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Ingenuity for life

Albatros² RVS – more than just heat pump controllers

Now with innovative options for split units, energy management and distribution control.

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The successful RVS controllers from Siemens' Albatros² family have been on the market for a number of years: they ensure reliable control and secure operation of entire heat pump systems. From small autonomous plants to large cascaded hybrid heat pump systems with several consumer and distribution zones – the controllers have proven their worth in tens of thousands of installations.

Key features at a glance

- Extremely advanced applications
- Comprehensive application library
- Flexible adaptations and straightforward fine-tuning
- Plug & play commissioning

The entire controller range has been strategically updated and innovative features have been added. This way, Siemens responded to current market trends, higher performance requirements and rising communication needs. Also, the controllers' deployment in new fields of use is facilitated, e.g. for efficient energy management in buildings.

New options

In the case of split heat pumps using third-party outdoor units, extended communication via Modbus offers versatile and elegant solutions with no need for extra engineering. Also, the outdoor unit can forward important information to the user or to service personnel via the user interface or the Climatix IC cloud.

What's more, the new controllers excel in professional and flexible energy management: they are capable of deciding independently which of the available energy sources is currently the most optimal in terms of ecological and economical footprint. And control of the energy source – e.g. of the photovoltaic plant – is performed independently. To achieve optimum results, the system selects the most suited energy source, based on real-time requirements.

RVS61 with housing

RVS21 as PCB version

Individual control of split units

The proportion of split heat pumps in air-to-water systems is increasing. This means that the outdoor unit is controlled as a closed entity, necessitating a controller that manages energy distribution and energy storage in a flexible way and that allows integration of other disciplines. The new RVS controllers are conceived to meet these types of requirements.

We placed our focus in product development on communication and optimization on the distribution and thus on the consumer side. In this field, the requirements and wishes of European customers are especially demanding.

The extended Modbus communication protocol enables powerful interaction with different brands of outdoor units. What's more, new features help improve system operation, increase the COP, and ensure comprehensive diagnostics and optimum maintenance of the outdoor units. A modulating heat pump with intelligent consumer control makes hydraulic separation in the heating system obsolete, thus simplifying the solution and saving costs.

Energy management beyond the norms

The controllers of the Albatros² family are the perfect solution to meet the stringent European regulations in terms of energy efficiency or to integrate renewable energy in the heating system.

The new products extend the limits of conventional hybrid system concepts: heat pumps can be combined with gas boilers or multiple heat sources in the form of cascades. They are capable of integrating and controlling valuable heat sources, such as solar heat, solid fuel boilers or ventilation systems with heat recovery. Also, the RVS controllers are Smart Grid ready.

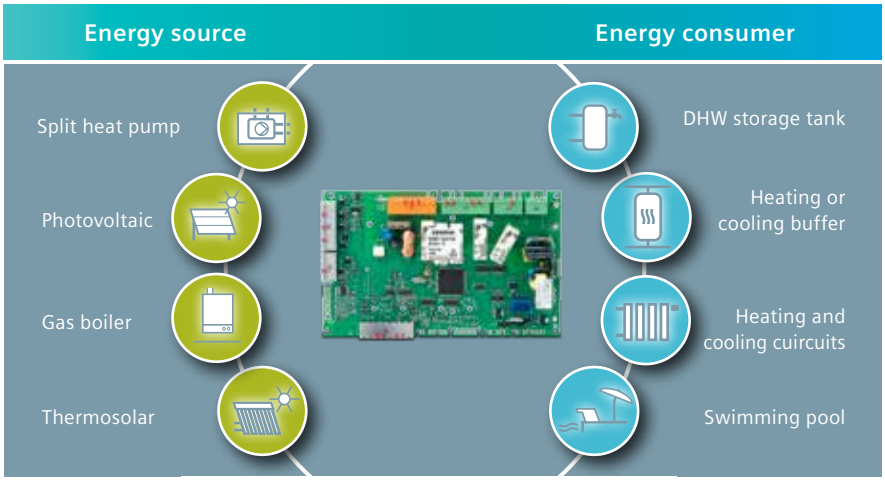
One of the latest innovations is photovoltaic heat pump operation based on the private consumption principle – most efficiently used on site. With heat pumps, the benefits of "free electricity" are further multiplied. Solar energy storage can take place via existing heat storages, such as domestic hot water tanks, heating or cooling buffers, or swimming pools.

Intelligent, simultaneous control of multiple heat sources is performed with only one controller via an operating unit. This reduces the effort and costs – and enhances ease of operation.

Comfort for all and in every situation

Highlights

- Excellent solution for split units via extended Modbus communication and versatile distribution options
- Improvements of CPO possible with intelligent control on the consumer side
- Full Modbus slave features for integration into building automation and control systems or for touch screen operation
- Smart Grid (SG) ready with support of four operating stages
- Photovoltaics
- Decades of experience and expert know-how from Siemens



Albatros² controllers can be easily and quickly connected to any type of heat source and heating/cooling system, ensuring optimum comfort.

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