ABB i-bus® EIB / KNX

Reference Projects

INMC Telecom

The headquarters of the German Telecom's International Net Management Center (INMC) was built in Frankfurt, Germany. The monitoring, control and network management of all international telecommunications, e.g., the sea cable to America, are carried out from here. Events and switching operations are visualised in real time on large media screens, making lighting an important factor. The electrical building installation was built on EIB / KNX and besides shutter control, constant light regulation in all the offices was also been implemented. In the foyer and the control center, dimmable lighting is managed through light scenes and presence detection.

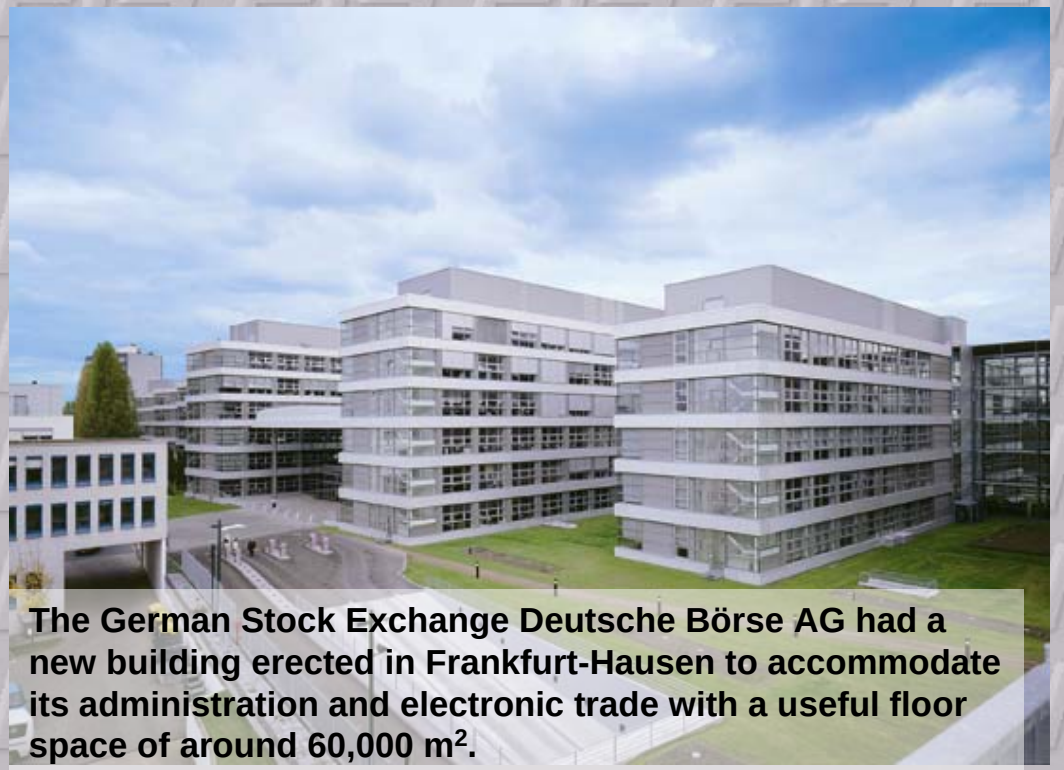
LVM Insurance

In 1996, the plans for the new LVM insurance building in Münster, already included EIB / KNX to achieve an efficient, ecologically sound, user-friendly and reliable installation with the following functions:

- **daylight dependent switching of lights in offices according to occupation**
- **shutters control according to the position of the sun and the time of day**
- **heating and cooling ceilings individually adjustable to the desired temperature in each room**
- **monitoring of the facade for over pressure**

Due to its 14,185 connected devices, this EIB / KNX installation is one of the largest in Europe.

German Stock Exchange



The German Stock Exchange Deutsche Börse AG had a new building erected in Frankfurt-Hausen to accommodate its administration and electronic trade with a useful floor space of around 60,000 m².

In this large complex, ABB i-bus® EIB / KNX is used for the following functions:

- **shutter and lighting control in the offices as special *effect* lighting in the glass corridors**
- **integration of the media technology in the seminar rooms with the lighting and room layout**
- **central visualisation of all switching states and operations**

In addition, various EIB / KNX functions are integrated into the security system of the building.

