

# The cooling meter MULTICAL® 603



**kamstrup**

## Facts Advantages Benefits

MULTICAL® 603, the intelligent meter built from Kamstrup's proven long-term reliability and accuracy is packed with intelligent features that will help you save time and resources during the life time of your meter installation.

Due to the unique design of the flow sensor, ULTRAFLOW®, the meter delivers high accuracy with minimized loss of pressure and with a high level of resistance to turbulence. In short: High accuracy and high performance, delivering measurements you can rely on.



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# Technical specifications



Heat meter approval [MID, EN1434]	DK-0200-MI004-040
Cooling meter approval [BEK-1178, EN1434]	TS 27.02 012
Temperature range	2...180 °C
Differential temperature	3...178 K
Temperature of medium	2...130 °C
Mains-supplied	24 VAC/VDC or 230 VAC
Battery-powered	1x D cell, 2 x A-cells
Battery life <sup>1)</sup>	Up to 16 years
Flow range	$q_p$ 0.6...1,000 m <sup>3</sup> /h <sup>2)</sup>
Flow sensor cable length	2.5...100 m <sup>3)</sup>
Temperature sensor	2- or 4-wire, Pt500 or Pt100
Temperature sensor cable length	1.5...100 m
Protection class	Calculator IP65, ULTRAFLOW® IP67/IP68
Integration mode (backup)	2...64 s
Measuring unit	MWh – kWh – GJ – Gcal
Modules	2 connectors
Integrated wired M-Bus	✓ [option]
Data and analog modules	✓
M-Bus modules (Wired)	✓
Advanced modules (Modbus, BACnet)	✓
Split meter solution	✓
Connection with third-party flow sensors <sup>4)</sup>	✓
Backlit display	✓ [option]

1) The battery life depends on various factors such as integration and reading intervals.

2) MULTICAL® 603 can be ordered with the Kamstrup ultrasonic flow sensors of the type ULTRAFLOW®.

3) The standard cable length is 2.5 m, 5 m and 10 m. Can be extended up to 30 m with cable extension box with extended flow info codes. Can also be extended up to 100 m with Pulse Transmitter, however without extended flow info codes.

4)  $q_p$  0.6...15,000 m<sup>3</sup>/h

# Future-proof your installation with full flexibility

MULTICAL® 603 offers full support for remote reading of data loggers for billing purposes and gives you instant access to the information needed to analyse and optimise your distribution network. The data loggers are fully programmable to save yearly, monthly, daily, hourly and minute values. This lets you effectively analyse and diagnose your application for faster identification of load profiles, errors and inconsistencies.

MULTICAL® 603 can be equipped with a wide range of advanced communication modules, e.g. Modbus, BACnet, Wired M-Bus.



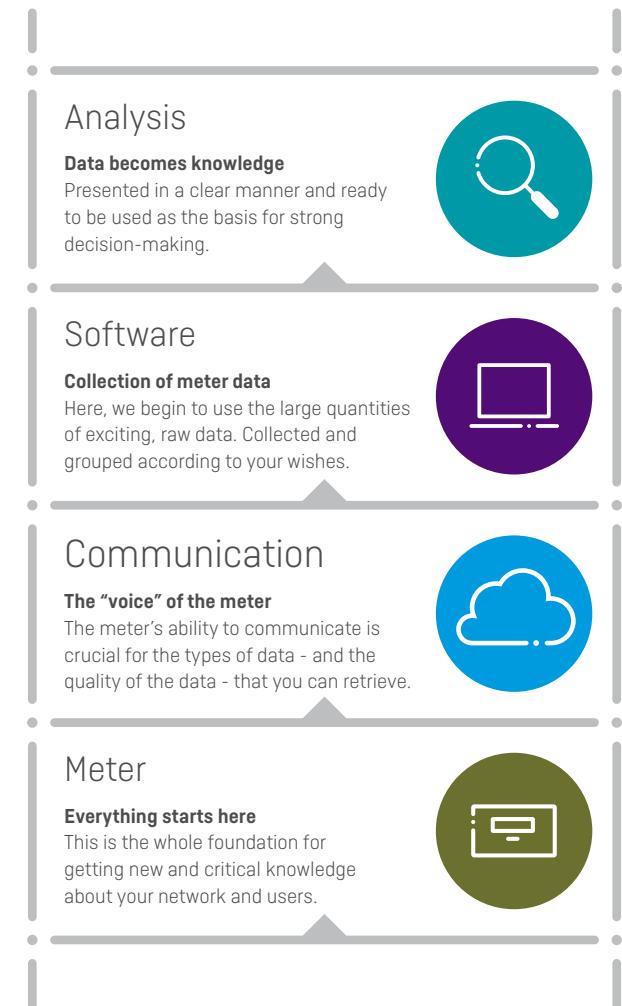
Fact	Advantage	Benefit
<b>Autodetection of ULTRAFLOW®</b>	The calculator automatically detects the connected ULTRAFLOW® and adapts meter factor and nominal flow accordingly	Low stockholding of calculator types and reduced risk of faulty meter factor
<b>Three communication channels</b>	Two module slots without restrictions on module selection. Option for integrated wired M-Bus, for example for billing, management and BMS systems, respectively.	Easily integrates in all types of AMR and BMS systems. Large range of communication modules e.g. Modbus, BACnet, LON and M-Bus
<b>Very low power consumption</b>	Up to 16 years of battery life with two connected ULTRAFLOW®	Possibility of remote reading of a battery-supplied meter with leak detection
<b>Faster integrations and higher resolution</b>	Down to 2 seconds integrations and 7 or 8 digit high resolution values mean more accurate measurements	The accurate measurements means a better basis for more in-depth consumption analysis
<b>Remotely read data logger</b>	Information for billing of energy and diagnostic efficiency can be remotely read	Faster troubleshooting and better basis for efficient energy consulting
<b>Software download</b>	Easy to update the calculator or module software with wired M-Bus or with the optical read-out head	Get the newest calculator or module software without replacing the calculator or module
<b>User-friendly design</b>	Easy configuration on site through the meter's three front keys and the backlit display	Save time and money with user-friendly on-site maintenance of the calculator
<b>High IP rating IP65</b>	Robust and well suited for condense environments	Minimize investment in maintenance or new meters replacement due to failing meters in condensing environments
<b>Split meter</b>	The same size screwed connections for both ULTRAFLOW®, temperature sensors and communication modules makes it easier to install or change subassemblies with just the use of one screwdriver	Faster installation/maintenance time and the possibility to replace a subassembly without needing to replace the whole meter
<b>Improved wired M-Bus module</b>	All M-Bus applications to be covered by just one configurable M-Bus module	Faster start-up, shorter reading intervals and configurable installation

# The digital value chain

You cannot optimize what you do not measure, but...

"If you want to exploit the full potential of intelligent energy measurement, you need the right tools to transform data into knowledge that you can act on."

Kamstrup's value chain includes everything from meters to communication solutions, software and analysis options.



**Think forward**