

Building your digital future

More comfort in homes, less energy consumption



ALPHA SMART SYSTEM

Hardware, software, and cloud solutions for smart buildings

Alpha smart system

The optimum solution for embracing smart building management.



The future of indoor climate solutions lies in smart systems based on user requirements. Modular systems that are scalable, flexible, and sustainable.

Years of expertise in high-quality, sophisticated heating control technologies coupled with innovative software expertise are solid foundations for our new product range. The Alpha smart system with cloud-compatible product- and system-solutions meets all the demands of future-proof technology for the internet of things.



Alpha smart system – fully automatic and under control
Our end-to-end package of hardware/software and cloud solutions gives you everything you need: the perfect route to your digital portfolio for a modern smart home.

Highlights at a glance



Offline installation and commissioning possible

- No internet access on the building site required
- Consumers can scale up the solution to include cloud operation later

Easy to control via a free smartphone app

- Compatible with iOS and Android

Stand-alone possible – easy to upgrade to a cloud/app solution later on

- Installed as a conventional, stand-alone solution to start with, but can be upgraded to an app/cloud solution at any time

Multi-object management

- Several properties can be managed

Fail-safe

- Devices can communicate with each other and guarantee functionality even if the cloud fails

Future-proof design

- Frequent firmware updates via the cloud
- product services
- Customised modifications: app, packaging, logo, instructions, marketing literature

The future of hyperconnected buildings

Smart home automation systems for maximum comfort



Ready for the digital transformation?

Nowadays, indoor climate control, which usually takes place automatically in the background, promises superb comfort for the user and energy efficiency. Customers' requirements are changing all the time. To meet these demands, we consistently gear its developments to future-proof digital technologies, in this case in the new Alpha smart system.

This strategy is underpinned by the foundation of a new subsidiary that's dedicated to developing cloud-based and digital product solutions. As a result, customers have a strong partner at their side to help them create and expand their own digital product portfolio.

Perfect market access

The basic Alpha smart systems range for radiant heating systems allows you to access the smart building management segment. It offers flexibility and can be upgraded at any time.

Customised modifications and cloud solutions give customers huge flexibility and the confidence. They can also rely on robust security and their products' fitness for tomorrow's world too.

Product portfolio constantly growing

Our strategy is to provide integrated, automatic, and sustainable building solutions at all times. Which is why we're constantly developing and expanding our smart product range.

As a result, our solutions are always state of the art and can help design your customised portfolio of intelligent building control offerings.

Alpha smart system for radiant heating systems

A basic range of intelligent and practical heating control



Smart home solution for heating systems with hydronic underfloor heating

Because of the energy efficiency required, new detached homes usually have hydronic underfloor heating systems. The Alpha smart system for radiant heating systems is the ideal solution in these cases and for legacy systems that frequently have inadequate control. The system can also be used offline in stand-alone mode, but enables upgrades to a cloud-based smart home system at any time.

Overview of components

- 1 Alpha smartware base station
 - 230 V
 - 6 and 10 channels with 10 and 14 actuators each
 - Easy pump contact
 - cSP-L wireless protocol
- 2 Alpha smartware room-control device
 - LC display with backlight
 - With and without design panel
 - Temperature and humidity measurement
 - cSP-L wireless protocol
- 3 Alpha smartware IoT gateway
 - Interface between Alpha smartware devices and the Alpha smart cloud
 - WiFi
 - cSP-L wireless protocol
 - cSP-L repeater

Commissioning and operational options

Step 1 – offline, stand-alone

- Devices can be paired locally via an operational concept
- The system can be tested
- Stand-alone usage possible
- As a result, technicians can carry out commissioning offline

Step 2 (optional) – online, cloud operation

- Integration with the Alpha smart cloud possible
- Configuration of the Alpha smartware IoT gateway
- Transfer of the Alpha Smartware devices to the Alpha smart cloud via the Alpha smart app (assigning, room allocation)
- Full system set-up of the stand-alone solution is carried out
- The end customer can commission online operation without a technician

