

# Reducing heating costs with radiator control in renovation and new buildings

Energy and cost efficiency with the Synco living Starter Kits



Answers for infrastructure.

**SIEMENS**





## Saving heating energy the smart way

Over the past years, the cost of energy has increased relentlessly – a trend that is likely to continue. As heating cost is one of the biggest contributors to the household energy bill, reducing it offers the best advantage to cut expenses. For this, Synco living Starter Kits, comprising a wireless room unit and radiator valve actuators, are an ideal solution: due to very precise radiator control and innovative functions, you can save up to 30% (depending on the building construction and heating application) of your heating cost, which will relieve your household budget.

The system is battery-powered. As it works wirelessly, it can be installed in no time. Simply unpack it, mount the room unit exactly where you want it and enjoy your new comfortable, modern home feeling.



Simple installation and de-installation make Synco living Starter Kits the ideal choice for apartments.



Low investment cost and high energy savings – a smart way to control room temperature in your home.



KIT911 and KIT914 include a room unit and valve actuators ...

# Why to choose Synco living Starter Kit?

Whether an apartment or a single family home, the first step to save energy and cost can be so simple – with Synco living Starter Kits. Quick and easy to install, they bring intelligent comfort into your home.

### ■ Ideal for apartment renovation – even in old buildings

With Synco living Starter Kits, you can bring the latest technology even into a historic building. They are also the ideal choice if you are living in a rented apartment. The reason: You can install the system at any time – without any trouble and without having to drill holes into the wall. This means for you quick and easy installation, and simply enjoying the benefits of a comfortable heating control system.

### ■ Simple reuse – in the new apartment or in the newly built house

Another big plus: When you move into a new apartment or a single family home, you can simply take your Synco living Starter Kit with you. The heating control system helps you to drastically cut your energy bill. This means for you that the system will pay back quickly – and that you can save up to 30% in energy cost.

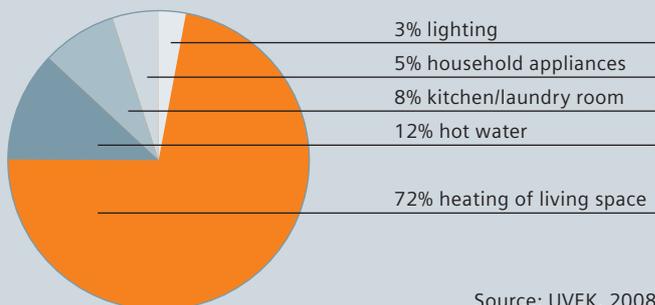
What's more, the valve actuators work noiselessly thanks to a 'Silent Mode'. So whether you work at home or have a light sleep: no buzzing or clicking noises will disturb you.

### ■ Upgrade to a full Home Automation System

The Synco living Starter Kits are a safe investment for the future. Every Starter Kit can be expanded to up to six valve actuators. And it's a simple matter to adopt all existing valve actuators when you upgrade your Starter Kit to the complete Synco living system. This means for you that you can easily expand your heating control system to a Home Automation System – step by step. Moreover, you can also increase the safety of your home at a later point in time, by simply adding components for intrusion and smoke detection.

About three-quarters of all home energy consumption is related to home heating.

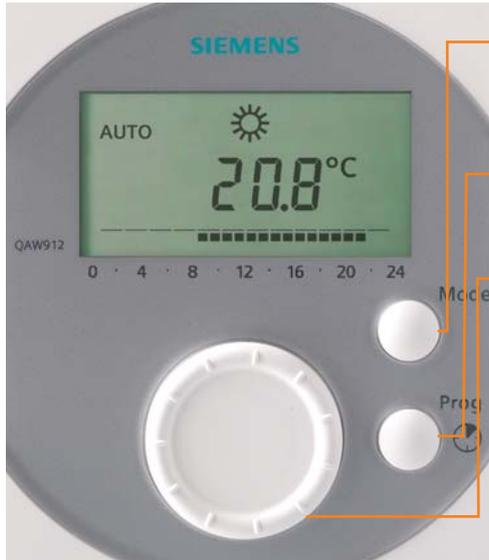
### Energy consumption in private households, 2006



Source: UVEK, 2008

SSA955 actuator fits directly on standard valves; a number of adapters are available from Siemens for non-standard valves.





- Mode button**  
– Selection of operating mode (Automatic, Comfort, Economy, Protection)
- Timer/Program button**  
– Activation and setting of timer function (holiday program etc.)
- Setting knob**  
– Selection of operating line and adjusting values

... and can be easily upgraded to a full Home Automation System, protecting your initial investment.

# Technical overview

	Room unit	Radiator valve actuator	Optional devices for boiler load management	
			Heating controller	RF adapter plug
				
<b>Product name</b>	QAW912	SSA955	RRV912	KRF960
<b>Control</b>	Max. 6x SSA955			
<b>Communication</b>	868 MHz radio frequency based on KNX standard		868 MHz radio frequency based on KNX standard	
<b>Power supply</b>	2x AA battery	3x AA battery	AC 230 V (potential free)	AC 230 V
<b>Starter Kit options</b>				
<b>KIT911</b>	1	1	Optional, not included	
<b>KIT914</b>	1	4	Optional, not included	

A maximum of six valve actuators can be used within two zones to increase room comfort.

