State 07/2026 - Version 1.0

KNX RF+ homeXpert Server, Secure
RF-HXS0ETH.01S

The MDT KNX RF+ RF+ homeXpert Server is the central interface for a homeXpert System. It connects the integrated KNX RF+ devices, coordinates their communication and provides the connection to the homeXpert App as well as to the MDT Cloud. The project planning is carried out via the web-based homeXpert configuration tool. After completion of the setup, the configuration is transferred to the homeXpert Server and executed there.

Lighting, shading, roller shutters, tunable white lights and room temperature functions can be conveniently set up and operated via the homeXpert Server. Additionally, timer functions, scenes, user roles and remote access functions are available.

RF-HXS0ETH.01S

Functional overview

Function	Description
Central system unit	Connects and manages the devices in the homeXpert System.
KNX RF+ radio communication	Communicates with the devices via KNX RF+.
homeXpert App	Enables operation and visualisation of the released functions.
MDT Cloud	Transfers project configurations to the homeXpert Server.
Room functions	Connect devices within a room or area.
Central functions	Controls functions across all rooms in the entire project.
Time switch functions	Executes functions automatically according to a time schedule.
Room temperature controller	Provides up to twelve independent temperature controllers.
Heating profiles	Adjusts setpoints depending on time and day of the week.
Scenes	Calls up several functions together with defined values.
User roles	Control access and user rights for different users.
Firmware update	Supports updates via MDT Cloud or web interface.

Central component in the homeXpert System

The homeXpert Server takes on the central role within the installation. During commissioning, it communicates with the individual KNX RF+ devices and transfers the set parameters. After setup, it forms the basis for operation, visualisation and later changes.

Radio communication with the RF+ devices operates in the frequency range from 868.0 MHz to 868.6 MHz. For a reliable connection, the homeXpert Server should be positioned as centrally as possible in the building. Metallic shielding, thick walls or electronic devices in the immediate vicinity can reduce the radio range.

Integration into network and cloud

The homeXpert Server is connected to the network via Ethernet and powered by the supplied USB-C power supply. The initial setup is carried out with the homeXpert App. In the process, the server is detected in the network, integrated via the security code and linked to the MDT Cloud account.

The actual project configuration is created and managed in the MDT Cloud. Only by uploading to the assigned homeXpert Server the settings become active in the system. In this way, projects can be prepared, adapted and then transferred to the server.

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Functional overview

Operation via the homeXpert App

The homeXpert App provides access to the released rooms, functions and scenes. Rooms can be displayed in the app as tiles or as a list. Which functions a user can see or operate depends on the user roles set up.

Remote access is enabled on the device via a button.

Room functions

Room functions are used to connect sensors and actuators in the same room or area. This enables typical control functions to be implemented easily, such as switching or dimming a light, operating a roller shutter or regulating the room temperature.

The selection of the function type determines which sensors and actuators are available. After creation, the function can be released for visualisation in the homeXpert App and assigned to specific user roles.

Central functions

Global functions enable control beyond individual rooms. They enable links between devices from different rooms or areas. This allows, for example, several lights, roller shutters or blinds to be controlled together.

This function is particularly suitable for master control tasks, such as ‘switch off all lights centrally’, ‘close the blinds’ or the joint control of several areas of a building. The selected function type remains permanently assigned. If a different function is to be created, the existing global function must be recreated.

Available function types

The homeXpert Server supports the function types switching, dimming, tunable white, blind, roller shutter, room temperature control and window status

Which function can actually be used depends on the integrated sensors and actuators. The "room temperature control" function is only available for functions within the room.

Time switch functions and automations

The homeXpert Server provides 10 time switch functions, each with 8 switching times. This allows functions to be executed automatically at defined times. In addition to fixed switching times, astro functions and random functions can also be used.

This allows lighting, shading or room temperature to be adapted to the time of day, weekly rhythm or position of the sun. Automatic operation can be used alongside manual operation via sensors or the homeXpert app.

Room temperature control and heating profiles

The homeXpert Server provides a total of 12 room temperature controllers. Each controller can be assigned to a room or area and set independently.

Heating profiles allow up to 8 time- and weekday-dependent setpoints to be defined per room temperature controller. This allows the room temperature to be automatically adapted to the daily routine, for example for comfort mode, night time lowering or different times at the weekend.

If the window is open, the setpoint can be lowered if suitable window contacts, window handles or corresponding detection functions are integrated.

Scenes

With scenes, several functions can be called up together. The homeXpert Server supports up to 8 scenes. Each scene can combine defined switching states, brightness values, shading positions or setpoints.

This provides convenient control options for recurring scenarios, such as ‘Home’, ‘Work’, ‘Presentation’ or ‘Energy Saving’. Scenes can be triggered via sensors, via the homeXpert App or depending on the time.

User roles and access rights

User roles are used to access the system. The roles "Owner" and "Installer" are predefined. In addition, up to 6 further roles can be created.

The owner has full access to the system. The installer receives the necessary rights for setup and commissioning. Additional roles can be used project-specifically to control operating and viewing rights in a targeted manner.

This allows you to specify which users are permitted to use certain functions, scenes or timer functions in the homeXpert App.

Display and control elements on the device

The homeXpert Server has buttons and LEDs for the most important operating states. The buttons are used to enable remote access, to connect to the cloud and to disconnect the cloud connection. The LEDs indicate the operating status, cloud status, remote access as well as information on the power supply.

In addition, the server has a programming button, a connection for the external antenna, an RJ45 socket for the network and a USB-C socket for the power supply.

Firmware update and web interface

If necessary, the homeXpert Server can be updated. Firmware updates are possible automatically as an OTA update via the connection to the MDT cloud or manually via the web interface.

The web interface also provides device information, KNX-specific data, time server settings and the installed firmware version.

For certain functions, access to the web interface is only available for a limited time after switching on.

KNX Secure

The device supports secure commissioning in KNX installations and thus increases protection against unauthorised access. This also makes the device suitable for KNX systems where there are special requirements for data protection and access security.