

# VIPA EC Radio

The multi-sensor electronic indicator serves for heat cost billing in buildings with a central heating system. The heat cost allocator allows each resident to share the heating cost of the whole complex of flats with the amount that matches the resident own heat usage.

The heat cost allocator VIPA EC Infra integrates backwater temperature of a radiator as a main index of installed heating power utilization.

## Technology at your side

A modern allocator is controlled by the microprocessor with a memory which contains the information about reading since last 18 months and on the date of accounting period. The device is equipped with highly sensitive temperature sensors and it fulfils all requirements for getting a perfect reading for the correct heat cost calculation. The indicator is also equipped with the electronic-mechanical seal which blocks the device reading at dismounting.

Radio reading data communication brings the highest comfort, security, speed and accuracy of reading data needed for heat bill calculation.

## The quality and accuracy of cost allocation

The heat allocators VIPA use a unique access to the proportional heat consumption indicating and the sequent heat bill calculation. Calculated average temperature of the reading room is the decisive factor, not a heat delivered by a radiator.

## Complex solution

The heat allocator is only one of the factors of quality and rightful heat bill calculation. We also offer the long-time complex rightful heat calculation with our own software VIPACALC which is optimized for quick and trouble-free heat calculation being implemented in tens of thousands flats.

Thanks to this fact you can completely give all worries about heat bill calculation up on us. You obtain easily verifiable, physically and technically evincible heat bill calculation for providing heating service.

*Owners of VIPA CZ s.r.o. are Czech citizens. We have longtime experience in research and development of our original heat expense allocators and with heat cost billing. In case of your interest in detail information do not hesitate and contact us any time.*



## Benefits

- Reading without entering the flat
- The elimination of the manual processing mistakes
- The acceleration of the measuring process
- Heat cost allocator memory for last 18 months
- The full controlled reading without possibility of meter - reader intervention



*Radio data transmission*



*Readable display*



*Compatibility with water meters*



*Coded transmission*



*Modern transmission protocol*



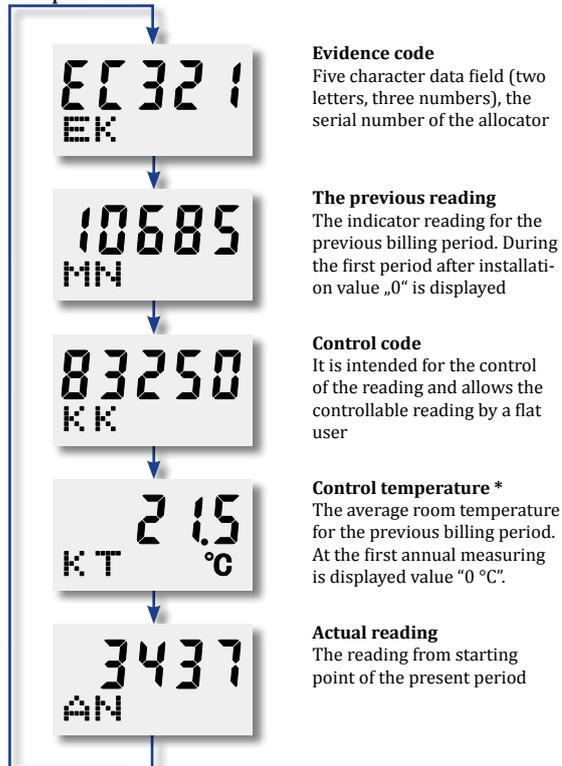
*Made in Czech rep.*

## Displayed data

Two visual loop lines

Switching between loop lines: longtime press

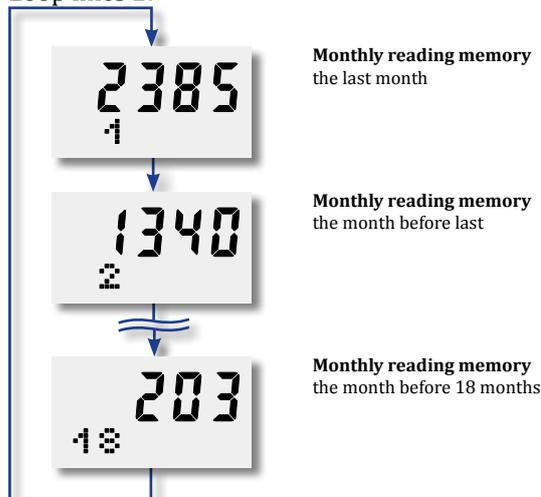
Loop lines 1:



Optional displayed data:

- KZ - The reference backwater temperature
- PZ - Average room temperature
- TZ - The instant backwater temperature
- PZ - The average backwater temperature
- ZD - The end of billing period
- AD - The current date

Loop lines 2:



## Technical data

Operation life	8 years + reserve
Power supply	3volt lithium battery
Display	LC display 5 numeric letters + 2 alphanumeric letters + symbols increased thermal resistance
Scale	Uniform
Protection	mechanic seal, el.-mech. seal with operation detection
Dimensions (mm)	71 x 44 x 60
Transmission protocol	Rcom - two way coded transmission
Operating frequency	868,299 MHz
Channel width	199.951 kHz
Transmitting power (max.)	10 mW
Data rate	19,2 kBd
Allocator memory	reading since last 18 months reading to the date of the billing period
Calendar function	variable heating period start and end variable date of an billing period
Summer reading	$\Delta t > 4 \text{ K}$ (back flow pipe temperature – room's temperature)
Winter reading	back flow pipe temperature $> 10 \text{ °C}$ (or variable)
Operating temperature	0 °C - 80 °C
Operating	push button, 3 press types
Design	3 sensors
Protective category	IP 31 (mounted)

Change of technical parameters of the product is reserved.

## Range of application

The indicator is designed for buildings with two-pipe heating system. We recommend a professional entry consultation in case of one-pipe vertical or horizontal system. It is determined for most radiators and convectors. It is impossible to use it for heating radiators with additional source of energy or for variable heat output, e.g. bathroom ladders with heating cartridge or convectors with a fan.

## Design

The device is generally delivered with 3 sensors. The first sensor measures backwater temperature, integrates particular readings and evaluates its average temperature during the heating period. This average temperature is used for calculation of heat cost for measured room.

The second sensor determines the average temperature of the room during the heating period and serves as a starting sensor when heated during the summer period.

The third sensor ensures electronic protection in case the indicator is mounted very close to the vertical outlet pipe. It eliminates wrong readings in the consequence of back-warming of the return pipe, where the indicator is placed, when a radiator is totally closed.

