

Accurate, simple, and updated daily—the RU-2 electronic heat cost allocator from EMS Electronic Metering Systems reliably and precisely measures the heat output of radiators.

Equipped with two sensors, the EMS-RU-2 continuously measures the temperature of the radiator surface and the room air. The microcontroller integrated into the device uses these values to calculate the radiator's actual heat consumption.

The data is automatically transmitted via radio to a data collector (EMS-DACOS). This eliminates the need to inspect the apartment, take consumption readings, and manually document the consumption values. The elegant and timeless design makes the device a decorative accent on the radiator.

Variably programmable

The EMS-RU-2 offers a wide range of programming options. The billing cutoff date, the start date, and the option to disable metering outside the heating season can all be set as needed.



Large storage capacity and transponder interface

The large storage capacity allows you to retrieve the last 14 daily readings, the last 18 monthly readings, the last 3 annual readings, as well as the highest and lowest measured radiator and room temperatures for each stored month.

The transponder interface integrated into the RU-2 allows for programming, parameterization, and maintenance without having to remove the device from the radiator. This interface can also be used to install software and firmware updates and to read the entire memory contents.



EMS Electronic Metering Systems

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Since 2007, EMS Electronic Metering Systems s.r.l. has been synonymous with innovation and reliable solutions in the fields of energy metering, heat metering, and water metering. Headquartered in Timisoara, Romania, we are a high-tech company known for our innovative and reliable solutions in the fields of energy metering, heat metering, water metering, and remote consumption data transmission. We combine nearly two decades of experience with high quality standards, making us a trusted choice for our customers throughout Europe. EMS Electronic Metering Systems s.r.l. offers more than just consumption meters for energy, heat, and water—at EMS Electronic Metering Systems s.r.l., everything revolves around providing efficient and precise tools for managing energy, heat, and water. Our products embody innovation, durability, and accuracy and have been serving a diverse European market since 2007.



Ideal for multiple heat sources

The device's two sensors, combined with its intelligent analysis method, make it possible to measure only the radiator's actual heat output. This automatically detects and accounts for any external heat sources—such as a tiled stove in the room.

No need to enter the apartments anymore:

The measurement data stored by the heating cost allocator is transmitted via radio to a permanently installed data collector (REDAC system) or to a mobile data collector (Walk-by, MODAC system). A special encryption method reliably prevents any transmission errors.

Due to the low transmission power and minimal transmission duration, electromagnetic interference is ruled out. For mobile data collection, the devices are programmed to send their radio telegrams during a precisely defined time interval.

In central data collection, radio telegrams are received by battery-powered data collectors that are permanently installed in the building's common hallways. The key advantages of central data collection include enhanced data security, the ability to access reading values and stored consumption data at any time, and the option to upgrade with a GPRS link.

Data collectors that have been upgraded with a GPRS link can transmit the stored measurement values fully automatically via cellular networks to the central server of EMS Electronic Metering Systems. This enables efficient energy management, energy benchmarking, and the implementation of a smart submetering system.



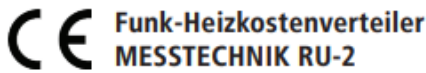
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Model:	EMS-RU-2 Wireless Heat Cost Allocator
Measurement principle:	Two-sensor principle: measurement of the radiator temperature and the room temperature
Life:	10 years + 18 months reserve
Display:	Five-digit LCD, special characters
Reading principle:	Manual reading via the display, readout via transponder, walk-by function, or remote reading via stationary data collectors
Functions:	▶ Individual parameterization of each device based on the specific radiator it monitors, using a power factor and a KC-value ▶ Continuous recording of heat output from the radiators ▶ Storage of data for the last 14 days ▶ Storage of data for the last 18 months ▶ Storage of data for the last 3 years ▶ Recording of the maximum and minimum radiator or room temperatures for each month, including the date ▶ Continuous, cyclical, internal self-monitoring of the following functions (if an error is detected, an indicator is activated on the LCD display and/or an alarm message is transmitted via a wireless signal) ❖ Monitoring the device for tampering attempts ❖ Monitoring of battery voltage ❖ Monitoring for temperature sensor faults or wire breaks ❖ Monitoring for memory errors ▶ Parameterization of the start time for consumption recording (delayed start) ▶ Reading out current temperature values via transponder ▶ Detection of external heat sources (recording the duration for which the room temperature exceeds an individually adjustable threshold, even though the radiator is not in operation). ▶ Configuration of a non-heating period (no recording of heat emission during this time) ▶ Operating mode selection: ❖ Manual reading (radio module deactivated) ❖ Network operation, REDAC system (radio component activated) ❖ Walk-by operation, MODAC system (radio component activated) The desired operating mode can be set at any time on the device using a transponder.
Radio frequency:	868.38 MHz, data encryption
Radio telegrams:	Programmable average number of radio telegrams per day
Protocol content:	▶ Current values ▶ Monthly values (for the last 18 months) ▶ Annual values (for the last three years) ▶ Time-stamped logging of external heat influence ▶ Status messages ▶ Error messages

Manufacturer's declaration of conformity for the wireless heat cost allocator type EMS-RU-2



EG-Konformitätserklärung

Hiermit erklären wir, dass der Funk-Heizkostenverteiler Typ Messtechnik RU-2 in Übereinstimmung mit nachfolgenden europäischen Normen entwickelt, konstruiert und gefertigt wurde. Das Produkt entspricht somit den Anforderungen in Bezug auf Gesundheit und Sicherheit des Benutzers und anderer Personen.

