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PRESS RELEASE

Modern lighting for a better quality of life

Spanish city relies on LED drivers from Tridonic for energy-efficient outdoor lighting

Dornbirn, March 30, 2021. **The Spanish city of Terrassa, located around 30 kilometres outside Barcelona, is devoted to climate protection and wants to offer its citizens clean air, a better quality of life and a healthy environment. By modernising more than 29,000 light points, it has now reached an important milestone towards becoming an energy-efficient, eco-friendly city. Tridonic's dimmable constant current LED drivers played a big part in it.**

Back in 2013, the Terrassa city council launched the "Terrassa Energia Inteligente" (TEI) project. Its main objective is climate protection. Once the project has been completed, the Catalan city is hoping to save around 17,000 MWh of energy per year. It wants to achieve this by improving energy efficiency and reducing pollutant emissions throughout the city.

To make this ambitious goal a reality, the city administration relies on modern technologies. Expanding renewable energy sources is just as much a part of this as applying modern energy management, upgrading fibre optics and building up a fleet of hybrid buses for public transport.

Another important element of the TEI project is the modernisation of the city's lighting installations. At the beginning of 2019, the Terrassa city administration and its project partner imesAPI SA began upgrading all the luminaires in the city. In total, 29,000 light points were replaced with LED luminaires from renowned manufacturers such as Novatilu, Schréder, Carandini, Signify, Disano and Lamp.

Uniform control – irrespective of the model or manufacturer

The new luminaires spread around the city vary depending on the requirements and applications. "In total, we have around 30 models from seven different

suppliers in use," says Albert Marín, smart city project manager at Terrassa. This diverse setup is a challenge for lighting control in particular. Because on top of high energy efficiency, the luminaires had to meet a whole range of other requirements. For example, the city wanted to be able to change the dimming curve of the luminaires either via a programming device or remotely. And for safety reasons, LED luminaires near bus stops and train stations needed to increase their illuminance to 100 percent as soon as a pedestrian approached the light point. This required a simple way of controlling the outdoor lighting across the board, despite its diverse setup.

The project partners opted for Tridonic's dimmable constant current LED drivers for luminaire installation. The drivers have been designed specifically for street and industrial applications, are robust and come with a nominal service life of 100,000 hours. And apart from their wide dimming range of 1 to 100 percent and high protection, the Tridonic LED solutions offer great energy savings. Depending on the model and design, the devices achieve an efficiency of up to 94 percent. And their power consumption on standby is extremely low.

Another deciding factor for the decision-makers was easy integration and flexible configuration of the luminaires using the U6Me2 programmer or the companionSUITE parameterisation software via NFC or ready2mains. ready2mains and U6Me2 don't require an additional communication interface. They use the existing network interface. Even after installation, the drivers can be easily (re)programmed with ready2mains or NFC – on site or from a central switching cabinet.

Light management functions open up potential savings

Terrassa now uses Tridonic constant current LED drivers from the advanced (ADV) product family such as LCO 14/100-500/38 NF C ADV3, LCO 24/200-1050/39 NF C ADV3, LCO 40/200-1050/64 NF C ADV3, LCO 60/200-1050/100 NF C ADV3 and LCO 90/200-1050/165 NF C ADV3. At bus stops and train stations, devices from the Tridonic excite driver range are used. The corridorFUNCTION, in combination with a motion detector, always provides the right lighting and therefore ensures the safety of pedestrians. High luminous fluxes are only produced when they are actually needed. If the sensor no longer

detects any movement, the luminous flux is automatically reduced. This makes outdoor operation even more energy-efficient and cost-effective.

The midnight function (chronoSTEP) integrated in the drivers also takes into account reduced road use at certain times during the night. It enables the lighting to be programmed in eight individual dimming stages and times. The different illuminance levels can be programmed on site or at a central switching cabinet and the timing for these different levels can also be configured.

An 80 percent reduction in energy

By switching over to LED luminaires across the entire city and adapting the dimming stages to local conditions, the municipal administration of Terrassa and its project partner imesAPI have managed to reduce installed output by around 3,500 kW. This will save around 12,200 MWh each year. All in all, Terrassa was able to lower the outdoor lighting's energy consumption by 80 percent.

"Thanks to new drivers, we have managed to unify and simplify control of our outdoor lighting – irrespective of the manufacturer and luminaire models used," says project manager Albert Marín. "This means that our outdoor lighting is now extremely reliable and more efficient than ever before – an important milestone in the fight against climate change." The Terrassa city administration also benefits from drastically reduced maintenance costs because the equipment is straightforward and the number of spare parts small.

Since completing the project, the interior lighting in the city's public buildings is now also being modernised as part of "Terrassa Energia Inteligente".

Photo captions

Move to an eco-friendly city: in Terrassa, Spain, the entire street lighting system was modernised. The lighting can be dimmed as required. LED drivers and control technology from Tridonic use the U6Me2 protocol to transfer signals via the power cable so the lights can be conveniently configured at the switching cabinet.

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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 customer.

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 2019/20 fiscal year, Tridonic achieved sales of 341.4 million euros. 1,932 highly skilled employees and a worldwide sales presence in over 50 countries provide the basis for developing and launching new, smart and connected lighting systems.

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