

MULTICAL® 21

Cold water metering for households, blocks of flats and industry



Ultrasonic water meter

MULTICAL® 21 is your guarantee that the consumption of every single litre of water is accurately registered and billed. By contrast to a traditional meter, the electronic ultrasonic meter operates with low start and stop flows during the entire life of the meter. It has no moving parts and is, thus, resistant to wear and impurities in drinking water. In combination with the meter's longevity, including up to 16 years' battery life and minimum operating costs you are guaranteed the most cost-effective solution.

Smart design

allows you freedom to install the compact MULTICAL® 21 in all operating environments, horizontally as well as vertical-ly independent of piping and installation conditions. The meter is vacuum sealed to prevent humidity from reaching the electronics. You hereby avoid condensation between glass and specially designed big display. The meter is watertight, IP68 type tested. This makes it suitable for installation in meter wells and for remote reading too via the built-in wireless M-Bus – rapidly and safely.

Water metering without waste

is what it is all about. The environmental report, Carbon Footprint, documents the water meter's high reusability and low environmental impact. Meter case and measuring tube are made of the synthetic material PPS which is free from lead and other heavy metals. – And naturally MULTICAL® 21 has built-in leak surveillance, which helps you minimize the waste of water by possible leakage - for the benefit of the environment and the economy.



MULTICAL® 21 – the most cost-effective solution for cold water metering

The electronic ultrasonic water meter MULTICAL® 21

MULTICAL® 21 is a static cold water meter based on new technology. MULTICAL® 21 is a MID-classified meter in accuracy class 2, which has been type tested according to OIML R 49. The meter is used for measuring cold water with temperatures from 0.1°C to 50°C.

The MULTICAL® 21 range comprises three meter sizes: Q3 = 1.6 m³/h, Q3 = 2.5 m³/h and Q3 = 4.0 m³/h. The meter is available with connections G¾ for ½" pipe or G1 for ¾" pipe as well as overall lengths 105 mm, 110 mm and 130 mm, and furthermore with extension pipes adjusted for nominal dimensions of 165 mm, 190 mm and 220 mm.

MULTICAL® 21 is sealed and verified, and the meter can and must only be opened by Kamstrup. If the meter has been opened and the seals have been broken, the meter is no longer valid for billing purposes, and the factory guarantee no longer applies.

Accuracy and longevity

MULTICAL® 21 has been type tested according to OIML R 49, which guarantees long-term stability as well as accuracy and reliable measurement. The meter has no moving parts and is thus resistant to impurities in the water, which secures longevity. MULTICAL® 21 measures with an

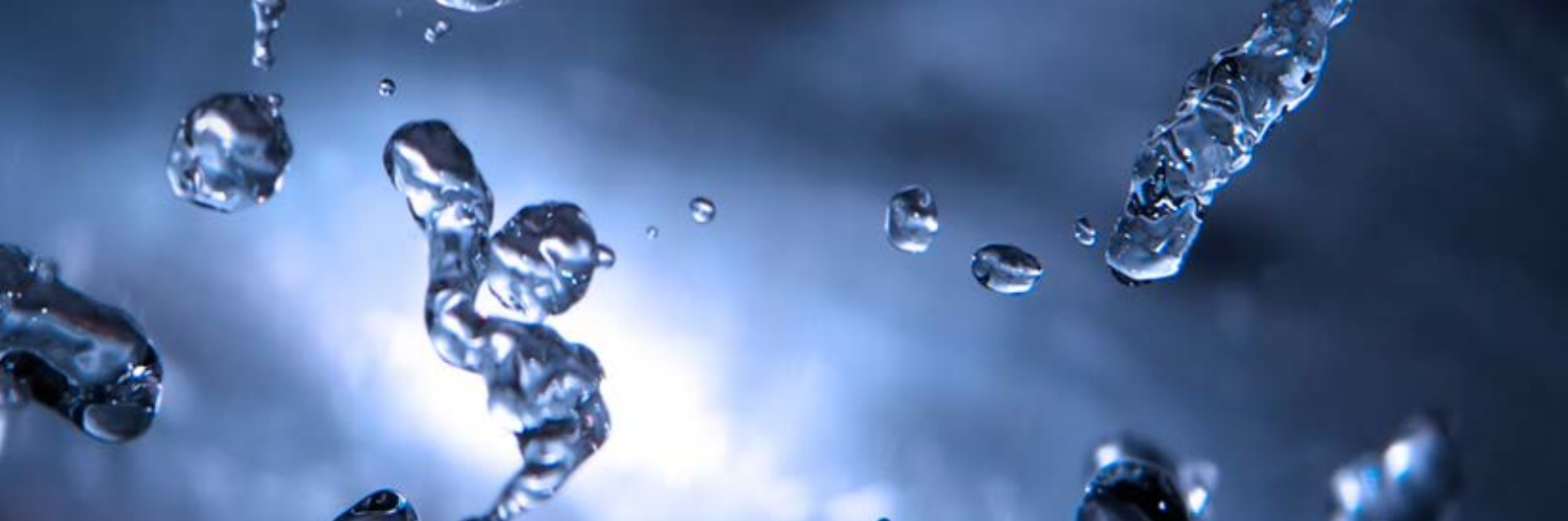
accuracy which is better than $\pm 2\%$, and the flow meter's long-term stability and pinpoint accuracy is maintained even at flow sizes, which markedly exceed the nominal flow. With a starting flow of 3 l/h accurate measurement is maintained even at low flows. Thus, the consumer's bill matches the actual consumption.