City Villa

This exquisite city mansion in Berlin is an interesting example of an extension to an existing house. Within a living space of some 200m^2, world class technology has been implemented.

The EIB / KNX system controls not only the lighting - including light scenes - but also the heating of the individual rooms. Additionally, the air conditioning and the shutters are also operated via the bus.

The overall security and safety of the building is also enhanced by the EIB / KNX installation. For example, the main gas can be controlled over the bus. The L208 intrusion alarm panel with integrated EIB / KNX interface provides optimum protection against unauthorised access

Westerbergland Centre

With a floor space of some 2,900 m² the Westerbergland Centre in Hameln can host, exhibitions, concerts, theatre performances and other events.
The installation comprises of 6 lines with 231 EIB / KNX participants. Both the general and effects lighting in the auditorium and the foyer are implemented via 49 controllable circuits in different switching groups, using manual and infrared remote controls.
Information regarding the circuit states, fault signals and switching operations is collected and processed irrespective of where the event occurred. In the control room, all the information can be retrieved and coordinated on a PC using a custom visualisation software.

Flensburg Town Hall

The 17 storey high city hall in Flensburg received a new facade and the latest building technology in 1997. Its 2,800 EIB / KNX components attend, among other things, to the following functions:

- **lighting, door and window control, as well as light scenes for the Citizens' Hall**
- **temperature control for data cabinets**
- **control and indication panels for the lifts**
- **peak power monitoring to reduce electricity costs**
- **transmission of fault signals to telecommunication devices and visualisation of all occurrences via PC**

Neufahrn Grammar School

Neufahrn Grammar School, guided by the spirit of modern, open architecture was inaugurated in 1996. It offers enough room for 800 students and is scheduled to be enlarged to accommodate 1,100 girls and boys in the near future. Using 828 EIB / KNX components, the following functions were installed:

- **shutter control**
- **central lighting control of individual classrooms**
- **time and occupation dependent lighting control and light scenes in the assembly hall**
- **monitoring of doors**

Köln Bonn Airport

Installing the spacious grounds of the airport compound with an EIB / KNX system was a particularly tricky task, which was successfully solved with the help of fibre optical technology.
With the completion of Terminal 2000, the existing EIB / KNX installation will be enlarged by eight passenger bridges, twelve bus gates, 40 check-in counters and 4,000 m^2 of waiting areas, restaurants, bars, lounges and shops. A structured bus topology was essential.
Fault, lighting and shutter control signals are processed, energy consumption figures collected, and events and status signals visualised – all with ABB i-bus® EIB / KNX.

Petersberg Hotel

The five-star luxury hotel composing of five parts and extending over eight different levels, has a total floor space of around 10.000 m^2. The hotel contains two restaurants, a conference and press centre, a sauna and swimming pool area, two luxury suites, ten standard suites, as well as 40 double and 47 single rooms.
Apart from lighting and shutter control, the bus system works hand in hand with the ABB Inscontrol Areadat building services management system. To combine both systems, a ZB 12 EIB / KNX interface card was installated into the management system substation.

Düsseldorf City Gate

The headquarters of the federal government of the German state of North Rhine Westphalia - The City Gate - stretches impressively into the skies of Düsseldorf.
Glass and steel dominate the 80 m high building and even from a distance one gets a first impression of its fine architecture.
Yet, it is not only the outside appearance that shows the innovative character of the building - the electrical installation is also something special. Lighting and shutter control are the main functions with which EIB / KNX has proven its worth here in the last two years. Additionally many security and safety features have been successfully implemented in the EIB / KNX installation.

Residential House

This residential home near Hildesheim with its appealing architecture is also distinguished by its modern electrical installation.
ABB i-bus® EIB / KNX controls more than 50 switchable and dimmable light sources, with pre-set light scenes enabling easy operation. Individual temperature control in every room ensures cosy warmth together with the energy saving benefits at the same time.
The EIB / KNX system also enhances the security within the entire house as, among other things, it constantly monitors the windows for glass breakage and opening.