Elektromagnetische Verträglichkeit gemäß der EU-Richtlinie 2004/108/EC

Störaussendung: EN 300 220-1 V2.4.1 (2012-05)
EN 300 220-2 V2.4.1 (2012-05)

Störfestigkeit: ETSI EN 301 498-1 V1.9.2 (2011-09)
ETSI EN 301 498-3 V1.4.1 (2002-08)

Heizkostenverteiler für die Verbrauchswerterfassung von Raumheizflächen – Geräte mit elektrischer Energieversorgung

EN 834:1994
prEN 834:2010

Diese Konformitätserklärung verliert ihre Gültigkeit:

- wenn das Produkt ohne ausdrückliche Zustimmung der MESSTECHNIK Unternehmensgruppe ergänzt oder in sonstiger Weise verändert wird
- wenn Bauteile, die nicht zum Originalzubehör gehören, in das Produkt eingebaut werden
- bei unsachgemäßer Installation oder nicht bestimmungsgemäßer Verwendung



DI Dr. Helmut Gradischnik
GESCHÄFTSFÜHRUNG



Prok. Christian Gradischnik
PRODUKTMANAGEMENT

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EMS - Our Story



EMS Electronic Metering Systems s.r.l., based in Timișoara, Romania, was founded in 2009. As part of a successful Austrian Messtechnik-Group, the company serves as a research, development, and manufacturing hub for the entire group. The Timișoara facility specializes in the development and production of electronic heat cost allocators, electronic heat meters, wireless data collection units, wireless repeaters, wireless adapters, M-Bus technology, and cellular-based consumption data reading systems.

Our production:

At our state-of-the-art production facility in Timișoara, we manufacture a wide range of innovative metering systems designed primarily for the housing industry and sub-metering applications. Our manufacturing processes are engineered for maximum precision and quality, ensuring the production of devices that meet international standards in metering technology.

Our ISO 9001-certified production process guarantees that every stage of manufacturing is carried out with the utmost care and in accordance with the highest quality standards. Furthermore, EMS operates two state-of-the-art test rigs supplied by one of Central Europe's most renowned manufacturers of precision testing equipment. Specifically designed for the MID-compliant production of heat and water meters, these test rigs ensure that all our metering devices comply with the European Union's Measuring Instruments Directive (MID) as well as stringent European standards, specifications, and regulations regarding measurement accuracy and conformity.

Through continuous research and development, we maintain the superior performance of our products, ensuring they consistently meet the latest technological requirements and perfectly satisfy our customers' individual needs. This philosophy is central to our commitment to continuous improvement and to delivering products of the highest quality to our customers.

Our expertise:

EMS focuses particularly on the development and production of consumption metering devices for the sub-metering sector. These products are used in various industries, especially for the precise measurement and monitoring of energy consumption and distribution.

Innovative solutions for the conscious and economical use of heat, water, and energy – for a sustainable future.

In addition to hardware manufacturing, EMS develops advanced firmware and software solutions, including systems for the remote reading of metering devices.

Our intelligent sub-metering systems enable the efficient optimization of energy consumption—particularly in the residential sector—and the targeted management of resources. EMS sub-metering products allow residents to monitor and manage their heat, water, and energy consumption with transparency and clarity.

This encourages more conscious usage habits: users who conserve resources benefit financially through lower costs, whereas wasteful behavior leads directly to higher bills. This incentive structure supports sustainable resource use, resulting in a significant reduction in overall consumption and, consequently, lower total costs for heat, water, and energy. Through our solutions, we actively contribute to the digitalization of the energy sector and provide tailored systems that meet our customers' specific needs. In doing so, we promote not only the efficient use of heat and energy but also the conscious and sustainable management of water resources.

Quality and Innovation

EMS places great importance on the highest quality and relies on state-of-the-art technologies across all areas of product development and production. We continuously work on improving our solutions to meet the ever-changing demands of the market.

Trust and Partnership

With over 15 years of experience in the metering industry, EMS is a trusted partner in the development and manufacture of consumption meters, associated remote reading technology, and related system solutions. As part of an established international metering group, EMS offers not only reliable and sustainable products but also excellent service and comprehensive support to its customers.

For further information or tailored solutions, we look forward to hearing from you:

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Email: info@ems-electronic.com, Internet: <https://ems-electronic.com>



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