

Case Study

Flexible automation for office building with KNX devices from ABB Outstanding compatibility allows for easy integration into existing systems

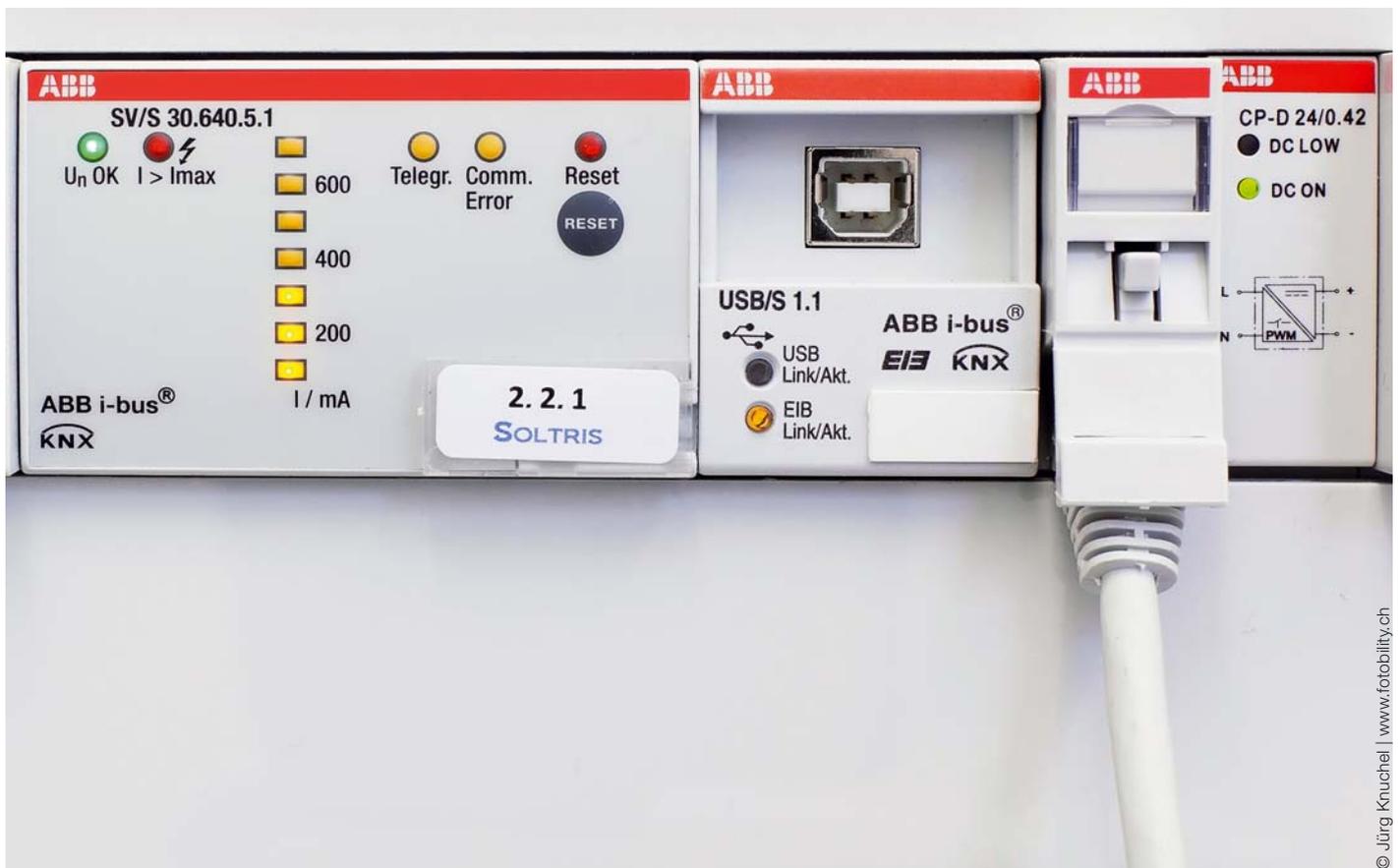


Creating a pleasant working environment for its employees while simultaneously consuming a minimum of power was the goal of Technische Betriebe Glarus Nord when expanding its office complex.

Achieving energy-efficient operation was a key objective for Technische Betriebe Glarus Nord (TBGN) when adding another storey to its office complex in the Swiss town of Glarus. KNX devices from ABB provide energy-saving and convenient building automation in the heating and cooling system as well as for ventilation and lighting. This has enabled TBGN to reduce the annual electricity consumption for the extension by 30 %, thereby complying with the EN 15232 standard. The project was also convincing within the scope of the EM ecowin initiative from Elektro-Material AG. This was rewarded with a contribution from the EM ecowin fund.

As a public utility company, TBGN is bound by statutory requirements on energy saving and is obligated to exploit energy-saving potential as far as is possible. Adding another storey to its office building presented the perfect opportunity to do this. This project was undertaken in 2014 and Soltris Gebäudesystemtechnik GmbH was responsible for planning the building system technology, selecting the necessary devices as well as their installation and programming. For the ventilation control, heating and cooling systems in particular, the system integrator decided on KNX solutions from ABB.

“ABB offers an incredibly wide product range. The primary advantage of the KNX devices is their flexibility. As they are compatible with other devices, we can integrate them into the new system entirely in line with our technical requirements.” Franco A. Bonutto, Managing Director of Soltris Gebäudesystemtechnik GmbH



The KNX devices from ABB enable energy supplier TBGN to reduce its annual electricity costs by 30 % in the extension to its office building.

Light, air and climate for every need

The planning of the building automation encompassed the areas of heating and cooling, lighting and shade as well as ventilation of the rooms. Sensors in the ventilation ducts record the current air quality. On the basis of these readings, the fan actuators ensure a consistently high quality of room air. Lights with integrated presence detectors determine whether people are present in the room and regulate the light accordingly, as well as the heating and cooling in combination with a room thermostat. Sensors detect when a window is opened and signal the room thermostat to shut down the heating.

Technische Betriebe Glarus Nord is relying on the following devices from ABB for the energy-efficient operation of its new office building:

- ABB i-bus KNX/DALI Gateway
- SIDUS-RTR room thermostats
- Light sensors for light controllers to ensure constant control of light levels
- VAA valve drive actuator
- SMISLINE pluggable system

(Planning and delivery via Elektro-Material AG, Heiden branch)

Certified efficiency

TBGN was faced with the challenge of creating an energy-efficient, yet still convenient solution for the everyday operation

“As part of the office extension, it was important to us that we create a working environment in which our employees feel comfortable and which utilises a minimal amount of energy. Thanks to systems for the constant control of light levels as well as presence and needs-based ventilation, we have been able to reduce our energy costs in the new building by around 30 %.” Tony Bürge, Managing Director of Technische Betriebe Glarus Nord

of the offices and the working environment of its employees which complies with the requirements of the Minergie standard. Minergie is a Swiss construction standard for the efficient use of resources in new buildings and for building modernisations. Not only do the KNX devices from ABB fit seamlessly into the precisely planned systems for lighting and temperature control, but they are also certified as per the Minergie standard. Its extended office complex enables TBGN to set a good example for other companies with respect to energy efficiency.