visitors. The local authorities also wanted the lighting to be more energy-efficient and offer higher levels of comfort. The existing luminaire infrastructure was to be retained. The luminaire heads were to be simply re-equipped and the conventional lamps replaced by LED light sources: a total of ninety-five 150 W high-pressure sodium lamps and 250 W mercury vapour lamps.

SECE is responsible for the infrastructure and for operating the street lighting. This Barcelona-based technical service provider specialises in the installation, operation and renewal of public lighting systems, and manages more than 400,000 light points in Spain. Albert de Ramos Pons, Technical Manager at SECE S.A. explains: “We were looking for a qualified partner who offers components that are easy to integrate in our infrastructure and can be controlled centrally from the switching cabinet. What’s more, the components had to be compatible with different luminaires from different manufacturers because in addition to Lloret de Mar we had projects on the agenda in Tarragona, Sitges and Granollers.”

In the existing lighting system SECE was already controlling the lamps from a central switching cabinet via telemanagement or wireless technology through controllers. However, this solution did not allow the lighting to be adapted to suit the different requirements resulting from wildly fluctuating visitor numbers at different times of the year.

Simple solution with central control

The central control options was to be retained, however, as was the existing luminaire infrastructure. “Our search for suitable partners led us to Tridonic because this supplier of efficient lighting solutions has a large portfolio of LED drivers with extensive functionality to cover various requirements and was prepared to support SECE as a partner in this project”, added Albert de Ramos Pons.

Extensive testing resulted in a combined solution. The existing infrastructure with central control could be retained. Premium dimmable drivers for outdoor applications were selected as the control devices for the new LED lamps. These robust drivers are equipped with a universal one4all interface that comprises DALI DT 6, DSI, switchDIM and corridorFUNCTION V2. The GridControl function is available for adapting the brightness level. It uses the U6Me2 protocol to transmit appropriate signals via the mains.

Adapting brightness to suit demand

The new LED luminaires can also be controlled centrally by the telemanagement controller via the mains. Depending on the brightness levels required, the controller forwards signals with commands to the LED drivers of all the luminaires installed in a street run.

For outdoor and street lighting in particular, it is worth reducing brightness levels during the night, for example, or at less frequented times. This can be easily achieved with the chronoSTEP function. By default, the switch-on and switch-off times for the lighting (dusk and

dawn) are determined over three days and the average of these times is taken as virtual midnight. The dimming levels are then adjusted accordingly around this virtual midnight. A total of eight profiles are available – five are pre-programmed and three can be individually defined via the programming protocol.

Virtual midnight can also be programmed manually via GridControl. The programming protocol behind this is U6Me2, which Tridonic has made available to SECE. Various profiles and the desired output current were set and profile values were reset as required. Tridonic then tested compatibility with the control system and prepared a list of compatible drivers.

The initial project in Lloret de Mar has now been successfully completed, and the three other projects in Tarragona, Sitges and Granollers are already in operation. SECE now has access to different dimming profiles for the busy summer months and the quieter winter period. The profiles can be changed at any time as required.

Initial experience shows that the new lighting solution is functioning smoothly. That has also been confirmed by Jordi Aulet, Director of City Maintenance Services Municipality of Lloret de Mar and Josep Lluís Castell, Director of City Maintenance Services and Mobility Municipality of Granollers.

Aulet: “GridControl gives us a simple and reliable way to set the desired lighting level. We can therefore respond promptly to different requirements at different times of the year.” To which he added: “It’s a simple and effective tool for controlling our street lighting which helps to adjust the lighting to meet actual requirements and at the same time saves energy.”

Tridonic, together with SECE, is showcasing this solution, which was conceived specifically for public lighting in towns and cities, during Light + Building from March 18 to 23 in Palais Livingston in Frankfurt.

The projects

Lloret de Mar

- Lighting renewed in the pedestrian precinct
- Existing luminaires re-equipped
- Existing infrastructure retained
- A total of 95 x 150 W high-pressure sodium lamps and 250 W mercury vapour lamps replaced with 55 W LED modules

- 95 LCA 60 W 350-1050 mA one4all C PRE OTD LED drivers installed
- Power consumption reduced by 13 kW
- Annual energy consumption reduced by 55,800 kWh

Granollers

- Lighting renewed in the Torres Villà Park
- Existing luminaires re-equipped
- Existing infrastructure retained
- 77 x 100 W, 150 W and 250 W high-pressure sodium lamps replaced with 25 W and 80 W LED modules
- 46 LCA 30 W 350-1050 mA one4all C PRE OTD LED drivers for LED modules and 31 LCA 120 W 350-1050 mA one4all C PRE OTD LED drivers for LED spotlights installed
- Power consumption reduced by 4.5 kW
- Annual energy consumption reduced by 17,650 kWh

Tarragona

- Lighting and entire system renewed in the Cala Romana housing development
- Existing luminaires re-equipped
- 238 x 125 W mercury vapour lamps replaced with 55 W LED modules
- 238 LCA 60 W 350-1050 mA one4all C PRE OTD LED drivers installed
- Power consumption reduced by 16.7 kW
- Annual energy consumption reduced by 65,130 kWh

Sitges

- Lighting renewed along the Port Alegre promenade
- Existing luminaires re-equipped
- Existing infrastructure retained
- 55 x 100 W metal halide lamps replaced with 40 W and 55 W LED modules
- A total of 55 LCA 60 W 350-1050 mA one4all C PRE OTD and LCA 75 W 350-1050 mA one4all C PRE OTD LED drivers installed
- Power consumption reduced by 2.5 kW
- Annual energy consumption reduced by 12,600 kWh

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About Tridonic

Tridonic is a world-leading supplier of lighting technology, supporting its customers with intelligent hardware and software and offering the highest level of quality, reliability and energy savings. As a global driver of innovation in the field of lighting-based network technology, Tridonic develops scalable, future-oriented solutions that enable new business models for lighting manufacturers, building managers, systems integrators, planners and many other types of customers.

To promote the vision of the “Internet of Light”, Tridonic relies on partnerships with other specialists. The goal is the joint development of innovative technological solutions that convert lighting systems into intelligent networks and thereby enable associated services. Its profound, technical industry expertise makes Tridonic an ideal partner for established brands and for newcomers to the market.

Tridonic is the technology company of the Zumtobel Group and is headquartered in Dornbirn, Austria. In the 2016/17 tax year, Tridonic generated sales of €377.2 million. 1,590 highly skilled employees and a worldwide sales presence in over 50 countries reflect the company's commitment to the development and deployment of new, smart and connected lighting systems.

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