



Synco living

Simply beautiful and quite beautifully simple

Building Technologies

SIEMENS



Overview of the products

Operation



1



2



3

No matter whether you control and monitor all the functions centrally with the central apartment unit **1** – the heart and brain of the system, or make individual changes comfortably in a room with the room device **2**, or operate the blinds and lights from the sofa by remote control **3**: Using Synco living is unimaginably easy.

Lights and blinds



4



5



6

By integrating lights **4** and blinds **5** in Synco living, you can also operate these centrally, or automate them with a timer, or include them in a simulation of presence (only lights), or store them in a scenario, or...
With an adaptor **6** you can switch electrical devices on and off.

Security



7



8

Smoke alarms **7** can also be incorporated by radio. In this way, if there is an alarm it is sent to the central apartment unit. This can then forward the alarm by SMS, pager or E-mail.
With door/window contacts **8** you can not only monitor the status of windows, doors and gates, but you can also report the oil tank as it becomes empty, for example.

Heating



9



10



11



12

The battery-powered radiator motors **9** maintain the temperature set by the central apartment unit. The room temperature sensor **10** checks how high this is. An additional weather sensor **11** turns your central apartment unit into a weather station. Desired and actual values are compared, the desired room temperature controlled through the setting of valves – easy as pie for the heating controls **12**.

The devices shown are only part of the possibilities.



What is Synco living?

Synco™ living is a flexible and expandable Automation System. It offers intelligent home comfort, central operation and monitoring and integrated security components, lights and blinds.

What does Home Automation System actually mean?

A centrally operated, modular system which adjusts all the parameters for good living, such as optimum temperature, air and light conditions, security and the careful use of environmental and financial resources, in every room to the fit in with the current, personal living requirements. The system can be adjusted dynamically to changing living conditions. Information processing is possible via cable and wireless.

Thanks to the internationally recognised KNX communication standard, Synco living opens up a variety of possibilities for you. You are not tied to products from one manufacturer, but instead can integrate all devices which use Konnex as communication standard. In this way you can realise your other desires immediately, or later with Synco living.

What is Konnex?

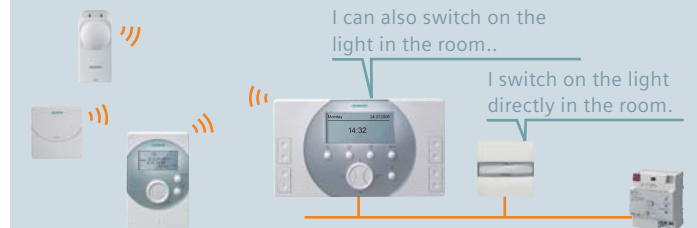
Konnex (KNX) is an open bus standard. It is a development from the European Installation Bus (EIB), Batibus (heating, ventilation, air-conditioning) and HES (household appliances) – a highly integrated communication protocol for all these applications. An ideal platform for the flexible expansion of Synco living, for as a result of the standardisation, the current and future integration of additional comfort, security and energy-saving features is guaranteed.

The central control, the heart of each system, not only communicates via Konnex radio (KNX RF), it can also communicate with peripherals via Konnex cable (KNX TP1).

Highlights

- efficient because, for example, the heating is turned down when a window is opened
- flexible, thanks to cable or wireless communication, this also makes it easily expandable
- simple, as operation is intuitive with a clear text display
- forward-looking, through communication on a standard bus
- secure, for open windows are reported when leaving the house

Konnex radio and Konnex cable



Synco™ living has won a „red dot award“ for outstanding design. This coveted seal of quality is awarded each year to the winners of an international competition for sophisticated and innovative design.



What can Synco living do?

Actually everything which makes life more comfortable for you! The most important functions are:

■ Heating

Suitable for underfloor and radiator heating.
Room heating for 12 rooms.

■ Heat generation

Controls the boiler according to the heating requirements from the rooms.

■ Hot water

Controls the hot water production for the whole house/apartment.

■ Smoke detector

A smoke detector can be used in each room.

■ Ventilation

Controls for the apartment ventilation.

■ Window and door monitoring

6 windows per room and 2 doors per apartment/house can be monitored.

■ Remote control

Comfortable operation of lights, blinds and scenes* from the sofa.

■ Lights and blinds

Controls for lights and blinds, including central commands („all off“).

■ Timer

Each room and each switch group** can be assigned its own timer program.

■ Activating electrical devices

Electrical devices can be switched on/off via Synco living (e.g. watering the garden, lighting in the aquarium).

