

KNX/EIB also taking off in the Russian Federation

Third price in KNX/EIB-Award 2004 goes to the Moscow based EcoProg company



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Facade of the 7 floor Belgorodenergo building in Moscow. Special glass minimises heat loss.

Currently the Russian construction market is rapidly changing. Increasing comfort and saving energy are also there the construction trends. As the first Russian company, EcoProg has specialised itself in equipping buildings with KNX/EIB and

offers its customers the multiple advantages of this standard. At the 2004 KNX Award it won the third price with its Belgorodenergo project.

Belgorodenergo is a leading Russian company in the area of power networks planning and installation. In 2002 EcoProg was asked to apply the intelligent building concept in the Belgorodenergo Moscow business centre. The main objectives of the project were energy saving and the development of an integrated management tool.

The project consists of two building parts, one with seven floors including labs and offices and one with only offices. The ground floor is made up of a parking lot and technical rooms. The reception is located on the first floor as well as the company restaurant and some technical rooms. The management is situated on the second floor, on the third the assistants to the management as well as the accounting department and a conference room. On the fourth till the sixth floor further offices are located, where the top floor is equipped with a fitness room, changing rooms, a bar and various side rooms. The building also has a technical floor with distribution boards, pumps and ventilation equipment.

Advantage of KNX in this project

- KNX room control for lighting, window-blinds and air-conditioning
- Energy efficient operation due to the input of present detectors, temperature sensors and other control equipment
- Individual control via combined pushbutton panels.
- Centralised visual management control and operation of the KNX room control network via gateway

Projektnummer: Z3/04/E

Country: Russia

Year of Construction: 2002

Area of Application

- Residential buildings
- Family home
- Apartment block
- Residential care home for senior citizens
- Residential care home for the disabled
- Functional buildings
- Office block / public office
- Commercial enterprise
- Retail office
- Restaurant and Hotel
- Cultural building (cinema, theatre, museum, etc.)
- Clinic / hospital
- Educational building (school, college, etc.)
- Leisure facility (sports center, spa, etc.)
- Industrial building
- Other

Facilities

- Lighting
- Shading/Light control
- Heating, ventilation, air conditioning
- Alarms
- Technical monitoring
- Energy management
- KNX visualisation
- Interfaces to other systems
- Remote monitoring/-operation
- Other application

Scope

- Number of areas/lines: 1/7
- Number of KNX devices: 305



Winner:

3. prize KNX Award 2004

Integrated room automation with KNX/ EIB



Restaurant for 50 persons
with climate control and
light scenes

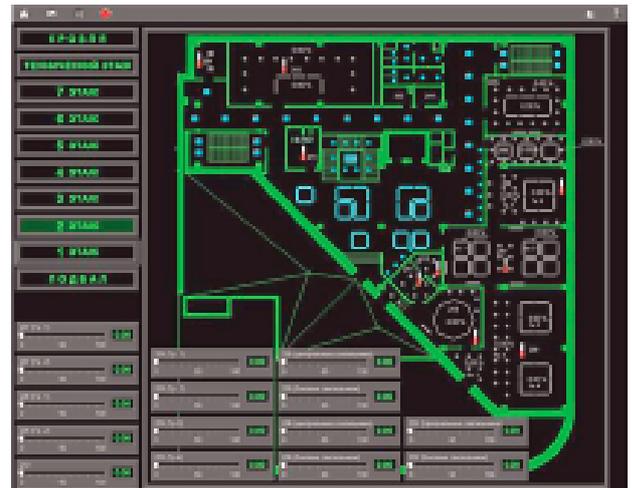
▼ The KNX/EIB installations are spread over a surface of approximately 7500 m² and the following functions were realised:

Lighting: lighting in the entire building is automated. 253 light groups are defined, of which 46 can be dimmed. Lighting can be operated in the offices via push buttons. In passage ways and on the exterior of the building, light is switched via motion detectors, brightness sensors and time switches. In some of the rooms predefined light combinations can be called as light scenes and lights can moreover be operated via an extra infrared remote control.

Heating/cooling: in most rooms the temperature is measured and displayed. For this purpose, Busch Jaeger Triton push buttons with integrated temperature sensor, display and room thermostat were mounted. The Tritons control the twin fan coils (heating and cooling) to regulate the room temperature. In order to save energy, different modes can be programmed. When the staff is present, the system is set to comfort mode, for short time absence to standby mode and for longer periods of absence to frost protection.

Shading: the management offices and the presentation rooms are equipped with electrical blinds. These can be individually operated and are also integrated in the various light scenes.

Central control and visualisation



Visualisation for a centralised representation and control of KNX/EIB installations (lighting and climate)

The KNX/EIB system can exchange data with the SCADA Citect 5.0 system via an EIB OPC server ("Supervisory Control and Data Acquisition", management software for visualisation, alarm handling, trend acquisition, history, data archiving, etc.). In this way, the technical operator can at any time monitor and influence the data of the functions controlled by KNX/EIB.

The advantage of the use of KNX/EIB lies in the high comfort, operational security and a superb energy efficiency realised in the building. ▲▲

Technical details

- Integration of the complete KNX network in the SCADA system Citect ("Supervisory Control and Data Acquisition"; a management software tool for status visualisation, alarm handling, trend recognition, history logging, data archive). Both systems are connected via an ETS OPC server (OLE for process control an object oriented client-server technology, using the Microsoft's COM/DCOM technology).

Involved companies

EIB/KNX/SCADA-system integrator:

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