Chancellor‘s Corner

This newly refurbished office building in Berlin’s prestigious Ku’damm shopping area offers not only office space, but also a fitness studio in the upper storey.
The building complex contains *usage* independent rented areas with separate building controls for each unit. Such flexibility can only be achieved through programmable installation technology like ABB i-bus® EIB / KNX . Should new tenants move in, the required functions can be simply re-programmed.
The EIB / KNX system includes all lighting, heating and shutter functions. Even the skylights open automatically at nights to cool the building down if necessary.

Max Planck Institute

The renowned Max-Planck research institute in Greifswald stands out due to its modern, open and functional construction. Even from afar, the characteristic wave-shaped roof is very noticeable
Inside this functional building, researchers carry out studies in the fields of nuclear and plasma physics.
1,112 EIB / KNX components allow the following functions to be realised:

- **lighting control, including dimming and light scenes**
- **fault signal monitoring**
- **visualisation**

Castle Hotel

The five-star hotel is integrated into an ancient castle, parts of which date back to the 15th century. This project, which involved redevelopment and new building work to create multifunction rooms, represented a real challenge to those responsible for the electrical installation.
The hotel complex includes 29 luxury rooms, 18 suites, a large sauna and spa area, a gourmet restaurant, a café, a bar and conference rooms, some of which with a stage. Apart from all interior and exterior lighting, fountains and water sculptures were also controlled via EIB / KNX. Should a fire be detected, all socket-outlets fitted in the rooms and suites can be switched off centrally. Fault signals are transmitted to a display at the reception.

Stiegelmeyer GmbH & Co. KG

When planning their new production site in Nordhausen, Johann Stiegelmeyer GmbH & Co. KG, a manufacturer of hospital and nursing home furniture, knew exactly what they wanted: a two-storey building to accommodate modern production processes.
The EIB / KNX technology installed allowed them to realise the following functions:

- **control of lighting, shutters, and skylights including wind and rain protection**
- **activation of sliding doors and gates**
- **exterior and interior security surveillance**
- **peak power monitoring and load shedding**
- **remote fault diagnose and remedy**

MDR Broadcasting Company

The new headquarters of Mitteldeutscher Rundfunk broadcasting company is a successful synthesis of old and new. The remarkable, elaborate restoration of the brickwork facade of the former Leipzig slaughterhouse, which was built between 1886 and 1888, has been combined with modern steel and glass architecture.
To demonstrate that television is being made behind these walls, the front of the 65 m and 13 storey high building housing five studios is shaped like a TV screen.
The latest EIB / KNX bus technology with a total of 4,050 devices is used to implement lighting, light scenes and windows control.

BAP Engineering GmbH

The new 4 storey building of BAP Engineering GmbH, a company engaged in project management for automation, process & power transmission engineering as well as measurement and control technology, features the following functions with ABB i-bus® EIB / KNX :

- **daylight dependent lighting control**
- **sun protection with individual, group and central shade control in connection with a weather station**
- **individual room temperature control of floor heating**
- **interrogation of window contacts for the intrusion detection system**

Print Media Academy

The architectural appeal of Heidelberg's Print Media Academy is nothing less than pure fascination. Two silver drums – that can easily be seen from a distance through the 50 m high glass cube – dominate the 12-storey high atrium. The printing drum towers pay homage to the printing profession, while at the same time accommodating seminar and conference rooms.
In addition to the entire lighting control, EIB / KNX is responsible for the function of the ingenious air conditioning, the heating and the shutters. The air condition equipment in every office ensures, together with the heating and the ventilation flaps in the facade, that the right personal climate is achieved. The whole picture is rounded off by an advanced visualisation system.

Allgäuer Newspaper

With 123,000 copies sold daily, the Kempten based Allgäuer Newspaper is one of the leading regional press articles in southern Germany. Its new building extends over a useable floor space of ca. 10,000 m².
560 people are employed in the functional building complex where 2,000 EIB / KNX components have been installed to ensure a flexible and future-oriented electrical installation. The EIB / KNX system controls the lighting, shutters, sky lights and the heating. Also the barriers and gates in the building are controlled are monitored via the bus.