*Scene:

Various components, such as lights and blinds, can be integrated into a scene. The scene can then be triggered by an event (e.g. „absence“) or the time program.

** Switch group:

A switching group consists of a number of components (minimum one) which can be jointly triggered by a time program, for instance. The following functions can be triggered by a switching group:

- Switching or dimming lights
- Switching an electrical consumer (e.g. watering the garden)
- Raising or lowering blinds
- Calling up scenes

What are the benefits compared to other systems?

Synco living offers more comfort, savings and security in one system. Fully flexible in new and old buildings, with great functionality, easier and cheaper to assemble and set up.

Comfort and flexibility

- creates individual room climate
- maintains tranquillity through whisper-quiet operation of the radiator control valves
- activates individual living scenarios at the push of a button or according to the occasion
- allows comfort settings to be manually extended
- controls ventilation units
- central operation of heating, lights, blinds, security and hot water
- displays all current living and weather data

Security and efficiency

- monitors and detects open windows and doors
- simulates presence
- reports smoke
- heats water as required
- reports empty batteries
- warns you of malfunctioning devices
- reports near-empty oil tank
- only lets as much heat be generated as required
- no increased heating if a window is open
- only supplies rooms which are being used



Advantages for new buildings

- simple, cheap mounting and operation
- great flexibility when selecting place of assembly
- standard cable, no expensive special cables (for KNX-cable communication)
- material savings thanks to wireless technology



Advantages for old buildings

- simple, cheap mounting and operation
- thanks to the wireless KNX radio communication, the system can be expanded without large structural changes
- great flexibility when selecting place of mounting
- existing cables can be used (for lights and blinds)
- existing devices can be connected (please check with an expert)

Can I do this by myself?

Nothing is more difficult than being really easy. With Synco living, installation, set up and operation are simple.



Quick access buttons for:

- Hot water
- Absence/monitoring
- Mode
- Apartment timer
- Information

Navigation buttons:

You can make settings with the navigation buttons. You can quickly find your way around thanks to the simple and understandable text.

Soft key buttons:

Define and call up scenes (e.g. „Scene TV“): A press of a button on the central control and the lights are dimmed to 40%, the blinds are lowered and the cosy evening in front of the television can begin.

Mounting is also unimaginably easy. Simply click on the frame of the central control, for example.

Most Synco living components send their information by radio and are battery-powered. As a result, there is no need to lay innumerable metres of cables when erecting the building. And the subsequent addition of components is child's play: no walls have to be opened for new cables, no dust and no dirt!

It has never been so easy to set up a system as it is to set up Synco living. You do not

need to read heavy books or attend a 3-week course, for thanks to the clear text menu and easy navigation, you can complete everything in no time at all. With Synco living, the devices are operated by simply pushing a button. This happens very quickly and no additional tool is required. And you do not need an expert to come round when you want to change a setting.

Is it also as easy to use?

Of course! The clear buttons and easy-to-use menu on the central control guarantee quick access to all functions. A push of a button is

sufficient and you inform Synco living that you are leaving the house, for example. The system immediately switches to Absent and shows you whether and where, for example, a window is still open (window contact required).

If you want to look something up again, no problem. Our operating instructions are available in many languages.

How often does communication take place?

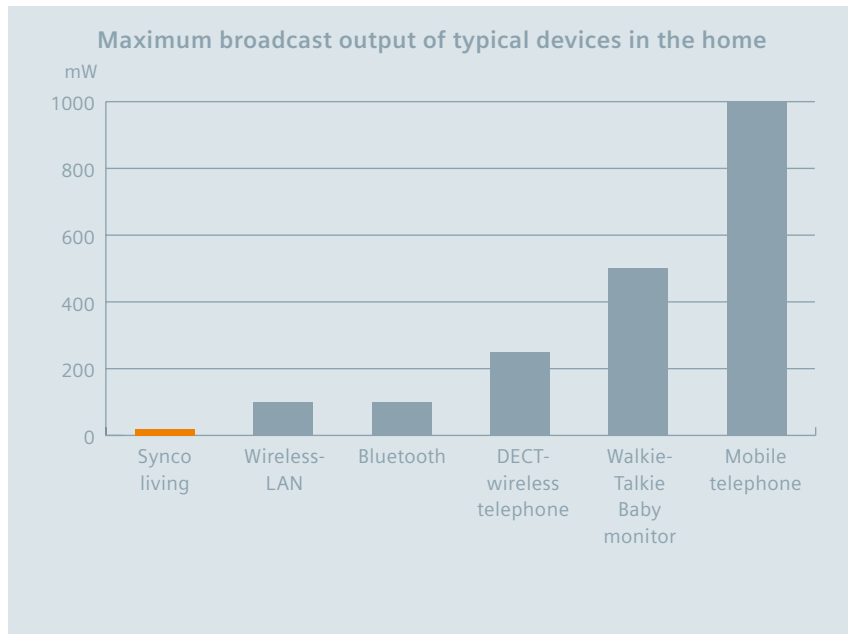
The components only communicate with each other when they have to. The rest of the time, the device is dormant.

