Three-fold Networking for Car Showroom

Central management via KNX / IP and internet

New Autoarona car showroom in Paruzzaro: a KNX visualization system displays building services data from three of the car dealer's showrooms in one place.

To the south of Lake Maggiore, the well-known Concessionaria Autoarona operates three branches: an Audi center in Arona, a showroom for Skoda in Dormelletto and in Paruzzaro a Volkswagen showroom where fans of this brand can find the car of their dreams. The new display premises are impressive with their modern architectural style. The glazed facades allow a lot of daylight to flood in, resulting in a pleasantly bright interior.

In this environment, it should be a true pleasure to choose one's favourite model from this high-end brand. Artificial lighting provides interesting highlights in the showroom – controlled and dimmed via KNX. Right from the beginning, Autoarona opted for a flexible bus system which allows quick and easy adaptations of the installations when changes in the use of the buildings require modifications. An important factor for selecting the world standard for building automation was also the guaranteed compatibility with a range of different brands. This has been well worth it – particularly when it came to networking all three locations with one central station via KNXnet/IP. However, the main emphasis was on modern, high-quality building services which reflect modern automotive technology.

Broad application spectrum with integration of special systems

Back in 2001 the first showroom in Dormelletto was equipped with the future-oriented KNX building system technology. In 2007 the installation of the new display area in Paruzzaro followed suit, and not much later, the interior refit of the new showroom in Arona. A broad application spectrum was implemented with KNX: lighting control systems with dimmer function and emergency lighting. An example of one of the features is that the lighting is switched off centrally when the intruder alarm system is set. In contrast, when the alarm system is activated, the lighting switches on as a deterrent and panic function. Likewise, an intruder alarm will activate the roller shutters and close them. In all other cases these are controlled manually or automatically via a weather station. KNX also controls the room temperature where under-floor heating has been installed. In other areas, heating and cooling is provided via fan coils which are also controlled via KNX room temperature controllers. At the AutoArona facility, the air conditioning and heating system is linked to KNX. In addition, an audio PA system in the showroom can be operated via KNX.

However, the feature that especially impressed the jury when it selected the project for the award was the networking of the three locations across a distance of many kilometers. All three KNX installations are linked together via KNXnet/IP to a central visualization facility. This means that the three KNX installations communicate with each other via the internet. In this way, the technical department at the headquarters can control all functions such as lighting, heating, ventilation, cooling, roller shutters and security technology, receive messages about technical failures and pass on alarms. At the same time it is possible to operate and maintain the installations remotely via KNXnet/IP. The universal application of this world standard for building services is further highlighted by its interfaces with the intruder alarm system, the fire alarm system and the HVAC system.

Benefits provided by KNX in this project
- Changes to the services installations are quick and easy to carry out when these are required due to modifications in the buildings.
- All different services functions, such as lighting, heating, ventilation and solar screening can be linked to one visualisation facility.
- Technical fault reporting systems and their central monitoring can be connected.
- Integration of the intruder alarm system.
- Remote control and maintenance via KNXnet/IP interface.

Technical refinements
- Networking of KNX installations in three different locations via KNXnet/IP and internet.
- Interfaces with the HVAC control system, the intruder alarm system and fire alarm system.
- Intruder alarm system is linked to lighting functions.
- Sound system control.

Companies involved
Building owner:
Autoarona SpA, 28040 Paruzzaro, Italy
Architect:
Massimo Corradino, 13011 Borgosesia (VC)
Services Engineers:
Studio Technico Alberti, 28100 Novara
Electrical Engineers:
IME die Pastore C SNC, 28021 Borgomanero (Novara)
KNX System Integrator:
MAPE SAS, 28021 Borgomanero (Novara)

KNX-controlled lighting spots create customer-friendly highlights in the Autoarona showroom