Alpha smartware base station

Overview of functions

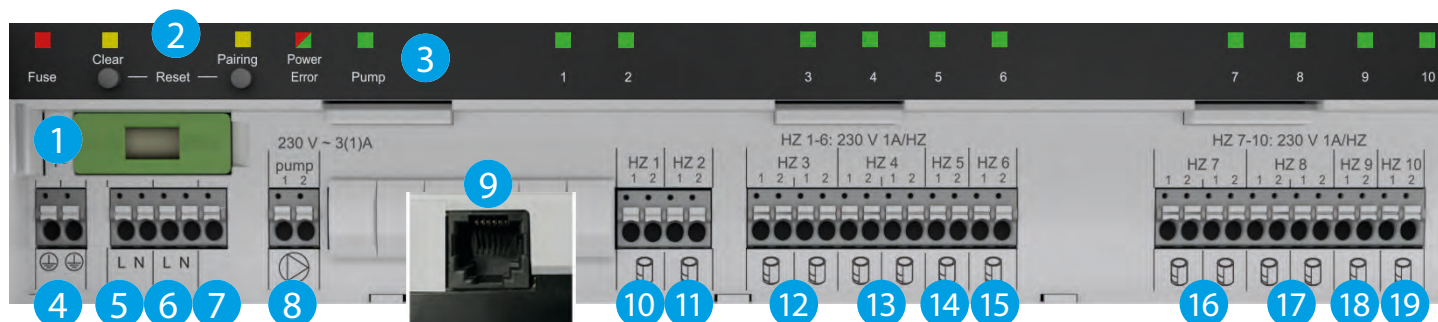
- Tried-and-trusted control algorithm
- Valve protection/pump protection
- Emergency operation
- Frost protection
- First Open unlocking
- Load balancing
- Smart start/stop function
- Local pairing of RCD and base station
- Timing functions (can be used with the cloud)
- For heating mode
- For NC valve actuators
- Clear, easy-to-read LED status displays



Central connection unit

The Alpha smartware base station is the Alpha smart system's core connection unit. The base station is easy to wire with all system components such as valve actuators. All the room-control devices' data is transmitted wirelessly to the base station. The base station analyses this information to provide customised, energy-efficient temperatures in each room.

Connections



- 1 Fuse
- 2 Clear button and pairing button for local operation
- 3 LED for fuse, power, error, pump and heating zones
- 4 Protective conductor connection with through-wiring option
- 5 L and N mains connection
- 6 230 V connection option for external components (pump)
- 7 Clamping point with no function
- 8 Output, pump request potential-free contact
- 9 Universal bus (currently with no function, RJ12 jack for future applications)
- 10 – 19 Valve actuator outputs (230V on/off)

Alpha smartware room-control device

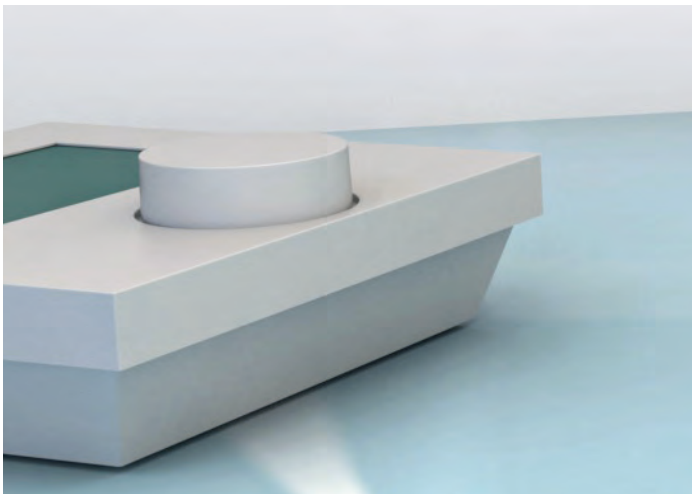
Overview of functions

- Key functions enabled on the device
- Temperature and relative humidity recorded
- Setpoint temperature, holiday mode can be deactivated
- Display of actual/setpoint temperature, humidity, wireless signal, battery level, errors, time
- 1 room-control device can be connected to X number of heating zones
- Display lighting



Easy operation and functional data capture

Developed for day-to-day usage, the room-control device has user friendly functions. In addition to the room temperature, it also captures the relative humidity in the room concerned. All information can be synchronised via the Alpha smart cloud. Consequently, the Alpha smart system can be used as a stand-alone or cloud solution.



Alpha smartware IoT gateway

Overview of functions

- Alpha smartware IoT gateway for encrypted communication of the wirelessly connected Alpha smartware devices with the Alpha smart cloud
- Several Alpha smartware IoT gateways function perfectly with one another, providing excellent wireless coverage, even in large properties
- Alpha smartware IoT gateways can be managed in several properties from one app
- Can be used within the Alpha smartware system as a cSP-L wireless repeater
- From a detached house to large properties



Smart network hub

The Alpha smartware IoT gateway links all smart devices securely with the Alpha smart cloud. It's a basic requirement for connecting Alpha smartware components with the Alpha smart cloud. The Alpha smartware IoT gateway enables configuration and control of the Alpha smart system with the Alpha smart app.



