

Wireless and remote operation protecting historic site

After a thorough restoration of its interior, the Johanniskirche church in the German city of Zittau will now be somewhat cosier. An automation solution from SAUTER not only ensures comfortable temperatures inside, but also protects the historical walls and precious artworks of this 700-year-old building.



Whether for church services, weddings or concerts, the Johanniskirche can seat over a thousand visitors. However, as attendance varies for different occasions, this poses a major challenge for the heating.

The parish of St. Johannes in Zittau wanted churchgoers to feel warm – all year round and in any part of the building. A solution was called for that controlled temperatures in different areas of the church and yet was suitable for this extremely old building. Above all, the sensitive building structure and priceless works of art had to be protected from sudden temperature changes. The comprehensive and efficient concept put forward by SAUTER won the planners' approval immediately.

User-friendly and precise heat delivery

While being restored to its former glory, the floor was also fitted with fan coils and a hot water underfloor heating system. The Johanniskirche has a vast nave and high ceiling with multiple adjoining rooms. Several heating circuits were laid. The temperature in the nave can therefore be controlled independently of the other rooms. Further fan coils were installed in the altar and entrance areas, along with static radiators in the gallery.

A modular automation system, with components from SAUTER's EY-modulo 5 range, monitors, controls and regulates the heating installations precisely and efficiently. Whatever the event, the heating circuits work in perfect harmony and if any adjustments are needed, a nearby touch panel is at hand.

The ingenious system also has another trick up its sleeve: fully automatic remote operation. Before an event is set to start, time programmes defined in moduWeb Vision – SAUTER's web-based building management system – switch on the heating at just the right time to warm up the church where needed. This means that, if a small church service is taking place, only the front pew rows are heated. A total of ten individual control scenarios are in fact available for heating the church interior.

Slow heating for cosy atmosphere and protection of church

The SAUTER solution has a special feature to preserve the historical building and valuable artworks. It ensures that the temperature in the church never rises or falls by more than 1.5 kelvin per hour. Heating the floors, air and pews slowly guarantees a comfortable ambience for concerts and other events. And when an event ends, the heating isn't just switched off; the automation system lowers it slowly.

If malfunctions occur, maintenance firms are emailed automatically, allowing them to respond swiftly. These alerts are important not only for the safety of the walls and art works. They also enable the interior temperatures and relative humidity to be monitored in the long term and archived. Operators therefore have accurate records should they need to look back at past data.



Integrated solution for treasured historical monument

The SAUTER system is also used for energy management, thereby heating the church efficiently. By reading and analysing levels from the M-Bus-integrated meters, energy consumption is documented. If consumption rises unexpectedly, operators can take immediate action. The recorded data also enables the parish to charge event organisers for the exact amount of electricity and heating they have used.

SAUTER's intelligent solution keeps a watchful eye on temperatures in the St. Johannis church. Not only does it maintain a comfortable climate around the clock, it also maximises energy efficiency. Modern solutions such as EnOcean wireless components and web technology protect the valuable structure of the church. At the same time, accurate recording of conditions inside ensures that the heritage site and its art treasures are preserved – allowing them to be enjoyed by generations to come.

Historically significant

The St. Johannis church in Zittau dates back to the year 1291. It has been extended over the years and, after being destroyed in the 18th century, was completely rebuilt. Today, the classical interior is still true to its original design and abounds with historical treasures – a late romantic pipe organ, a rounded apsis niche with a statue of Christ offering blessings (a reproduction of the original by Thorvaldsen from the Church of Our Lady in Copenhagen) and a wooden pulpit with inlaid images.

www.johannis-kirche-zittau.de

