

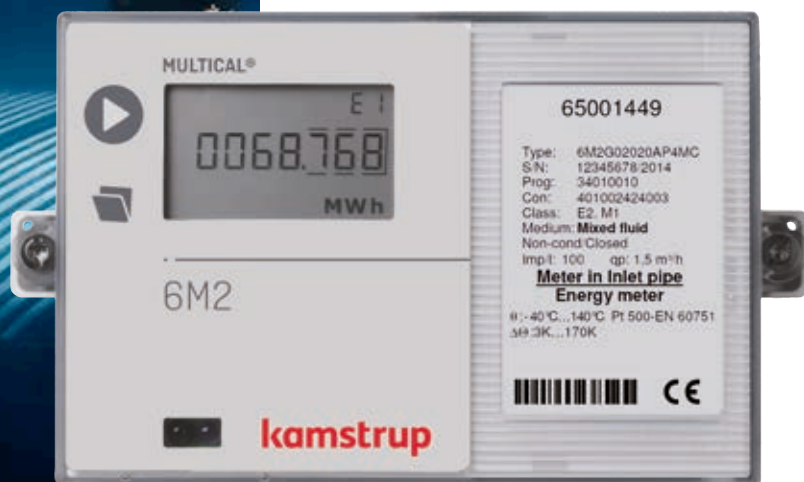
MULTICAL® 6M2

kamstrup



The single-box solution that is taking energy efficiency to a new level

- Cooling
- Solar heating
- Geothermal



Keep Cool – Stay Warm

Whether comfort cooling or solar heating, you can get the maximum energy efficiency of your system with a MULTICAL® 6M2 energy meter. MULTICAL® 6M2 lets you monitor the performance of a heating or cooling system 24/7 to get the most out of your clean energy investment.

Tailored for mixed fluids, MULTICAL® 6M2 is compatible with most common antifreeze liquids (tyfocor, antifrogen, ethylene- & propylene glycol) used in industrial, commercial and domestic applications.

- ✓ Sub-zero temperature measurement
- ✓ Programmable chemical composition and concentration level
- ✓ Adjustable for any application: Heating, cooling, solar and geothermal

A Kamstrup meter as you know it:

- Reliable
- Robust
- Accurate

Mixed fluids have a lower specific heat capacity compared to that of water. The type of antifreeze liquid and the concentration are freely programmable and thus MULTICAL® 6M2 can compensate for the unique specific heat capacity in each application, ensuring a high accuracy regardless of the chemical composition or the application.

MULTICAL® 6M2 can operate in **sub-zero temperatures**, with a temperature range of -40...+140 °C.

MULTICAL® 6M2 can be fitted with a wide range of **communication modules** to allow data integration with Building Management Systems through pulsed outputs, M-Bus, LonWorks, BACnet or Modbus.



Keep track of your energy efficiency

As with all Kamstrup meters, MULTICAL® 6M2 can be supplied with power or battery. The battery has 13 years lifetime.

MULTICAL® 6M2 is your guarantee that energy in any mixed fluid application is monitored and measured accurately during the entire lifetime of the meter with an absolute minimum of maintenance checks.

The operating costs are minimal and cost saving thereby a reality.

Sharp analysis

MULTICAL® 6M2 constantly monitors power supply and the function of the temperature sensors.

If an error occurs an INFO code will appear in the display.

An info logger registers and stores all irregularities and changes. MULTICAL® 6M2 is also fitted with an integral RTC and saves yearly, monthly, daily and hourly loggers which can easily be read and analysed as part of the daily operations optimization.

Hassle-free installation

MULTICAL® 6M2 is a single-box solution containing a preprogrammed integrator, a mechanical flow meter and temperature sensors. No need for configuration or pairing of calculator and flow part; just bring the box to the installation site as it is.

Easily adjustable

With the free download-able configuration software METERTOOL you can easily configure/reconfigure MULTICAL® 6M2 and change the chemical composition to fit any installation.



Fluid codes

MULTICAL® 6M2 is programmed to a certain chemical composition and concentration level based on the 4 digit fluid code. The energy calculation is based on the K-factor for any given operating condition and taking into account the current temperatures, fluid type and concentration. The table illustrates a typical example where the relative K-factor has been calculated for several fluid types and compared to that of water.

Fluid	Fluid code	Relative K-factor [%]
Water	-	100
Monoethylene glycol	1130	91
Propylene glycol	1330	94
Tyfocor	2030	95
Tyfocor L	2130	94
Antifrogen N	3030	92
Antifrogen L	3130	95
Tyfocor LS Standard	2200	88
Tyfocor LS Arctic	2300	83
Tyfocor LS Medit.	2400	95
Antifrogen SOL HT	3200	83

Please note that there is no proportional relationship between the K-factor and the temperature or concentration between the different fluid types.

* The table illustrates an example where the K-factor is calculated for a mixed fluid with a 30 % concentration and with temperatures at 15 °C in inlet and 5 °C in outlet.

** The K-factor is calculated with temperatures at 15 °C in inlet and 5 °C in outlet. The fluids are premixed.



Kamstrup A/S

Industrivej 28, Stilling
 DK-8660 Skanderborg
 T: +45 89 93 10 00
 F: +45 89 93 10 01
 info@kamstrup.com
 kamstrup.com

Think forward