Reference City Hall Römer, Frankfurt/Germany

Fire protection with style in the historical Frankfurt City Hall

The Römer in Frankfurt/Main is one of the best-known and oldest city halls in Germany. The entire three-storey complex of buildings has a base of about 10,000 m² and consists today of nine connected houses which include six inner courts. Since 2006, the 14th-century sandstone building, classified as an historical monument, has also housed gastronomic facilities: Ratskeller, Kapellchen and Römerkeller.

The Team Construction GmbH installers were entrusted with the installation of the fire detection technology for these premises. The task for the corresponding pre-planning was taken over by the engineering office of ELTPLAN GmbH from Marburg.

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The task

The most modern technology guarantees more safety in noble vaults

Dome-shaped ceilings and mighty columns shape the special ambience in the rooms of the Frankfurt Römer. In the basement of the Römerkeller as well as in the Ratskeller and the Kapellchen on the ground floor, it was not possible to use conventionally wired fire detectors due to the building's historical protection. Here, wireless detectors with multisensor technology were needed. In addition to the high optical demands on the system and its technical components, a solution was also needed which reliably recognizes disturbance signals such as steam and fumes from the kitchen area and avoids false alarms.

The solution

The technology in the base protects the original ambience, discretely and cable-free

In the Frankfurt Römer, the IQ8Wireless system facilitates the cable-free connection of 27 IQ8Quad O²T detectors and two IQ8MCPs to a fire alarm system. Additional IQ8MCPs and IQ8Quad O²T detectors were also conventionally connected. The wireless system offers the highest levels of safety with maximum flexibility, even under difficult environmental conditions such as those in the historically protected Römerkeller. Here, the wireless transmission functions perfectly - in spite of the building's historical construction with two-meter thick columns and sandstone walls.

Four wireless transponders connect the various wireless devices to the IQ8Control M fire alarm control panel. Up to 32 wireless bases with automatic IQ8Quad fire detectors or ten wireless interfaces with IQ8MCP can be assigned to one transponder. The Kapellchen was additionally protected with a line smoke detector. Some of the installed O²T detectors have integrated sounders partially in order to guarantee an acoustic alarm in case of emergency.

The benefits

It works conveniently cable-free, is very discreet and extremely reliable

Intelligent fire detection technology with wireless components, which also meet the high esthetic demands of the Frankfurter Römer, guarantees the safety of the guests. The wireless detectors – some of which were coated with a special finish upon request – are installed in such a way that they do not affect the building's historical impression. Thus the ambience is not optically influenced and the guests can concentrate completely on the culinary pleasures. So that dining in this congenial ambience is not unnecessarily interrupted by false alarms, IQ8Quad O²T detectors were used. These set themselves apart by their broad detection spectrum – from smoldering fires to open fires and all types of smoke. VdS-tested, the O²T recognizes all six test fires (TF 1 to TF 6) even though a smoke detector is required to recognize only four of these test fires according to DIN EN 54 standards.

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