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Building with historic value converted into apartments Art Nouveau on the outside, KNX building automation on the inside



Jugendlinna in Turku is one of the most carefully conserved buildings in town. This historically significant building is going to be converted into more than 20 apartments. Their lighting control will be based on intelligent KNX building automation.

Jugendlinna in Turku was sold to a private party in 2012. The new owners decided to renovate the valuable building into premium apartments. The building had previously been used as an office by the City of Turku.

The customer requested the KNX system: lighting control for the apartments and the ABB Welcome door entry system will be connected to it.

“I have used ABB's KNX products in previous projects, so I know that the equipment and technical support are excellent. That is why I also wanted them to contribute to this project,” says Viljami Eriksson, electrical engineer at Eriksson Sähkötiimi IL Oy.

One switch, many functions

Even though the 100-year-old Jugendlinna is a protected building, it was possible to implement electrical solutions just like in any other building.

“The apartments are big and have a lot of lights. With KNX, a single switch can be used to control all the lights. This affects the overall look of the apartment, as long rows of switches are unnecessary. Different lighting schemes are programmed into the system,” says Eriksson.

The apartments will have Impressivo series KNX buttons with LED indicators. ABB Welcome door entry units are connected to the system. In the hall of each apartment, there will be a touchscreen acting as the KNX system control panel and door entry system display. The Welcome system includes automatic image storage to increase the security of the residents.

“Connecting the door entry system to the KNX system was something new to me. I asked ABB to confirm my plan so that it can be implemented exactly as planned,” says Eriksson.

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Switchboard space

The apartments will be completed in the spring of 2016. Lighting control based on the KNX system will first be tested in one apartment, and its settings will then be copied to the rest.

“We are familiar with KNX and have done some system programming of our own. ABB will give us technical assistance when necessary,” says Patrik Ginström, project manager at Saipu Oy.

It will be easy to connect a large number of additional building technology control systems to KNX in the future, such as air conditioning, cooling and heating: the options are limitless. System modifications are easy because no new cables are needed.

Prior to installation, the contractor should take into account how much electrical switchboard space the system needs.

Jugendlinna is a gem beside the Aura River

The Jugendlinna, situated beside the Aura River, is one of the most impressive Art Nouveau buildings in Turku. The style is particularly obvious in the facades, which have two towers and decorative stone portals. The opening of the building was celebrated in August 1908. It was designed by architects Knut Wasastjerna and Gustaf A. Lindberg to be a municipal office. In the construction, a steam pile driver and concrete were used in Turku for the first time.



The interior of Jugendlinna has been renovated in full. The apartments are designed to meet modern requirements.



The Impressivo series will be used in Jugendlinna.

The standardized KNX system combines all of the building's electrical functions into a single, energy-efficient network. KNX bus technology can be used for controlling all aspects of building automation, such as lighting, heating, cooling, air conditioning and sunshades. The bus technology will result in major savings upon implementation and during the life cycle of the building. The system is a great choice for different locations of different sizes, from single-family homes to commercial buildings. The extent and functions of KNX-based building technology are always decided on the basis of customer needs, which means that modification and expansion are easy.