Automatic hydraulic balancing

Perfect control for greater energy efficiency and comfort



Advantages of the Alpha smart system with automatic hydraulic balancing:

- Certified by TÜV Rheinland
- BAFA-approved
- Easy-to-apply-for grants
- Heating requirements spread over a defined period
- Constant heating media flow

Automatic hydraulic balancing

Hydraulic balancing of a heating system boosts energy efficiency and comfort in homes.

The German Building Energy Act (GEG) makes hydraulic balancing a legal requirement for all new builds and refurbishment projects in Germany.

By temporarily disconnecting some heating zones, automatic load balancing is carried out. As a result, the system improves the heating's hydraulic balance and ensures it operates at maximum efficiency.

TÜV certificate

The control algorithm in the new base station achieves results that are equivalent to traditional hydraulic balancing and has been independently tested and certified by TÜV Rheinland.



BAFA grants

As part of the drive to incentivise more efficient heating, the Alpha smart system's balancing capability qualifies for grants from the BAFA (the German Federal Office for Economic Affairs and Export Control). Grants are easy to apply for via the VdZ (German Association of Building Technology). As a result, 20 to 45% of the net investment made can be saved.

Alpha smart app

Simple and intuitive to configure and operate



100% DSGVO KONFORM

- Free app for iOS and Android in the standard version
- Customised app variants possible (at a cost)
- GDPR compliant
- Available in 12 languages

ANDROID APP ON Google play

Available on the iPhone App Store

The free Alpha smart app's intuitive user interface allows easy configuration and control of the whole system:

- User management
- Device management (assigning, room allocation)
- Setpoint temperature can be changed
- Displays actual temperature, humidity, battery level, wireless connections, errors
- Over The Air Update function (OTAU)
- Time-based functions:
 - Configuring and changing heating times
 - (week program, 7 days, 6 switching times per day)
 - Automatic/manual mode
 - Holiday mode



At a glance
Clear overview of rooms and devices Customised setting for the most important rooms and devices on a favourites screen.



Heating profiles
Heating profiles can be customised and configured to suit preferences for each room.



Room menu
Room configuration, preferred setting for the room temperature required.

Alpha smart app

Tailored to your needs



Standard packages for customised apps:

- Customised look and feel to the app (graphics, logo, colours)
- Information about copyright, EULAs, licensing conditions
- Further corporate design modifications

