

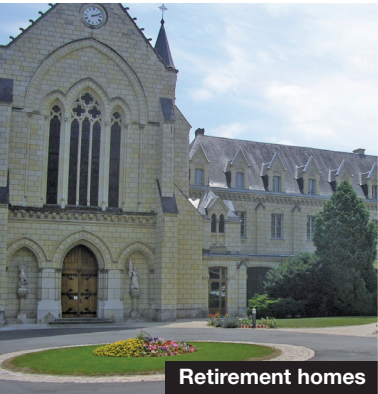
ThermoZYKLUS



Schools and Nurseries



Universities and business premises



Retirement homes



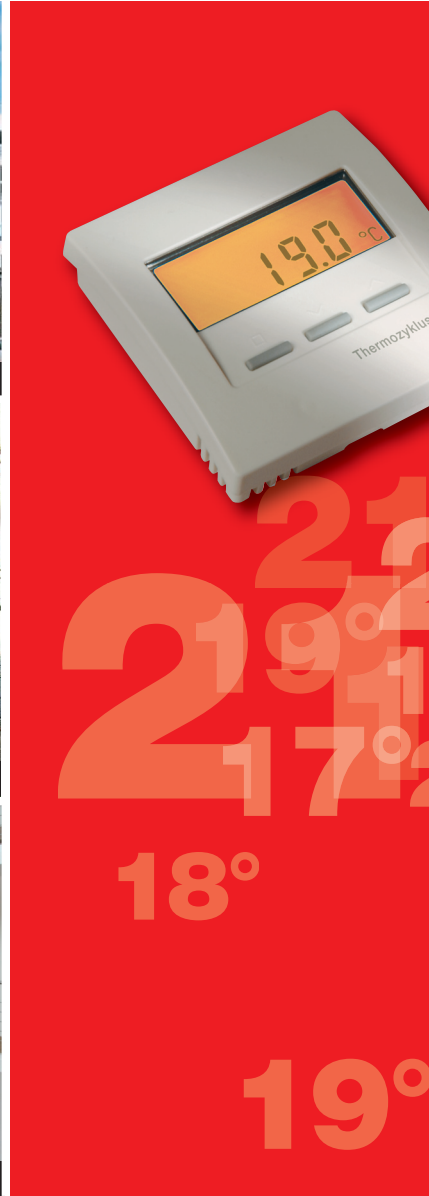
Private houses



Apartment blocks



Special applications



Individual room control
Self-teaching and dynamic –
energy savings included



213371

The intelligent ThermoZYKLUS control – unrivalled accuracy

The patented control algorithm makes the intelligent thermo-cyclic control fast and efficient: It calculates in advance when the heating source has to be switched on and off. It automatically adapts to take into account the characteristics of each heating system, as well as all existing heat sources to the benefit of the user. The system measures, evaluates and processes the temperatures from all controlled rooms.

The ThermoZYKLUS control ensures the best possible comfort from the first use and optimises energy consumption in every zone and every room. The ZE central unit, which is at the heart of this modular system, receives and processes the data from the room units RG, RS and RF (radio). The room units are installed in each room where they measure the temperature and transmit this information to the central unit in real time. The central unit calculates the future temperature profile for each room and controls the valves of the manifolds or the radiators directly or using a switching step.

The SK and SF (radio) direct actuators are mounted on the radiators. They open and close the radiator as directed by the central unit. The intelligent control of the electromechanical actuators make hydraulic balancing easy – all year round, fully automated.

