



LOYTEC's Intelligent Room Automation Solutions enhance energy saving

Text by BASBD



Langestraße 100 in Germany is a newly built 5-star rated design hotel with 130 spacious rooms and suites, a state-of-the-art medical center with 15 medical specialists, an apartment building with 16 flats and a two-story underground garage with 200 parking spaces.

Close to the Festspielhaus Baden-Baden, Germany's largest opera and concert house, a group of buildings is being developed with a five-star hotel as the central element. It is arranged at a forecourt which is planned to be used for summer gastronomy as well as events before and after performances in the Festspielhaus. The tenant of this new hotel is the well-known group of operators of the internationally celebrated "Roomers" design hotel in Frankfurt. In 2010 "Roomers" in Frankfurt won the "hotel property award of the year".

A main goal of the new "Roomers" in Baden-Baden is to offer the most comfortable place for customers of the hotel and the restaurant, to provide a luxurious lifestyle and relaxation at an international level. The well-known Italian designer Piero Lissoni (Lissoni Associati) implemented the interior visions of the investor as well as of the operator.

F.B. Wagener, constructor and investor, intends to realize a project that fits into Baden-Baden and the surrounding districts of the Festspielhaus. The area's planners emphasize a favorable development of the district and want to provide enriching ideas to the town as a whole.

Thanks to LOYTEC's room automation solution, by combining use of room controllers, I/O modules and KNX interfaces, each hotel room has an automation system that can interact with other building systems, the booking system and the hospitality software via BACnet/IP. This solution was chosen for its open programmability and multiple interface support for: Ethernet, OPC UA, Modbus TCP, BACnet/IP, LON, Modbus RTU, KNX.

LOYTEC's powerful gateway, installed on each floor of the building complex, is in charge of communication with the Langestraße 100 building management system (BMS) for monitoring and control of individual lights, roller blinds, heating, cooling, ventilation and audio. In addition, the BMS handles and visualizes maintenance messages and warnings. The required OPC is handled by the LOYTEC Gateway at each floor to accumulate the data provided by the L-ROC Room Controllers.

Whenever a guest checks in, scenarios are activated and make energy savings possible. Via the OPC, the BMS provides the occupancy status to the room controllers, which can communicate to the L-STAT Network Thermostat, and displays the status of occupied or unoccupied. In addition, an L-VIS Touch Panel is configured to control the building complex and provide an alternative for controlling and visualizing the building.

KNX system integration was one of the most important reasons why LOYTEC devices were selected for the Langestraße 100 project. When the L-ROC room controller processes incoming messages from KNX sensors, it can make considerable energy savings possible by communicating with the room's heating, cooling, ventilation and fire dampers via BACnet/IP. For example, when a guest checks in, a welcome mode activates a predefined dimmed lighting mode, audio mode, and indoor climate, and then opens the roller shutter for optimizing guest comfort. When the guest checks out, an unoccupied scenario is activated, which guarantees that energy is only used when actually needed.