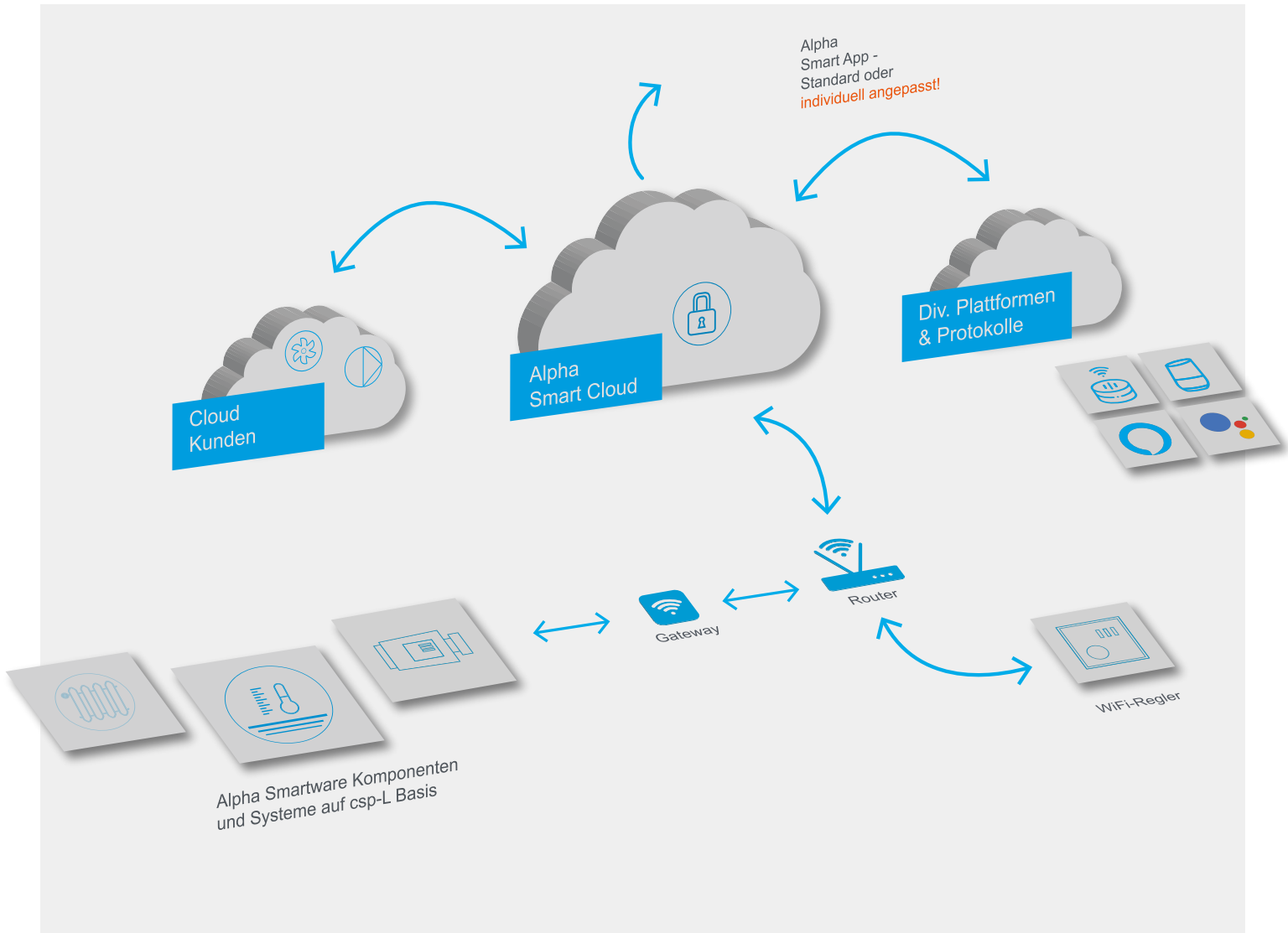
Further options possible on request:

- Configuration of customer stores
- Login and publication in the app stores
- Solution maintenance
- Other solutions tailored to customer requirements



