Case note
A resort where technology and aesthetic come together
Home automation improves relaxation and safety

The tourist village of Lu Carfat was recently created in Limone Piemonte, the famous tourist and ski resort in the province of Cuneo, to offer all the comforts and relaxation of a second home both during the winter and summer seasons. The complex consists of more than fifty residences divided into apartments in elegant villas and independent chalets on three levels. It has direct access to the ski slopes and provides facilities such as ski lockers, gym, restaurant, and private laundry. The residences were designed with an attention to detail and the surrounding environment by combining the latest technology and technical services in residential construction that are in keeping with the local tradition that favours natural materials such as stone, wood and glass. All of these converge to offer high aesthetic standards as well as ensure comfortable thermal insulation and acoustics.

A project geared towards the quality of housing

The main objective of those behind the project was to create a luxury residence that guarantees its guests high levels of comfort and safety where energy efficiency has been obtained by appropriately streamlining all consumption. The core of this technological approach is a home-automation system that is almost entirely designed using ABB components that meet the international KNX standards, which are specific to residential and tertiary automation systems. In addition, all the wiring accessories series for the terminal parts of electrical systems, which are designed to further enhance the aesthetic effect of the interior, are of ABB design.

Élos Soft equipment and plates were chosen due to their elegant design and the fact that they blend optimally with the different styles of decor. This unique aesthetic quality is also distinguished by the multi-functionality of the Busch-triton series, which consists of different combinations of control keys, infrared presence sensors, thermostats and video display according to the functions that each unit has to play within the automation system.

The home automation system in the apartments

The efficiency of the KNX system is evident both when utilized on a grand scale for an entire complex or solely for a single residence. By controlling the lightning and thermoregulation in different settings, the system is able to perform a wide range of home-automation and security functions in each residence. The scenarios are programmable integrations of several functions which, given the command or by the mere presence of an anomaly such as in temperature or presence sensor, are activated simultaneously and automatically even on different installations (lighting, air conditioning, intrusion detection, etc.).

A typical example that is widely used in home-automation applications is the "evening/night" surveillance system. This allows the user to send a command via a button, touch screen or other device, to fortify the residence during the night-time by turning off all the lights, setting the thermostats to the appropriate temperature and activating the perimeter intrusion detection system. The perimeter intrusion detection installation in the resort is controlled from a central surveillance which is also completely integrated into the function of the system. This permits activation, deactivation, and remote control via the Internet and text messaging. On being assigned accommodation, the user receives a designated number through which via GSM he can activate different settings for the heating system, water heating, lights and security lock.

The user also receives transponder cards that allow access through different areas controlled by apposite card readers connected to the automation system. An important security aspect is, in fact, the so-called "virtual reception" which is managed by the transponder cards. This provides secure and controlled access throughout the common areas of the resort and the areas attached to the individual structures, such as parking lots.

Advantages of the surveillance system

To ensure safety and efficiency of the installations, a team of technicians oversees and supervises the entire resort complex: they monitor the facilities and status of consumption and run the necessary maintenance checks of any detected alarms or faults. This is done through a functional integration system via the Internet that combines the functioning of the automation system in the individual residences as well as generally throughout the resort. This system allows the technical team to maintain optimal security control whilst at the same time optimizing time and costs, which in turn provides guests with a 24-hour "help on-line" on the relevant website. Readings are taken of the gas, water, heating and electricity levels and these data are transmitted to the management system of the complex.

Use of the functional integration system also allows costs to be proportionally divided between the different users as expenses of all utilities consumption are sent periodically. These web-based methods allow for the control, parameter and detailed energy count. Telephony and video surveillance are implemented through the Internet, thus further facilitating remote monitoring. The lighting in the common areas within the complex and along the roads, designed to enhance the beauty and naturalness of the structure, is managed by presence detectors that are activated only when required, therefore enabling real energy savings.

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