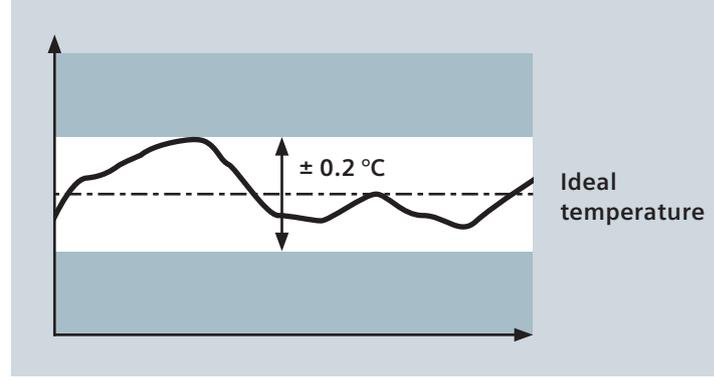
Living space – with e.g. two radiators



Sleeping rooms – with e.g. four radiators in one or more rooms



Thanks to their high control accuracy with a narrow tolerance range of only  $\pm 0.2\text{ }^{\circ}\text{C}$ , Synco living Starter Kits help you to significantly save energy cost. Conventional heating controllers can deviate up to  $2\text{ }^{\circ}\text{C}$  from the set temperature.



# Efficiently increasing room comfort

## ■ Easy home automation and investment protection

The Synco living Starter Kits for radiator heating can be used in either renovation or new buildings. Two basic sizes are available: KIT911 with one room unit and one valve actuator and KIT914 with one room unit and four valve actuators; both kits can be extended to maximally six actuators per room unit. How does it work? The valve actuator controls the radiator so it keeps the preferred temperature you set at the room unit.

The valve actuators SSA955 can also be used in the Home Automation System Synco living from Siemens. If you want to integrate more functionalities like air conditioning, ventilation, lighting and blinds or basic security such as smoke detectors, door and window contacts into your home, simply upgrade your Starter Kit step by step to a full Home Automation System – while keeping your initial investment protected.

## ■ Fast installation and simple commissioning

The Starter Kits are wireless and work with radio frequency (RF). This means for you: no holes in the walls to mount the room unit exactly where you want it. Just replace the existing thermostatic heads with the new actuators and connect them by simply pushing a button on the room unit.

## ■ Energy-efficient comfort due to highest control accuracy

Traditional room thermostats allow swings of 1 – 2 °C. The Starter Kits work with absolute highest control accuracy of  $\pm 0.2$  °C. Once you set the most comfortable value, the Starter Kit reliably keeps room temperature at this level. The big

plus for your comfort: no more readjusting the thermostats, but simply feeling good and comfortable – while saving energy at the same time.

## ■ Innovative functions for modern living

With individual time programs and temperatures for two zones (for example living and sleeping zone), the Starter Kits limit heating exactly to where and when it is needed. Using the short absence timer or the holiday program when leaving home makes sure that you are never heating when nobody is in. These clever functions help you save both energy and cost.

With the unique 'Silent Mode' of the valve actuators, the Starter Kits keep the temperature on the desired level – and stay unnoticed apart from that.

All devices work with included standard AA batteries, and they don't need extra power supply. Control strategy and communication processes have been optimized to get by with minimum battery consumption. This ensures that the room units run two years and the valve actuators even three years with one set of batteries. As batteries don't have to be changed very often, this is another small contribution to protecting the environment.

## Highlights

- Easy home automation and investment protection – thanks to quick installation and easy upgrade to a full Home Automation System
- Simple start-up – with wireless technology
- Highest control accuracy and best living comfort – with a narrow tolerance range of only  $\pm 0.2$  °C
- High energy savings – by setting individual time programs for each zone and short absence timer



# Answers for infrastructure.

## ■ Megatrends driving the future

The megatrends – demographic change, urbanization, climate change and globalization – are shaping the world today. These have an unprecedented impact on our lives and on vital sectors of our economy.

## ■ Innovative technologies to answer the associated toughest questions

Throughout a 160-year history of proven research and engineering talent, with more than 50,000 active patents, Siemens has continuously provided its customers with innovations in the areas of healthcare, energy, industry and infrastructure – globally and locally.

## ■ Increase productivity and efficiency through complete building life cycle management

Building Technologies offers intelligent integrated solutions for industry, commercial and residential buildings and public infrastructure. Over the entire facility's life cycle, our comprehensive and environmentally conscious portfolio of products, systems, solutions and services in the fields of electrical installation technology, building automation, fire safety and electronic security, ensures the:

- optimum comfort and highest energy efficiency in buildings,
- safety and security for people, processes and assets,
- increased business productivity.



Siemens Switzerland Ltd  
Industry Sector  
Building Technologies Division  
International Headquarters  
Gubelstrasse 22  
6301 Zug  
Switzerland  
Tel +41 41 724 24 24

Siemens Ltd  
Industry Sector  
Building Technologies Division  
Units 1006-10  
10/F, China Resources Building  
26 Harbour Road  
Wanchai, Hong Kong  
Tel +852 2870 7888

Siemens Building Technologies  
Industry Sector  
Brunel House  
Sir William Siemens Square, Frimley  
Camberley  
Surrey, GU16 8QD  
United Kingdom  
Tel +44 1276 696000

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.

© Siemens Switzerland Ltd, 2009 • Order no. 0-92208-en • 10910