Flexible installation

The compact design makes it easy and fast to install MULTICAL® 21. The meter can be installed both horizontally and vertically independent of piping and installation conditions, in both new and existing installations. The specially designed big and mist-free display makes it easy to read the meter. In addition to volume reading, a graphic indication of current flow and a number of information codes are displayed.

Furthermore, MULTICAL® 21 is fitted with an optical eye which makes it possible to read consumption data, data logger and serial PC connection for configuration of the water meter.





High demands require high standards

Ultrasound

The static ultrasonic water meter MULTICAL® 21 is not exposed to wear due to impure water – contrary to traditional cold water meters. More than 20 years' experience has proved that the ultrasonic principle is most reliable in the long run. Two ultrasonic transducers are used to send sound signals both against and with the flow. The ultrasonic signal travelling with the flow reaches the opposite transducer first. The time difference between the two signals can be converted into flow velocity and thereby also volume.

Environment friendly materials

Meter case and measuring tube are made of the synthetic material PPS which is free from lead and other heavy metals. The water meter MULTICAL® 21 as a whole fulfils requirements to discharge of heavy metals. The environmental report (the so-called Carbon Footprint) of MULTICAL® 21 documents that the meter has low environmental impact as min. 80 % of the materials can be reused when the meter is withdrawn from operation.

Vacuum sealing

MULTICAL® 21 is constructed as a vacuum chamber of moulded composite material, which fully protects the electronics against penetration of water. The meter has been IP68 type tested, which documents that it is 100 percent waterproof. This means that the meter can be installed in bathrooms, where it is sprayed with water and in meter wells, which are frequently filled with water.

Remote reading

MULTICAL® 21 comes with integral data communication for wireless M-Bus. Wireless M-Bus is one-way radio communication with open protocol. A Wireless M-Bus System consists of MULTICAL® 21 with Wireless M-Bus, a Wireless M-Bus Reader and a PC program for configuration and reading. The list of meters is transferred to the Wireless M-Bus Reader and reading data are quickly wirelessly exchanged between Wireless M-Bus Reader and PC-program. The data can subsequently be exported to a billing program.

Leak surveillance

MULTICAL® 21 constantly monitors the cold water consumption. If the meter does not register minimum one hour a day without flow, it can be an indication of an untight faucet or a running toilet cistern. This warning system helps you to quickly discover water waste, which reduces both water consumption and expenses.

Billing

Guarantee for accurate meter data is decisive when it comes to the consumer's reliance in consumption billing. It gives consumer satisfaction and secures payments. The long-term stable and accurate ultrasonic water meter MULTICAL® 21 with Wireless M-Bus gives you optimum data security, and presents the consumer with a bill for the household's actual consumption and thereby a bill which the consumer trusts completely.



Our ultrasonic metering solution – your **ultra**strong partner

Kamstrup is a world leading manufacturer of system solutions for smart energy and water metering.

Our core areas are measurement of heat, cooling, water and electricity. Furthermore, in co-operation with you we develop AMR and service solutions that are customized for your company.

We are represented in more than 60 countries worldwide by Kamstrup sales and subsidiary offices or by our distributors.

All employees work hard to offer your company the very best service and to respond to global market information provided by our trusted partners.

In this way we maintain a strong mutual co-operation.

The Kamstrup brand

– when you demand quality, reliability, innovation and partnership.



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Think forward