Alpha smart cloud

Professional cloud solutions for smart building management



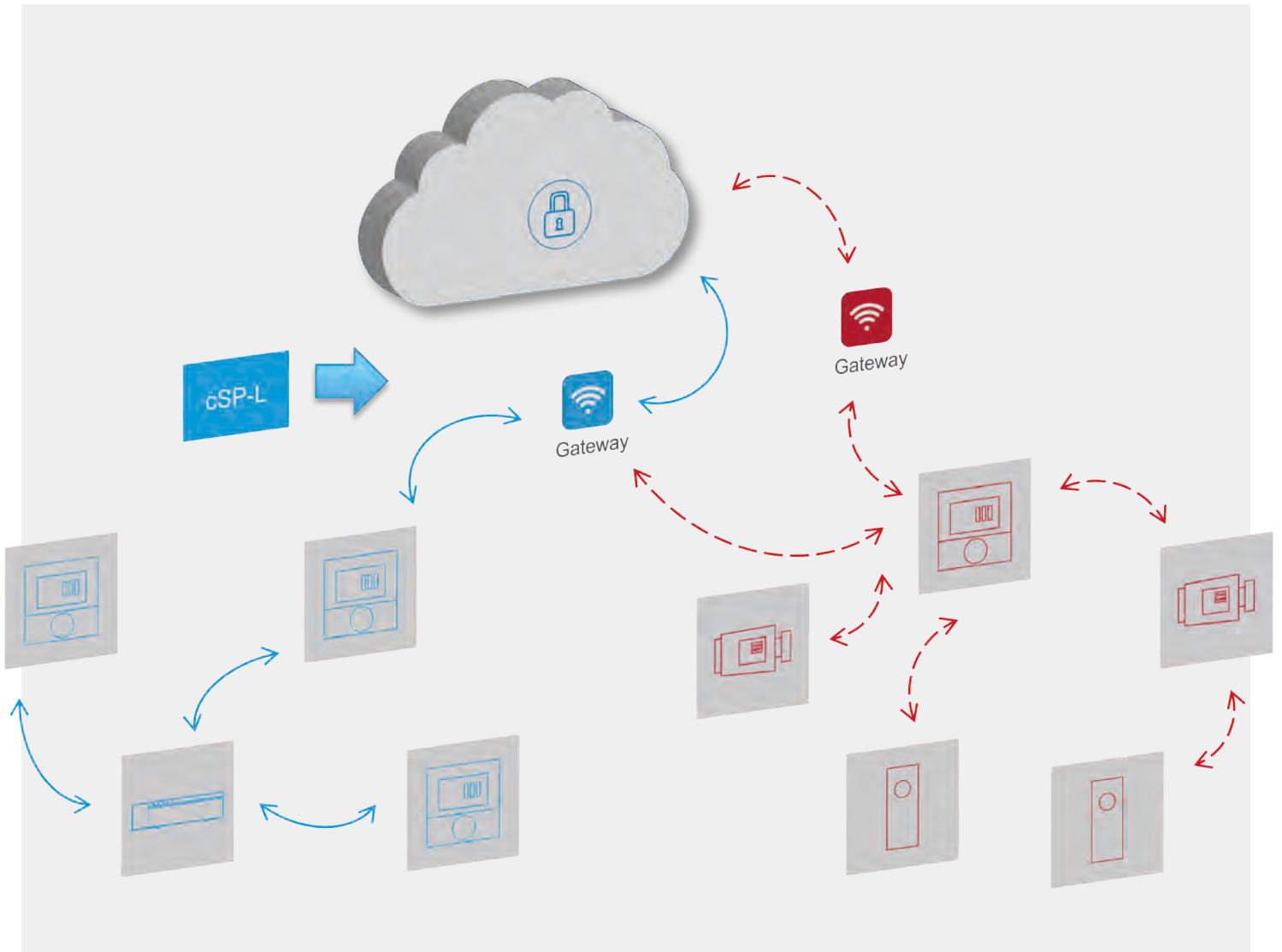
Highlights at a glance



- Dedicated cloud solution
- Hosted in Germany
- Flexibly scalable
- Integration of third-party products and into the Alpha Smart app possible
- Third-party protocols can be integrated
- Customised apps
- Firmware updates on the fly

A wireless protocol for superior requirements

The new standard of perfect connections



Highlights at a glance



The future-proof CSP-L wireless protocol meets top standards in terms of security and stability

- Very secure wireless transmission thanks to AES 128 encryption
- Exceptional wireless range due to 868 MHz frequency
- Protocol supports wireless firmware update of the devices
- Wireless communication between the devices makes the following possible:
 - Teach-in without an IoT gateway and internet
 - Stand-alone mode without a cloud
 - Exceptionally reliable (works autonomously even if the internet is down)
 - Lower response times (latency) than online communication

First-class security

We takes data protection very seriously



Outstanding security

The Alpha smart system meets stringent security requirements.

868 MHz

Fail-safe

CSP-L is a perfect combination of wide range and fail-safe operation regarding WiFi, Bluetooth wireless technology and video-streaming systems.



Tamper-proof

During installation and operation, encrypted communication (to the AES-128 encryption standard in CCM mode) of the wireless components rules out unauthorised access.



Data protection

Only servers based in Germany are used to manage the data stored in the cloud. Therefore, our cloud services are governed solely by German law.

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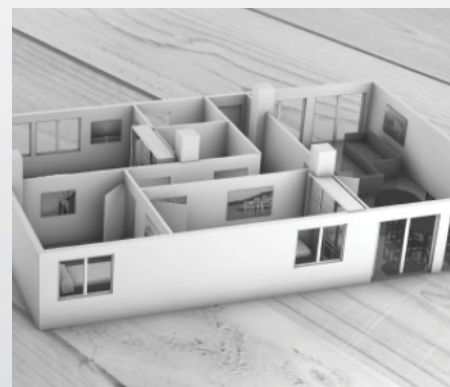
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Pettinaroli for a Smart Home



Pettinaroli A/S is a supplier of quality components and complete solutions including ball valves, valves and underfloor heating systems to the Danish plumbing industry. Furthermore, Pettinaroli A/S cooperates with several European companies. Pettinaroli A/S was founded in 1976 under the name of Jørgen Pedersen VVS.

The production and product development of hot stamped brass components take place in Italy.

Pettinaroli A/S is located in Middelfart and from this warehouse Pettinaroli distributes the vast assortment of products to all Danish wholesalers in the industry as well as to 17 countries in Northern, Central and Eastern Europe.

QUALITY, SERVICE and FLEXIBILITY are important keywords in our daily work, and our skilled employees are always ready with support and guidance.