

# Ultrasonic Heat Meters

## Residential



Ultrasonic Heat Meter

## ULTRAHEAT T350 (2WR6...)

A customer tailored, accurate and reliable heat meter especially designed for residential applications

**Highest measurement accuracy**

The ULTRAHEAT T350 Heat Meter was specifically designed for the varied residential applications and works with the proven ultrasonic measurement technology of Landis+Gyr giving the highest accuracy, no maintenance and stable measurement for years and years. The flow rate is measured by the ultrasonic dragging principle, where two transducers alternatively transmit ultrasonic signals in and against the direction of flow. From the difference between the measured propagation times, the flow rate can precisely be calculated.

**Future-proof and durable**

The measuring tube of the ULTRAHEAT T350 has a robust all-metal design and is fitted with the special internal profile DuraSurface. Interfering reflections in the measurement channel are filtered out from the outset.

That makes the meter more resistant to dirt deposits.

The advantages are obvious: technical superiority and no wearing parts. It is the excellent reliability that counts.

**Easy mounting and handling**

The ULTRAHEAT T350 is easy to install and to handle, it does not require straight lengths of pipe or flow strengtheners and can be installed any way round. The mounting orientation does not affect the measuring accuracy or the measuring dynamics.

The Heat Meter is insensitive to small particles in the water and operates silently.

**Comprehensibility**

The readouts on the generously sized display are clearly structured and easy to understand, divided into an easily accessible customer area and a service area. Not only instantaneous values but also set day values and monthly values can be shown. Display of all consumption values facilitates traceability and heat billing.



## Customer tailored Ultrasonic Heat Meter for residential applications

Our ULTRAHEAT T350 heat meters are not only accurate and permit easy billing but they are also absolute reliable, long-life and low-cost in demand in building services technology. These heat meters offer you all that – especially for your individual residential needs.



### Performance Features

- High measuring accuracy and – reliability due to proven ultrasonic technology
- Nonwearing – requires no mechanical moving parts
- Measuring range of flow: 1:1000 acc. to EN 1434
- Total range: 1:500
- Any mounting orientation, mounting in return or in flow
- No straight lengths of pipe or flow strengtheners required
- yearly set day
- 15 monthly values
- Battery operated up to 11 years
- 24 V AC/DC external supply as special version
- Optical interface acc. to IEC870 (M-Bus)
- Modules: Pulse Output or M-Bus
- Self-diagnostics

## Technical Data

Approval	EN 1434 Class 3		Nominal flow rate	qp (m <sup>3</sup> /h)	<b>0.6</b>	<b>1.5</b>	<b>2.5</b>
Protection class	IP 54/ (IP65)		Max. Flow	qs (l/h)	1200	3000	5000
Display LCD	7-digit		Min. Flow	qi (l/h)	6	15	25
Physical units	kWh / MWh or MJ / GJ		Operating limit	(l/h)	2.4	6	10
Temperature range	(C°)	5-105	Mounting length	(mm)	110/190	110 /130/190	130/190
Nominal pressure	PN (bar)	PN16, PN25	Thread connection		G <sup>3/4</sup> /G1	G <sup>3/4</sup> /G1/G1	G1/G1
Max. Diff. of Temp.	(K)	80	Pressure drop at mounting length 110 qp (mbar)	(mbar)	150	150	--
Min. Diff. of Temp.	(K)	3	Pressure drop at mounting length 130 qp (mbar)	(mbar)	--	160	200
Switch-off limit	(K)	0.2	Pressure drop at mounting length 190 qp (mbar)	(mbar)	150	160	200

## Communication

**M-Bus**, with 1.5m cable connected, with galvanic isolation

Voltage:	50V max.
Current:	1.3 M-Bus leads
Addressing:	primary or secondary
Permitted mean frequency of reading:	once with 3h @ 2400 bd, once with 24h @ 300 bd

**Pulse Output for energy or volume**, with 2m cable connected, with galvanic isolation

Pulse significance:	1 pulse per kWh or MJ respective 1 pulse per 100 Liter
Pulse length:	100ms
Energy / Volume:	specify in order or change with Service-Software
Voltage:	max 30 V
Current:	max 30 mA
Classification:	OB (acc. to EN 1434-2)
Voltage drop:	ca. 1.3V at 20 mA
Dielectric strength:	500 V <sub>eff</sub> against ground



### **Tailored selection – the temperature sensor**

ULTRAHEAT T350 works with permanently connected Pt 500 temperature sensors. Depending on individual customer we can supply not only the standard sensor Direct Short M10 x 27.5 mm for direct installation but also 5.2 x 45 mm sensors for pockets – with cable length of 1.5 m or 5m. Installation accessories are available for the flow sensor whereas the return sensor is already mounted in the volume measuring unit.

### **Big features in a small space – the calculator**

With its compact calculator, the ULTRAHEAT T350 heat meter easily fits into any mounting box. For optimum readability, it can be rotated on the measuring tube and can also be mounted up to 1m away even in the series version. The mounting plate can be used as a wall holder. The electronic unit also features an optical interface and options for remote reading, such as M-Bus or pulse output.

### **Tested and proven over many years**

Since more than two decades the Landis+Gyr Ultrasonic meters have been successful in tough district- and residential heating applications.

The high measurement stability and reliability have been proven 100-thousand times in the field.

Quality “Made in Germany” – reliable, individual and innovative

## Manage energy better

Landis+Gyr is the leading global provider of integrated energy management products tailored to energy company needs and unique in its ability to deliver true end-to-end advanced metering solutions. Today, the Company offers the broadest portfolio of products and services in the electricity metering industry, and is paving the way for the next generation of smart grid.

Landis+Gyr, an independent growth platform of the Toshiba Corporation (TKY:6502) and 40% owned by the Innovation Network Corporation of Japan, operates in 30 countries across five continents, and employs 5,000 people with the sole mission of helping the world manage energy better.

More information is available at [www.landisgyr.com](http://www.landisgyr.com).

### Landis+Gyr in short

- 5000 employees worldwide
- Operations on all five continents
- Broadest portfolio of products and services in the industry
- 25 years of smart metering experience
- 1000 AMM systems delivered
- 300 million energy meters produced
- Largest relevant engineering capacity in the industry
- 65 years of direct load management experience
- 15 million load management receivers produced
- ISO certified for quality and environmental processes
- World leader in integrated energy management solutions
- Committed to improved energy efficiency and environmental conservation
- Solid and established partner network

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