A thinking home

Buderus heating system supplies heat as part of KNX home automation

BOSCH THERMOTECHNIK GMBH The home of Ute and Matthias Schmidt from Coburg (Germany) is unlike any other. Thanks to modern KNX standard home automation technology, their house "thinks" and acts automatically – the blinds close when they switch on the TV, the letterbox informs them when the post has been delivered and the socket with an iron plugged in switches off when nobody is in the room. This high level of comfort in the "smarthouse213" is increased even further by a Buderus heating system that is integrated into the home automation system and now also meets the design and technology standards of the house thanks to its new heat generator.

A new wall-mounted Logamax plus GB182i gas condensing boiler from the Buderus Titanium Line is at the heart of the heating system. It features a glass front, touch panel and Logamatic RC300 controller with EMS plus control system. The heating system is integrated into the home automation system via the Logamatic web KM200 Internet gateway on the one hand, connecting it to the LAN network. This allows Ute and Matthias to control their heating system and monitor the system parameters using the Buderus EasyControl app on their smartphone or tablet computer. The heating system is connected to the KNX bus via the KNX 10 gateway; in this way, it is connected not only to the control elements but also to all other components of the building technology system.

The line-based KNX building system bus is a global building automation standard. The KNX bus allows a virtually unlimited number of components such as heating, light, blinds, window contacts or weather station to be connected and centrally controlled. This reduces the cabling as the components are connected only to the KNX bus and information can be used for multiple purposes. KNX allows, for instance, the window contacts to be connected to the single-room control unit of the heating system. When open windows are detected, the room temperature control unit receives this information, switches to frost protection mode and closes the radiator valves. The Buderus heat generator is informed that no heat is needed and stops heating. This means that the heating system supplies energy only when it is actually needed.

The single-room control unit allows Ute and Matthias to set the desired temperatures for individual rooms manually. The fact that the heating system supplies heat as required independently of the outside temperature, helps save energy. "Requirement-based heating works better with KNX 10 than before, as the valve position of the radiators and the exact room temperature are now re-

*"smarthouse213" in Coburg was built in 2001.
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ported to the heat generator. The actual temperature can thus be compared with the desired temperature and the boiler 'knows' whether it should heat or not," Matthias Schmidt explains.

The home server on the ground floor serves as the central operation interface. The touch-screen computer allows Ute and Matthias to keep an eye on all components and settings and to adjust them at all times. Whenever they change a setting using for example the Buderus App EasyControl, the system transmits the information to the home server. But this is required very rarely: "The system responds to the information on the KNX bus, e.g. from the single-room control unit, the weather station or the window contacts and supplies heat whenever it is needed," says Matthias Schmidt. Apart from the home server, the four operating panels in the house or the RC300 control unit in the cellar may be used to control the building technology and the heating system. "The house turned out exactly the way we wanted it," says Ute Schmidt.

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Matthias Schmidt uses KNX and EasyControl