

Ultrasonic heat and cooling meter for residential, sub-metering, district heating / cooling

Landis+Gyr+  
manage energy better



Ultrasonic thermal energy meter

**The Versatile**

**ULTRAHEAT / ULTRACOLD  
T450**

The universal meter -  
applicable in building services and district heating -  
precise, reliable, flexible  
and with a high degree of economic efficiency



## FLEXIBLE



### **Be able to react to all circumstances at any time**

The T450 is versatile: With exchangeable temperature sensors, exchangeable power supply and one slot for communication modules, the T450 can be adapted to the system requirements at any time.

Furthermore, the T450 offers exceptional flexibility especially due to its calibration logbook. The installation location, energy unit and sensor type can be changed at any time - even during operation. Also multiple firmware updates are possible.

## YOUR BENEFITS:

The T450 adapts itself flexibly to future requirements and developments. This means fewer stock variants and fast response times.

## PRACTICAL



### **Simple operation and handling**

The T450 focuses on practical use and ease of operation: Two pushbuttons simplify the handling of the device and are easy to use, even with the lid open.

Large installation spaces allow easy connection of communication cables and sensors. Electronic and communication modules are protected by a frame to prevent damage.

M-Bus modules have four terminals instead of two. This allows daisy chaining, whereby junction boxes can be omitted.

## YOUR BENEFITS:

This enables a quick and error-free installation. In addition, the T450 has a clear labeling, which allows you to pinpoint the technical specifications immediately.

## Intelligent measurement technology for exceptional reliability

The ULTRAHEAT®T450 is a compact and at the same time flexible ultrasonic meter, which is suitable for many, especially demanding applications. Robustness, easy installation, on-site configurations, retrofitting of communication modules, sensors or power supply - these are just a few of the features that distinguish the T450. The new electronic design enables power supply via M-Bus and thereby an almost unlimited service life. The unique calibration logbook makes it possible to change the installation location, sensor type and energy unit at any time.



- Heat meter
- Cooling meter
- Combined heat / cooling meter

### Characteristics and features

#### ROBUST and DURABLE

- Stainless steel transducers- resistant to:
  - Abrasion and particles
  - Deposits and chemical residues in the heating circuit
  - Pressure peaks and negative pressure
- Temperature resistant - 130°C permanent
- Also for difficult environmental conditions: IP68 for calculator and volume measuring unit possible
- Long service life due to extremely efficient electronics

#### INTELLIGENT

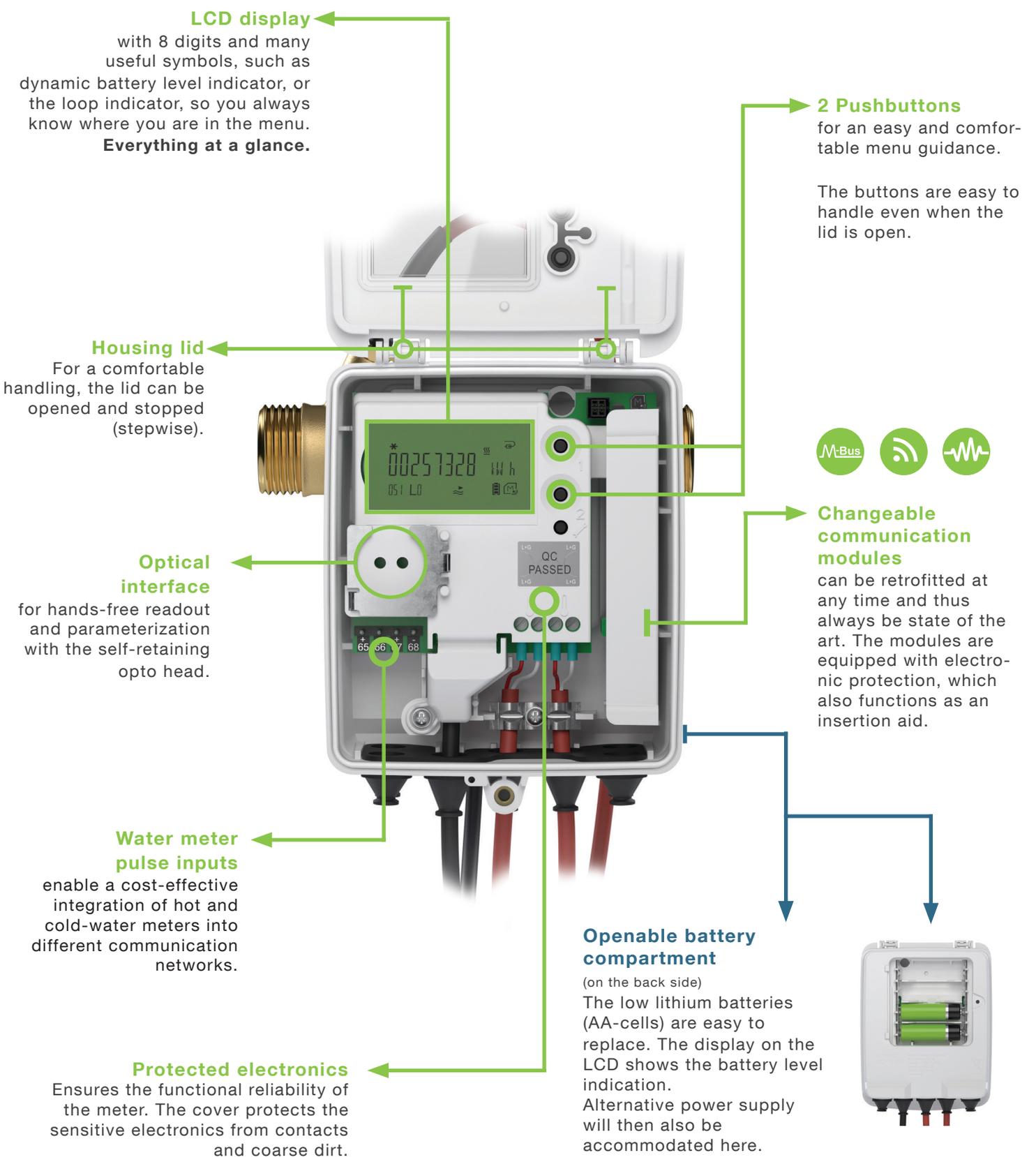
- Parameterizable installation location - even during operation
- Adaptive measurement cycle
- Detailed error flags
- Logbook with 44 monitored functions
- Battery life indication