Radio systems work with wireless communication, which allows a high degree of flexibility. Many everyday objects are now fitted with this technology and we cannot imagine life without them.

Wherever electricity is flowing, non-ionising radiation is generated. We at Siemens have used our knowledge in the development of these devices so that the load for the user is kept as small as possible. This is guaranteed above all through the frequency band 868 MHz as devices which broadcast in this frequency range may only communicate for a maximum of 36 s per hour with other

devices. For the rest of the time, communication does not take place (the device is dormant). In addition, the maximum permitted output is 25 mW.

The following example should give you an idea of the radiation load: Telephoning for one minute with a mobile phone exposes you to the same radiation as living in a detached house with Synco living for 15 years (depending on local conditions).



Does Synco living help me save energy?

You can transfer all the tasks to Synco living which help to save energy: e.g. closing the blinds at night, reducing the temperature when you leave the house and switching off all the lights, etc.

Synco living helps you in all these points with timers, the absence scenario, etc.

Thermal energy

Saving energy – a topic that accompanies us daily, even since before oil prices became so high. We at Siemens support you to save energy, for thanks to the intelligent controls of Synco living you can save up to 30% heating energy, without having to sacrifice comfort. On the contrary, as a result of the controls quality and various lifestyle functions, each room can be set according to individual wishes. The operation still takes place centrally, i.e. from one place in the home or

even, depending on the equipment, in the respective room. All these Synco living features not only protect the environment, but also your pocket.

Thanks to the modern and sealed construction, buildings today need much less heating energy than older ones. However, there is a large potential for saving energy in these buildings as well.

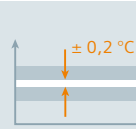
The cheap thermostatic valves fitted directly on a radiator are still the most widespread. But these have several drawbacks compared to Synco living, for example the actual room temperature fluctuates by ± 1 K around the set value; the setting 3 is not always 20 °C, at night the temperature has to be lowered manually or the valve fully opens automatically when a window is opened in the winter.

Electrical energy

You leave your house or go to bed and would like to be certain that all the lights are off, no problem, a push of a button is enough and all the lights go out. Or you want to leave a light on in the hall for a while, no problem either. Controlled by a timer, the light switches off after a fixed period so that it is not on all night and you do not have to get up in the middle of the night to switch it off.

When you leave the house, all you have to do is press a button on the central apartment unit and all the lights are switched off. At the same time, this push of a button also closes all the blinds and reduces the temperature setting of the heating from, e.g. 21 °C to 17 °C.

Energy-saving potential with Synco living	
Single room controls	The central apartment unit can control up to 12 rooms independently of each other. The suitable room temperature can be selected in each room (single room controls).
Controls quality	Synco living's heating controls function in a tolerance band of ± 0.2 K. This means that the room temperature does not fluctuate between 19 and 21 °C as with usual thermostatic valves, but only between 19.8 and 20.2 °C.
User behaviour	The energy-saving potential also depends on the user's actions: closed blinds at night, setting the heating lower when leaving the house, all lights out at night and when absent, lamps dimmed, target setting reduced (why 21 °C when 20 °C is also comfortable).



Are the devices noisy?

No. The devices that can be heard are as quiet as someone breathing.

So by pushing one button you can make sure that:

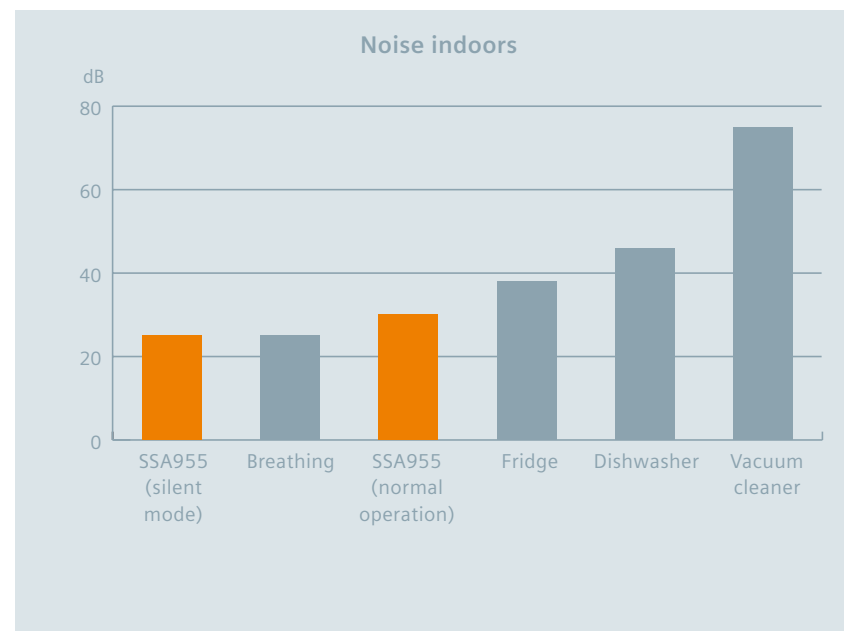
- All the lights are off (saving electricity)
- The blinds are closed (saving heat)
- The heating changes to a lower setting, e.g. from 21 °C to 17 °C (saving thermal energy)

Dimming

Dimming bulbs increases their life considerably and saves electricity at the same time.

We humans are constantly surrounded by noises. We consciously perceive many of these, but also many unknowingly, because our ears have already got used to them. These noises are not always safe and can even lead to damaged hearing. Therefore we value a low-noise environment a great deal and at night we do not want to be irritated by a dripping tap or controlling radiator control actuator. Even Synco living cannot do anything about a dripping tap, but our radiator control actuator are almost silent, their

noise is as quiet as someone breathing. And unlike a person, who breathes approximately 15 times a minute, the actuator only works if there is a change from the comfort setting.





And the added-value?

Synco living offers you more comfort, more security and is more efficient.

The use of international technology standards also guarantees the integration of other comfort functions, such as the extensions with additional rooms, even after many years.

components first, for example, and then lights and blinds can be integrated later.

How do the benefits compare to the cost?

Added value and comfort depend partly on the building and partly on the desired equipment. Thanks to the large flexibility of Synco living, the house can be fitted with heating

	Basic	Synco living	Benefits
Basic equipment	Basic installation for a detached house equipment (incl. TV, telephone, connections for boiler, kitchen appliances, etc.)		
Heating	Thermostats	Individual room control Time programs Intelligent boiler control	Comfort Efficiency
Lights	Standard design Normal light switches	Automatic lights controls Central controls Shock lighting Scenes Presence simulation	Comfort Efficiency Security
Blinds	Standard design manual operation	Automated blinds controls Central controls	Comfort Efficiency Security
Security	No security components	Smoke alarms Window and door monitoring Alarms	Security Efficiency

What maintenance is involved?

With normal batteries and efficient consumption, the maintenance costs are low. And when the batteries are empty, you are notified automatically at the central apartment unit.

We at Siemens have designed our devices such that the batteries in the battery-operated devices only have to be replaced every three years. The battery life of the security components, window contacts and smoke alarms is approximately 5 years. A radiator control valve, for example, ensures your comfort uninterrupted for more than 26000 hrs.

And you do not need any special batteries either; normal AA alkaline batteries can be used. Exception: door/window contacts.

How can you tell whether the batteries still have enough power, or whether the batteries need to be replaced?

The devices periodically send their battery status to the central apartment unit. As soon as a device reports that the remaining battery life is sufficient for approximately 3 months (approx. 1 month for smoke alarms, door/window contacts), a corresponding message is displayed by the central apartment unit warns you of malfunctioning devices.

So you can go on holiday in peace or entrust your holiday home to Synco living. If the batteries are not replaced despite all the warnings, the central apartment unit reports a breakdown in communication, as no radio contact is possible with the device. The radiator valve, for example, sticks in the last reported position. Manual settings (with an Allen key) are possible. After inserting the new batteries, the device automatically starts normal operation again.

How can a battery last around 3 years?

The reason is the energy-saving radio transmission; a device can only communicate for 36 s per hour. Radio silence is maintained for the remaining time.



The central apartment unit is in constant operation. It sends/receives information to and from the devices in predefined intervals.

In these intervals the device awakens and sends or receives information.

Apart from the display on the central apartment unit, almost empty batteries are displayed through a flashing LED on the device itself.



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The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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