Ultrasonic Cooling Meter

Radio-ready ultrasonic cooling meter type 3.2.1

Measure cooling consumption accurately with readout via radio.

The latest generation Techem radio-ready ultrasonic cooling meter are calculator, volumetric measuring unit and temperature sensor in one. The volume detection is based on the ultrasonic principle with maximum precision and minimal installation effort.

The key points:

- Highest measurement accuracy and stability of flow rate using the ultrasonic principle, even the smallest flow rates can be accurately detected
- No moving parts = no mechanical wear
- Extensive display and memory functions for servicing and statistics
- Compact design, detachable calculator, optical interface
- No calming sections in the inlet or outlet required
- Installation in any position, even overhead
- Heat Meter: Certified according to MID (Please note the requirements in some countries for installation of temperature sensor with meters size DN25)
- Cooling Meter: PTB TR K7.2 approved
- Return temperature sensor mounted to connector

Versatile

The ultrasonic cooling meter is designed for use in individual residential units, but can also be used in district cooling transfer stations. A variant for heating circuits is also available. The further variant with a shorter measurement cycle enables particularly precise detection of water energy.

Ready to use

The ultrasonic cooling meter is prepared for device and energy monitoring ex works. Just install, plug in and immediately the functionalities are hundred percent ready. Also, the meter provides reliable warnings of pollution or air in the pipe from the word go.

Future capable

The meter is already enabled for wireless operation (Techem Radio 3). This enables reading data to be independently transferred from the apartment, so the resident does not have to be present and nobody enters the flat. The need for on site intermediate readings is eliminated. Due date readings also provide all mid-month and end of month data. Vario 3 meters have a radio module which can be activated at any time.

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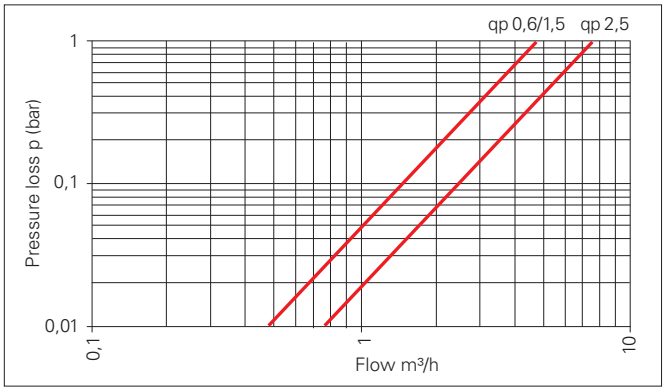
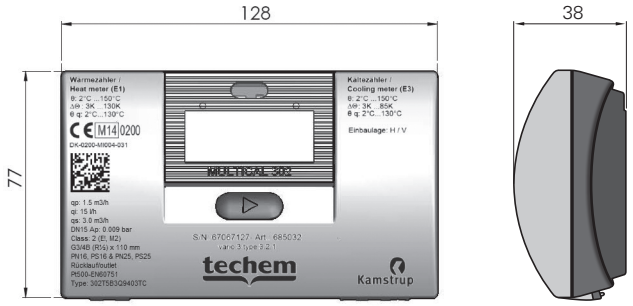
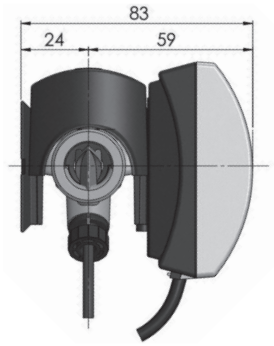


Pressure loss curve





Technical Data **Main meter**

Nominal flow rate qp	m³/h	0.6	1.5	2.5
Max. flow qs	m³/h	1.2	3.0	5.0
Minimal flow qi	l/h	6	15	25
qi /qp			1:100	
Pressure lost at qp	mbar	20	90	90
Kvs value Δp = 1bar	m³/h	5	5	8
Connection thread on meter		G¾B	G¾B	G1B
Length of volume transducer	mm	110	110	130
Nominal width DN		15	15	20

Mechanical Data

Protective category counter		IP65
Protective category volume unit and temperature sensors		IP68
Ambient temperature	°C	5...55
Heat meter	°C	2...130
Cooling meter	°C	2...130
Heat-/Cold-meter	°C	2...130
Medium in volume unit		water
Storage temperature	°C	-25...60 (empty device)
Nominal pressure		PN16
Cable of volume unit	m	1.2 (non removable)
Cable of temperature sensor	m mm	1.5 (non removable) ø 5.2 PT 500
Battery		3.65 VDC, 2 x A-cell-Lithium

Approval Data

Guide line		EN 1434:2007, prEN 1434:2013 and PTB TR K7.2
Heat meter approval Temperature range Temperature difference	°C K	DK-0200-MI004-031 2...150 3...130
Cooling meter approval Temperature range Temperature difference	°C K	PTB TR K7.2 (22.72/13.04) 2...150 3...85
EN 1434 description		Class of accuracy 2 and 3 Class of environment A
MID description Mechanical environment Electromagnetic invironment		Class M1 and M2 Class E1

Technical data **RF**

Radio data		Consumption data from 12 mid-month and end of the month values, Due date value and status information
Operating frequency	MHz	868,95
Transmitting power	mW	3...10
CE conformity		In compliance with Directive 1999/5EC

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