



BKN230-24-MOD from Belimo ensures safety at the University of Hamm-Lippstadt

## 900 fire damper actuators integrated into ventilation concept via Modbus

After almost four years of construction, the new campus buildings at Hamm and Lippstadt (Germany) were inaugurated in 2014. The university is dedicated to the so-called 'MINT' subjects (mathematics, computer science, natural sciences and technology) and has space in its state-of-the-art laboratories, lecture halls and seminar rooms for up to 4000 students and 120 professorships for research and teaching. The campus at Hamm has in the meantime received the 'Ionic Award' for design. The contribution made to the ingenious ventilation and fire protection concept came from Belimo in the form of its BKN230-24-MOD communication and power supply units.

<b>Type of building</b>	University
<b>Project</b>	New building
<b>Sector</b>	HVAC
<b>Products</b>	900 communication and power supply units BKN230-24-MOD
<b>Commissioning</b>	June 2014

## Initial situation

A total of 900 fire damper actuators needed to be integrated into the building automation so that the DDC/PLC devices can also take over corresponding control and regulation tasks in the event of fire. This request was assigned to GFR (Gesellschaft für Regelungstechnik und Energieeinsparung mbH), a company from Verl in North Rhine-Westphalia, Germany.

The solution was implemented with the GFR's own EMS 2 building automation system, which connects and processes the 900 fire damper actuators and displays them in the control cabinet.

## Project requirements

- Efficient power supply with 230 V
- Communicative signaling modules to avoid complex wiring
- Permanent access to the signaling modules through the operations centre

## Belimo solution

The Belimo BKN230-24-MOD communication and power supply unit enabled the ready-to-connect actuators implementation and 230 V power supply for the signaling modules. The use of a connection via the 'Modbus RTU' field bus allowed the implementation of a self-monitoring communication transmission concept that includes monitoring of malfunction messages. It enables the operator to have access to each individual signaling module at all times and provides them with far more information than it is possible with a conventional connection. A benefit of this system configuration is that the cable cross-sections and lengths for signal transmission are reduced, thus saving significant amounts of cable. Furthermore, additional savings in respect to space and materials were made possible by 50% reduction of the control cabinet fields.



## Customer benefits

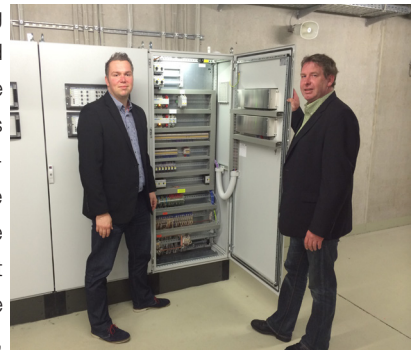
- Simple maintenance and monitoring thanks to visualisation at the management level
- Energy savings in the building, as non-used zones can be sealed off with respect to energy use
- More safety through high transparency and remote access
- Reduction in installation costs
- Maximum flexibility and free selection of the DDC controller



Each of the 900 fire damper actuators installed at the Hamm-Lippstadt University of Applied Sciences are controlled and monitored by a BKN230-24-MOD from Belimo. This ensures that the status and possible malfunctions of the fire dampers are permanently visible, not only on-site at the device but also on the monitor at the operations centre.

## Customer satisfaction

The DIP switch ensured that the addressing of the individual modules was fast and simple to implement. It was also possible to detect and correct the coding errors directly. As a result of the permanent allocation of one signaling module per fire damper which is also responsible for the power supply of the actuator, the project planning was clear and comprehensible at all times, comments Daniel Kloster, Project Leader and Automation Technician (image left). The software for the monitoring lies completely in the hands of GFR. "This relieves the customer, as our technicians have full access to all building data at all times," confirms Burkhard Babiuch, Branch Office Manager for GFR Steinfurt (image right). "Industry solutions are often implemented with external servers, which means that communication does not always function smoothly. With the solution from Belimo, we are kept informed on a permanent basis and can intervene immediately in the event of a malfunction."



Belimo worldwide: [www.belimo.com](http://www.belimo.com)



5-year warranty



On your doorstep worldwide



Complete product range



Tested quality



Short delivery times



Comprehensive support

**BELIMO Automation AG**, Brunnenbachstrasse 1, CH-8340 Hinwil, Switzerland  
Tel. +41 (0)43 843 61 11, Fax +41 (0)43 842 62 68, [info@belimo.ch](mailto:info@belimo.ch)

**BELIMO**<sup>®</sup>