#### PRACTICAL and FLEXIBLE

- Removeable temperature sensors (Pt100 and / or Pt500)
- Doubled M-Bus terminals
- Battery exchange possible
- LCD symbols for loop and display-ID
- Calibration logbook for changes in the field, even after commissioning has already taken place

### Technical data

Approval	MID B, H1 (EN 1434), national cooling	Nominal flow $q_p$	0.6	1.5	2.5	[m <sup>3</sup> /h]
Protection class	up to IP68	Maximum flow $q_s$	1.2	3	5	[m <sup>3</sup> /h]
Display: LCD	10 mm high digits	Minimum flow $q_i$	6	15	25	[l/h]
Temperature range (flow part)	5 ... 130 [°C]	Operating limit	2.4	6	10	[l/h]
Temp.-difference $\Delta T$	3 ... 120 [K]	Mounting length	110 / 190	110 / 130 / 190	130 / 190	[mm]
Nominal pressure	PN16 / PN25 [bar]	Thread connection	G $\frac{3}{4}$ / G1	G $\frac{3}{4}$ / G1 / G1	G1 / G1	--





## INTELLIGENT **Utilization of improvement potentials**



The T450 provides data for billing as well as data on the current status, efficiency and usage of the heating system. This enables it to analyze consumption and draw conclusions about potential improvements and problems in the system. Customers can also use the values, e.g. minima, maxima or average values, to better assess whether their individual consumption is high or low.

### HIGHLIGHT:

The battery life indication constantly calculates the remaining time until battery replacement based on the consumption profile.

## ROBUST **Prepared for all adversities**



The meter can also be used if the conditions are demanding: DuraSurface™, all-metal measuring sections and stainless-steel transducers enable accurate, trouble-free operation even under adverse conditions.

Soiling, abrasive particles, pressure peaks, high temperatures, line misalignment and vibrations don't affect the exact measurement of the T450.

However, environmental influences such as mechanical and electromagnetic influences do not put the T450 out of step.

### HIGHLIGHT:

In the special version, the T450 can even be installed in locations that are occasionally flooded without damaging the meter. The modularity remains the same.

## DURABLE **The economical alternative**



Intelligent power supply, economical electronics in combination with robust measurement technology and revisionable construction allow the T450 to be used for a very long time without malfunctions or maintenance and, if necessary, to be repaired.

Should the meter no longer meet the state of the art standards, a firmware update on-site offers the possibility of meeting future requirements.

### HIGHLIGHT:

Complete power supply possible via the M-Bus.  
(power-over M-Bus)



2 Scan motive →

3  Discover a new world



### Center of Competence HEAT in short:

- “Made in Germany”- own development, manufacturing and sales
- Since 1983 experiences with ultrasonic thermal energy meters
- Operations on all five continents
- Optimized and order-related manufacturing
- Modularity and software parameterization leads to fast reaction times on orders
- Certified acc. to ISO 9001, 14001 and EC Directive D+H1 (MID)
- State-approved test center KBY5
- Service-Center for revisions and repairs
- Committed to improved energy efficiency and environmental conservation
- Solid and established partner network

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