

## Ultrasonic Heat Meter

# Radio-ready ultrasonic heat meter type 3.2.1

Measure heat or cooling consumption accurately with readout via radio.

**The latest generation Techem radio-ready ultrasonic heat 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

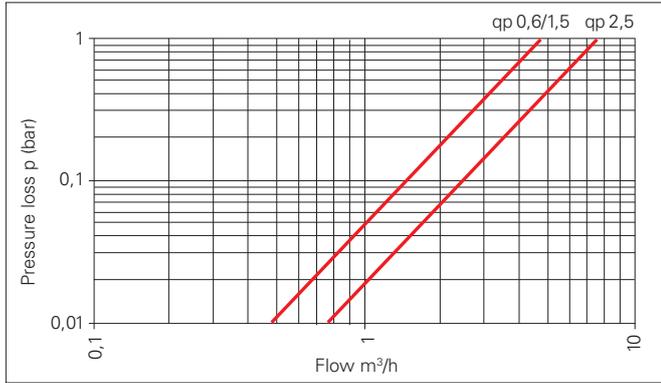
The ultrasonic heat meter is designed for use in individual residential units, but can also be used in district heating transfer stations. A variant for cooling circuits is also available. The further variant with a shorter measurement cycle enables particularly precise detection of hot water energy.

### Ready to use

The ultrasonic heat 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.



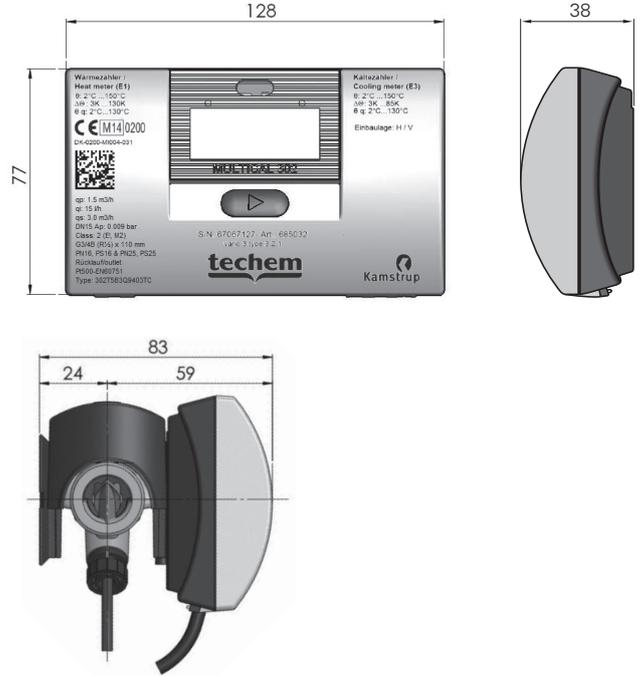
Pressure lost curve

### 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 $\Delta p = 1\text{bar}$	m³/h	5	5	8
Connection thread on meter		G3/4B	G3/4B	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
Cold 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 (the cable isn't removable)
Cable of temperature sensor	m	1.5 (the cable isn't removable)
	mm	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 K72
Heat meter approval		DK-0200-MI004-031
Temperature range	°C	2...150
Temperature difference	K	3...130
Cold meter approval		PTB TR K7.2 (22.72/13.04)
Temperature range	°C	2...150
Temperature difference	K	3...85
EN 1434 description		Class of accuracy 2 and 3 Class of environment A
MID description		
Mechanical environment		Class M1 and M2
Electromagnetic environment		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 1999/5/EC