

# Highlight

## Partial Renovation of Psychiatry Clinic St. Gallen Nord, Wil, Switzerland

### Positive feedback from the project participant

- » Client Canton of St. Gallen Building Authority: "The modernization of the fire damper system is a matter of trust".
- » Calorex planning office: "The M240 system is so self-explanatory that we can take over the operation ourselves during the acceptance test. It doesn't need SMT."
- » Electrical company Alpiq InTec Ost: "With the dismantling of the control cabinets and the removal of the associated cabling, the building was «decoppered»".

Before

— 3.2m —



After

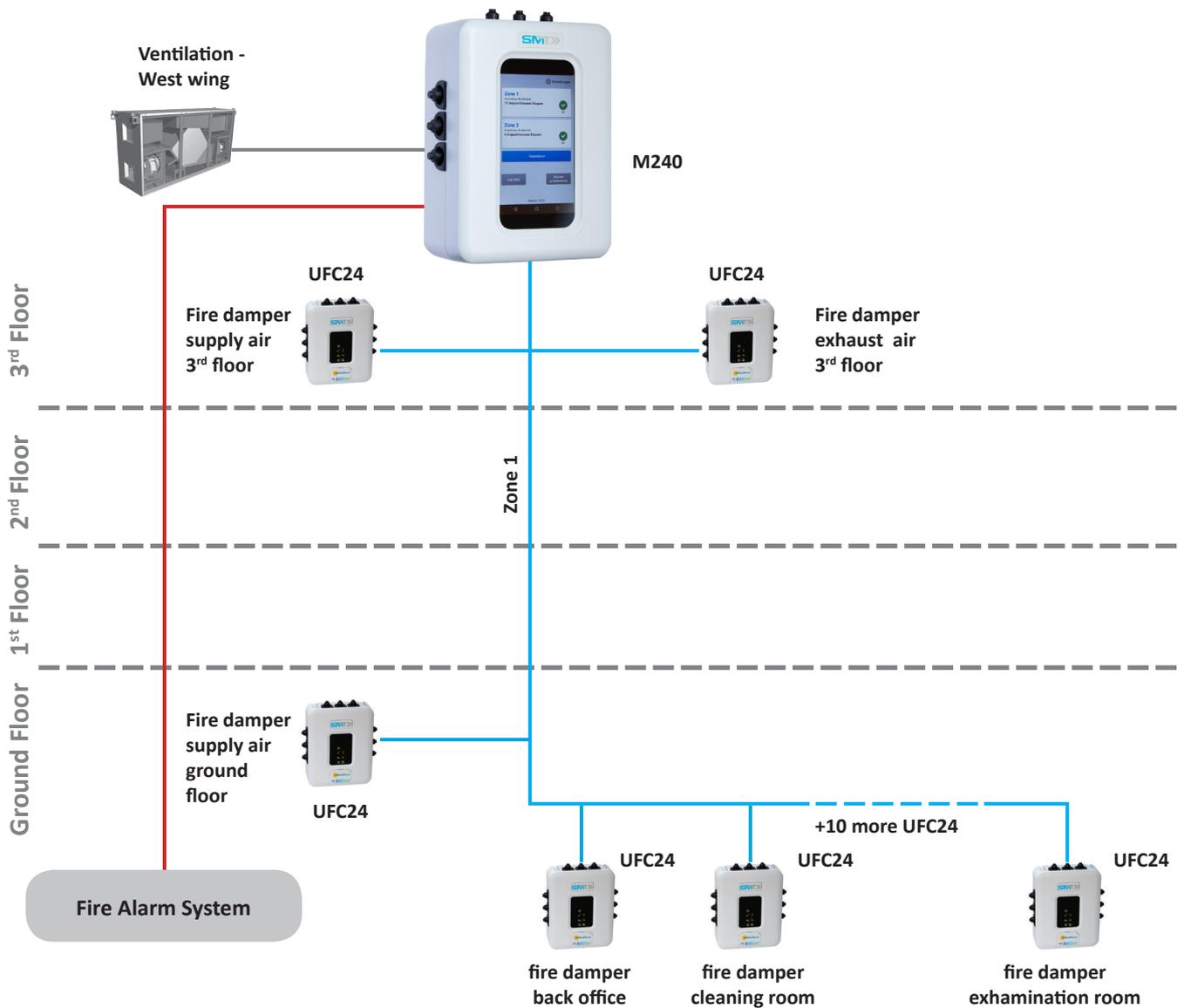
- 0.8m -



### Key Data of the Project

- » Client: Canton of St. Gallen Building Authority.
- » Planning: Planning office Calorex AG in Wil.
- » Ventilation contractor: Tobler Haustechnik AG, Wattwil.
- » Project type: Partial renovation of admission building A01, modernization of infrastructure and of ventilation technology.
- » Before the renovation: 37 fire dampers, 3 fans, conventional wiring of each of the fire dampers in the control cabinet.
- » After the renovation: Modern SMT bus system with M240 controllers, controls and monitors the 37 fire dampers and 3 fans via UFC24 field controllers.
- » Application: The 3 pcs. M240 controllers replace the whole control cabinets! The 37 pcs. UFC24 resp. the motorized fire dampers and the 3 fans are controlled and monitored via bus communication. Thanks to the automatic commissioning of the M240 controller and the excellent work of the involved parties, commissioning was completed in a very short time.

# System Topology for Fire Damper System West Wing



## Detailed Report

Since the construction of the A01 admission building in 1980, the needs of patients and the processes in psychiatry have changed significantly, so that a partial renovation of the building was necessary. The entire infrastructure was modernized, including the ventilation technology.

The planning office, Calorex AG in Wil, was instructed to make the planning for the partial renovation of the ventilation technology in the admission building of the psychiatry clinic. Richard Stolz, Head of Ventilation / Air Conditioning at Calorex AG, wanted to replace the existing conventional control of the fire dampers with an **independent bus solution**, so that as few cables as possible are in the building and therefore the fire load is reduced. **Richard Stolz relied on the fire damper system M240 from SMT because the fire protection application is already pre-programmed and the system is commissioning itself automatically.**

As Calorex sets a high value on a comprehensive project coordination, all project partners, as the responsible people of the ventilation contractor, planning office, MSR company and SMT, were invited to a kick-off-meeting. This meeting proved to be key to ensure the project to run smoothly across all the trades. After the meeting, a site visit made sure that all involved parties could take a look at the current installation and discuss further details. Then the project implementation started.