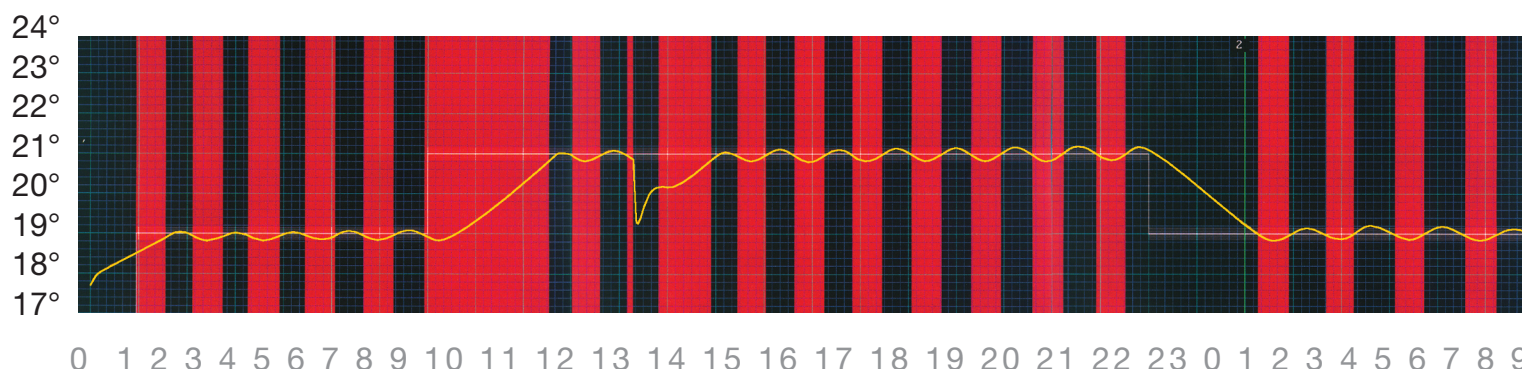
In the wireless version, the FE radio receiver forms the interface between the wireless components and the central unit. Also available: FV radio amplifier, VR flow control, PC programming software PCi-profile, PC evaluation software ThermoZYKLUS-analysis, smartphone apps ... (also refer to separate data sheets)

The ZE5 central unit with its SK/SF actuators has been eu.bac certified (license no. 213371) in line with EN 15500 for water-based underfloor heating systems (Ca = 0.5), radiators (Ca = 0.2) and radiant panels (Ca = 0.4 for heating and 0.4 for refreshing). It is rated in the highest energy efficiency class in line with EN 15232.

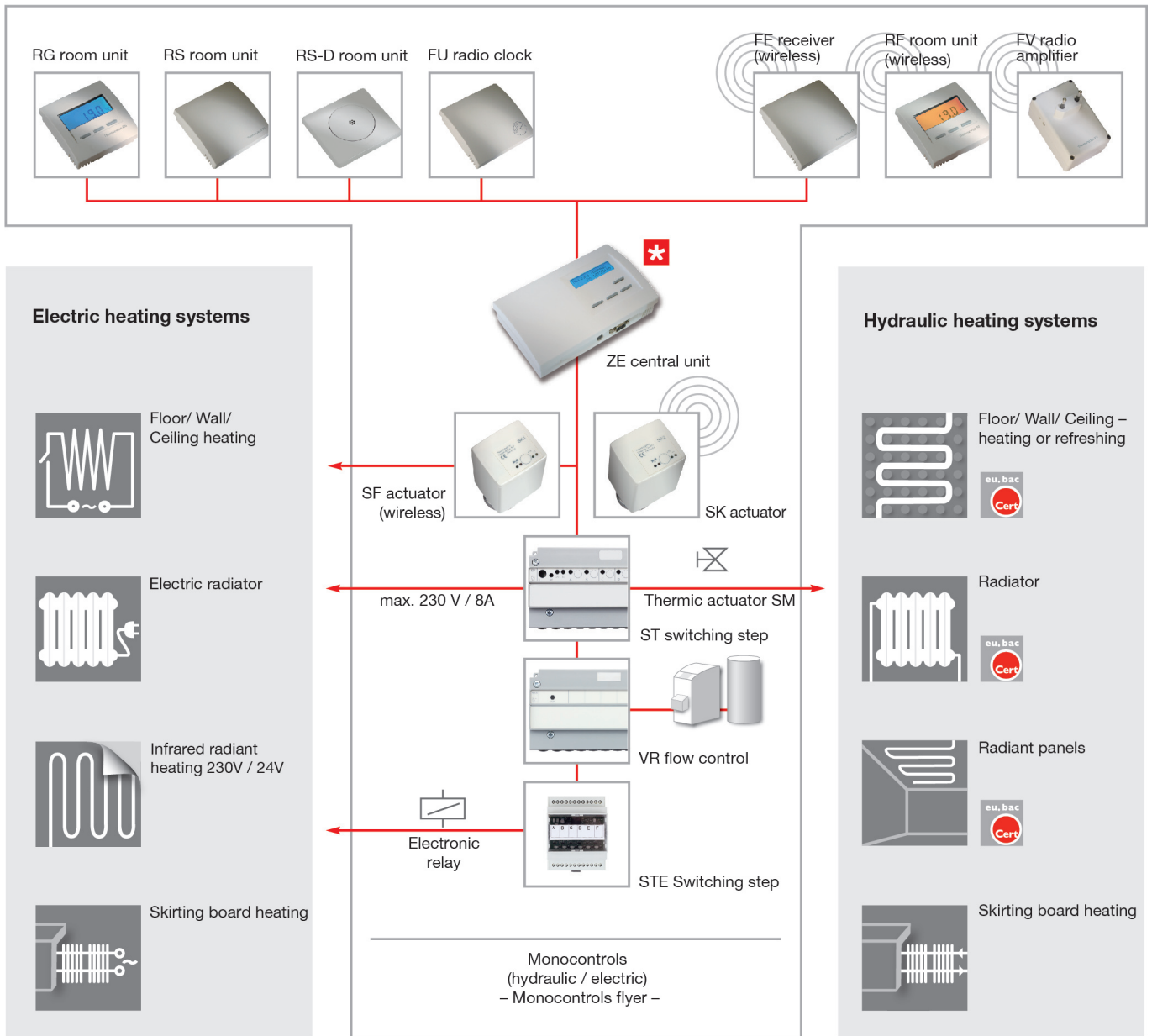
The users set their preferred comfort temperature and the system provides the right implementation – independently and efficiently. The result: control accuracy that is still unequalled: $\pm 0.15^{\circ}\text{C}$! Whether underfloor heating, radiators or other adjustable heating sources. The best possible comfort with the least energy consumption – a real benefit for the operator.

