

Looking to the Stars with KNX RF



Figure 1. Planetarium Stuttgart: Straightforward retrofitting with KNX RF

Modern bus technology offers a level of comfort, security, flexibility and profitability which was unthinkable just a few years ago. However, it was not always possible to take advantage of all the possibilities this technology has to offer due to structural restrictions. Typical examples are historically valuable buildings, which do not allow the opening of walls to run electrical wiring, but even modern architecture sets restriction with large glass facades.

An interesting solution for such cases are trend-setting bus systems based on radio frequency transmission which do not require physical bus wiring, e.g. the Hager KNX RF. It allows the inclusion of up to 250 devices and therefore covers a broad application spectrum.

The radio frequency products work on the standardized frequency 868 Mhz for building systems and do not conflict with other wireless systems like mobile phones or multimedia remote controls. The coverage is up to 30 meters in buildings and up to 100 meters outdoors. Amplifiers can increase the coverage of the devices.

The planetarium in Stuttgart is a good example of a sensible retrofit.

The side windows were already equipped with automatically controlled blinds. However, the angled roof windows were not equipped with a sun shading device. During high solar radiation, the rooms below overheated so much that something had to be done.

The innovative KNX RF system offered an efficient and fast solution. A weather station on the roof measures

the solar radiation and controls the blinds to ensure comfortable indoor temperatures. For safety reasons the sun shading system is retracted during high winds. The safety position of the sun shading systems cannot be overridden manually - storm damage is therefore automatically eliminated. During normal weather conditions, the manual override of the system is possible at any time. It is a significant advantage that the actual

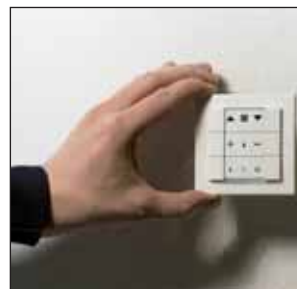


Figure 2. Retrofitting at any time



Figure 3. Easy commissioning with the TX100

tors of the Hager KNX RF system also function as a repeater since the signals in the planetarium Stuttgart have to travel over long distances. Just a few years ago such a straightforward retrofit would not have been possible. But this new system reduces the amount of assembly efforts to a minimum because the radio frequency technology does not require the physical control wiring. Programming of the devices is the only task left after successful installation of the radio frequency technology installation. Quite a few electricians did not like this last step, as the devil is often in the details. This is the reason that during the development of the Hager KNX RF special attention was given to making the programming as easy as possible. An innovative portable linking device was developed – the TX 100. This device makes the programming effort very easy for the electrician. Today, no one has to break out in a sweat anymore at the planetarium in Stuttgart. The building operator is happy for two reasons after this retrofit: The implemented solution is not only the most efficient and state-of-the-art technology, but also the most cost effective.