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Unlimited Horizons

Wireless control for LED lighting
On the way to the Internet of Things





Every morning and evening, guests of the Mandarin Oriental Hotel in Macau enjoy a spectacular color and light show over the bay of this southern Chinese metropolis. The lights and curtains in the stylish rooms are controlled by an automation system from Eltako. Self-powered wireless technology brings energy efficiency and comfort into perfect harmony.

By Bettina Goss, Export Sales Manager,
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Five-star luxury hotel cuts energy by 80 percent

With its unique waterfront location and luxurious furnishings, the five-star Mandarin Oriental Hotel provides visitors to Macau with a very special experience during their stay. The room design reflects the city's fascinating ambiance, with its famous shopping district, vibrant night life and modern lifestyle, and offers an exciting mix of style and comfort.

The best of everything

For guests of the Mandarin Oriental, the perfect stay also includes cutting-edge technology that meets the highest standards of pleasant atmosphere and the sustainable use of resources. The same applies to building automation. When it came to modernizing its light and curtain control system, the hotel therefore wanted a solution that would fit perfectly with the design and atmospheric



room lighting while simultaneously making efficient use of energy.

Flexibility and experience

Another challenge was to find a technology that could be seamlessly integrated into the existing INCOM system. Moreover, the modernization work was not to negatively affect guest comfort in any way.

The Mandarin Oriental chose a solution from Eltako, which was able to meet all of the five-star hotel's requirements, thanks to self-powered wireless technology and a modern product design. TELCS Ltd, Theuer Eurolighting Consultancy, planned and supervised the project. The local Eltako partner won over the customer with its many years of project experience, extensive specialized knowledge and flexibility in meeting the requirements.

Comfort by pressing a button

1,900 switches and 3,400 actuators in the Eltako 14 series were deployed in a total of 213 rooms and suites, including the Presidential Suite. The switches work without cables or batteries, thanks to the EnOcean technology. The energy needed for the wireless signal is generated simply by pressing a button. As a result, the switches could be placed flexibly in the desired locations and on all surfaces. They are also maintenance-free and operate reliably without interruption, eliminating the possibility of outages. In addition, the hotel staff does not need to disturb the guests by changing batteries. Guests will find the switch's function engraved on its surface.

Perfect communication

The actuators receive the information from the wireless switches and control the lights and shades in the room without delay. The INCOM signal is tapped in the distribution panel and converted to scenes for controlling the lights and curtains. Conventional switches are linked in the wireless installation with the FTS14 remote sensing system.

By using self-powered wireless technology, TELCS was able to reduce the amount of cabling required in the rooms and thus minimize construction noise and dirt. Time was also a major advantage of the system. The entire implementation in all rooms took just four months.

Optimum level of automation

The modern automation system now opens and closes the curtains automatically, depending on the time of day and as soon as a guest enters or leaves the room. During the day, the light-weight curtains remain closed

and create a pleasant lighting atmosphere in the room, while simultaneously providing privacy. At sundown, all curtains open as though by magic when someone enters the room and provide a view of the magnificent sea of lights over the bay of Macau.

Not only do these settings create an agreeable ambiance, they also maintain the room temperature at a constant, comfortable and energy-efficient level. The lights furthermore automatically generate cozy lighting scenes to welcome the guest. All lights turn off when the room is not being used, thereby saving additional energy.

Guests can operate the curtains and the lights individually with separate bedside switches or turn the lamps on and off in all rooms, including the bathroom (FSR14). They can also use the same switches to dim the lights as needed (FUD14).

Successful effects

The hotel operators were thrilled with the results delivered by the new automation system. The lighting scenes fully support the guests' sense of well-being and allow them to conveniently control all functions in the room without getting out of bed. The Eltako solution even surpassed the expected energy savings by using 80% less power than the previous system.

The project's success is persuasive: TELCS will soon install Eltako wireless technology in another Mandarin Oriental Hotel in Hong Kong.

www.eltako.com
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