Your advantages at a glance

- works with all energy types and heating systems
- best possible anticipation of inertia
- automatic window open detection without window contact
- connection to building automation systems
- programming and central management
- heating profile analysis and system monitoring
- eu.bac certified for radiator/underfloor/radiant panel
- central unit with energy efficiency class AA
- simple mounting and operation
- bus wiring (serial or star) without polarity
- up to 30 rooms per central unit
- modular design: networking of several central units
- radio and/or cable version freely combinable
- cooling function integrated e.g. for surface heating
- Android + iPhone apps available
- up to 30 % energy savings



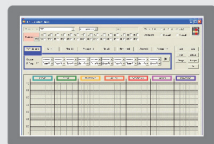
The ThermoZYKLUS ■ System



★ Communication

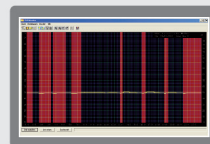
- LAN
- WLAN
- Radio
- Modbus
- CAN-Bus
- SD-card

PCi - profile / Software



- Software to command the THZ-regulation via PC
- Visualisation and programming of all components

THZ-analysis / Software



- Software to analyse the heating of every regulated room in the THZ-system
- Possibility to analyse existing installations

Smartphone / App



- Android, Apple
- Control via WLAN or Internet



Application example – schools and nurseries/modernisation

Situation

Eco-friendly nursery school, combination of different heating units. Overheating in summer, cold in winter: poor user comfort, energy waste.

Solution

ThermoZYKLUS radio & wired: actuators, RS sensors – no adjustment possible, efficient. Dynamic & self-teaching, inertia anticipation, exact temperature measurements = optimised energy performance.



Application example – universities/new buildings

Situation

New building, 27,000 m². Bio-climate building concept with many windows without window opening detection. Complex management, temperature fluctuations, waste of energy. Radiant heating panels.

Solution

ThermoZYKLUS wired version: takes into account existing heating sources, automatic switching off of heating system without window contact, Modbus connection. Easy operation, comfort and optimum energy consumption.



Application example – flats/renovation

Situation

Building with only two heating circuits, cast iron radiators. No central management. Flats are not controlled, users are unhappy. Complex hydraulic balancing process.

Solution

ThermoZYKLUS radio version: Actuators on each radiator, PC software for easy monitoring and programming. Simplified heating management, automatic hydraulic balancing thanks to ThermoZYKLUS intelligence.

These users place their trust in thermocyclic control:

Jonas School in Stralsund, University of Architecture in Nantes, care home in Saumur, secondary school in Germering, church centre in Ottobrunn, Wittmann Tower in Gräfelfing, care home Wartburghöhe, Hotel W Paris, courthouse in Thulle, historic waiting room at the station in Bordeaux, block of flats in Munich, chalets in Courchevel, vicarage in Traunstein, office building in Germering, nursery schools in Nantes / Rimpfing / Geiselwind...

ThermoZYKLUS ■

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