The existing ventilation systems for the east, middle and west wing were retained, but were given a new control system. The duct system was adjusted and cleaned and all motorized fire dampers were replaced. Before the renovation, every single fire damper was connected to the control cabinets in the technical room on the top floor. With the dismantling of the control cabinets and the corresponding wiring, **the building was “decoppered”, as the electrician on site stated.** Instead of the control cabinets there are now 3 M240 controllers mounted on the wall-need- ing substantially less space compared to the former solution. These 3 M240 controllers take over the monitoring and control of the fire dampers and the ventilation system. **All necessary contacts for the communication with the ventilation system and the alarm input are already built-in in the controller. The fire dampers now communicate with the controllers via RS-485 bus line.** For this purpose, Universal Field Controllers UFC24 were installed near each fire damper to monitor and control the fire dampers.

Thanks to Calorex already having a detailed system topology and wiring diagram with a detailed list of the fire dampers, the ventilation contractor was in the position to order **the UFC24 devices already configured, addressed and labeled by SMT.** All he had to do was to snap the UFC24 devices onto the pre-assembled brackets on site. For the data point test, the M240 controller was started up and it automatically recognized the connected UFCs. Thanks to the fact that the wiring of the UFC devices (bus communication and power supply) was executed in a perfect way, **all connected fire dampers were shown on the touch screen of the M240.** After that, the only thing which needed to be done in the commissioning process was, **to trigger a test run to monitor the runtime of the actuators** and check to the correct place of the installed dampers/UFCs in the M240 controller. Thanks to the **pre-programmed and tested fire safety application**, the further commissioning was merely to check the functionality of the M240 controller in connection with the ventilation and fire alarm system. Meaning, to check if the connection from and to the ventilation system and the fire alarm system was correct.

Calorex was very impressed by the **simplicity as well as the intuitive operation of the M240 system.** **“The M240 system is so self-explanatory that we can take over the operation ourselves during the acceptance test. It doesn’t need SMT.”** Said Andreas Coric, project manager at Calorex AG.

This is the philosophy of **SMT: Safe – Simple - Standard!**

## Registration Psychiatry Clinic



Photo: Ladina Bischof, Arbon

### Before renovation - conventional wiring of fire dampers in the control cabinet



### After the renovation - modern bus system from SMT; M240 controllers replace the control cabinet



### Mounted UFC24 device at the fire damper



**Are you interested? Please get in contact with us for an introduction of our solutions!**

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