

Cooling & Combined Heat/Cool Metering

MULTICAL[®] 602 and ULTRAFLOW[®]

High temperatures and humidity challenge the electronics of flow parts used for measurement of cooling and combined heat/cooling. MULTICAL[®] 602 & ULTRAFLOW[®] based on ultrasonics provide you with a moisture resistant flow part.

High resistance to moisture penetration is the ultimate demand to Kamstrup cooling and combined heat/cooling meters. Moisture resistance guarantees longevity as well as exact measuring and billing – even when exposed to condensation under extreme climatic conditions.

High accuracy of measuring and easy access to consumption data contribute to keeping the annual operating costs at a minimum. High accuracy – the quality mark of MULTICAL[®] 602 & ULTRAFLOW[®] – secures the ultimate solution to trustworthy billing.



Cooling & Combined Heat/Cool Metering Features

The perfect operational solution



MULTICAL® 602



Flow Sensors ULTRAFLOW®54 qp 1,5 to 100 m³/h



Flow Sensors ULTRAFLOW® qp 150 to 1000 m³/h

The Calculator MULTICAL® 602

Kamstrup's cooling and combined heat/cooling meters provide you with state of the art technology. The advanced calculator, MULTICAL® 601, is used together with the complete range of flow sensors, and even at extreme low temperature differences, the measuring accuracy is second to none.

The Flow Sensor ULTRAFLOW®

The ULTRAFLOW® range comprises flow sensors between qp 1,5 and 1000 m³/h. ULTRAFLOW® is used for measurement of cooling and combined heat/cooling in all water based plants with flow temperatures from 2°C to 50°C.

The measurement conversion is performed by Kamstrup's unique ASIC design, providing the best functionalities like absolute time measurements and self diagnostics.

The accuracy Class 2 as well as the wide dynamic measuring range (qp/qi 100:1) and the high permanent overload capability (qs/qp 2:1) are standard features of all flow sensors.

Our meters are divided into two groups by size and construction type:

Cooling – Combined Heat/Cooling Meters – qp 1,5 to 100 m³/h

To ensure immunity against flow disturbances and obtain the most precise measurements, cooling meters DN15-20 utilise the single beam ultrasonic principle, while cooling meters DN25-80 use the triangle beam principle. ULTRAFLOW® is a moisture resistant flow part, as the signal converter is located in the base of the calculator.

Cooling – Combined Heat/Cooling Meters – qp 150 to 1000 m³/h

The measuring method used in the large meters is the dual beam ultrasonic principle which ensures very high accuracy and provides the flow meters with high resistance against flow disturbances. The encapsulated signal converter, located on the flow meter, transmits calibrated pulses to the calculator.

Cooling & Combined Heat/Cool Metering Specifications

High Demands Require High Standards

Moisture Resistance

High temperatures and humidity do not have a chance against MULTICAL® 601 and ULTRAFLOW® for cooling and combined heat/cooling. Thanks to its unique design and distinctive electronics, ULTRAFLOW® is resistant to moisture penetration. In other words, ULTRAFLOW® is the right choice for you who demand moisture resistant flow parts, exact measuring and operating stability.

Memory

MULTICAL® 602 stores all consumption data for 1392 days, 460 days, 36 months and 20 years. Analysis of these registers permits closer understanding of energy usage through troubleshooting, diagnostics and tamper detection.

Dual Interface

MULTICAL® 601 is able to perform data communication on two ports simultaneously, e.g. LONWORKS for Building Management Systems and M-Bus for billing purposes. This ensures ultimate data reliability at the lowest possible cost.

Tamper Protection

MULTICAL® 602 is equipped with an info event counter which reveals and registers all irregularities, among those tamper attempts in the shape of systematic cutoffs. Registration of error codes combined with compulsory sealing ensures high tamper protection.

Ultrasonics

More than 15 years of experience has proved that the ultrasonic principle is the most reliable one in the long term. The flow is measured using bidirectional ultrasonic technique based on the transit time method. Two ultrasonic transducers are used to send the sound signal both against and with the flow direction.

Accuracy

The unique temperature measuring circuit and precisely paired sensors guarantee accurate cooling measurements, even at temperature differences below 1K. The long-term stability and accuracy of the flow meter are maintained even at flow rates twice the nominal flow rate.

Remote Reading

MULTICAL® 602 provides you with reliable remote reading options such as M-Bus, or LONWORKS.

Billing

Accurate measurements aim at enhancing the consumers' confidence in the accuracy of billing. This leads to reduced consumer complaints as well as reduced revenue leakage. The perfect couple – MULTICAL® 602 and ULTRAFLOW® – informs you of accurate energy usage and provides you with trustworthy billing, any time.

Schneider Electric Field Devices

Our Ultrasonic Heat Solution – Your Ultrasonic partner

These heat meters are developed and produced by the world-leading supplier of energy meters, coupled with the systems know-how of Schneider Electric this combination has a world class, unrivaled performance for energy control and reduction.

Global Leader in Building IT

Schneider Electric's Buildings Business delivers more than solutions for HVAC, access control, video security management, lighting control & energy efficiency.

Our focused approach to building systems strips away layers of complexity to integrate multiple systems in a building to achieve enterprise wide facilities management.

This uses less energy, tightens security, speeds response times and maintains optimal environments for occupants AND saves you up to 36% on operating costs over time.